AGENDA

UPPER YAMPA WATER CONSERVANCY DISTRICT
BOARD OF DIRECTORS MEETING
WEDNESDAY, MAY 18, 2022 (12:00 PM)
MOUNTAIN VALLEY BANK COMMUNITY ROOM
2220 CURVE PLAZA, STEAMBOAT SPRINGS, CO
ONLINE MEETING:

HTTPS://US06WEB.ZOOM.US/J/84676949122?PWD=ZG5YATCYV2VVZWXTNGR1QNJDRWHQUT09

THE UPPER YAMPA WATER CONSERVANCY DISTRICT REQUESTS THAT UNVACCINATED PEOPLE ATTENDING THE BOARD OF DIRECTORS MEETING AT THE MOUNTAIN VALLEY BANK COMMUNITY ROOM WEAR A MASK.

INSTRUCTIONS ON HOW TO JOIN A ZOOM MEETING FOLLOW THE AGENDA

A Board of Directors meeting packet is available for public review on our website at https://upperyampawater.com/agendas-and-meeting-documents/ by the Friday before the meeting. Amendments to the Agenda and new documents that are generated or submitted after the original posting of the meeting materials will be posted under "Additional Documents" on the website for the relevant meeting.

QUESTIONS ON AGENDA AND/OR BOARD MATERIALS: Members of the public or Board of Directors with questions on the agenda or meeting materials, including the consent agenda, are welcome to contact the General Manager at the District offices prior to the meeting. You may reach the General Manager at: arossi@upperyampawater.com or (970) 871-1035 Ext. 2.

MEETING PROCEDURE: Comments from the Public are welcome at two different times during the course of the meeting: 1) Comments no longer than three (3) minutes on items **not** scheduled on the Agenda will be heard under Public Input and Comment; and 2) Comments no longer than three (3) minutes on all scheduled public hearing items will be heard following the presentation. Please wait until you are recognized by the President. With the exception of subjects brought up during Public Input and Comment, on which no action will be taken or a decision made, the Board may take action on, and may make a decision regarding, ANY item referred to in this agenda, including, without limitation, any item referenced for "review", "update", "report", or "discussion" whether or not listed as an "Action Item**."**

(1) **12:00 PM** Establishment of Quorum and Call to Order

(2) **12:00 PM** Approval of Agenda for Meeting **Action item**

(3) **12:05 PM** Public Input and Comment

The Board will make no decision nor take action, except to direct the General Manager. Those addressing the Board are requested to identify themselves by name, organization, if any, and address. Comments shall not exceed three (3) minutes.

(4) **12:10 PM** Consent Agenda **Action item**

a. Approval of the March 16, 2022, Board of Directors Meeting Minutes
b. Financials

i. Approval of Disbursements
ii. Budget Comparison

(5) **12:15 PM** Report of Chief Accountant
a. Audit **Action item**

(6) **12:45 PM** Report of General Manager
a. Certificates of Deposit Update **Action item**
b. Coal Creek Diversion Project Update
c. Soil Moisture Monitoring Pilot Program Report
d. Stagecoach State Park UYWCD-CPW Lease Renewal
e. Water Storage Contracts
i. Stagecoach Municipal **Action item**
ii. Augmentation

(7) **2:45 PM** District Engineer Report
a. Update on Reservoir Water Status
b. Sickles Grazing Lease **Action item**

(8) **3:00 PM** Public Information Updates
a. Grants

(9) **3:15 PM** Board Member Reports

(10) **3:30 PM** Report of General Counsel

(11) **3:45 PM** Pending Water Cases
a. Water Resumes
b. Status of Other Water Cases

(12) **4:15 PM** New Business (Limited to emergency matters that came up During the course of the meeting) **Action item**

(13) **4:25 PM** Executive Sessions:
a. Executive session under CRS § 24-6-402(4)(b) to discuss legal issues on Water Resumes, Water Cases, Contract Negotiations and_____(insert description) . Mere presence or participation of an attorney at an executive session is not sufficient to satisfy the requirements of CRS § 24-6-402(4)(b). Executive sessions to discuss legal matters are not recorded.
b. Executive session under CRS § 24-6-402(4)(e)(I) for the purpose of determining positions relative to matters that may be subject to negotiations; developing strategy for negotiations; and instructing negotiators with respect to _____(insert brief description). This session will be recorded, and a copy of the recording maintained for not less than 90 days.

(14) **5:00 PM** Board Actions in Regard to Executive Session

(15) **5:05 PM** Determination of Next Meeting(s) Agenda(s)

(16) **5:15 PM** Adjournment.

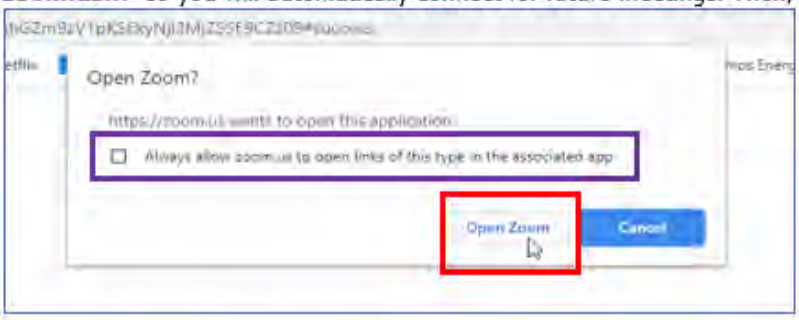
How to join a Zoom meeting

Join via "Join Zoom Meeting" link:

To join a Zoom meeting, click on the meeting link that has been sent to you by the host:

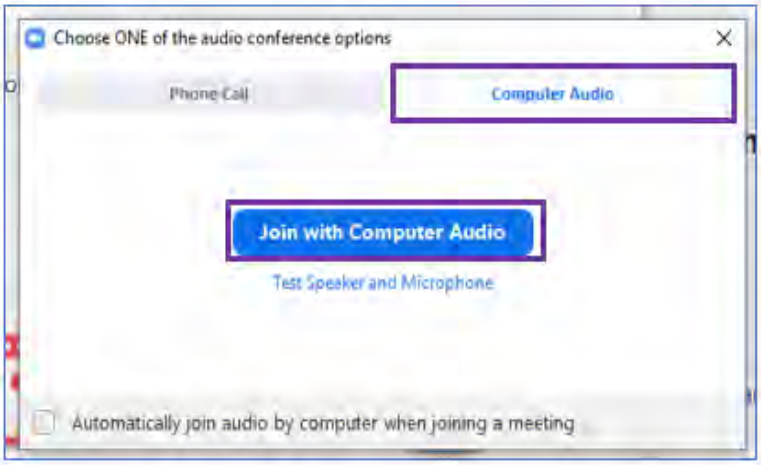
Join Zoom Meeting
https://zoom.us/j/92536171054?pwd=MGxQRjZaTWp5U0Q4VUh6VmJ5blExQT09

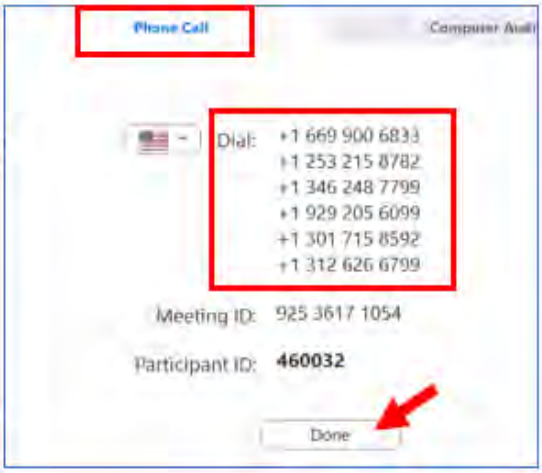
If you have not used Zoom before, you may receive this dialogue box to open Zoom. First, click on "**always allow zoom.us...**" so you will automatically connect for future meetings. Then, click on "**Open Zoom**" and follow the prompts.



Once you are connected to Zoom, you will need to choose your audio conference option. To join via your computer, click on "**Computer Audio**" and then "**Join with Computer Audio**".

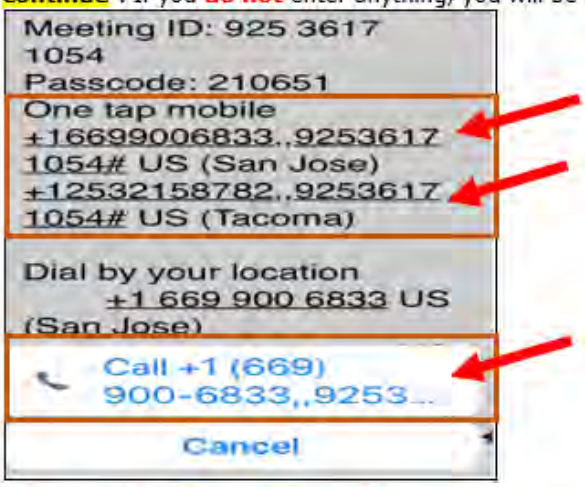
To use your cell phone or landline, click on "**Phone Call**" and then choose a number from the list. Once you dial the number, you will be asked for the Meeting ID and Participant ID to enter the meeting. Click on "**Done**" once you are connected to the Zoom meeting. Or, you can use the "**One tap mobile**" option, see below, to connect via your cell phone.



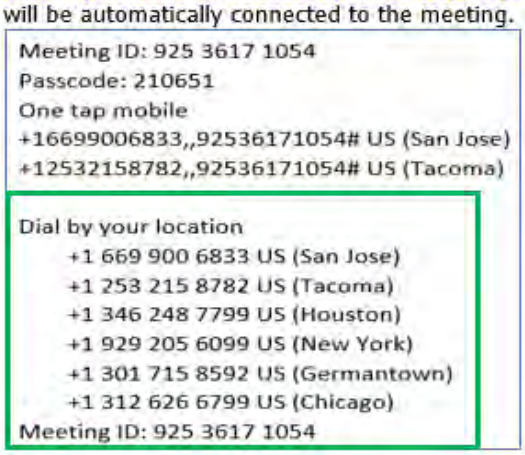


Join via cell phone with "One tap mobile":
If you will be joining a Zoom meeting via your cell phone, click one of the "**One tap mobile**" links. Then click on "**Call +1...**". You will hear a request to "**enter your Meeting ID followed by pound (#)**". You **do not** need to enter the ID as the link will do this automatically for you.

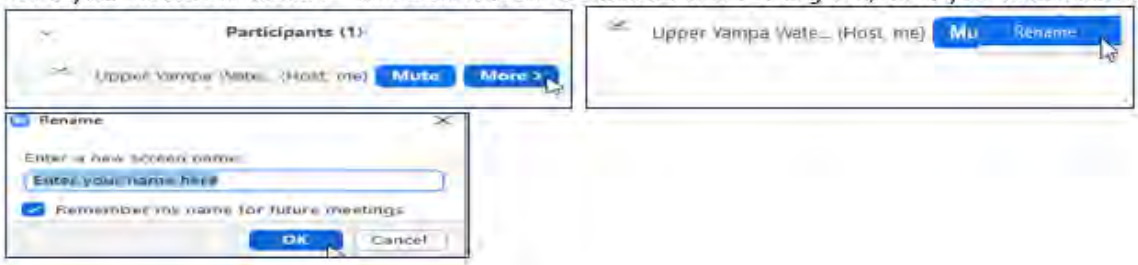
You will be asked if you are a participant and to "**Please press pound (#) to continue**". You **must** press the pound key (#). Then you will be asked to "**Enter your Participant ID followed by pound (#) or just press pound (#) to continue**". If you **do not** enter anything, you will be automatically connected to the meeting.



Join via "Dial by your location":
If you will be joining a Zoom meeting via your cell phone or landline, you can choose any of the numbers below to access the meeting. Once you dial the number you will be asked to "**Enter your Meeting ID followed by pound (#)**". Then, you will be asked to "**press pound (#) if you are a participant**". Finally, you will be asked to "**Enter your Participant ID followed by pound (#) or just press pound (#) to continue**". If you **do not** enter anything, you will be automatically connected to the meeting.



Be sure you are identified properly:
Once in Zoom, be sure that you are identified properly. If you need to change, in "**Participants**" click on your ID and hover your mouse on "**More >**" and then click on "**Rename**". In the dialog box, enter your name and click "**OK**".



Contact Deb Bastian for any questions
- Email: dbastian@upperyampawater.com
- Phone: 970-819-0189

PUBLIC INPUT AND COMMENT

The Board will make no decision nor take action, except to direct the General Manager. Those addressing the Board are requested to identify themselves by name, organization, if any, and address. Comments shall not exceed three (3) minutes.

RECORD OF PROCEEDINGS

UPPER YAMPA WATER CONSERVANCY DISTRICT
BOARD OF DIRECTORS MEETING
WEDNESDAY, MARCH 16, 2022 (12:00 PM)
MOUNTAIN VALLEY BANK COMMUNITY ROOM
2220 CURVE PLAZA, STEAMBOAT SPRINGS, CO
ONLINE MEETING:
HTTPS://US06WEB.ZOOM.US/J/88075697458?PWD=TGZ1A0V5EELLZE5RUUPOANPHDWNVQT09

MINUTES

Chairman Doug Monger called the meeting to order and declared a quorum present. In addition to Chairman Monger, the Board Members present were Ken Brenner, Jim Haskins, John Redmond, Ron Murphy, Lyn Halliday, Tom Sharp, Webster Jones and Nicole Seltzer. General Manager Andy Rossi, District Engineer Emily Lowell, Public Information and External Affairs Manager Holly Kirkpatrick, Business Manager Deb Bastian, Chief Accountant Karina Craig, General Counsel Bob Weiss and Special Counsel Scott Grosscup were also present. Members of the public present for some portion of the meeting included Erin Light, Colorado Division of Water Resources; Scott Hummer, Colorado Division of Water Resources; Sherry Villafane, ColoTrust; Brent Turner, ColoTrust; Julie Baxter, City of Steamboat Springs; Jon Synder, City of Steamboat Springs; Frank Alfone, Mt. Werner Water; Alyson Gould, Colorado Water Trust

This meeting was held in person and by videoconference utilizing Zoom. The meeting agenda included instructions to the public describing the process to participate in the meeting and comment on agenda items.

The following agenda was proposed:

AGENDA

(1) **12:00 PM** Establishment of Quorum and Call to Order
(2) **12:00 PM** Approval of Agenda for Meeting **Action item**
(3) **12:05 PM** Public Input and Comment
The Board will make no decision nor take action, except to direct the General Manager. Those addressing the Board are requested to identify themselves by name, organization, if any, and address. Comments shall not exceed three (3) minutes.
   a. Update from Erin Light
(4) **12:10 PM** Consent Agenda **Action item**
   a. Approval of the January 19, 2022, Board of Directors Meeting and February 16, 2022, Special Board of Directors Meeting minutes
   b. Financials
      i. Approval of Disbursements
      ii. Budget Comparison
(5) **12:15 PM** Report of General Manager
   a. Financial Audit Update
   b. ColoTrust Presentation
   c. 2022 Budget Amendment (Town of Oak Creek Funding Adjustment) **Action item**

d. Board Member Appointment Recognition
e. Stagecoach Reservoir Water Storage Contracts
i. Municipal Contracts
a. Existing Municipal Contract Amendment **Action item**
b. New Municipal Contract Pricing **Action item**

(6) **2:00 PM** District Engineer Report
a. Update on Reservoir Water Status
(7) **2:30 PM** Public Information Updates
a. Grants Update
(8) **2:45 PM** Board Member Reports
(9) **3:00 PM** Report of General Counsel
(10) **3:10 PM** Pending Water Cases
a. Water Resumes
b. Status of Other Water Cases
(11) **3:30 PM** New Business (Limited to emergency matters that came up During the course of the meeting) **Action item**
(12) **3:35 PM** Executive Sessions:
a. Executive session under CRS § 24-6-402(4)(b) to discuss legal issues on Water Resumes, Water Cases, Contract Negotiations and_____(insert description) . Mere presence or participation of an attorney at an executive session is not sufficient to satisfy the requirements of CRS § 24-6-402(4)(b). Executive sessions to discuss legal matters are not recorded.
b. Executive session under CRS § 24-6-402(4)(e)(I) for the purpose of determining positions relative to matters that may be subject to negotiations; developing strategy for negotiations; and instructing negotiators with respect to _____(insert brief description). This session will be recorded, and a copy of the recording maintained for not less than 90 days.
(13) **4:35 PM** Board Actions in Regard to Executive Session
(14) **4:45 PM** Determination of Next Meeting(s) Agenda(s)
4:55 PM Adjournment.

Chairman Monger established a quorum and called the meeting to order at 12:06 PM.

Meeting Agenda. Director Redmond moved to approve the agenda. Director Sharp seconded the motion which was unanimously approved.

Public Input and Comment. Chairman Monger invited members of the public to comment on items not otherwise scheduled on the agenda. There was no comment.

Erin Light, Division Engineer for the Division of Water Resources provided an update on the Water Diversion Measurement Rules for Division Six and public comments received and discussed the next steps in the measurement rules process.

Consent Agenda. Director Sharp moved to approve the consent agenda as presented. Director Halliday seconded the motion which was unanimously approved.

Report of General Manager.
Financial Audit Update. Chief Accountant Karina Craig provided an update on the financial audit and noted that the audit is going as scheduled. The final audit will be presented at the May 18, 2022, Board meeting.

ColoTrust Presentation. Sherry Villafane and Brent Turner of Colotrust provided an update on the structure and organization of Colotrust and gave a presentation on the new EDGE fund being offered through Colotrust. The Board directed staff to further investigate the varied holdings with Colotrust and to provide the Board with a recommendation as to whether or not the District should allocate funds into the EDGE product.

2022 Budget Amendment. The Board reviewed the amendment. Director Sharp moved to approve the proposed March 16, 2022, Budget Amendment and attached Resolution 2022-2. Director Seltzer seconded the motion which was unanimously approved.

Board Member Appointment Recognition. General Counsel Bob Weiss and General Manager Andy Rossi noted that Directors Murphy, Redmond, and Sharp have been reappointed to the Upper Yampa Water Conservancy Board. Their new term is 2022 to 2026.

Stagecoach Reservoir Water Storage Contracts - **Existing Municipal Contract Amendment**. General Manager Rossi provided a review of the status of the acceptance of the proposed contract amendment by municipal contract holders. Additionally, the Board reviewed and discussed questions submitted by the City of Steamboat Springs. Further, General Manager Rossi noted that any outstanding offers to the proposed contract amendment will need to be determined soon as, due to the terms of the existing contracts, the District will be issuing invoices for water storage contracts based on the payment terms in the original existing contract documents in July. Therefore, the May meeting is the last chance for the Board to consider any requested changes to a contract amendment before payment for 2022 is requested. General Manager Rossi commented that if the District does not hear from the remaining contract holders by May 1, 2022, he recommends that the District rescind the offer of contract amendments and continue with the existing contract.

Director Brenner moved to authorize the signature of the approved amendments to the existing Stagecoach Reservoir water storage contracts for Agate Creek (when received), Alpine Mountain Ranch, Dakota Ridge (when received), Town of Hayden and Tree Haus. Director Redmond seconded the motion. General Counsel Weiss noted that the Board has an approved amendment form. However, if the Board is still having conversations on proposed changes to the amendments after May 1, 2022, this complicates the Board position to have "across the board" identical contract amendments. He wanted the Board to be aware of this and suggested the issued be discussed in Executive Session. Director Brenner amended his motion to be tabled until after the Executive Session. Director Redmond accepted the amended motion, which was unanimously approved.

Director Sharp moved to table the recommendation to direct staff to inform Stagecoach Reservoir municipal contract holders that all outstanding offers of the proposed contract amendment will be terminated on May 1, 2022, if no explicit acceptance or rejection of the proposed contract has been received by the District until after the Executive Session. Director Brenner seconded the motion, which was unanimously approved.

Stagecoach Reservoir Water Storage Contracts - **New Municipal Contract Pricing**. General Manager Rossi reviewed the three staff recommendation items regarding new municipal water storage contracts out of Stagecoach Reservoir. Director Sharp notified the Board that he is the General Counsel for Mount Werner Water (MWW) and that he does not perceive a conflict of interest in discussing or acting on staff recommendation #1 to set the price per-acre foot for new municipal contracts out of Stagecoach Reservoir or item #2 to direct staff to provide the Board with a recommendation on the Town of Hayden's request for modification to the new Stagecoach Reservoir municipal contract as these are policy matters. However, he will recuse himself from any discussion or action on item #3 regarding MWW's request for modifications to the new

Stagecoach Reservoir municipal water contract. Chairman Monger asked the Board is there were any concerns with Director Sharp's participation in items # 1 & #2. The Board had no concerns.

The Board reviewed and discussed MWW's request for modifications to the new Stagecoach Reservoir municipal water contract form as three separate items. Following this discussion, on question #1 – Terms of Contract, the Board directed General Counsel Weiss to work with MWW to prepare proposed language for Section 4.1 that will address both parties concerns and for Section 4.2 the Board does not want to extend beyond "the right to request" and staff will need to look into clarifying "so long as the Reservoir remains in operation" language. On question #2 – Pricing Adjustment, the Board did not agree with the proposed amendment from MWW. On question #3 – Reduction in Contracted Amount, the Board suggested that the timeframe for adjustments in volume be at the end of the initial Term of the contract (40 years maximum initial term) in lieu of every fifth year. Frank Alfone, General Manager, Mount Werner Water, stated he would bring this to his Board for consideration.

The Board reviewed and discussed the Town of Hayden's request for modification to the new Stagecoach Reservoir municipal contract. The Board agreed to adding a TABOR clause in the new municipal contract form and specifying the clause relates to governmental allotees.

Director Sharp moved to increase the price per acre-foot of stored water in Stagecoach Reservoir for new municipal water storage contracts by 5.22% and set the price as indicated in the Stagecoach Reservoir 2022 New Water Contract Pricing table. Director Redmond seconded the motion, which was unanimously approved.

District Engineer Report. District Engineer Emily Lowell provided an update on the reservoir water status and discussed the reservoir inflow forecasting.

Public Information Updates. Public Information and External Affairs Manger Holly Kirkpatrick provided an update on the Diversion Infrastructure Improvement Project Grant Report and Community Grant Funding Report. The Board reviewed the draft Community Grand Fund Project Guidelines and Application Packet and provided feedback and suggested revisions. The Board directed staff to implement the recommended revisions by the Board and to publish the guidelines and application to the District's website without further review by the Board.

Board Member Reports. There were no Board Member reports.

Report of General Counsel. There was no report from General Counsel.

Pending Water Cases.
Water Resumes. Special Counsel Grosscup noted there was nothing unusual with the resumes for January and February and nothing needs to be filed.

Status of Other Water Cases. Special Counsel Grosscup provided an update on the water court cases in which the District is an Applicant or Opposer. Additionally, he provided an overview and update on the District's conditional water rights and reviewed the Water Table listing the District's conditional water rights. General Manager Rossi stated he will provide the Board with a strategic schedule on how to address each of the water rights. Further, the Board directed staff to engage with consultants to begin the process.

New Business. Director Sharp asked General Manager to give thought to how the District can proceed with the Little Morrison diversion ditch.

RECORD OF PROCEEDINGS

Executive Session. At 4:34 PM Chairman Monger moved, Director Redmond seconded, and it was unanimously agreed to go into Executive session under CRS § 24-6-402(4)(b) to discuss legal issues on Water Resumes, Water Cases and Contract Negotiations. Mere presence or participation of an attorney at an executive session is not sufficient to satisfy the requirements of CRS § 24-6-402(4)(b). Executive sessions to discuss legal matters are not recorded.

The Chairman then announced that if any person who participated in the executive session believed that any substantial discussion of any matters not included in the motion to go into executive session occurred in the executive session, or that any improper action occurred during the executive session in violation of the Open Meetings Law, that such person state their concern for the record. No one sated concerns.

Board Action Regarding Executive Session. General Manager Rossi noted that the Board provided direction to staff on existing Stagecoach Reservoir municipal water storage contract amendments, continued conversation with legal representatives of the Stahl family on their municipal contracts, Board authorization for General Manager to sign approved amendments to the existing Stagecoach Reservoir water storage contracts for Agate Creek (when received), Alpine Mountain Ranch, Dakota Ridge (when received), Town of Hayden, and Tree Haus promptly following the May 18, 2022, regular Board meeting, and the offer of Stagecoach Reservoir municipal contract amendments will be rescinded on May 1, 2022, if there is no explicit acceptance or rejection of proposed contract has been received by the District by the contract holders. Director Sharp noted that he is abstaining regarding any action on items that he has a previously noted a conflict of interest.

Determination of Next Meeting Agenda. The agenda for the May 18, 2022, Board Meeting was reviewed. The Board requested a status update on the conditional water rights.

Director Brenner moved to adjourn the meeting at 5:23 PM. Director Redmond seconded the motion which was unanimously approved.

I certify that the foregoing constitutes a true and correct summary of the proceeds at the above referenced meeting.

_____ Date: _____

Andy Rossi, District Secretary/Manager

STATEMENT FROM ATTORNEY REGARDING ATTORNEY-CLIENT PRIVILEGE

The undersigned Robert G. Weiss, legal counsel for the District, hereby attests, pursuant to CRS Section 24-6-402(2)(d.5)(II)(B), that the portion of the executive session that was not recorded and which related to contract negotiations constituted a privileged attorney-client communication under CRS Section 24-6-402(4)(b).

_____ Date: _____

Robert G. Weiss, Counsel

CONSENT AGENDA

FINANCIAL REPORTS:
APPROVAL OF DISBURSEMENTS & BUDGET COMPARISON

BOARD COMMUNICATION FORM

From: Karina Craig, Chief Accountant.

Date: May 18, 2022

Item: Financial Reports: April 29, 2022 Cash Disbursement Report and March 31, 2022 Budget Comparison Report.

_____ DIRECTION
__X__ INFORMATION
_____ MOTION
_____ RESOLUTION

I. Request/Issue and Background Information:

The ***Cash Disbursement Report*** contains disbursements from the Upper Yampa Water Conservancy District (the District) of reconciled monthly statements. These include disbursements incurred with check and electronic payments through April 29, 2022, and credit card payments through April 3, 2022. Disbursements include operating and capital expenditures from the 2022 fiscal year budget totaling $335,949.89.

The ***Budget Comparison Report*** includes transactions accrued up to March 31, 2022. Additional transactions for the reported period may be added as further documentation is received and processed.

The All Items, All Urban Consumers, Denver-Aurora-Lakewood *2021 Half 2* CPI index was published by the US Bureau of Labor and Statistics in early 2022. CPI adjustments and related contract stipulations are reflected in annual revenue projections of Stillwater Ditch & Reservoir Company and water sales from both reservoirs.

Interest revenues were conservatively projected, based on most recently available investment yields.

II. Summary: Cash disbursements reported include *reconciled* expenditures incurred through check and credit card transactions. The Budget Comparison reports *2020 final audit* and *2021 draft audit* actuals. It also includes current-year financials: budget, 2022 Q1 actuals and annual projections. All expenditures are projected to be within budget.

III. Staff Recommendation: Accept reports.

IV. Legal Issues: None

V. Consistency with Board Goals and Policies: UYWCD By-Laws and SP Goal 3.

Attachments:
Attachment 1: Cash Disbursement Report.
Attachment 2: Budget Comparison Report.

Upper Yampa Water Conservancy District
Cash Disbursement Report
April 30, 2022

Date	Name	Memo	Amount
02/03/2022	NDS Northwest Data Services	IT Services. Monthly Cloud Services, January.	284.10
02/03/2022	ISSUU	Website upgrade for annual report	228.00
02/05/2022	Mailchimp	Email marketing platform, monthly subscription	17.77
02/06/2022	CrashPlan Code42	Monthly subscription, February services	9.99
02/07/2022	Garmin	Monthly subscription, 02-06-2022 to 03-05-2022.	34.95
02/07/2022	Safeway	Office supplies	4.17
02/08/2022	BAP Oak	Staff supplies	341.13
02/10/2022	esri - Environmental Systems Research Ins	Software Renewal GIS, 02-09-2022 to 02-08-2024.	100.00
02/10/2022	Zoro	Yamcolo maintenance	40.69
02/13/2022	NYT The New York Times	Monthly subscription	4.00
02/14/2022	Amazon	Computer supplies	189.68
02/15/2022	CAA Community Agriculture Alliance Inc	2022 Ag Week Sponsorship and CAA Annual Membership	1,000.00
02/15/2022	Ken Brenner	CWC Conference reimbursements	674.48
02/15/2022	Element Print and Design	Printing of annual report	288.64
02/15/2022	Tom Sharp	CWC conference, per diem & mileage.	174.72
02/16/2022	Edge Communications	Services 02-06-2022 to 03-05-2022	114.48
02/18/2022	YVEA	Electrical service at Stagecoach, 01-03-2022 to 02-01-2022.	1,229.41
02/21/2022	CenturyLink Lumen	SC Telephone, February 2021.	160.80
02/21/2022	Adobe	Monthly subscription 02-20-2022 to 03-19-2022	118.93
02/22/2022	RingCentral	Annual subscription for fax number	239.88
02/28/2022	ICMA-401a	Monthly contributions, February 2022 payroll.	4,504.65
02/28/2022	ICMA-457	Monthly contributions, February 2022 payroll.	2,688.82
02/28/2022	CenturyLink Lumen	Office Telephone & Internet, 02-07-2022 to 03-06-2022.	238.26
02/28/2022	SmartVault	Software, interphase with quickbooks	140.00
		Subtotal	**12,827.55**

Upper Yampa Water Conservancy District
Cash Disbursement Report
April 30, 2022

Date	Name	Memo	Amount
02/28/2022	Amazon	Annual shipping expenses	129.00
03/01/2022	MVB Mountain Valley Bank	March Rent	6,471.94
03/01/2022	Family Support Registry	Remittance March 2022.	716.00
03/01/2022	Conoco Universal WEX	Gasoline, February 2021.	529.55
03/01/2022	Education Innovations, Inc	Hydropower demonstration tool for Stagecoach field trips	186.97
03/01/2022	Amazon	Computer supplies	131.37
03/01/2022	Restaurant.	Staff meeting lunch	121.90
03/02/2022	Verizon Wireless	Stagecoach Cell phones, 2-14-2022 to 3-13-2022.	85.01
03/03/2022	CEBT	Medical, dental, vision, life, STD, LTD March 2022 coverage.	13,618.71
03/03/2022	Balcomb & Green, P.C.	Miscellaneous Matters, Yamcolo diligence, Opposition cases, January legal services	9,094.00
03/03/2022	Yampatika	Annual Grant for Yampatika's water education program 2022	5,000.00
03/03/2022	Colorado Water Congress CWC	Sustaining Membership Yearly Dues, 01-01-2022 to 12-31-2022.	3,234.00
03/03/2022	Stand Creative Studio	Monthly digital marketing Services	1,450.00
03/03/2022	Parsons Behle & Latimer	Million Utah filing, legal Services through January 10, 2022.	936.00
03/03/2022	CDC Civil Design Consultants	SW Ditch Dogleg Structure. December 2021 & January 2022 Services.	877.50
03/03/2022	All Natural of Yampa Valley Inc	Office cleaning, February 2022.	300.00
03/03/2022	NDS Northwest Data Services	IT Services	225.00
03/03/2022	ACE Hardware	Stagecoach maintenance supplies	186.40
03/03/2022	Tech Data Corporation	AutoCAD support	164.00
03/03/2022	BlueChannel, Inc.	Annual domain website registration	50.00
03/03/2022	CO CSDPL Property and Liab Pool	Workers Compensation Insurance	42.00
03/03/2022	ACS Advanced Copier Solutions, Inc.	Monthly copier fees, January and February 2022.	14.34
03/03/2022	NDS Northwest Data Services	IT Services	11.25
03/03/2022	Jeffrey D Erickson, Lynx	Snow removal January 2022, Stagecoach Reservoir.	765.00
		Subtotal	**44,339.94**

Upper Yampa Water Conservancy District
Cash Disbursement Report
April 30, 2022

Date	Name	Memo	Amount
03/04/2022	Walmart	Office supplies	35.69
03/05/2022	NDS Northwest Data Services	IT Services. Monthly Cloud Services, February.	279.10
03/05/2022	Mailchimp	Email marketing platform, monthly subscription	17.77
03/05/2022	CrashPlan Code42	Monthly subscription, March services	9.99
03/06/2022	Garmin	Monthly subscription, 03-06-2022 to 04-05-2022.	34.95
03/07/2022	Amazon	Facilities maintenance, heat sensors	19.50
03/08/2022	Amazon	Board meeting supplies	40.98
03/08/2022	Amazon	Board meeting supplies	19.88
03/13/2022	NYT The New York Times	Monthly subscription	4.00
03/15/2022	Amazon	Event supplies	70.45
03/15/2022	Safeway	Board meeting supplies	43.74
03/16/2022	Restaurant.	Board meeting lunch	188.83
03/17/2022	CEBT	Medical, dental, vision, life, STD, LTD April 2022 coverage.	13,618.71
03/17/2022	Watson Coon Ryan	2022 auditing services	8,000.00
03/17/2022	Water Education Colorado (CFWE, WeCO)	2022 Water Leaders Program	4,000.00
03/17/2022	Geokon	Pressure transducer	600.91
03/17/2022	NDS Northwest Data Services	IT Services	540.00
03/17/2022	Staples	Office supplies	56.60
03/17/2022	Staples	Office supplies	20.77
03/17/2022	Edge Communications	Services 03-06-2022 to 04-05-2022	114.48
03/17/2022	ACE Hardware	Stagecoach maintenance	85.17
03/18/2022	Hotel	Training, lodging	67.23
03/18/2022	Routt County Clerk	Recording of augmentation contract with Young Peaks Preserve	24.28
03/18/2022	Routt County Clerk	Recording of augmentation contract with C. Roach Trust	24.28
		Subtotal	**27,917.31**

Upper Yampa Water Conservancy District
Cash Disbursement Report
April 30, 2022

Date	Name	Memo	Amount
03/21/2022	Denver Rubber Company	Facilities maintenance, new gaskets.	178.92
03/21/2022	Adobe	Monthly subscription 03-20-2022 to 04-19-2022	118.93
03/22/2022	Amazon	Event supplies	16.65
03/23/2022	Amazon	Office supplies	10.38
03/24/2022	Internal Revenue Service	Monthly payroll liabilities, employee withholdings and employer contributions	16,099.98
03/24/2022	ICMA-401a	Monthly contributions, March 2022 payroll.	4,497.35
03/24/2022	ICMA-457	Monthly contributions, March 2022 payroll.	2,685.17
03/25/2022	CenturyLink Lumen	SC Telephone, March 2021.	159.93
03/26/2022	Amazon	Office supplies	32.12
03/27/2022	SmartVault	Software, interface with quickbooks	140.00
03/27/2022	Amazon	Office supplies	11.91
03/29/2022	CenturyLink Lumen	Office Telephone & Internet, 03-07-2022 to 04-06-2022.	238.26
03/29/2022	Amazon	Office supplies	15.05
03/30/2022	Quickbooks Payroll Service	Monthly payroll	44,410.47
03/31/2022	CDWR CoDivision of Water Resources - WAFP	Stagecoach CWCB lease, CDWR review	307.52
03/31/2022	UC San Diego	Soil Moisture Study, January 2022 services.	27,321.35
03/31/2022	Balcomb & Green, P.C.	Miscellaneous Matters, Yamcolo Diligence, Opposition cases, February legal services	7,201.69
03/31/2022	The Blue Cell, LLC	Functional Excercise	5,000.00
03/31/2022	Weiss & Van Scoyk	Legal services, February 2022. General Matters, price-inclusive.	4,133.50
03/31/2022	GMS Gray Matter Systems, LLC TMMI	GE Annual Software Renewal	2,678.40
03/31/2022	CDC Civil Design Consultants	SW Ditch Dogleg Structure. February 2022 services.	2,490.10
03/31/2022	Weiss & Van Scoyk	Legal services, February 2022. Augmentation plan matters, price-exclusive.	828.00
03/31/2022	Jeffrey D Erickson, Lynx	Snow removal February 2022, Stagecoach Reservoir.	625.00
03/31/2022	Hugh Webster Jones	Director fees, Q1 2022.	600.00
		Subtotal	**119,800.68**

Upper Yampa Water Conservancy District
Cash Disbursement Report
April 30, 2022

Date	Name	Memo	Amount
03/31/2022	Douglas Monger	Director fees, Q1 2022.	600.00
03/31/2022	Lyn Halliday	Director fees, Q1 2022.	600.00
03/31/2022	Ron Murphy	Director fees, Q1 2022.	600.00
03/31/2022	Jim Haskins	Director fees, Q1 2022.	600.00
03/31/2022	NDS Northwest Data Services	Hardware, replacement of port switch box.	490.25
03/31/2022	John Redmond	Director fees, Q1 2022.	400.00
03/31/2022	All Natural of Yampa Valley Inc	Office cleaning, March 2022.	300.00
03/31/2022	NDS Northwest Data Services	IT Services	225.00
03/31/2022	CNA Surety	Directors & Officers Surety Bond, annual renewal 05-07-2021 to 05-07-2023	100.00
03/31/2022	CMNM Colorado Mountain News Media	Publication of legal notice, Board seat applications	67.10
03/31/2022	Element Print and Design	River maps for field trip display	30.00
04/01/2022	YVEA	Electrical service at Stagecoach, 02-01-2022 to 03-01-2022.	1,120.58
04/01/2022	MVB Mountain Valley Bank	April Rent	6,471.94
04/01/2022	Family Support Registry	Mandated deduction	716.00
04/02/2022	Verizon Wireless	Stagecoach Cell phones, 03-14-2022 to 04-13-2022.	85.01
04/07/2022	Conoco Universal WEX	Gasoline, March 2022.	542.78
04/13/2022	UC San Diego	Soil Moisture Study, February 2022 services.	20,628.13
04/13/2022	CEBT	Medical, dental, vision, life, STD, LTD May 2022 coverage.	13,618.71
04/13/2022	Stand Creative Studio	Monthly digital marketing Services	1,450.00
04/13/2022	Jeffrey D Erickson, Lynx	Snow removal March 2022, Stagecoach Reservoir.	562.50
04/13/2022	NDS Northwest Data Services	IT Services	180.00
04/13/2022	ACS Advanced Copier Solutions, Inc.	Monthly copier fees, March 2022.	162.92
04/13/2022	CMNM Colorado Mountain News Media	Publishing of grazing lease notice	114.91
04/13/2022	Flat Tops Ranch Supply	Yamcolo maintenance	48.98
		Subtotal	**49,714.81**

Upper Yampa Water Conservancy District
Cash Disbursement Report
April 30, 2022

Date	Name	Memo	Amount
04/26/2022	Colorado Department of Revenue	Quarterly Employee state tax withholdings	7,360.00
04/26/2022	ICMA-401a	Monthly contributions, April 2022 payroll.	4,502.74
04/26/2022	ICMA-457	Monthly contributions, April 2022 payroll.	2,687.87
04/27/2022	Balcomb & Green, P.C.	Miscellaneous Matters, Yamcolo Diligence, Opposition cases, March legal services	10,711.89
04/27/2022	AECOM	Yamcolo, Butterfly valve	6,132.00
04/27/2022	CDC Civil Design Consultants	SW Ditch Dogleg Structure. March2022 services.	2,510.00
04/27/2022	AECOM	Yamcolo, Butterfly valve and Generator	1,898.00
04/27/2022	All Natural of Yampa Valley Inc	Office cleaning, April 2022.	300.00
04/28/2022	Quickbooks Payroll Service	Monthly payroll	45,247.10
		Subtotal	**81,349.60**
		Total	**335,949.89**

UPPER YAMPA WATER CONSERVANCY DISTRICT - 2022 BUDGET COMPARISON REPORT, AS OF MARCH 31, 2022

	2020 ACTUALS audited	2021 ACTUALS draft audit	2022 BUDGET Amended March 16, 2022	2022 ACTUALS March 31, 2022	2022 PROJECTIONS Mar 31, 2022
Fund Opening Balance including Encumbered Funds	16,012,911	17,536,141	18,778,813	18,778,813	18,778,813
Encumbered Funds	6,212,424	5,875,302	6,133,474	6,131,074	6,131,074
Emergency Facilities Reserve	4,485,814	4,606,931	4,814,243	4,814,243	4,814,243
Capital Maintenance Reserve	752,436	772,752	807,526	807,526	807,526
Stagecoach Wetlands Mitigation Reserve	419,734	419,734	419,734	419,734	419,734
Routt County Road #14 Contribution	500,000				
Tabor Reserve	54,440	75,885	91,971	89,571	89,571
Capital Projects Development Fund	9,800,487	11,660,839	12,645,339	12,647,739	12,647,739
Revenues					
Facilities					
Stagecoach Reservoir					
Power Sales	162,432	58,824	193,000	18,828	193,000
Water Sales	162,197	228,487	189,190	600	208,458
Yamcolo Reservoir					
Water Sales	167,913	139,374	169,025		169,025
Stillwater Ditch & Reservoir Company	11,556	10,582	8,850		8,961
Elk River Augmentation Water Sales		1,668	476	600	1,316
Property taxes	2,644,690	2,719,734	2,715,657	1,227,130	2,715,657
Interest earned	124,735	15,204	11,300	6,378	58,200
Other income	20,835				
Pass through income	72,761	63,728			
revenues	**3,367,118**	**3,237,601**	**3,287,499**	**1,253,536**	**3,354,617**
Expenditures					
Operating					
Facilities					
Stagecoach Reservoir	409,709	435,389	643,533	121,712	643,533
Yamcolo Reservoir	116,440	131,307	154,277	30,663	154,277
Stillwater Ditch & Reservoir Company	40,707	30,100	59,209	8,411	59,209
Administration	262,197	294,343	344,750	77,702	344,750
Board of Directors	125,671	52,669	117,913	20,286	117,912
External Affairs	106,310	102,876	125,482	29,614	125,482
Finance	103,206	105,482	147,310	37,537	147,310
Legal	157,532	107,172	157,641	45,046	157,642
Planning	53,869	83,816	283,571	54,753	283,571
Grants, Scholarships & Public Information	133,030	202,455	408,039	59,388	408,039
Treasurer fees	80,543	82,564	81,470	37,815	81,470
Pass through expenses	84,681	56,629		213	
Subtotal Operating	**1,673,894**	**1,684,802**	**2,523,194**	**523,140**	**2,523,194**
Capital					
Stagecoach Reservoir	59,361	198,921	297,500		297,500
Yamcolo Reservoir	38,276	56,411	130,000	6,132	130,000
Stillwater Ditch & Reservoir Company	72,357	54,795	115,000	3,368	115,000
Office Space					
Subtotal Capital	**169,994**	**310,127**	**542,500**	**9,500**	**542,500**
expenditures	**1,843,888**	**1,994,929**	**3,065,694**	**532,640**	**3,065,694**
net income (loss)	**1,523,230**	**1,242,672**	**221,805**	**720,896**	**288,923**
Ending Fund Balance	**17,536,141**	**18,778,813**	**19,000,618**	**19,499,709**	**19,067,736**

Rev 5-9-22

UPPER YAMPA WATER
CONSERVANCY DISTRICT

BOARD COMMUNICATION FORM

From: Karina Craig, Chief Accountant.

Date: May 18, 2022

Item: **2021 Financial Audit Schedule**

_____ DIRECTION
__X__ INFORMATION
__X__ MOTION
_____ RESOLUTION

I. Request/Issue and Background Information:

Throughout the fiscal year, District staff carries out the accounting of the District's financial activities adhering to Generally Accepted Accounting Principles in the United States of America (U.S. GAAP) as promulgated by the Governmental Accounting Standards Board (GASB). As a local government administering public funds the District is subject to Colorado Auditing Standards and is required to undergo an annual audit of its financial books.

The auditing of the District 2021 fiscal year financials is nearing completion, with services provided by Watson Coon Ryan, Certified Public Accountants.

The following schedule shows milestones that were scheduled and completed, including the *final draft audit* presentation to take place today.

- February 3, 2022, kick-off meeting with Auditor.
- February 2022, field work.
- March 4, 2022, initial draft released for Accountant's review.
- March 18, 2022 1:00 PM, review of the *preliminary draft* with auditor and directors, as needed.
- April 11th or May 9th, *final draft* released for Directors' review.
- April 20th or May 18th *final draft* presented by Auditor.

The *preliminary audit draft* was released by the Auditor; no adjustments to the financial records were requested. The audit draft has been reviewed by staff, Board President Monger and Director Brenner.

Through the Colorado Department of Local Affairs, Colorado Revised Statutes state that the auditor shall submit an audit report to the District's governing body by June 30 every year [C.R.S. 29-1-606(a)(1)]. In turn, the District must submit a copy of the annual audit report to the Office of the State Auditor within thirty days after receipt of said audit [C.R.S. 29-1-606(4)].

UPPER YAMPA WATER
CONSERVANCY DISTRICT

II. Summary and Alternatives: The audit field work and the preparation of the *final draft* of the District's 2021 fiscal year audit report are now complete**.** The Audit Report is being presented by the auditor to the Board for consideration and approval.

III. Staff Recommendation: Review and accept Audit.

IV. Legal Issues: None

V. Consistency with Board Goals and Policies: Goal 3.

Attachments:
Attachment 1: Upper Yampa Water Conservancy District, Financial Statements and Supplemental Information with Independent Audit Report, December 31, 2021.

UPPER YAMPA WATER CONSERVANCY DISTRICT

Financial Statements
And
Supplemental Information
With
Independent Audit Report

December 31, 2021

UPPER YAMPA WATER CONSERVANCY DISTRICT

CONTENTS

WATSON COON RYAN
CERTIFIED PUBLIC ACCOUNTANTS

INDEPENDENT AUDITOR'S REPORT

Board of Directors
Upper Yampa Water Conservancy District
Steamboat Springs, Colorado

Opinion

We have audited the financial statements of the business-type activities and each major fund of the Upper Yampa Water Conservancy District, as of and for the year ended December 31, 2021, and the related notes to the financial statements, which collectively comprise Upper Yampa Water Conservancy District's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the business-type activities of the Upper Yampa Water Conservancy District as of December 31, 2021, and the respective changes in financial position and cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of Upper Yampa Water Conservancy District and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Responsibilities of Management for the Financial Statements

Upper Yampa Water Conservancy District's management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about Upper Yampa Water Conservancy District's ability to continue as a going concern for one year after the date that the financial statements are issued.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of Upper Yampa Water Conservancy District's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about Upper Yampa Water Conservancy District's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control–related matters that we identified during the audit.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance

on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise Upper Yampa Water Conservancy District's basic financial statements. The Statement of Revenues, Expenditures and Changes in Fund Balance – Budget and Actual is presented for purposes of additional analysis and are not a required part of the basic financial statements.

The Statement of Revenues, Expenditures and Changes in Fund Balance – Budget and Actual is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Statement of Revenues, Expenditures and Changes in Fund Balance – Budget and Actual is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Watson Coon Ryan, LLC

WATSON COON RYAN, LLC
CENTENNIAL, COLORADO

MARCH 24, 2021

UPPER YAMPA WATER CONSERVANCY DISTRICT
Management's Discussion and Analysis
2021

The intent of the Management's Discussion and Analysis is to provide an overview and highlights of the financial and other activities of the Upper Yampa Water Conservancy District (UYWCD) for the year ended on December 31, 2021. UYWCD Board members and readers are encouraged to read this discussion and analysis in conjunction with the accompanying audited financial statements. In addition to the accompanying audit, it provides a report by the General Manager of the activities of the UYWCD in 2021.

Overview of the District's Operations and Economic Factors

The UYWCD, formed in 1966, provides the legal authority to plan and construct water conservation projects in the Yampa River basin. The UYWCD's combined assets represent the largest source of stored water available for water users in the Yampa River Basin managed by a single entity. The Yampa River Basin is largely recognized as the river with the least amount of stored water, by percent of total flow, of all major river basins in the Colorado River system. The UYWCD boundary includes most of Routt County and a small portion of Moffat County. The UYWCD is governed by a Board of nine directors appointed by the Water Court.

Yamcolo (9,621 AF) and Stagecoach (36,439 AF) Reservoirs represent the primary water conservation projects constructed and operated by the UYWCD. The Stillwater Ditch is another UYWCD facility and is used to deliver water contracted from the Yamcolo Reservoir and water from other decreed water sources. In addition to the facilities described above, the UYWCD has contracted for 360 AF of water from Steamboat Lake to enable an augmentation plan with water contracts for out of priority depletions in the Elk River Valley.

The 20220/21 water year was characterized by below average snowpack and very low summer precipitation. The combined effect of these hydrologic conditions resulted in reduced hydro-power generation at Stagecoach Dam. Water use out of the reservoirs was extensive. Furthermore, an increase in water storage contracts at UYWCD reservoirs led to an increase in water storage revenues.

Significant activities for the 2021 year included the renewal of some of the UYWCD's water storage contracts, annual updates to the UYWCD Strategic Plan and Board Governance Documents, and ongoing logistics and operational modifications due to Covid-19.

<u>Revenues</u>
Property tax revenues from a 1.82 mill levy on the taxable property of the UYWCD generated $2,637,169, net of $82,564 of Treasurer Collection Fees.

Overall water sales were $369,529, $83,304 above the $286,225 budgeted. Increased water sale revenues resulted from a one-year contract with the Colorado Water Trust, new agricultural use contracts from Stagecoach Reservoir, newly executed long-term contracts for Augmentation water from both our Yampa River and Elk River augmentation water programs and increased contracted water for local ski operations.

Hydro-power generation produced a total revenue of $58,824 for the year, $136,176 below the $195,000 budgeted. Hydro-power generation is directly influenced by the magnitude and timing of Yampa River flows into Stagecoach Reservoir. The 2020/21 water year was characterized by below average snowpack and very low summer precipitation. The combined effect of these hydrologic conditions resulted in reduced hydro-

power generation at Stagecoach Dam. Stagecoach Dam Powerhouse maintenance needs also influence hydro-power generation.

Other revenues include those generated by the Stillwater Ditch and Reservoirs Company of $10,582 and interest income of $15,204.

Pass through revenues and expenses for the *Evaluating the Observation Network and Enhancing Soil Moisture Observations to Support Decision Making in the Upper Yampa Basin,* the *Coal Creek Diversion Project Engineering Analysis,* and the *Infrastructure Improvement Projects*, were received and disbursed in 2021, resulting in an aggregate year-end net balance of $7,099, scheduled for 2022 disbursements.

Expenditures

Operation and Maintenance expenditures, and capital improvements for Stagecoach Dam and Reservoir, Yamcolo Dam and Reservoir, and the Stillwater Ditch continue to improve the condition of UYWCD facilities consistent with current operational standards. Total Operating Expenditures for all UYWCD facilities and operations (net of depreciation) were $1,855,735, $525,449 below the $2,381,184 budget.

Overview of the Financial Statements

The UYWCD's financial statements comprise of two components:

1. Stand-alone Enterprise fund financial statements,
2. Notes to the financial statements.

This report also contains other supplementary information consisting of a comparison of budget to actual non-US GAAP (U.S. Generally Accepted Accounting Principles) Budgetary basis.

Stand-alone Enterprise fund financial statements:

These financial statements are designed to provide readers with a broad overview of the UYWCD in a manner similar to a private-sector business.

- The statement of net position presents information on all the UYWCD's assets and liabilities with the difference reported as net position. Over time, changes in net position may serve as a useful indicator of whether the financial position of the UYWCD is improving or deteriorating.

- The statement of revenues, expenses and changes in net position presents information showing how the UYWCD's net position changed during the year. All changes in net position are reported when the underlying event giving rise to the change occurs, regardless of the timing of related cash flows.

- The statement of cash flows represents the information on the change in the UYWCD's cash balances during the year segregated into operating, investing, and financing categories.

The assets of the UYWCD exceeded its liabilities on December 31, 2021, by $45,282,560. Of this amount, $26,503,746 is invested in capital assets (net of related debt) and $6,346,340 is restricted. While there are no legal restrictions on the unrestricted net position of $18,312,157, in 2021 the District encumbered a net position balance equal to $772,752 in the Capital Maintenance Reserve, $4,606,931 in the Emergency Facilities Reserve, and $12,932,474 to ensure adequate net position is available to address future debt payments and the development of capital projects.

Statement of Net Position

	2021	2020
Assets:		
Current and Other Assets	$21,552,565	$20,225,885
Net Capital Assets	26,503,746	26,209,958
Total Assets	$48,056,311	$46,435,843
Liabilities:		
Current liabilities	$ 58,094	$ 168,869
Deferred Inflows	2,715,657	2,520,875
Total liabilities	$2,773,751	$2,689,744
Net position:		
Invested in capital,		
Net Investment in Capital Assets	$26,503,746	$26,209,958
Restricted Net Position	466,657	471,478
Unrestricted*	18,312,157	17,064,663
Total net position	$45,282,560	$43,746,099

*Encumbered funds, including Emergency Facilities Reserve, Capital Maintenance Reserve and Capital Projects Development Fund.

2021 Fund Closing Balance		$18,778,813
Encumbered and Legally Restricted Reserves	$5,846,340	
Emergency Facilities Reserve		$4,606,931
Capital Maintenance Reserve		$772,752
Stagecoach Wetlands Mitigation Reserve		$419,734
Tabor Reserve		$46,923
Capital Projects Development Fund	$12,932,473	

Statement of Revenues, Expenses, and Changes in Fund Net Position

	2021	2020
Revenues		
Operating Revenues	$438,935	$504,098
Other Income (Expense)	2,659,473	2,685,552
Total Revenues	$3,098,408	$3,189,650
Expenses		
Operating Expenses	$1,561,947	$1,712,885
Change in Net Position	1,536,461	1,476,765
Net Position - Beginning	43,746,099	42,269,334
Net Position - Ending	$45,282,560	$43,746,099

Capital Assets

	Balance 12/31/20	**Additions**	**Deletions**	**Balance 12/31/21**
Capital assets not being depreciated:				
Stagecoach				
Land and water rights	$ 5,179,506	$ 80,269	$ -	$ 5,259,775
Dam Structure	9,080,877	-	-	9,080,877
Amenities	3,929,108	-	-	3,929,108
Yamcolo:				
Dam Structure	5,998,642	-	-	5,998,642
Stillwater Ditch:	530,653			530,653
Elk River Augmentation	10,000			10,000
Total capital assets not being depreciated	24,728,786	80,269	-	24,809,055
Capital assets being depreciated:				
Stagecoach				
Dam structure and equipment	3,391,769	117,272	-	3,509,041
Amenities	1,310,968	1,380	-	1,312,348
Yamcolo				
Dam structure and equipment	841,257	56,411	-	897,668
Stillwater Ditch	110,214	54,795	-	165,009
Equipment, vehicles and other	193,042	-	(16,217)	176,825
Total capital assets being depreciated	30,576,036	310,127	(16,217)	30,869,946
Less: Accumulated depreciation	(4,366,078)	(16,339)	16,217	(4,366,200)
Net Capital Assets	**$ 26,209,958**	**$ 293,788**	**$ -**	**$ 26,503,746**

Budgetary Comparison

The UYWCD budgets for expenses on a non-GAAP basis whereby expenses include debt principal payments and capital outlay and exclude non–cash expenses of depreciation and amortization. In 2021 there were three revenue budgetary differences. Water sales revenues were slightly higher than budgeted due to new water storage contracts. Power sales and interest revenues were lower than budgeted, resulting from current year hydrologic and economic conditions, respectively.

Capital project expenditures were all within budgeted amounts.
Budgetary changes have not adversely affected the financial stability of the UYWCD.

The variations between the budgeted income and expenses enumerated above will have no deleterious effect on the liquidity of the UYWCD or its future obligations and services.

UPPER YAMPA WATER CONSERVANCY DISTRICT
Statement of Net Position
December 31, 2021

Assets:	
Current assets:	
Cash and investments	$ 16,888,163
Accounts receivable	52,667
Property taxes receivable	2,715,657
Certificate of deposit	1,849,969
Prepaid expenses	46,109
Total current assets	21,552,565
Noncurrent assets:	
Capital assets, net of accumulated depreciation	26,503,746
Total assets	$ 48,056,311
Liabilities:	
Current liabilities:	
Accounts payable	57,463
Accrued expenses payable	631
Total current liabilities	58,094
Deferred inflows of resources:	
Deferred property tax revenues	2,715,657
Net position:	
Net Investment in capital assets	26,503,746
Restricted for:	
Wetlands mitigation	419,734
Emergencies	46,923
Unrestricted	18,312,157
Total net position	$ 45,282,560

The accompanying notes are an integral part of this financial statement.

UPPER YAMPA WATER CONSERVANCY DISTRICT
Statement of Revenues, Expenses, and Change in Net Position
For the year ended December 31, 2021

Operating Revenues:		
Water sales	$	369,529
Power revenues		58,824
Other income		10,582
Total operating revenues		438,935
Operating Expenses:		
Facilities:		
Stagecoach reservoir		413,488
Yamcolo reservoir		162,948
Stillwater ditch and reservoir		33,864
Administration		297,178
Board of directors		52,669
External affairs		102,875
Finance		105,482
Legal		107,172
Planning		83,816
Grants, scholarships and public information		202,455
Total operating expenses		1,561,947
Operating loss		(1,123,012)
Non-Operating Revenues and (Expenses):		
Property taxes, net of collection fees		2,637,170
Pass-through income		63,728
Pass-through expense		(56,629)
Interest income		15,204
Net non-operating revenues		2,659,473
Change in net position		1,536,461
Net position, beginning of year		43,746,099
Net position, end of year	$	45,282,560

The accompanying notes are an integral part of this financial statement.

UPPER YAMPA WATER CONSERVANCY DISTRICT
Statement of Cash Flows
For the year ended December 31, 2021

Cash Flows From Operating Activities:	
Cash received from customers	$ 409,962
Cash payments to suppliers of goods or services	(1,673,016)
Net cash provided (used) by operating activities	(1,263,054)
Cash Flows From Non-Capital Financing Activities:	
Property taxes, net of collection fees	2,637,170
Cash received from pass-through grantor	63,728
Cash payments to pass-through suppliers of goods or services	(56,629)
Net cash provided by non-capital financing activities	2,644,269
Cash Flows From Capital Financing Activities:	
Purchase of capital assets	(310,127)
Net cash (used) by capital financing activities	(310,127)
Cash Flows From Investing Activities:	
Reinvested interest on certificates of deposit	(5,577)
Interest received	15,204
Net cash provided by investing activities	9,627
Net change in cash and cash equivalents	1,080,715
Cash and cash equivalents, beginning of year	15,807,448
Cash and cash equivalents, end of year	$ 16,888,163
Reconciliation of Operating Income (Loss) to Net Cash Provided by Activities:	
Operating loss	$ (1,123,012)
Adjustments to reconcile operating income (loss) to net cash provided (used) by operating activities:	
Depreciation	16,339
Decrease (increase) in:	
Accounts receivable	(28,973)
Prepaid expenses	(16,633)
(Decrease) increase in:	
Accounts payable, net of capital amounts	(101,977)
Accrued expenses payable	(8,798)
Net cash provided (used) by operating activities	$ (1,263,054)

The accompanying notes are an integral part of this financial statement.

UPPER YAMPA WATER CONSERVANCY DISTRICT
Statement of Revenues, Expenditures, and Changes in Net Position - Budget and Actual
For the year ended December 31, 2021

	Original Budget	Final Budget	Actual	Variance with Final Budget
Operating Revenues:				
Water sales	$ 286,225	$ 286,225	$ 369,529	$ 83,304
Power revenues	195,000	195,000	58,824	(136,176)
Other income	8,408	10,076	10,582	506
Total revenues	489,633	491,301	438,935	(52,366)
Operating Expenditures:				
Facilities:				
Stagecoach reservoir	485,653	485,415	435,389	50,026
Yamcolo reservoir	150,322	150,543	131,307	19,236
Stillwater ditch and reservoir	34,888	34,905	30,100	4,805
Administration	329,216	329,216	294,343	34,873
Board of directors	114,232	114,232	52,669	61,563
External affairs	117,278	117,278	102,875	14,403
Finance	154,304	154,304	105,482	48,822
Legal	156,623	156,623	107,172	49,451
Planning	95,053	95,053	83,816	11,237
Grants, scholarships and public information	288,346	288,346	202,455	85,891
Capital outlay	375,000	455,269	310,127	145,142
Total expenditures	2,300,915	2,381,184	1,855,735	525,449
Operating Income (Loss)				
Other Income (Expense)				
Tax revenue, net of treasurer fee	2,443,021	2,443,021	2,637,170	194,149
Pass-through income	--	70,477	63,728	(6,749)
Pass-through expense	--	(70,477)	(56,629)	13,848
Investment earnings	31,045	31,045	15,204	(15,841)
Change in net position - non-US GAAP basis	662,784	584,183	1,242,673	658,490
Adjustments to US GAAP basis:				
Capital outlay	--	--	310,127	
Depreciation expense	--	--	(16,339)	
Change in net position - US GAAP basis	662,784	584,183	1,536,461	
Net position, beginning of year	16,941,721	17,536,141	43,746,099	
Net position, end of year	$ 17,604,505	$ 18,120,324	$ 45,282,560	

Note 1: Summary of Significant Accounting Policies

The Upper Yampa Water Conservancy District (the District) was established in 1966 by Colorado Revised Statutes (CRS) Title 37, Article 45 under the "Water Conservancy Act". The District was formed to provide legal authority to plan and construct water conservation projects in the Yampa Valley of northwest Colorado. The District stores water in two reservoirs, Stagecoach Reservoir and Yamcolo Reservoir, from which water is released to its ultimate users. The Stagecoach dam generates hydroelectric power that is sold to Yampa Valley Electric Association (YVEA). In addition, the Stagecoach Reservoir and dam includes a State recreation area for which the District pays a limited maintenance subsidy to the Colorado Parks and Wildlife.

The District's financial statements were prepared in accordance with U.S. generally accepted accounting principles for governmental entities (US GAAP). The Governmental Accounting Standards Board (GASB) is the standard-setting body for the establishment of US GAAP in governmental entities. The following summary of the more significant accounting policies of the District is presented to assist the reader in interpreting these financial statements and should be viewed as an integral part of this report.

Reporting Entity

The District applies the criteria set forth in GASB Codification Section 2100: Defining the Financial Reporting Entity, to determine which governmental organizations should be included in the reporting entity. The inclusion or exclusion of component units is based on the elected officials' accountability to their constituents, and the financial reporting entity follows the same accountability. Further, the financial statements of the reporting entity should enable the reader to distinguish between the primary government (including its blended component units, which are, in substance, part of the primary government) and discretely presented component units.

The criteria used for determining whether an entity should be included, either blended or discretely presented, includes but is not limited to: fiscal dependency, imposition of will, legal standing, and the primary recipient of services. Based on these criteria, the District has no includable component units. The District is also not included in the financial statements of any other entity.

Basic Financial Statements

As a special purpose government, basic financial statements are presented at the activity level. Activity level financial statements focus on the sustainability of the District as an entity and the change in aggregate financial position resulting from the activities of the year. These aggregated statements consist of the Statement of Net Position, the Statement of Change in Fund Net Position, and the Statement of Cash Flows.

As a special purpose government, the District has only one fund, an enterprise/proprietary fund which is also considered its business type activity. The District does not present any other fund or activity information.

Measurement Focus and Basis of Accounting

The District operates as an enterprise and the accompanying proprietary fund financial statements use a flow of economic resources measurement focus to determine net income and financial position. The accounting principles used are similar to those applicable to businesses in the private

sector and, thus, this fund is maintained on the accrual basis of accounting. Revenues are recorded when earned and expenses are recognized when incurred.

Assets, Liabilities, Deferred Inflows of Resources and Net Position

Cash and Cash Equivalents

For purposes of the statement of cash flows, the District considers all highly liquid investments with a maturity of three months or less when purchased to be cash equivalents. The District's investment in the Colorado Local Government Liquid Asset Trust (COLOTRUST) PLUS+ fund is measured at net asset value, equal to $1.00 per share.

Certificates of Deposit

The District holds money in nonnegotiable certificates of deposit that are valued at amortized cost. Maturities range from May 5, 2022-April 12, 2023. Interest rates range from .05%-.75%.

Accounts Receivable

Amounts due to the District from water storage and power sales are reported as accounts receivable. The District's management reviews accounts receivable periodically to consider the collectability of the balances. District management believes all accounts receivable to be fully collectible as of December 31, 2021. Therefore, no allowance for uncollectible accounts has been established.

Prepaid Expenses

Certain payments to vendors reflect costs applicable to future accounting periods and are recorded as prepaid expenses.

Capital Assets

Capital assets include land, reservoir and dam structures, hydro-electric plant, buildings and improvements, furniture and fixtures and equipment. Capital assets are defined by the District as assets with an initial cost of $1,000 or more and an estimated useful life in excess of one year. Such assets are recorded at historical cost. The costs of normal maintenance and repairs that do not add to the value of the asset or materially extend asset useful lives are not capitalized.

Capital assets are depreciated using the straight-line method over the following estimated useful lives:

	Years
Buildings and improvements	30 - 40
Furniture, fixtures and equipment	5 - 20

Non-depreciable capital assets of the District include its land, land improvements, reservoirs, and dams.

Deferred Inflows of Resources

In addition to liabilities, the statement of net position includes a separate section for deferred inflows of resources. Deferred inflows of resources represent an acquisition of net position that applies to future periods and will not be recognized as an inflow of resources (revenue) until that time. The District's deferred inflows of resources consist solely of unavailable revenues from property taxes.

Net Position

Equity is classified as net position and may be displayed in three components:

- Net investment in capital assets - consists of capital assets including restricted capital assets, net of accumulated depreciation and reduced by the outstanding balances of any bonds, mortgages, notes or other borrowings that are attributable to the acquisition, construction, or improvement of those assets.
- Restricted net position - consists of net position with constraints placed on the use either by (1) external groups, such as creditors, grantors, or laws or regulations of other governments; or (2) law through constitutional provisions or enabling legislation.
- Unrestricted net position - all other net position that do not meet the definition of "restricted" or "net investment in capital assets." This net position is available for future operations or distributions.

It is the District's policy to fund operations through the most restricted available equity first.

While the unrestricted net position does not have any legal constraints on its use, the accumulation of these amounts may be necessary to offset significant unforeseen capital repairs and for the development of capital projects that may be necessary in future years. These amounts do not meet the accounting definition to be considered restricted, but the District believes this balance is necessary to ensure adequate reserves are available when the need does arise.

Operating and Non-Operating Revenues and Expenses

The proprietary fund financial statements distinguish operating revenues and expenses from non-operating items. Operating revenues and expenses are those that result from providing services associated with the principal activities of the District. Operating expenses include the cost of ongoing operations, related administrative expenses, and depreciation expense. Non-operating revenues and expenses are all those that do not meet the criteria described previously.

Property Taxes

Property taxes are levied on December 15 of each year and attach as an enforceable lien on property on January 1. Taxes are payable in full on April 30 or in two installments on February 28 and June 15. The Routt County Treasurer and Moffat County Treasurer collect property taxes and remit collections to the District on a monthly basis.

Use of Estimates

The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the financial statement date and the reported amount of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Note 2: Stewardship, Compliance and Accountability

Budgetary Information

Budgets are adopted on a non-US GAAP basis wherein depreciation is not budgeted; capital expenditures and principal payments on capital debt are budgeted and recorded as expenditures.

The District conforms to the following procedures, in compliance with CRS, Title 29, Article 1, in establishing the budgetary data reflected in the financial statements:

- Prior to October 15, the District's Treasurer submits to the Board of Directors a proposed operating budget for the fiscal year commencing the following January 1. The budget includes proposed expenditures and the means of financing them.

- Public notice is offered by the Board of Directors to obtain taxpayer comments.

- Prior to December 31, the budget is adopted by formal resolution.

- Expenditures may not legally exceed appropriations at the fund level. Revisions that alter the total expenditures must be approved by the Board of Directors.

- All appropriations lapse at the end of each fiscal year.

During the year the Board may authorize supplemental appropriations, if necessary. There was one budget amendment for the year ended December 31, 2021.

Compliance

The District did not have expenditures in excess of appropriations for the year ended December 31, 2021.

TABOR Amendment

In November 1992, Colorado voters amended Article X of the Colorado Constitution by adding Section 20, commonly known as the Taxpayer's Bill of Rights (TABOR). TABOR contains tax spending, revenue and debt limitations which apply to the State of Colorado and all local governments, excluding enterprises. TABOR requires, with certain exceptions, advance voter approval for any new tax, tax rate increase, mill levy above that for the prior year, extension of any expiring tax, or tax policy change directly causing a net tax revenue gain to any local government.

Future spending and revenue limits are determined based on the prior year's fiscal year spending adjusted for allowable increases based upon inflation and local growth. Fiscal year spending is generally defined as expenditures plus reserve increases with certain exceptions. Revenue in excess of the fiscal year spending limit must be refunded unless the voters approve retention of such revenue.

Except for refinancing bonded debt at a lower interest rate or adding new employees to existing pension plans, TABOR requires advance voter approval for the creation of any multiple-fiscal year debt or other financial obligation unless adequate present cash reserves are pledged irrevocably and held for payments in all future fiscal years.

TABOR requires local governments to establish emergency reserves. These reserves must be at least 3% of fiscal year spending (excluding bonded debt service). Local governments are not allowed to use the emergency reserves to compensate for economic conditions, revenue shortfalls, or salary or benefit increases. The District has reserved $46,923 of the December 31, 2021 fund net position for this purpose.

Management believes that the District qualifies as an enterprise as defined by TABOR. Therefore, the provisions of TABOR are not applicable to the District.

In November 1999, voters passed a referendum that permanently lifted TABOR restrictions on the amount of revenue the District can collect and expend.

The District's management believes it is in compliance with the financial provisions of TABOR. However, TABOR is complex and subject to interpretation. Many of its provisions may require judicial interpretation.

Note 3: Detailed Notes on the Fund

Cash and cash equivalents

Colorado statutes require protection of public moneys in banks beyond that provided by the federal insurance corporations. The Public Deposit Protection Act in Colorado Revised Statutes 11-10.5-107(5) requires all eligible depositories holding public deposits, including those of the State's component units, to pledge designated eligible collateral having market value equal to at least 102 percent of the deposits exceeding the amounts insured by federal insurance. Upon liquidation of a defaulting eligible depository, the statute requires the banking board to seize the eligible collateral, liquidate the collateral, repay the public deposits to the depositing government. Amounts on deposit in excess of federal insurance levels must be collateralized. The eligible collateral is determined by the PDPA. PDPA allows the institution to create a single collateral pool for all public funds. The pool is to be maintained by another institution, or held in trust for all the uninsured public deposits as a group. The market value of the collateral must be equal to 102% of the aggregate uninsured deposits. The State Commissioners for banks and financial services are required by Colorado Revised Statutes to monitor the naming of eligible depositories and reporting of the uninsured deposits and assets maintained in the collateral pools.

COLOTRUST (Colorado Local Government Liquid Asset Trust) is a local government investment vehicles that qualifies as 2a7-like investment pools, where the value of each share is maintained at $1.00.

As of December 31, 2021, all of the District's deposits were either held in deposit accounts insured by the Federal Deposit Insurance Corporation or in eligible depositories as required by PDPA.

Investments

Credit risk

The District follows Colorado Revised Statutes regarding its investments. Colorado Revised Statutes specify investment instruments meeting defined rating and risk criteria in which the District may invest which include local government investment pools.

Investment Valuation

The District categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs.

Investments:		Fair Value
COLOTRUST (at NAV)	$	16,726,960

Custodial and concentration of credit risk

At December 31, 2021, the District had $16,726,960 invested in the Colorado Local Government Liquid Asset Trust (COLOTRUST), an investment vehicle established for local government entities in Colorado to pool surplus funds. COLOTRUST operates similarly to a money market fund and each share is equal in value to $1.00. Investments of COLOTRUST consist of U.S. Treasury bills, notes and note strips, and repurchase agreements collateralized by U.S. Treasury Securities. A designated custodial bank provides safekeeping and depository services to COLOTRUST in connection with the direct investment and withdrawal functions of COLOTRUST. Substantially all securities owned by COLOTRUST are held by the Federal Reserve Bank in the account maintained for the custodial bank. The custodian's internal records identify the investments owned by COLOTRUST.

Colorado Revised Statutes specify investment instruments meeting defined rating and risk criteria in which local government entities may invest. The allowed investments include local state sponsored investment pools. The District invests in one such pool, the Colorado Local Government Liquid Asset Trust (COLOTRUST) which is rated AAA by Standards and Poor's. This investment is not categorized because the investment is not evidenced by securities that exist in physical or book entry form. The District also invests excess undesignated cash reserves into certificates of deposit.

Credit risk

The District has adopted a formal investment policy that complies with the Colorado Revised Statutes. The policy specifies investment instruments in which the District may invest including certificates of deposits, and local government investment pools.

Interest rate risk

The District has a formal investment policy that limits investment maturities to five years from the purchase date as a means of managing its exposure to fair value losses arising from increasing interest rates.

Capital Assets

Capital asset activity for the year ended December 31, 2021 is summarized below:

	January 1, 2021 Balance	Additions	Deletions	December 31, 2021 Balance
Capital assets not being depreciated:				
Stagecoach				
Land and water rights	$ 5,179,506	$ 80,269	$ -	$ 5,259,775
Dam Structure	9,080,877	-	-	9,080,877
Amenities	3,929,108	-	-	3,929,108
Yamcolo				
Dam Structure	5,998,642	-	-	5,998,642
Stillwater Ditch	530,653	-	-	530,653
Elk River Augmentation	10,000	-	-	10,000
Total capital assets not being depreciated:	24,728,786	80,269	-	24,809,055
Capital assets being depreciated:				
Stagecoach				
Dam structure and equipment	3,391,769	117,272	-	3,509,041
Amenities	1,310,968	1,380	-	1,312,348
Yamcolo				
Dam structure and equipment	841,257	56,411	-	897,668
Stillwater equipment	110,214	54,795	-	165,009
Equipment, vehicles and other	193,042	-	(16,217)	176,825
Total capital assets	30,576,036	310,127	(16,217)	30,869,946
Less: accumulated depreciation	(4,366,078)	(16,339)	16,217	(4,366,200)
Net capital assets	$26,209,958	$ 293,788	$ -	$26,503,746

Stillwater Ditch Agreement

The District has entered into an Assignment of Stock and Water Delivery Agreement with the shareholders of the Stillwater Ditch and Reservoirs Company (the Company) whereby the shareholders assigned and transferred all shares in the Company to the District in exchange for the

District's continued maintenance and repair of the Stillwater Ditch and delivery of water to the shareholders under certain absolute water rights retained by the shareholders.

Restricted Net Position

The United Stated Army Corps of Engineers (ACOE) issued a permit to the District to raise the height of Stagecoach Reservoir Dam four feet inundating approximately 23.51 acres of jurisdictional wetlands. The permit requires the District to post financial assurances to ensure a high level of confidence that the District will complete the compensatory mitigation required by the permit. The District has appropriated $419,734 for this purpose as of December 31, 2021. The legislative appropriation will terminate when the compensatory mitigation is completed and accepted by the ACOE.

Note 4: Other Information

Defined Contribution Plan

Certain full-time employees are covered under a 401(a) defined contribution pension plan. Under the terms of the plan, the District contributes at a rate of double the employee's retirement contribution not to exceed 6% of gross pay. Participants become fully vested within 3 years of participation in the plan. The plan can only be amended by the District's board of directors. District contributions to the plan were $36,325 for the year ended December 31, 2021.

Commitments and Contingencies

State of Colorado

The District has entered into an agreement with the State of Colorado Department of Natural Resources, Division of Parks and Outdoor Recreation for the operation of the recreational facilities at Stagecoach Reservoir. Under the terms of the agreement the District has agreed to make an annual payment of $35,000 to the State each December 31st through May 1, 2024.

Power Purchase Agreement

The District entered into an agreement on October 30, 2015 to sell exclusively the hydroelectric energy generated by its Stagecoach facility to YVEA. The initial term is through December 31, 2025 and may be extended by either party for an additional 10 year period. The initial sales price is $0.060 per kWh and is subject to annual adjustment beginning January 1, 2017. The sales price during the year ended December 31, 2021 was $0.060 per kWh.

Reservoir Agreements

Numerous governments, organizations and individuals have reservoir agreements with the District to purchase water in storage annually from the District. The agreement terms range from 1 to 40 years with the majority of contracts expiring between the years 2021 and 2052.

Contribution to Routt County, Colorado

The District has committed to contribute $500,000 to Routt County, Colorado for construction costs for the reconstruction improvements to be made to Routt County Road #14 in the future.

State of Colorado Stagecoach Reservoir Operating Subsidy

The District has entered into a twenty-year lease agreement with the State of Colorado for the State to manage recreational use of District owned assets at Stagecoach Reservoir. The lease period is from May 1, 2004 through May 1, 2024. In exchange for the State managing the recreation areas and completing improvements and replacement of existing recreation facilities pursuant to the Master Plan, the District will annually provide the lessor of $35,000 or the amount of State funded improvements plus $10,000 in the form of an operating subsidy to the State. This payment is due by December 31 of each year of the lease. The State is allowed to carryover excess improvement costs annually to meet subsequent years' obligations. The maximum amount that the District is liable for in operating subsidies is $700,000 over the twenty-year period.

Risk Management

The District is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; errors and omissions; injuries to employees, and natural disasters. The District maintains commercial insurance for these risks by participation in an insurance pool.

The District is a member in the Colorado Special Districts Property and Liability Pool (the Pool). The Pool creates an opportunity for members to control their own insurance costs through the joint pooling of resources, making it possible to self-insure property, liability and workers' compensation insurance. The Pool is member-owned, and all surplus revenues support the stabilization of rates, coverage enhancements, innovation, and technology to bring the most value to its members. The Pool provides property, liability, workers' compensation and associated coverage, and claims and risk management services to its members. The District has not had losses of a material amount in any of the preceding three years.

The Pool has contracted with a third party to operate, administer and manage the Pool. In the event aggregated losses incurred by the Pool exceeds amounts recoverable from the reinsurance contracts and capital and surplus accumulated by the Pool, the Pool may require additional contributions from its members.

Contingencies

The District is involved in several items of pending litigation primarily involving defense of its water rights and opposition of applications for water rights that conflict with those of the District. While it is not feasible to predict the outcome of all such proceedings and exposures with certainty, management believes that their ultimate disposition should not have a material adverse effect on the District's financial position, cash flows, or results of operations.

Subsequent Events

The District has evaluated subsequent events through the report date, which is the date these financial statements were available to be issued.

UPPER YAMPA WATER
CONSERVANCY DISTRICT

BOARD COMMUNICATION FORM

From: Andy Rossi

Date: 05/18/22

Item: General Manager's Report on UYWCD Water Resources Management Activities: Spring 2022 Edition

---

_____ DIRECTION
__X__ INFORMATION
_____ MOTION
_____ RESOLUTION

I. Request/Issue and Background Information:

General Manager's report summarizing current and ongoing Upper Yampa Water Conservancy District activities.

II. Summary and Alternatives:

The 2022 run-off season is underway with the onset of basin-wide irrigation practices close at hand. Accordingly, the UYWCD staff and basin partners remain extremely active as we manage what recovery from extended drought conditions is possible with the available snowpack. These drought conditions are accelerating not only the Yampa Basin's consideration of new baseline river conditions, but also that of the entire Colorado River water user community. Responses to the most recent low flow conditions already include new legal mechanisms for water release, studies of new water supply projects, and coordinated management efforts amongst diverse water user groups.

Presented below is a summary of the water resources management activities the UYWCD has been involved in. Many of the items included in this communication will discussed during the 05/18/22 meeting and/or future meetings in 2022.

If you have any further questions about any of the items included in this communication please contact Andy Rossi, UYWCD General Manager, for additional details.

UPPER YAMPA WATER
CONSERVANCY DISTRICT

UYWCD Water Resources Management Activities: Spring 2022

Run-off Season Facilities Operations

- Stagecoach Reservoir Operations
  - Stagecoach Reservoir operations are focused on retaining as much storable volume as possible during the 2022 run-ff period. Stagecoach Reservoir water status is presented as Agenda item 7 a.
  - The UYWCD facilities staff completed a partial turbine tear-down and inspection effort in earl May 2022. The turbine is in good operating condition and no significant needed repairs were identified. A full turbine tear-down and inspection will be completed by the facilities staff before the end of 2023.

- Yamcolo Reservoir Operations
  - Yamcolo Reservoir operations are focused on retaining as much storable volume as possible during the 2022 run-off period as the reservoir recovers from the 2021 Bear River irrigation activities that depleted agricultural water storage supplies. Irrigation season is underway with a small number of irrigation ditches already diverting water from the main stem of the Bear/Yampa River. Yamcolo Reservoir water status is presented as Agenda item 7 a.

- Snowpack/River Flow Tracking
  - The earliest signs of runoff were observed in local streams and rivers starting the week of March 28th. Since late March, runoff has progresses in a staggered manner with localized temperatures and precipitation influencing early season streamflow variations. Please refer to the materials included with agenda item 7 a for details on the current Yampa Basin and regional snowpack data.

- The CDWR Water Commissioner responsible for Bear River administration, Scott Hummer, will be retiring at the end of June 2022. Mr. Hummer's replacement has not yet been identified.

Other UYWCD Projects and Water Resources Activities

- UYWCD Public Records Archive
  - The UYWCD staff began efforts to establish an electronic public records archive with the installation of a dedicated records workstation in the UYWCD offices. This workstation is available for any member of the public to search and view documents from the UYWCD Board of Director's meetings. Documents available for electronic viewing at the archive station will be expanded throughout 2022.
- Water Supply Infrastructure
  - Additional Coal Creek Diversion Project flow analysis is complete. The results of the augmented study and next steps in project development will to be discussed as part of Agenda item 6 b.

UPPER YAMPA WATER
CONSERVANCY DISTRICT

- Water Resource Management and Outreach Efforts

  - The UYWCD hosted a South Routt Water User Meeting on May 4th. The meeting was very well attended by community members, UYWCD board members, and staff. A big THANK YOU is due to the Future Farmers of America group that provided logistic support for the event. Additional Water User Meetings are planned for North and West/Central Routt County areas.

  - The UYWCD and Colorado Water Trust (CWT) initiated the formal application process for the loan of Stagecoach water storage water rights to the CWCB for release to maintain and improve the instream flow reach of the Yampa River between Stagecoach Reservoir and Lake Catamount. This multi-step process is scheduled to be completed by June of 2022. If the CDWR approval process is completed as scheduled, the water lease agreement will be available for use by mid-June 2022.

  - The UYWCD started the next cycle of diligence filings for the UYWCD's water rights with an opposition filing to the partial abandonment of some of the Yamcolo Reservoir water rights and other water court filings. Discussions of the proposed partial abandonment of Yamcolo Reservoir Water Rights will be presented as part of Agenda item 11 b.

  - Yampa White Green Roundtable IWMP efforts are drawing to a close with the final IWMP report due in July of 2022. Several recommended continued efforts will be included in the final IWMP report.

  - Upper Yampa River Basin Analysis: Soil Moisture Station Location Priorities study performed by a research group from the University of California, San Diego is complete. The recommend first location for a pilot soil moisture sensor station is in the Flattops area of Routt County. The pilot station installation is planned for the summer of 2022.

UPPER YAMPA WATER
CONSERVANCY DISTRICT

BOARD COMMUNICATION FORM

From: Karina Craig, Chief Accountant.

Date: May 10, 2022

Item: Upper Yampa Water Conservancy District Certificates of Deposit.

_____ DIRECTION
__X__ INFORMATION
__X__ MOTION
__X__ RESOLUTION

I. Request/Issue and Background Information:

The Upper Yampa Water Conservancy District's (UYWCD) liquid assets are currently deposited in a portfolio of Certificates of Deposit (CDs) at local banking institutions and at a Governmental Investment Pool Fund, administered by Colotrust, in accordance with Colorado statutory requirements for the investment of public funds.

The UYWCD's current CDs total $1.8M in aggregate deposits. The Annual Percentage Yields (APY) for these deposits are low, varying between 0.05% to 0.75%.

Section 330.15 of Federal Deposit Insurance Corporation (FDIC) regulations governs the insurance coverage of public unit accounts at banking institutions (12. C.F.R 330.15).

The insurance coverage of public unit accounts depends upon the *type of deposit* and the *location* of the insured depository institution. *Time and savings deposits*[1] are insured in aggregate up to $250K. Separately, all *demand deposits*[2] owned by a public unit are added together and insured up to $250K. This is the case as long as the depository institution is located in the same state as the public unit.

Public unit deposits may be secured by banks' collateral assets. The FDIC does not guarantee that the collateral will be sufficient to cover uninsured funds. However, the FDIC will honor the collateralization agreement if the agreement is valid and enforceable under applicable law. Thus, collateralization provides an avenue of recovery in the unlikely event of the failure of an insured bank.

---

[1] **Time and savings deposits**: Negotiable Order of Withdrawal (NOW, interest earning demand deposit, which permits drafts) accounts and Money Market accounts, but *does not include interest-bearing demand deposit accounts*. I.E., Certificates of Deposit, Savings deposits, Money Market accounts.

[2] **Demand deposits:** means both interest-bearing and noninterest-bearing deposits that are payable on demand and for which the depository institution does not reserve the right to require advance notice of an intended withdrawal. I.E., interest-bearing and non-interest-bearing Checking accounts.

UPPER YAMPA WATER
CONSERVANCY DISTRICT

In Colorado, the Public Deposit Protection Act (PDPA, C.R.S. 11-10.5-101), establishes mechanisms of preservation and protection of public funds held by banks that are in excess of FDIC insurance limits. The practical protections established by the PDPA are:

- Deposits held in Certificates of Deposit, Savings and Money Market accounts are insured *in aggregate* up to $250K.
- Separately, deposits in Checking Accounts are insured *in aggregate* up to $250K.
- Banks are required to collateralize public fund deposits exceeding FDIC's insurance coverage. They report the collateralization monthly, to the Colorado Department of Regulatory Agencies.
    - Provides an avenue of recovery in a bank failure event.
    - Because banks must tie their assets in collateralization, yields offered to public fund deposits are generally *lower* than their non-public fund counterparts.

II. Summary and Alternatives:

The UYWCD's Certificates of Deposit in each separate institution range from $150K to $657K, with maturity dates between June 2022 and April 2023. The UYWCD's support for local banks with large CD balances began as early as 1993. The current UYWCD CD accounts are:

Institution	Balance	APY	Maturity	Default Renewal Terms
Yampa Valley Bank	$ 200,000.00	0.75%	13-Jun-2022	annual
Mountain Valley Bank	$ 657,794.75	0.20%	17-Jun-2022	annual, open CD
Vectra Bank, CD #1	$ 200,115.09	0.05%	23-Jun-2022	annual
Vectra Bank, CD #2	$ 150,000.00	0.05%	23-Jun-2022	annual
Bank of the West	$ 642,058.76	0.15%	12-Apr-2023	biannual

Since the time when these CDs were opened, some thirty years ago, the banking landscape in our community, as well as general economic circumstances, have changed.

Since the UYWCD's initial 2005 deposit at Bank of the West (BotW), the BotW expanded domestically and internationally with acquisitions, reaching 532 branches nationwide and settling its headquarters in California. BotW was until recently a subsidiary of BNP Paribas, an international banking group based in France and is currently being purchased by the Chicago unit of the Bank of Montreal (BMO) Financial Group.

In 2021, Colorado experienced a record-setting net closure of 21 bank branches, a fact reflective of a nationwide trend triggered by increased digital banking during COVID-19. Regionally, BotW closed branches in Craig and in recent months had to close its Steamboat Springs branch on certain weekdays, due to lack of staffing.

The UYWCD conducts its daily banking activities with Mountain Valley Bank (MVB). While each bank offers different renewal cycles for their CDs, MVB is the only one to offer the UYWCD an ***Open CD***. An Open CD allows the withdrawal of funds before maturity, without penalties. In

addition, an Open CD allows on request, yields to be adjusted upwards and locked, securing a higher yield when rates increase. The UYWCD exercised this option in the last 30 days.

In consideration of the maturity dates of the UYWCD's CDs and changing economic conditions, staff requests the UYWCD Board of Directors (BOD) to consider three possibilities for the current UYWCD CDs deposit balances:

1. Make no changes:
    a. Renew CDs at the same amounts and with the same banks.
2. Adjust existing CD Maturity Terms and Balances, increase cash management flexibility with new transactional account, and open a new CD account:
    a. ***Existing CDs Maturity:*** Renew CD's on short-term renewing cycles when appropriate, to allow for more options in changing and improving yield scenarios. CD rates available today are significantly lower than maturing rates, shown in section II above.
        i. MVB – renew annual, Open CD as is, 0.20% APY.
        ii. Vectra Bank – renew with 30-day maturity cycle, 0.05 % APY.
        iii. Yampa Valley Bank – renew with one-month cycle, 0.01% APY.
        iv. BotW – reassess in early 2023.
    b. ***Existing CDs Balances:*** Adjust CD balances to match FDIC Insurance, except for the UYWCD's Open CD at MVB, as follows:
        i. Decrease CD balance at MVB from $658K to $300K, transfer amounts from open CD to UYWCD operating checking account as needed for daily operations and over twelve-month period.
        ii. Decrease total CD balance at Vectra Bank from $350K to $250K, and merge both CDs into a single CD.
            1. Transfer $100K from Vectra CD#2 to Vectra Bank Money Market.
            2. From Vectra Bank Money Market, transfer $50K to Yampa Valley Bank CD and $47.5 to Colotrust. Keep 2.5K at Vectra Bank Money Market.
        iii. Increase CD balance at Yampa Valley Bank from $200K to $250K.
        iv. Revisit BotW balances in early 2023, before maturity of April 12, 2023. Consider closing this account.
    c. ***Open two transactional accounts, one short term:***
        i. CDs are not *transactional accounts* and thus do not allow for electronic transfers. To withdraw funds securely from a bank where the UYWCD holds only a CD account, the opening of a transactional account with a minimum balance is recommended.

Funds in the CD can be transferred to the transactional account within the same bank. Funds can then be transferred electronically to another banking institution.

CDs allow for a ten-day period after maturity, after which the funds must be either transferred to another account or the CD must be renewed. Having a transactional account sister to a CD account also allows for a temporary holding place for the funds upon maturity of the CD, without the ten-day limit.

Money Market accounts typically offer higher interest rates than other transactional accounts, such as checking accounts, while still allowing for electronic withdrawal and deposit privileges. Withdrawals are limited to six per month, while deposit frequency is unrestricted.

Staff recommends opening:

1. A Public Funds Money Market Account at Vectra Bank. Requires a $2,500.00 minimum balance and currently offers a 0.01% APY. Vectra Bank CD yields will be automatically deposited to this account on a monthly and ongoing basis.
2. A Business Money Market Advantage Account at BotW: Open the account in the first quarter of 2023; use it to securely transfer funds out of BotW upon maturity of the $642,058.76 BotW CD in April 2023. Then, close both BotW CD and Money Market accounts.

d. *New CD*:

i. Open a new CD with Alpine Bank in 2023.

After the completion of adjustments described in 2 a – c, open and fund a CD at Alpine Bank, then move remaining balances to Colotrust, which offers daily capitalization and higher yields.

1. Transfer $100,000.00 from BotW Money Market to Alpine Bank CD.
2. Transfer the remainder balance at BotW Money Market to Colotrust. The amount is $542,058.76, plus BotW CD yields to be earned between now and April 2023.

The Average Monthly Yield of the Plus + Fund at Colotrust has been changing rapidly:

1. April 2021: 0.0574%
2. January 2022: 0.0735%
3. April 2022: 0.4492%

The proposed account adjustments detailed in Section 2 are presented in Table 1.

Table 1

The proposed CD Adjustments can be summarized as follows:

Bank Name	Current Balance		Withdrawal, June 2022	Deposit, June 2022	Proposed Balance, June 2022	Withdrawal, April 2023	Deposit, April 2023	Proposed Balance, April 2023	
Existing CDs									
Mountain Valley Bank	$657,794.75		($357,794.75) (1)		$300,000.00 (1)			$300,000.00	(13)
Vectra Bank, CD #1	$150,000.00			$100,000.00 (3)	$250,000.00 (3)			$250,000.00	
Vectra Bank, CD #2	$200,115.09	(2)	($200,115.09) (3&4)		$0.00 (5)				
Yampa Valley Bank	$200,000.00			$50,000.00 (6)	$250,000.00 (6)			$250,000.00	
Bank of the West	$642,058.76				$642,058.76	($642,058.76) (9)		$0.00	(12)
Subtotal	**$1,849,968.60**	(0)	**($557,909.84)**	**$150,000.00**	**$1,442,058.76**	**($642,058.76)**	**$0.00**	**$800,000.00**	(14)
Existing Transactional Accounts									
Mountain Valley Bank, checking account	NA			$357,794.75 (1)	$357,794.75 *			$357,794.75	*
Colotrust	NA			$47,615.09 (7)	$47,615.09 *		$542,058.76 (11)	$589,673.85	*
Subtotal	**NA**		**$0.00**	**$405,409.84**	**$405,409.84**	**$0.00**	**$542,058.76**	**$947,468.60**	
Proposed New Accounts									
Vectra Bank, Public Funds Money Market	NA		($50,000.00) (6) ($47,615.09) (7)	$100,115.09 (4)	$2,500.00 (8)			$2,500.00	(13)
Bank of the West, Money Market	NA	(9)				($100,000.00) (10) ($542,058.76) (11)	$642,058.76 (9)	$0.00	(12)
Alpine Bank, CD	NA	(10)					$100,000.00 (10)	$100,000.00	(14)
Subtotal	**NA**		**($97,615.09)**	**$100,115.09**	**$2,500.00**	**($642,058.76)**	**$742,058.76**	**$102,500.00**	
Total	**$1,849,968.60**		**($655,524.93)**	**$655,524.93**	**$1,849,968.60**	**($1,284,117.52)**	**$1,284,117.52**	**$1,849,968.60**	*

June 2022:

(0) Beginning balance of CD portfolio is $1,849,968.60

(1) Transfer funds from MVB Open CD to MVB Operating Checking Account as needed for daily operations, bring CD balance to $300,000.00. Start June 2022, complete before twelve months.

(2-5) Merge both Vectra Bank CDs into a single CD. Keep $250,000 in CD & transfer remainder to Vectra Money Market

(2) Current Balance of Vectra Bank CD#2 is $200,115.09

(3) Transfer $100,000.00 from Vectra Bank CD#2 to CD#1, bringing CD#1 balance to $250,000.00

(4) Transfer $100,115.09 from Vectra Bank CD#2 to new Vectra Bank Money Market. See also (6~8)

(5) Close Vectra Bank CD #2.

(6~8) Withdraw funds from Vectra Bank Money Market, leaving there only $2,500.00.

(6) Transfer $50,000.00 from Vectra Money Market to YVBank CD, bringing YVB CD to $250,000.00

(7) Transfer the remainder $47,615.09 from Vectra Money Market to Colotrust

(8) Vectra Bank Money Market Account end balance is $2,500.00

April 2023:

(9~12) Close BotW CD, Open & fund CD at Alpine Bank, transfer balance to Colotrust.

(9) Open a Money Market at BoTW

(9) Transfer full balance from BoTW CD to BotW Money Market (currently, $642,058.76)

(10) Open new CD at Alpine Bank

(10) Transfer $100,000.00 from BoTW Money Mkt to Alpine Bank CD

(11) Transfer balance from BotW Money Market to Colotrust (currently calculated at $542,058.76)

(12) Close BotW CD & Money Market accounts

(13) Account balance increases slightly with CD yield deposits

(14) End balance of CD portfolio is $900,000.00 + CD yield deposits

* Balance from transfers only. Current funds balances not included. MVB Checking account is a daily operating account, Colotrust is an investment account, account balances fluctuate daily.

3. Alternate Deposit Account Options:

    a. Certificate of Deposit Account Registry Service (CDARs) offered by Yampa Valley Bank. Currently offering a 0.54% APY for a four-week deposit, compared to 0.01% APY of a one-month CD.
    b. Investments in other Colorado Local Government Investment Fund Pools; Colorado Surplus Asset Fund Trust (CSAFE) and Colorado Statewide Investment Program (CSIP)

III. Staff Recommendation:

Adjust CD balances as proposed above in Option 2**,** renew CDs at Vectra Bank and Yampa Valley Bank on a monthly basis, Renew the Open CD at MVB on a one-year term, open Money Market accounts at Vectra Bank and BotW (one year as financial mechanism).

IV. Legal Issues:

UYWCD staff recommended adjustments to local bank deposits are in compliance with UYWCD Bylaws section 5.d: "The General Manager as Treasurer shall be the custodian of the funds of the UYWCD and shall deposit those funds in a bank, or banks, as authorized by the Board."

V. Consistency with Board Goals and Policies:

UYWCD SP Objective 3.

Attachments:
Attachment 1: Yampa Valley Bank: CD Rate sheet, CDAR Brochure, CDAR Rate sheet
Attachment 2: Resolution No. 2022-3; Resolution Authorizing Certain Bank Accounts and Setting Forth Matters Pertaining Thereto

YampaValleyBank

Variable Rate Merit Checking	Interest Rate	APY*
$0 - $999.99	0.02%	0.02%
$1,000 - $9,999.99	0.05%	0.05%
$10,000 - $49,999.99	0.08%	0.08%
$50,000 - $99,999.99	0.10%	0.10%
$100,000 plus	0.15%	0.15%

minimum of $100 to open

Business Interest Checking	Interest Rate	APY*
$0 - 4,999.99	0.00%	0.00%
$5,000 - $9,999.99	0.05%	0.05%
$10,000 - $49,999.99	0.08%	0.08%
$50,000 - 99,999.99	0.10%	0.10%
$100,000 plus	0.15%	0.15%

minimum of $5,000 to open

Variable Rate Money Market	Interest Rate	APY*
$0 - $1,999.99	0.03%	0.03%
$2,000 - $9,999.99	0.05%	0.05%
$10,000 - $49,999.99	0.07%	0.07%
$50,000 - $99,999.99	0.09%	0.09%
$100,000 plus	0.12%	0.12%

minimum of $2,000 to open

Variable Rate Premier MMA	Interest Rate	APY*
$0 - $99,999.99	0.05%	0.05%
$100,000 - $199,999.99	0.12%	0.12%
$200,000 - $499,999.99	0.15%	0.15%
$500,000 plus	0.25%	0.25%

minimum of $2,000 to open

Fixed Rate TCD's	Interest Rate	APY*
1 month	0.01%	0.01%
3 months	0.15%	0.15%
6 months	0.25%	0.25%
9 months	0.35%	0.35%
12 months	0.50%	0.50%
24 months	0.60%	0.60%
36 months	0.85%	0.85%
48 months	0.95%	0.95%
60 months	1.05%	1.06%

minimum of $1000 to open

Fixed Rate IRA's (Roth and Traditional)		
	Interest Rate	APY*
12 Months	0.50%	0.50%
24 Months	0.60%	0.60%
36 Months	0.85%	0.85%
48 Months	0.95%	0.95%
60 Months	1.05%	1.06%

minimum of $100 to open

Variable Rate Health Savings Account		
	Interest Rate	APY*
$0 - $2,499.99	0.15%	0.15%
$2,500 plus	0.20%	0.20%

no minimum to open

Variable Rate Prime Savings	Interest Rate	APY*
$0 - $2,999.99	0.15%	0.15%
$3,000 plus	0.20%	0.20%

minimum of $100 to open

Variable Rate Minor Savings	Interest Rate	APY*
$25.00 plus	0.20%	0.20%

minimum of $25 to open

*APY - Annual Percentage Yield

1) All variable rates are subject to change after account opening
2) A penalty may be assessed for early withdrawal on CD's
3) Fees imposed on accounts could reduce earnings
4) Please contact a Yampa Valley Bank employee for further information about applicable fees and terms

Updated 9/20/2021

Member FDIC

EQUAL HOUSING LENDER

HOW CAN CDARS HELP YOU?

Any organization or individual who wants to combine the convenience of working directly with a single bank with the security of FDIC insurance can benefit from CDARS.

Businesses, nonprofits, government entities, advisors (trustees, trust officers, lawyers, accountants, financial advisors/planners, and other fiduciaries), and individual investors can:

- Earn CD-level returns, which may compare favorably with those of Treasuries and other high-quality investments.[1]
- Satisfy requirements for insured deposits.
- Enjoy the time-saving conveniences associated with one relationship, one interest rate per maturity, and one regular statement.
- Eliminate the need to track changing collateral values on an ongoing basis.
- Avoid having uninsured deposits to footnote in financial statements.
- Make the full amount of deposit available for lending in the local community.[2]

CDARS®

[1] Consult with your account manager or one of our customer service representatives regarding available rates.

[2] When deposited funds are exchanged on a dollar-for-dollar basis with other banks in the CDARS Network, we can use the full amount of a deposit placed through CDARS for local lending, satisfying some depositors' local investment goals or mandates. Alternatively, with a depositor's consent, our bank may choose to receive fee income instead of deposits from other banks. Under these circumstances, deposited funds would not be available for local lending.

Access Multi-Million-Dollar FDIC Insurance on CD Investments.

One Bank. One Rate. One Statement.®

CDARS®

0617

WHAT IS CDARS?

CDARS®, the Certificate of Deposit Account Registry Service®, is the easiest, most convenient way to access FDIC insurance on large deposits.

WHY IS THAT?

One Bank

Everything is handled through our bank. Your large deposit is broken into smaller amounts and placed with other banks that are members of the CDARS Network. Then those banks issue CDs in amounts under the standard FDIC insurance maximum, so that your investment is eligible for FDIC protection. By working directly with just one bank—our bank—you can receive insurance through many.

One Rate

You earn one rate per maturity on your entire investment—so you can forget about multiple rate negotiations and the need to consolidate multiple disbursement checks.

One Statement

You receive one regular account statement listing all of your CDs along with their issuing banks, maturity dates, interest earned, and other details. With CDARS, there's no need to manually consolidate statements or track changing collateral values on an ongoing basis.

IT'S THAT SIMPLE.

HOW DOES CDARS WORK?

When you're ready to take advantage of CDARS, here's what happens:

1. **You enter into one Deposit Placement Agreement.**
   You sign one simple CDARS Deposit Placement Agreement with us.

2. **You select an interest rate and a maturity from our offering.**
   Based on our current CD options, you agree to a rate and a maturity that best match your investment goals.

3. **Funds are deposited.**
   Using CDARS, we submit your funds for placement at member banks.

4. **CDs are issued.**
   Member banks issue CDs in denominations under the FDIC maximum, so your investment is eligible for FDIC coverage.

5. **Confirmation is received.**
   You receive written confirmation of your deposits and a listing of all of your CDs.

THAT'S IT!
USING CDARS IS THAT EASY.

WHERE DO I LEARN MORE?

To learn more, talk to your account manager or one of our customer service representatives.

CDARS rates:

For all NEW investments, customer must deposit minimum of ***$100,000.00****.*

4-week CDARS	**0.54% APY**
13-week CDARS	**0.89% APY**
26-week CDARS	**1.09% APY**
52-week CDARS	**1.65% APY**
2-year CDARS	**2.18% APY**
3-year CDARS	**2.46% APY**

ICS Rates: **0.47% APY**

Updated 5/9/2022

Kelly Wagner
970-875-1634
kwagner@yampavalleybank.com

RESOLUTION NO. 2022-3

A RESOLUTION AUTHORIZING CERTAIN BANK ACCOUNTS AND SETTING FORTH MATTERS PERTAINING THERETO

WHEREAS, the Board of Directors ("Board") of the Upper Yampa Water Conservancy District ("District ") desires to authorize and establish certain accounts in Vectra Bank Colorado (the "Bank") as more particularly set forth herein.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE DISTRICT THAT:

1. The General Manager and Secretary/Treasurer of the District, Andy Rossi, is authorized to open the following accounts at the Bank in the name of the District:

(a) Public Funds Money Market account;

The General Manger is authorized to endorse checks and orders for the payment of monies and otherwise withdraw or transfer funds on deposit in any such accounts in amounts less than $10,000. Any check, withdrawal or transfer in an amount of $10,000 or more shall also require the signature of Doug Monger, President of the Board.

2. This resolution shall continue to have effect until express written notice of its rescission or modification has been received and recorded by the Bank. Any and all prior resolutions adopted by the Board of Directors of the District and certified to the Bank as governing the operation of the District's accounts are revoked and terminated. Any revocation, modification re replacement of this resolution must be accompanied by documentation satisfactory to the Bank, establishing the authority for the changes.

3. The signature Board President below on this resolution is conclusive evidence of his authority to act on behalf of the District.

4. All transactions, if any, with respect to any deposits and withdrawals by or on behalf of the District with the Bank prior to the adoption of this resolution are hereby ratified, approved and confirmed.

Dated this ____ day of _____, 2022.

_____
Doug Monger, President of the Board

ATTEST:

_____
Andy Rossi, General Manager and Secretary of the Board

UPPER YAMPA WATER
CONSERVANCY DISTRICT

BOARD COMMUNICATION FORM

From: Andy Rossi, General Manager

Date: 05/11/22

Item: **Coal Creek Diversion Project**

_____ DIRECTION
__X__ INFORMATION
_____ MOTION
_____ RESOLUTION

I. Request/Issue and Background Information:

The Upper Yampa Water Conservancy District's (UYWCD) Coal Creek Diversion is conditionally decreed to divert 100.0 cfs from Coal Creek, a tributary of the Bear River (Yampa River). The Coal Creek confluence with the Bear River is located approximately ½ mile downstream from the outlet of Yamcolo Reservoir. The water supply diverted by this direct flow right is to be delivered through a pipeline to Yamcolo Reservoir, upstream of this confluence for subsequent storage. The contemplated diversion is located on United States National Forest Lands near the Yamcolo Dam Spillway. Background materials for the Coal Creek Diversion were presented at the March 17, 2021, UYWCD Board of Directors (BOD) meeting. All materials presented at the March 17, 2021, meeting are posted to the UYWCD Website:

https://upperyampawater.com/wp-content/uploads/2021/07/0519-2021-BOD-Meeting-Packet.pdf

Continued discussions of the Coal Creek Diversion Project and review of a water supply availability study completed by Wilson Water Group (WWG) were included in the February 9, 2022, UYWCD BOD Special Meeting proceedings. The WWG report presented for discussion at the February 9, 2022, meeting is included again with this communication for reference.

Additional water supply analyses of the Coal Creek Diversion Project were complete by WWG in April of 2022. The results of these new analyses will be presented for discussion and review. The UYWCD staff will also discuss possible next steps for the continued consideration of the Coal Creek Diversion Project.

II. Staff Recommendation:

Continue project consideration with final comparative hydrologic analysis discussed during meeting.

UPPER YAMPA WATER
CONSERVANCY DISTRICT

III. Legal Issues:

Development of UYWCD Conditional Water Rights

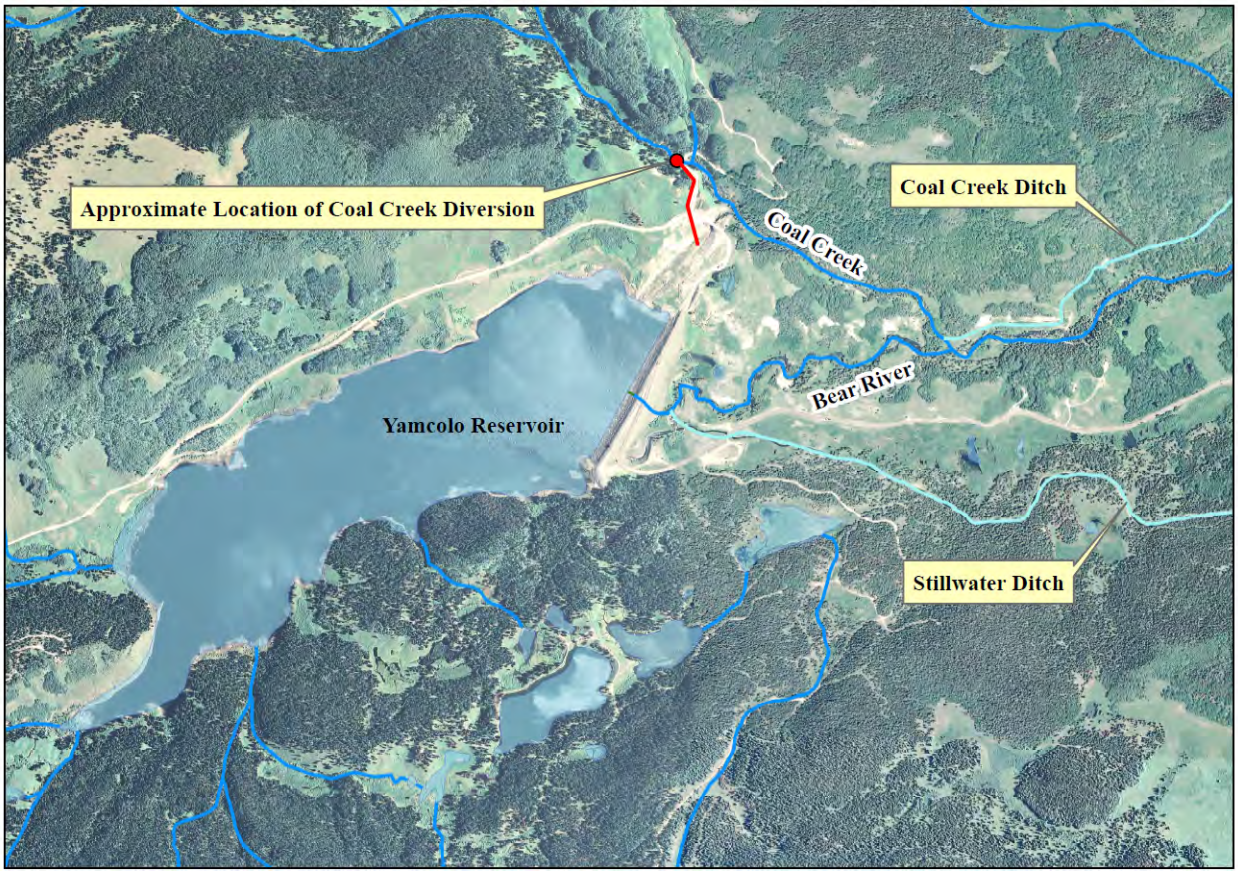
IV. Consistency with Board Goals and Policies:

UYWCD SP Objective 9

Attachments:

WWG Analyses.
Additional data and/or information presented during meeting.

Coal Creek Supply for Yamcolo Modeling



Report prepared by Wilson Water Group for Upper Yampa Water Conservancy District

January 10, 2022

Table of Contents

Introduction

Upper Yampa Water Conservancy District (UYWCD) is considering the feasibility of constructing a pipeline from Coal Creek to Yamcolo Reservoir. The Coal Creek Diversion to Yamcolo Reservoir project is intended to address three goals:

1. Stabilize daily streamflow by dampening the diurnal fluctuations
2. Enable water stored in Yamcolo Reservoir to be released to produce hydropower at Stagecoach Reservoir
3. Provide supplemental supply to Yamcolo Reservoir.

This project did not evaluate Goal 1: Stabilizing daily streamflow or Goal 2: Hydropower production. UYWCD requested that Wilson Water Group (WWG) evaluate Goal 3: Supplemental supply to Yamcolo Reservoir. Specifically, WWG used the daily Yampa Basin StateMod model to investigate the volume, timing, and frequency of supplemental supply to Yamcolo Reservoir and a spreadsheet model to determine the amount of supplemental supply that could have be stored in Yamcolo Reservoir. The results from this modeling analysis are presented below.

Background

The State of Colorado provides water users with the Colorado Decision Support System (CDSS) planning tools. The monthly Yampa Basin water allocation (StateMod) model was last updated in 2015. From 2016 through 2018, the Yampa-White-Green Basin Roundtable funded the Basin Implementation Plan Modeling Phase 3 Effort (WWG 2018), which included converting the monthly Yampa Basin model to a daily time step. In 2021, UYWCD partnered with the River District and Tri-State to jointly fund the extension of the daily model. The daily model is now available from water year 1975 through 2020. UYWCD determined that the recently updated daily Yampa Basin model is the right tool to quantify the supplemental supply from the conditional Coal Creek Diversion.

UYWCD had previously studied the physical water availability on Coal Creek (Landmark Consultants 2003). However, the methodology to estimate physical water availability on Coal Creek needed to be updated and the legal availability of the water considered. Additionally, the potential supply needs to be combined with a reservoir operation model to show how the new supply could be used. Implementing the future operations of the Coal Creek Diversion in StateMod combined with a historical reservoir operations spreadsheet model meets these needs.

In 2003, UYWCD filed for 100 cfs conditional water right on Coal Creek for storage in Yamcolo Reservoir (03CW58) and was assigned WDID 5802431. The conditional water right is junior to an existing diversion (Coal Creek Ditch - 5800589) and CWCB instream flow reaches. The instream flow on Coal Creek will prevent UYWCD's conditional water right from diverting when flows are below 5 cfs. Additionally, the CWCB instream flow reach on the Bear River for 12 cfs will prevent the conditional water right from diverting when flows are low on the Bear River. It is anticipated that impacts to peak flows and related geomorphic processes will be raised as an environmental concern for the project. Therefore, UYWCD

needs an understanding of the current conditions and potential impacts. This report presents estimates of natural flow on Coal Creek, legally available flow for the Coal Creek Diversion, and flow stored in Yamcolo Reservoir.

Model Approach

A two-prong modeling approach is taken:

- StateMod to estimate natural flow on Coal Creek and legally available flow for the Coal Creek Diversion (5802431)
- Spreadsheet model to maintain historical Yamcolo Reservoir operations while considering the additional supply from Coal Creek Diversion and evaluate the impact of the historical call regime.

StateMod offers the advantages of a standardized approach to estimating monthly and daily natural flows. WWG followed this standard approach in order to develop defensible daily natural flow estimates at an ungaged location due to the scarcity of observed flow records for Coal Creek. Additionally, StateMod represents strict administration under the prior appropriation water rights system. This is a conservative assumption and removes dependency on the historical call record. While the Bear River has experienced administration historically, the call regime is expected to become more restrictive in the future due to increased scrutiny. StateMod provides a good approximation of more active administration.

As described in the section below, the StateMod model was refined in order to produce the best estimate of monthly and daily natural flows on Coal Creek. The model provides a daily time series of the legally available water for the Coal Creek Diversion. This output is provided to the spreadsheet model.

While StateMod includes reservoir operations, it is limited to following general operating rules. For more details on how Yamcolo Reservoir is represented in StateMod, refer to Appendix A. The spreadsheet model maintains the historical variations in Yamcolo Reservoir filling while also incorporating additional supply from Coal Creek Diversion.

Additionally, the spreadsheet model is used to compare the legally available flow from StateMod and an estimate of legally available flow under the historical call regime. UYWCD provided the first day of the call starting in 1991. The end of the call was estimated using daily Yamcolo Reservoir storage values. When Yamcolo contents began to increase at the end of the irrigation season or early fall, it was assumed that the call was off. A daily call record is available from CDSS online starting in 2002. The CDSS call record includes the end date of the call. The daily natural flow on Coal Creek from StateMod is reduced by the historical diversions by the Coal Creek Ditch and then an additional 5 cfs (representing the Coal Creek instream flow right) is subtracted. Flows are considered legally available when the historical calls on the Bear River are off.

StateMod Model Refinements

The daily Yampa Basin StateMod model is used to estimate physical and legal flow for the Coal Creek Diversion. Therefore, the best possible estimate of physical flow on Coal Creek and along the Bear River is required. WWG verified and improved the historical calibration of the StateMod model for the region upstream of Stagecoach Reservoir. This section discusses the general CDSS approach, required data, and the specific steps taken by WWG to refine the model.

The CDSS general modeling approach uses StateMod to create natural flows, which serve as the hydrologic input to the subsequent model scenarios. The natural flow time series represents monthly flow volume and timing absent the impacts of man. Consumptive use, impacts of delayed return flows, reservoir operations and reservoir evaporation are removed from the observed streamflow record.

Estimating natural flow on ungaged tributaries such as Coal Creek is a three-step process:

1. Create monthly natural flows at gaged locations
2. Distribute monthly natural flow to ungaged locations
3. Disaggregate monthly natural flow to daily

Specific to the Yampa Basin model, monthly natural flows are calculated at the Bear River near Toponas (USGS 09236000 and DWR BRBBLCO) gage and the Yampa River below Stagecoach Reservoir (09237500). The monthly local gains in natural flow between the Bear River near Toponas and Yampa River below Stagecoach Reservoir are distributed to ungaged locations. A daily pattern gage is then used to disaggregate the monthly natural flow to daily.

After the natural flow time series are generated, a historical calibration scenario is used to check the various input parameters to the model, such as return flow location and timing and reservoir operations. The historical calibration compares simulated to measured streamflow at gaged locations, headgate diversions, and reservoir contents. In order to have confidence in the daily Yampa Basin model's estimate of physical flow for Coal Creek, WWG made refinements to the following StateMod inputs in order to improve the daily streamflow calibration. The refinements are categorized based on the general CDSS approach.

- Create monthly natural flow at gages
    - Refine irrigated acreage upstream of Stagecoach Reservoir
    - Revise approach for estimating missing reservoir contents for Stillwater, Yamcolo, and Stagecoach
    - Revise approach for filling missing measurements at the USGS gage Bear River near Toponas (09236000). Original gage active data collection period = 1953 – 1986. Gage restarted in 2012 as Bear River below Bear Lake (CDWR BERBBLCO).
- Distribute monthly natural flow to ungaged locations
    - Determine upstream watershed average annual precipitation and drainage area for ungaged tributaries upstream of Stagecoach Reservoir
- Disaggregate monthly natural flow to daily

    - Revise daily pattern gage selection for the Bear River and ungaged tributaries
- Historical model calibration
    - Refine return flow locations

The following sub-sections briefly discuss the refinements made to the daily Yampa Basin model.

Irrigated acreage

In order to have the best possible estimate of natural flows, the correct historical consumptive use is needed. WWG and UYWCD met with the Andi Schaffner (former Water District 58 water commissioner) on September 16, 2021 to review the irrigated acreage assignments for ditches located upstream of Stagecoach Reservoir. This meeting resulted in relatively minor modifications, as shown in Figure 1. The red parcels have been removed from the acreage assessment because they are no longer actively irrigated. The orange parcels indicate a new parcel or a change in extent or ditch assignment for an existing parcel. The majority of the parcels are green, indicating no change in either extent or ditch assignment. Correct irrigated acreage and water source assignments provide confidence that the model accurately reflects historical consumptive use and depletions used to estimate natural flow. In addition, WWG reviewed the return flow locations for the updated irrigated acreage, and minor adjustments were made based on the updated ditch assignments.

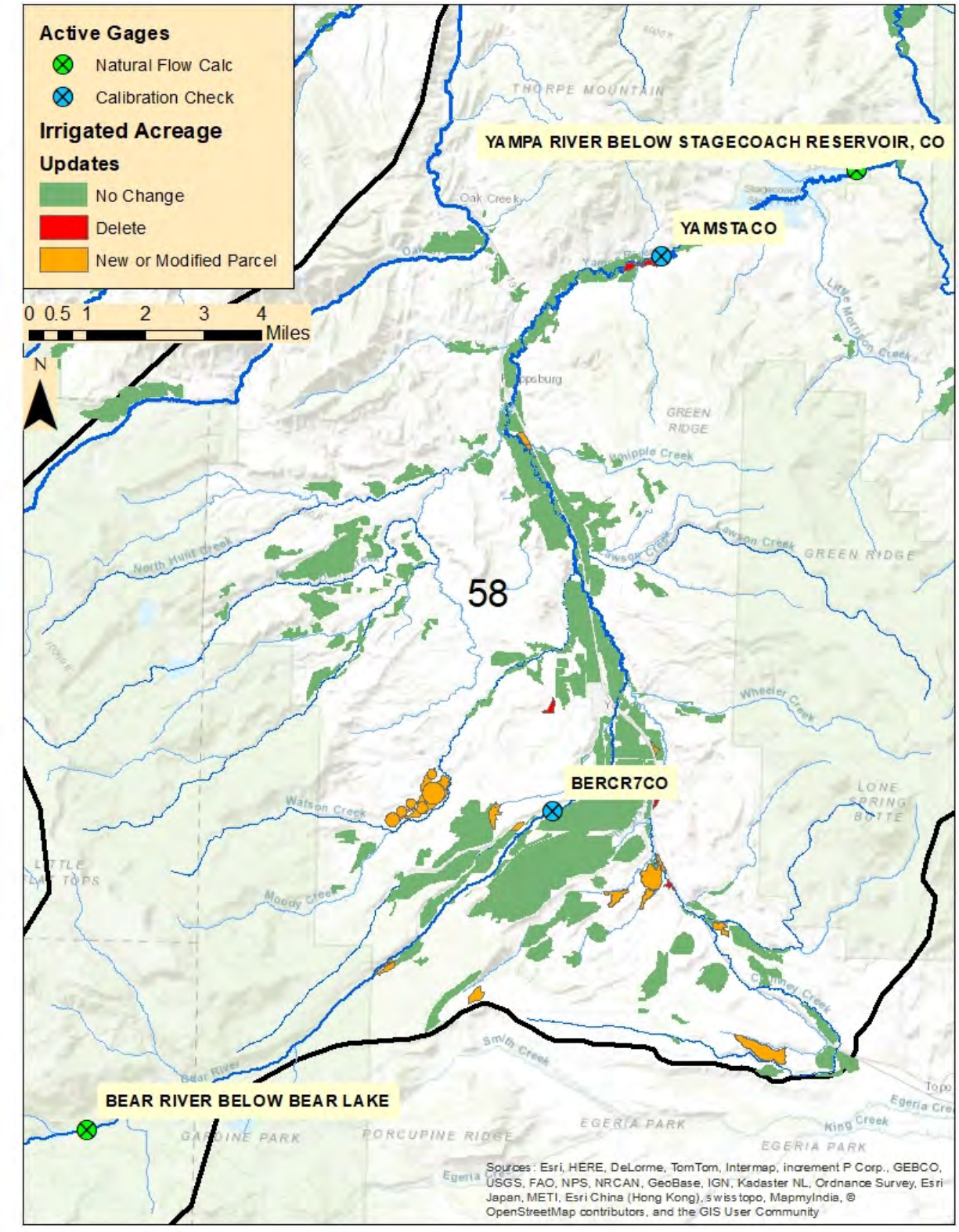


Figure 1: Yampa Basin upstream of Stagecoach Reservoir, refined irrigated acreage

Missing Reservoir Content

UYWCD provided WWG with complete reservoir content records for Yamcolo Reservoir from November 1, 1987 through November 1, 2019 and for Stagecoach Reservoir from March 1, 2014 through February 20, 2021. Values outside of these dates were queried from HydroBase. Missing reservoir content data were filled using the standard CDSS approach, with good results. The one exception was during the summer of 1989, when Stagecoach Reservoir was filling. Values from HydroBase during this period are sparse, but the model is very sensitive to the timing of reservoir storage. WWG set the contents for June 1989 based on engineering judgement. This created a complete time-series of reservoir contents used to generate natural flows for the daily model period.

The Bear River near Toponas (09236000) gage has measured data from 1953 through 1986 from the USGS, then was restarted by DWR in 2012 as the Bear River below Bear Lake (BERBBLCO) gage. Natural flow values during the missing period are filled using a regression technique discussed below. In order to create reliable natural flow estimates, reservoir contents for Stillwater Reservoir are needed during the periods of observed streamflow data. Stillwater Reservoir contents are generally available during the irrigation season from 1953 through 1986, but many of the values during the winter months are missing. Previously, the winter content values were being filled using a monthly average approach, resulting in unrealistic changes in reservoir contents from month to month. WWG set missing winter content values from this period using a standard fill-forward approach.

Filling Bear River near Toponas

The Bear River near Toponas (09236000) gage has year-round observed data from October 1, 1952 through September 30, 1986, with the exception of water year 1966. The gage was restarted by DWR on May 11, 2012 as the Bear River below Bear Lake (BERBBLCO) gage. Daily observed streamflow is available during the runoff and irrigation season. The two gage records are combined in StateMod to produce the longest period possible.

Because this gage is directly below Stillwater Reservoir, it is not appropriate to fill the observed streamflow time series. Instead, the monthly natural flow time series is filled. Previously, the standard Mixed Station Model approach was used to fill the record. However, the filled winter values for the most recent period were not always congruent with the observed summer values. WWG tested several different gages for the best regression fit. The Yampa River at Steamboat (09239500) with a log-transform was selected. This improved the continuity of the filled winter natural flow values.

Precipitation and Area

The previous three refinements improved the natural flow estimates at gaged locations. The next step of the process is to distribute to ungaged locations. The standard CDSS approach is to start with the watershed average annual precipitation and drainage area from USGS StreamStats (https://streamstats.usgs.gov/ss/). Figure 2 shows the ungaged watersheds that are represented in the model. It is important to consider the ungaged watersheds upstream of Stagecoach Reservoir to ensure that a maximum of 100 percent of the local gains are distributed. Currently, 88 percent of the local gains are distributed, which is reasonable given the amount of ungaged area that is not explicitly represented

in the model. It is also important to check that the relative contributions of the various ungaged tributaries are reasonable.

StateMod calculates the area-precipitation ratio for the ungaged locations to find a percent of the local gains between gages to distribute. Based on previous modeling calibration efforts, the percent of local gains frequently needs to be refined. Two metrics are used to adjust the percentages:

- Shortages to historical diversions on ungaged tributaries
- Distributing a maximum of 100 percent of the local gains

The percent distribution to Coal Creek was increased based on the daily historical diversion records for the Coal Creek Ditch (5800589). Adjustments were also made to:

- Dome Creek using the Dome Creek Ditch diversion records
- South Hunt Creek based on the total shortages to diversions on the tributary
- Middle Hunt Creek based on the total shortages to diversions on the tributary
- Brinker Creek based on the total shortages to diversions on the tributary

Note that for Brinker Creek, additional data processing was performed on the diversion records for Pony Creek Ditch and Just Ditch based on Andi Schaffner's comments that both of those structures re-divert water carried from the Buckingham-Mandell Ditch. WWG used the diversion coding to identify the diversions of native Brinker Creek water. The natural flow distribution was adjusted to enable the native flow diversions, which are a small portion of the total diversions.

One additional refinement to the model was distributing local inflows to Fix Ditch. At the September 16, 2021 meeting, Andi Schaffner confirmed that river levels tend to increase at the Fix Ditch due to return flows from upstream irrigated acreage and tributary inflow.

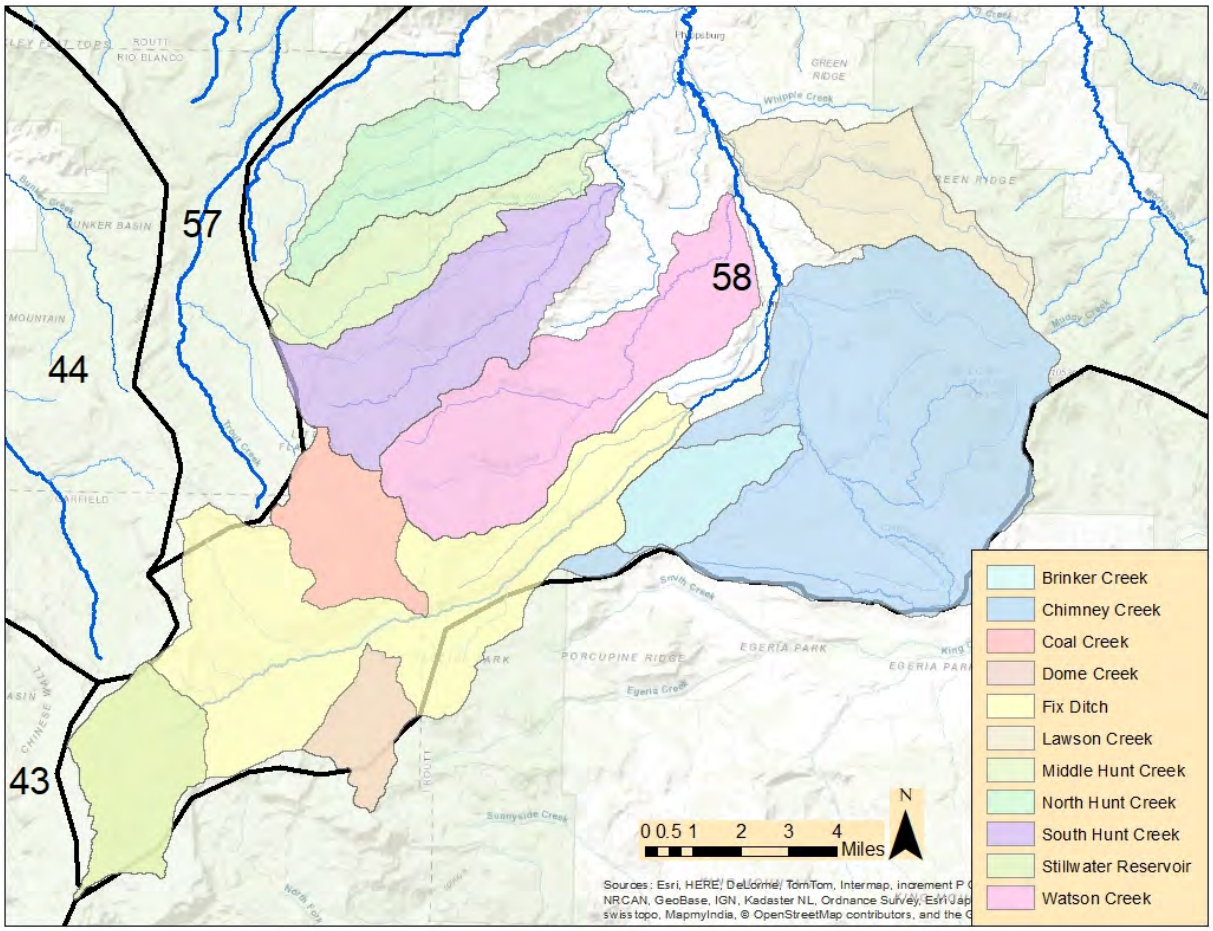


Figure 2: Ungaged watershed represented in the model

Daily Pattern Gage

In the daily Yampa Basin model, the monthly natural flows are distributed to daily using a pattern gage. StateMod calculates the daily percent of flow for each month from the pattern gage, then uses the daily percent to disaggregate the monthly natural flow volume. Previously, all monthly natural flows for the watershed upstream of Stagecoach Reservoir were disaggregated using the Yampa River at Steamboat gage as the pattern gage. This gage was used because of the long term, continuous record available. While this gage is downstream of several reservoirs, the hydrograph generally preserves a relatively natural signature. However, on closer examination, the shape of the monthly hydrograph does not always align with the monthly natural flow hydrograph for Coal Creek. This mis-match causes "jumps" or a stair-step appearance on the first day of the month. WWG tested six other daily pattern gages to find the best over-all match in hydrograph shape by examining the percent change in streamflow on the first of the month.

Figure 3 compares the daily streamflow for Coal Creek for four different pattern gages in 2020. These four gages produced the most realistic streamflow results. The White River gage was selected as the

pattern gage for the modeling effort, as it results in a smoother, more realistic change in daily natural flow compared to the other gages reviewed.

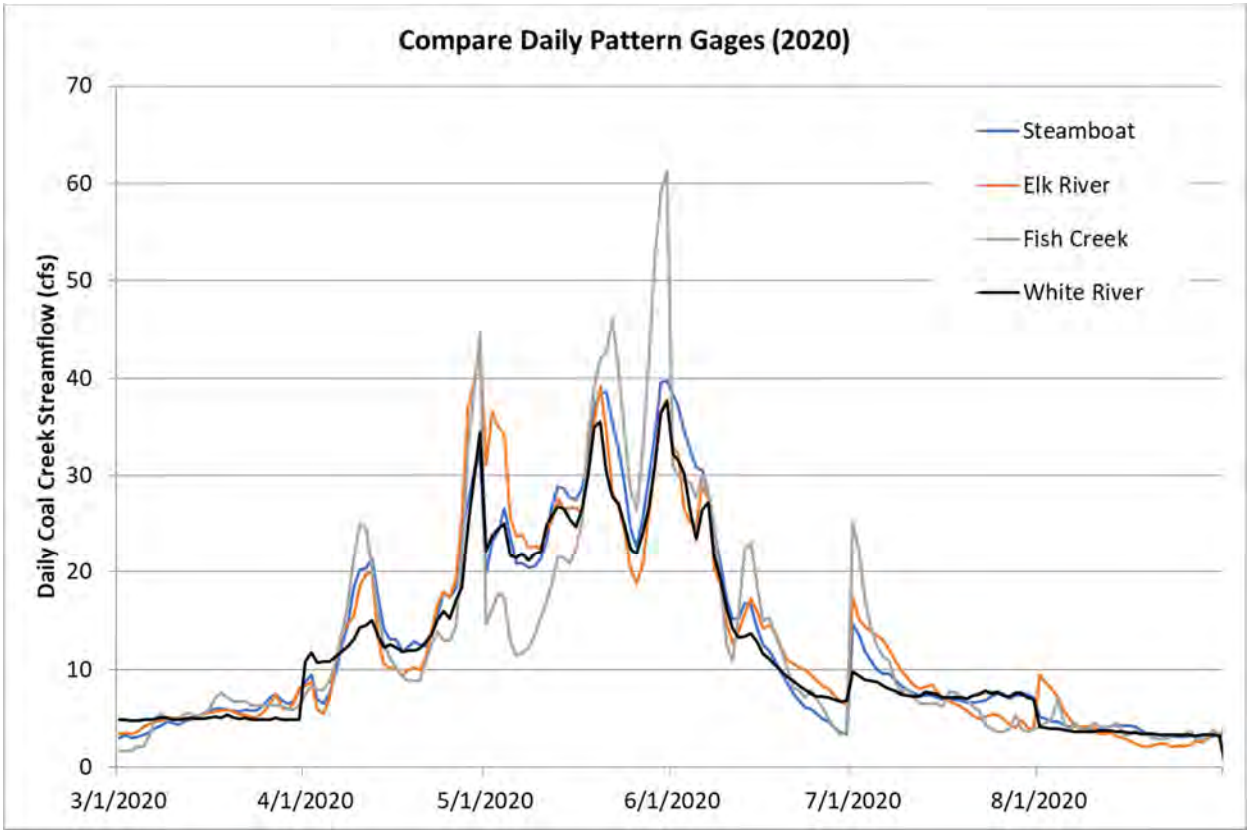


Figure 3: Comparison of daily Coal Creek streamflow using different pattern gages (2020)

The White River gage is a compilation of three streamflow gages. To create a complete time series from October 1, 1974 through September 30, 2020, WWG added the North Fork White River at Buford (09303000) to the South Fork White River at Buford (09304000) from October 1, 1974 through February 28, 2002. The White River Below North Elk Creek near Buford (09304115) is used from March 1, 2002 through September 30, 2020. Daily streamflow values were collected from the USGS and DWR.

The conditional Coal Creek diversion structure has an upstream contributing area of 6.95 square miles and an elevation of approximately 9,600 feet while the White River Below North Elk Creek near Buford gage has an upstream contributing area of 530 square miles and an elevation of 6,776 feet. However, this watershed produced the best over-all match in hydrograph shape, as determined by the smallest percent change in streamflow on the first of the month. WWG examined other nearby tributaries, but none of the gages had a long enough period of record to be used as the daily pattern gage.

Natural Flow Calibration Results

Confidence in the natural flow estimates for Coal Creek are critical to using the model to estimate physical and legal flow available to the Coal Creek diversion. Several metrics were used to calibrate the distribution of natural flow to Coal Creek:

- Daily Coal Creek Ditch (5800589) diversions, from HydroBase
- Daily streamflow measurements from 1989 and 1990, provided by UYWCD
- Spot measurements taken by the U.S. Forest Service during winter months in 1997, 1998, and 1999, which concluded that the average daily flow for Coal Creek during the winter is about 4 cfs.
- Spot measurements taken by UYWCD in 2012

The graphs below compare the estimated daily natural flow on Coal Creek to the metrics.

Figure 4 compares the estimated daily Coal Creek streamflow to the daily Coal Creek Ditch (5800589) diversions from HydroBase. The daily diversion record provides an assumed minimum streamflow value. It is WWG's understanding that the Coal Creek Ditch can physically sweep the river. The ditch has an 8 cfs water right and daily diversions are generally 8 cfs or less. However, the maximum daily diversion was about 12 cfs in 1982. The natural flow distribution to Coal Creek was increased so that the historical diversion could be met in the majority of years. There are 12 years in the 46 year model run that have at least one day of insufficient flow to meet the historical diversions at Coal Creek Ditch.

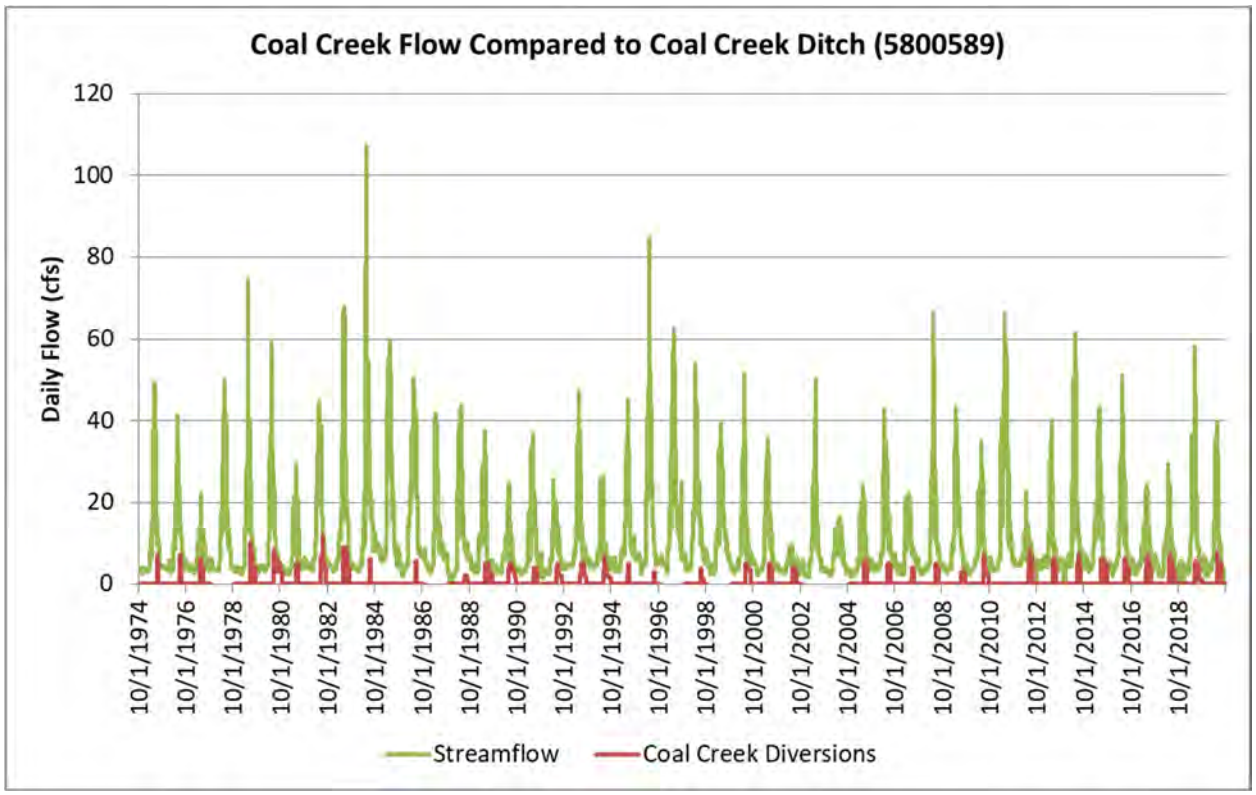


Figure 4: Daily Coal Creek streamflow compared to daily Coal Creek Ditch (5800589) diversions, full POR

Figure 5 focuses on the most recent years (2015 through 2020). This highlights how close the streamflow estimates in 2015 are to the recorded diversions; the estimated streamflow generally follows the shape of the historical diversions.

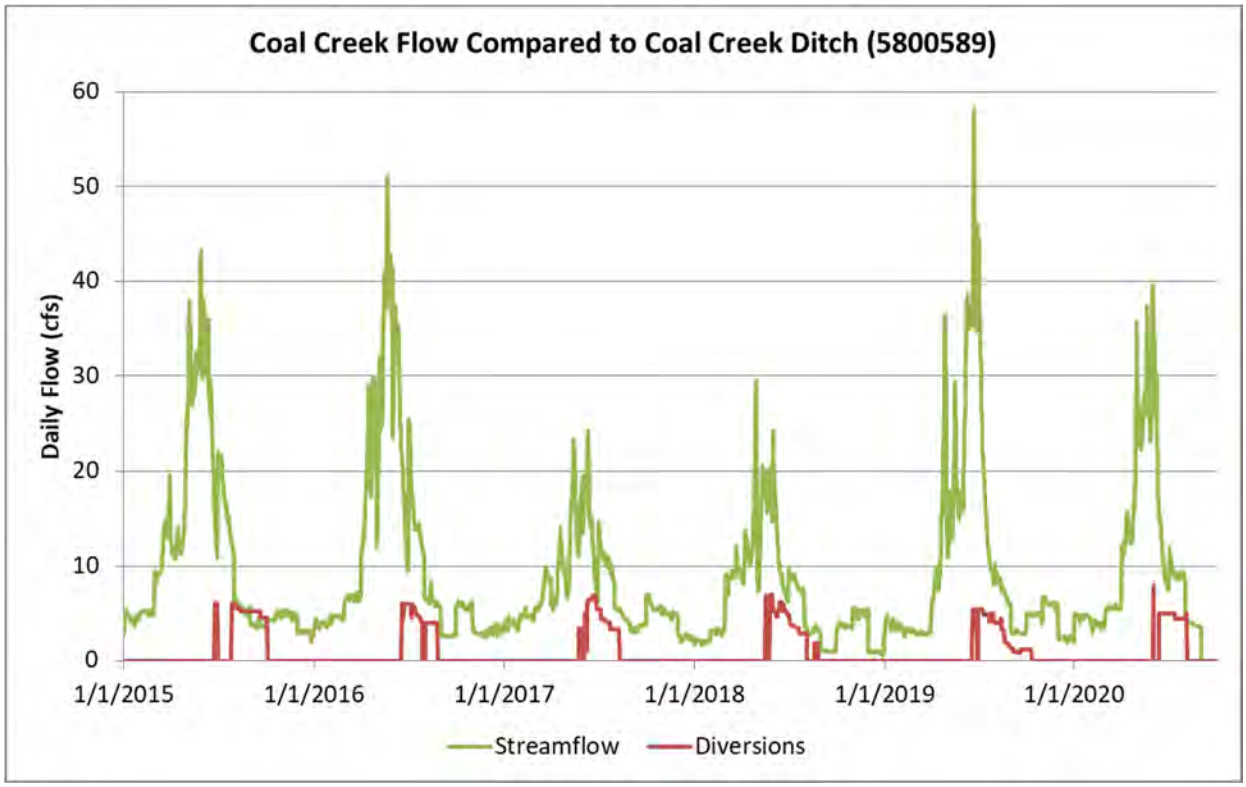


Figure 5: Daily Coal Creek streamflow compared to daily Coal Creek Ditch (5800589) diversions, 2015 - 2020

UYWCD provided WWG with daily streamflow records for Coal Creek from 1989 and 1990. It is assumed that the flow record is representative of the natural flow at the conditional Coal Creek Diversion location. Figure 6 compares estimated natural flow to measured flow in 1989 and Figure 7 compares estimated to measured flow in 1990. Key observations from the two figures are:

- The general shape of the hydrograph is well matched.
- There are periods when the model matches the observed daily flow
    - June through September in 1989
    - June 1990
- There are periods when the model over-simulates and under-simulates compared to the observed.

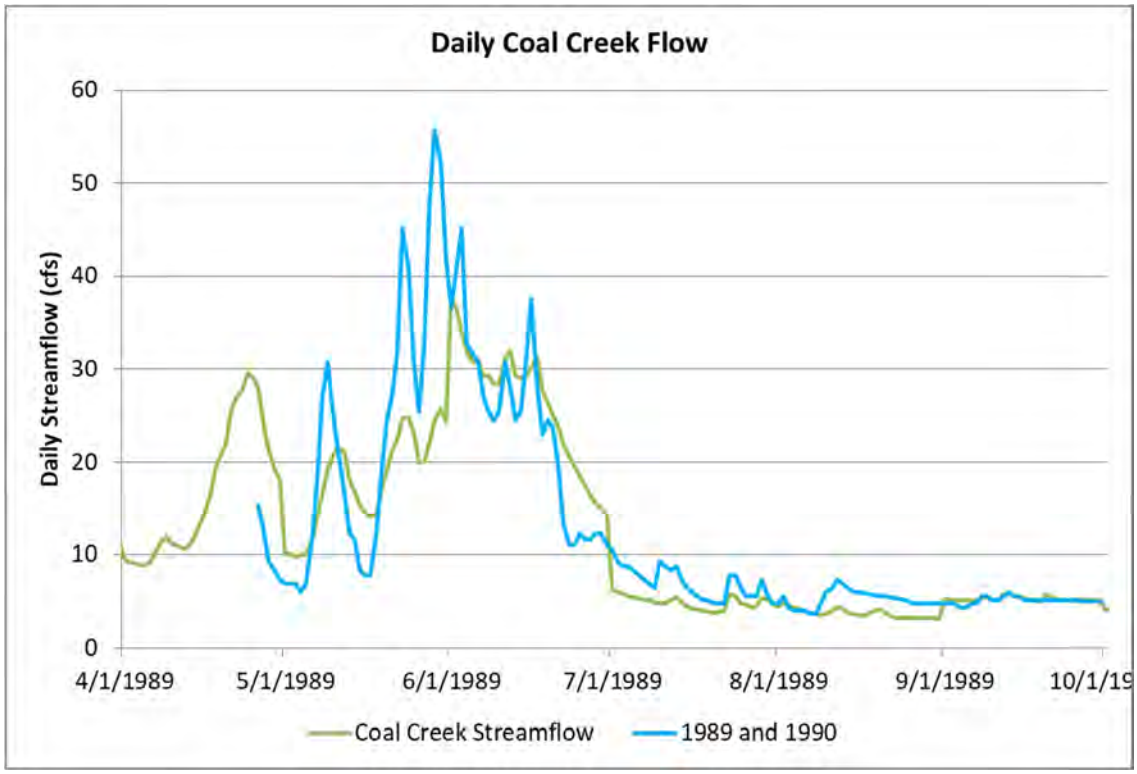


Figure 6: Compare estimated daily Coal Creek streamflow with observed (1989)

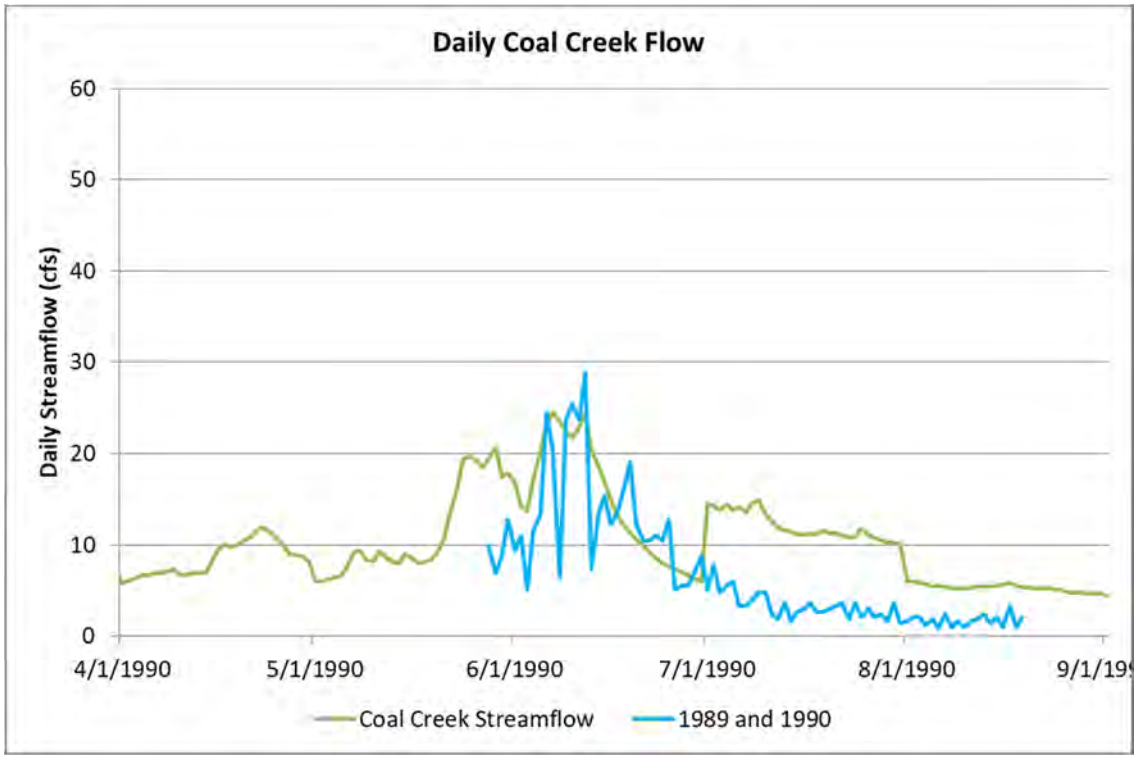


Figure 7: Compare estimated daily Coal Creek streamflow with observed (1990)

The U.S. Forest Service took spot measurements of Coal Creek during the winters of 1997, 1998, and 1999. Figure 8 shows the estimated daily natural flow and the USFS spot measurements. As shown the natural flow estimates correspond well with the measured flows.

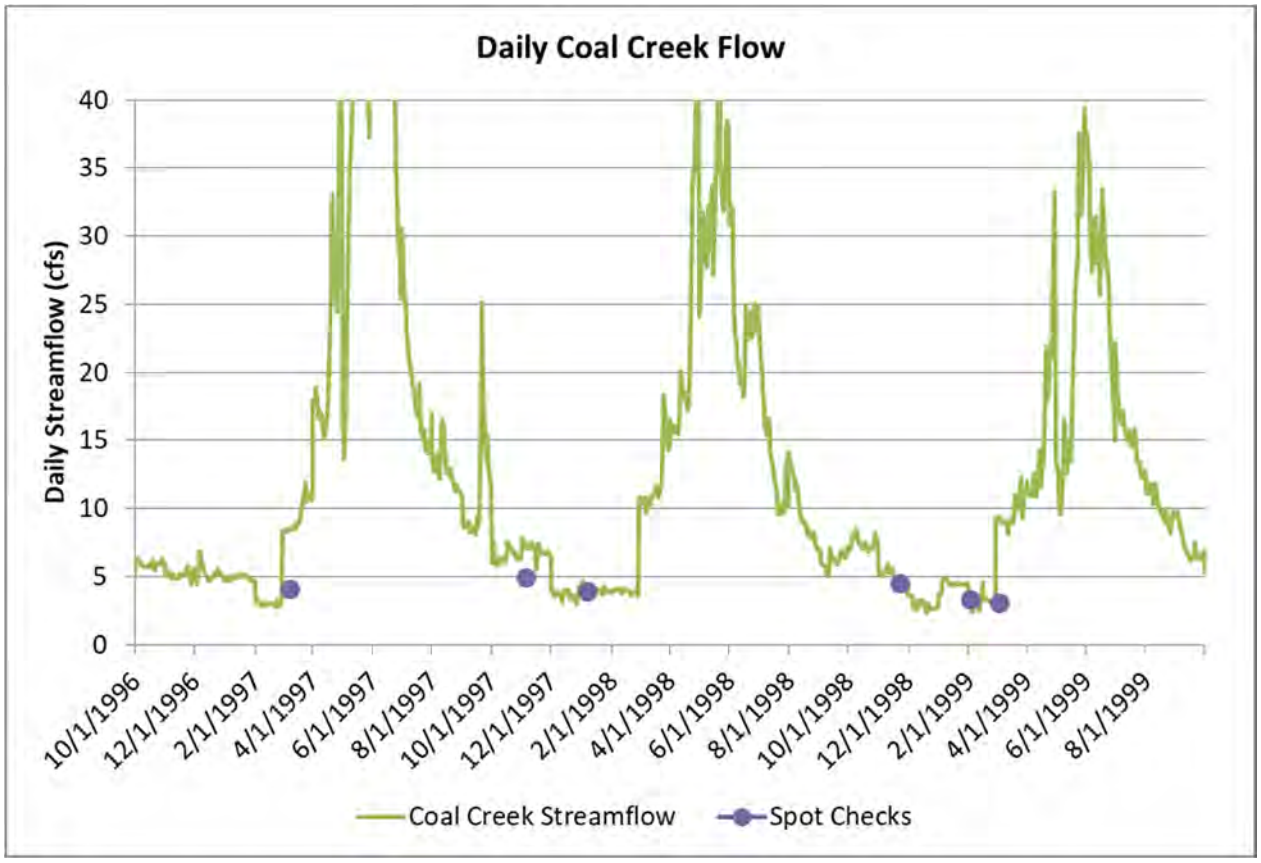


Figure 8: Daily Coal Creek flow compared to USFS spot measurements

Based on these spot flow measurements and input from knowledgeable individuals, the U.S. Forest Service determined that it was appropriate to assume that Coal Creek flows are about 4 cfs during the winter (November through March). Table 1 presents the average daily estimated Coal Creek streamflow by month. The natural flow distribution was adjusted so that the winter average for the modeled period is 4.4 cfs.

Table 1: Average Daily Estimated Coal Creek Streamflow by Month

Month	Average Daily Streamflow (cfs)
Jan	3.8
Feb	3.7
Mar	6.6
Apr	16.1
May	24.5
Jun	23.7
Jul	14.3

Aug	7.6
Sep	4.5
Oct	5.2
Nov	4.4
Dec	3.5
Winter Average	**4.4**

UYWCD performed spot measurements in 2012. These are compared to the estimated natural flows in Figure 9. The natural flows generally represent the spot measurements for this dry year.

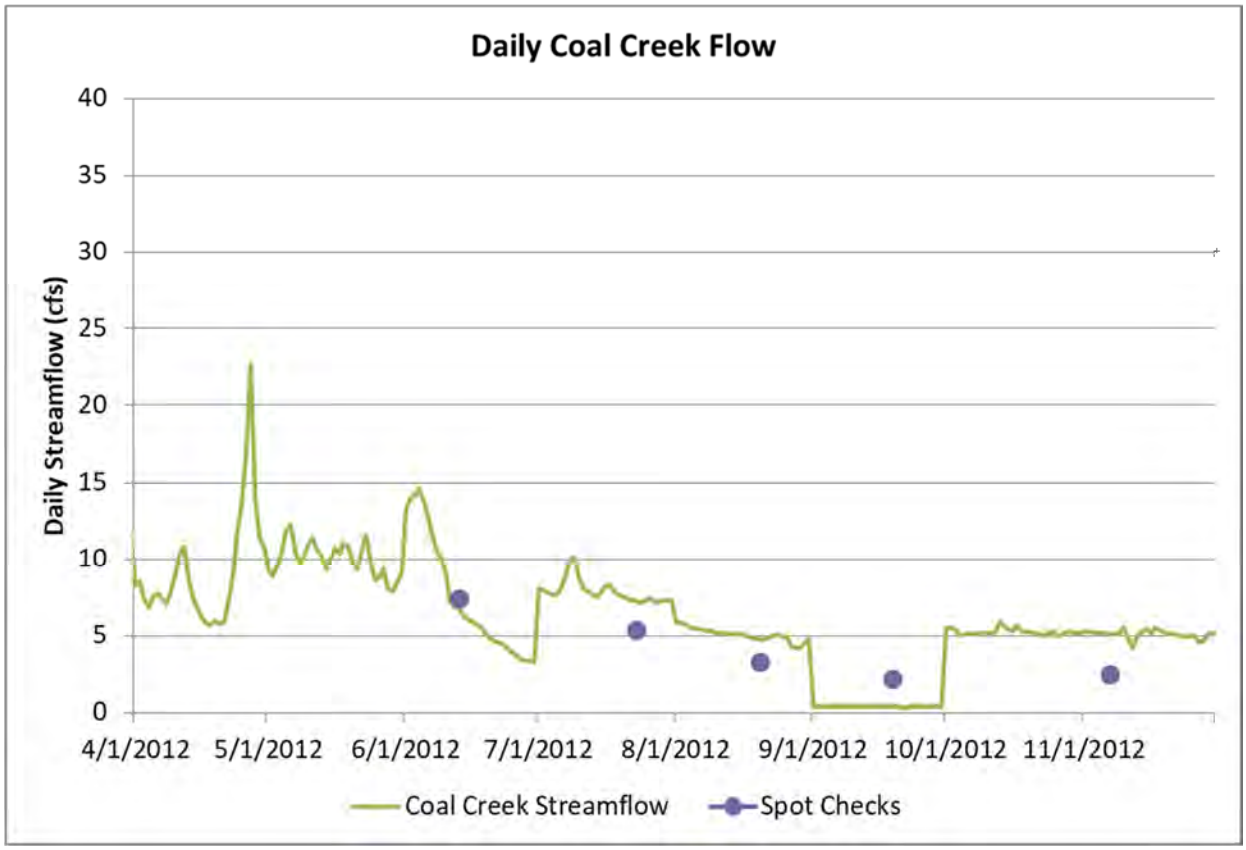


Figure 9: Estimated daily Coal Creek streamflow compared to 2012 spot measurements

As an additional point of reference, the estimated daily natural flows for Coal Creek and the inflow to Yamcolo Reservoir are shown in Figure 10.

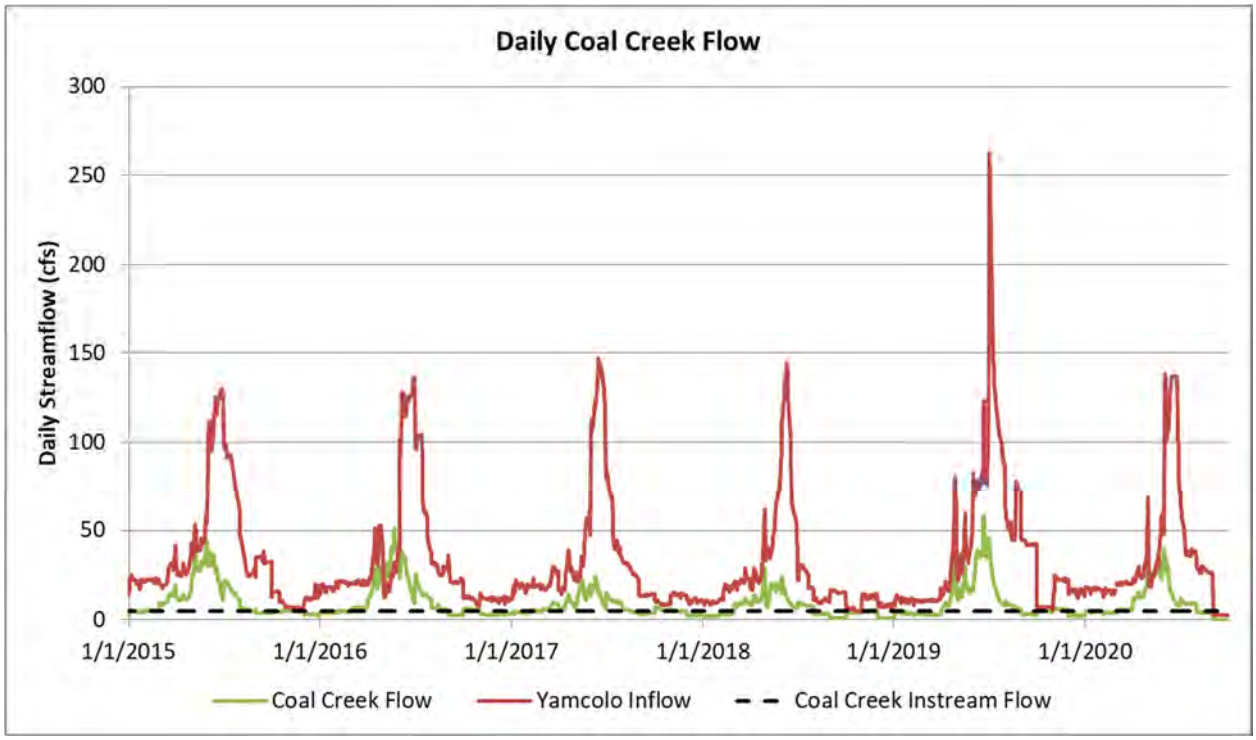


Figure 10: Coal Creek natural flow and Yamcolo Reservoir inflow

Table 2 presents two sets of daily statistics for Coal Creek streamflow. The first is the start of the historical call on the Bear River compared to the start of the call on Coal Creek as estimated by StateMod. The StateMod Days of Available Flow columns show the period during which Coal Creek flows can be diverted to Yamcolo Reservoir. The second is the date of Coal Creek annual peak flow and Coal Creek peak flow rate. The average peak flow rate is 45 cfs, with values ranging from a minimum of 9 cfs on May 31, 2002 to a maximum of 107 cfs on May 25, 1984. The earliest peak day is April 27, 2012, with a flow rate of 23 cfs. The average day of peak flow for Coal Creek is May 26. This aligns with UYWCD's experience with the Bear River.

Table 2: Daily statistics for Coal Creek

Year	Historical First Day of Call*	StateMod First Day of Call	StateMod First Day of Available Flow	StateMod Day Available Flow Ends	Peak Flow Date	Peak Flow (cfs)
1975		1/1/1975	4/14/1975	7/14/1975	6/8/1975	49
1976		1/1/1976	4/4/1976	6/11/1976	6/4/1976	41
1977		1/1/1977			6/1/1977	22
1978		1/1/1978	7/1/1978	8/27/1978	5/30/1978	50
1979		1/1/1979	4/8/1979	7/7/1978	5/29/1979	75
1980		1/1/1980	4/16/1980	6/23/1980	5/23/1980	59
1981		1/1/1981	4/10/1981	5/5/1981	6/9/1981	30

1982		1/1/1982	6/17/1982	7/16/1982	5/28/1982	45
1983		1/1/1983	4/18/1983	8/31/1983	6/25/1983	68
1984		1/1/1984	4/6/1984		5/25/1984	107
1985			1/1/1985	6/23/1985	5/29/1985	59
1986		1/1/1986	3/1/1986	12/20/1986	5/29/1986	51
1987		1/1/1987	4/7/1987	5/1/1987	4/30/1987	42
1988		1/1/1988			6/6/1988	44
1989		1/1/1989	3/28/1989	5/1/1989	6/1/1989	38
1990		1/1/1990			6/12/1990	25
1991	5/13	1/1/1991			6/15/1991	37
1992	4/29	1/1/1992	4/18/1992	5/1/1992	4/30/1992	26
1993	5/19	1/1/1993			5/22/1993	47
1994	5/22	1/1/1994	3/1/1994	5/1/1994	6/1/1994	26
1995	5/24	1/1/1995	7/5/1995	12/31/1995	6/17/1995	45
1996	7/1	1/1/1996	3/30/1996	6/25/1996	5/17/1996	85
1997	7/5	1/1/1997	3/1/1997	11/30/1997	6/6/1997	63
1998	5/29	1/1/1998	3/1/1998	6/5/1998	4/30/1998	54
1999	6/2	1/1/1999	3/1/1999	6/5/1999	5/31/1999	39
2000	5/15	1/1/2000	3/1/2000	6/5/2000	5/31/2000	51
2001	5/10	1/1/2001			5/16/2001	36
2002	4/19	1/1/2002			5/31/2002	9
2003	5/15	1/1/2003			5/31/2003	50
2004	4/5	1/1/2004			6/8/2004	16
2005	5/4	1/1/2005			5/24/2005	24
2006	5/28	1/1/2006	4/6/2006	5/1/2006	4/28/2006	43
2007	6/5	1/1/2007	3/1/2007	5/1/2007	5/15/2007	22
2008	6/16	1/1/2008	7/2/2008	7/6/2008	5/21/2008	67
2009	6/1	1/1/2009	3/1/2009	6/8/2009	4/30/2009	43
2010	6/17	1/1/2010	3/1/2010	6/14/2010	6/8/2010	35
2011	No Call	1/1/2011	3/1/2011	11/1/2011	6/7/2011	66
2012	5/1	1/1/2012	2/1/2012	5/1/2012	4/27/2012	23
2013	5/23	1/1/2013			5/27/2013	40
2014	6/25	1/1/2014	6/1/2014	6/17/2014	5/31/2014	62
2015	7/1	1/1/2015	3/1/2015	6/7/2015	5/31/2015	43
2016	6/18	1/1/2016	3/1/2016	6/12/2016	5/22/2016	51
2017	6/16	1/1/2017	4/17/2017	4/30/2017	6/10/2017	24
2018	5/23	1/1/2018			4/29/2018	30
2019	6/6	1/1/2019			6/22/2019	58
2020	5/24	1/1/2020	3/1/2020	6/8/2020	5/31/2020	40

* Provided by UYWCD. First day of a Bear River call impacting Yamcolo Reservoir storage. Data starts in 1991.

Model Results

The Baseline Yampa Basin model was updated to include the Coal Creek Diversion (5802431). The structure is represented with the 2003 conditional water right for 100 cfs. The StateMod model reports the flow legally available at the diversion point. Water is generally available during the rising limb and peak of the hydrograph. The average first day of available flow is March 28.

Results using the StateMod available flow results for Coal Creek are presented first. Results using the historical call regime to estimate available flow are presented second.

StateMod Available Flow

As described in the "Modeling Approach" section above, the legally available flow results from StateMod are entered into the spreadsheet model in order to estimate the amount of flow that could have been stored in Yamcolo, assuming the same historical operations of existing water supplies. The spreadsheet model stores up to 100 cfs per day of available flow from Coal Creek when there is storage space in Yamcolo Reservoir, based on the historical contents. The reservoir cannot be filled beyond the historical capacity (either 9,096 acre-feet from 1981 through 1997, or 9,621 acre-feet from 1998 to present). The spreadsheet model is re-set to historical values on November 1 to prevent carry-over during the winter.

Figure 11 shows the results of the Yamcolo Reservoir spreadsheet analysis. The orange line shows the historical Yamcolo contents. The green line shows the modified contents. The blue line shows the legally available flow on Coal Creek. The key observation from the graph is that Yamcolo contents are not substantially changed by the additional supplemental supply from Coal Creek.

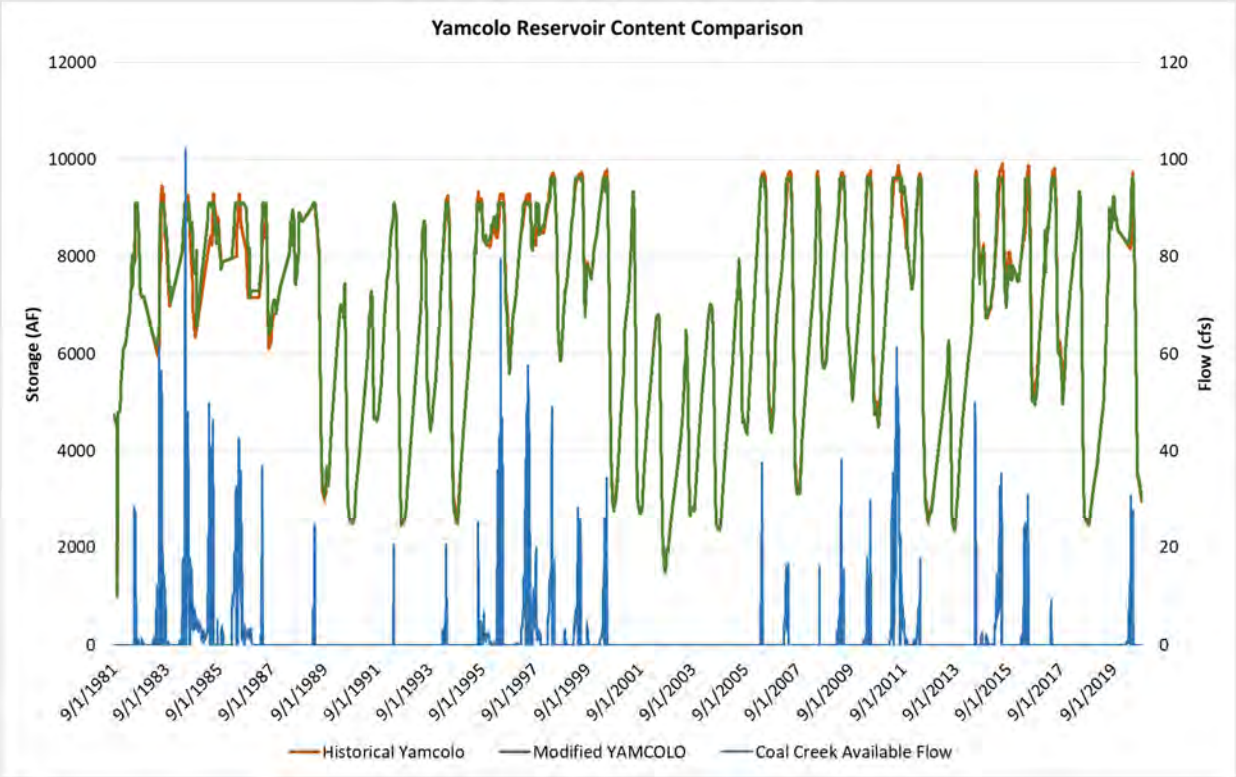


Figure 11: Yamcolo Reservoir content comparison using StateMod Coal Creek available flow results

Figure 12 shows the annual volume (from November 1 through October 31) of legally available flow from StateMod compared to the amount of water that can be stored considering storage capacity determined by the spreadsheet model. The red stars indicate whether Yamcolo Reservoir filled historically, with a star at the top of the graph indicating that the reservoir filled to capacity and a star at the bottom indicating that the reservoir did not fill to capacity. Table 3 shows available Coal Creek volume compared to the stored volume by year. Key observations from the graph and table are:

- When there is legally available flow from Coal Creek, the volume is much greater than the stored volume. This is due to the limited reservoir capacity.
- Legally available flow does not occur every year. It primarily occurs during wet or average years.
- In years when Yamcolo did not fill historically, there is no available flow from Coal Creek.

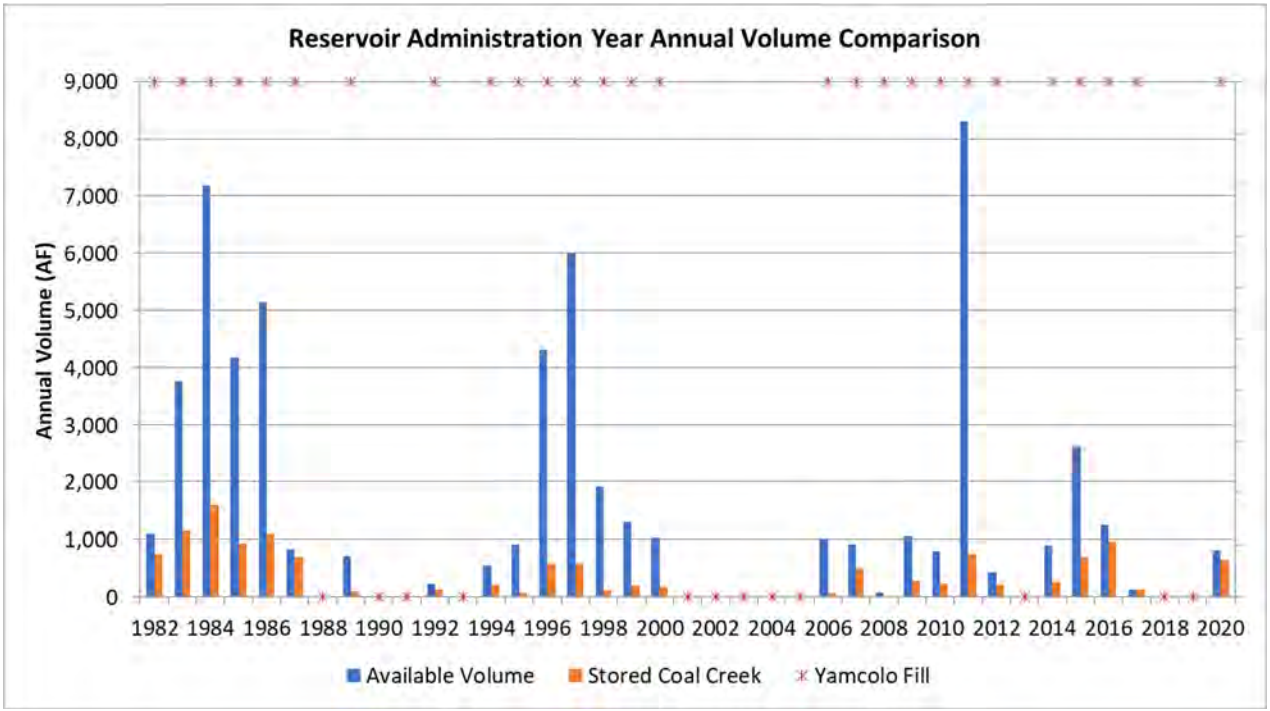


Figure 12: Comparison of legally available flow (StateMod) and stored flow from Coal Creek

The median available flow is about 820 acre-feet, while the median stored volume is about 190 acre-feet. As noted above, there is no available flow in years when Yamcolo Reservoir did not fill historically. This means, as represented by the described StateMod configuration, that the supply from Coal Creek helps Yamcolo Reservoir fill earlier in the year than historically, but does not increase the Yamcolo Reservoir supply during dry years.

Table 3: StateMod available Coal Creek volume compared to stored Coal Creek volume in Yamcolo, and historical Yamcolo fill status

Year	Available Coal Creek Volume (AF)	Stored Coal Creek Volume (AF)	Yamcolo Fill
1982	1,093	745	Yes
1983	3,761	1,154	Yes
1984	7,186	1,591	Yes
1985	4,179	933	Yes
1986	5,145	1,105	Yes
1987	828	703	Yes
1988	0	0	No
1989	711	104	Yes
1990	0	0	No
1991	0	0	No
1992	228	123	Yes
1993	0	0	No
1994	552	213	Yes

1995	917	83	Yes
1996	4,318	585	Yes
1997	6,002	588	Yes
1998	1,915	111	Yes
1999	1,290	197	Yes
2000	1,023	186	Yes
2001	0	0	No
2002	0	0	No
2003	0	0	No
2004	0	0	No
2005	0	0	No
2006	1,018	67	Yes
2007	912	502	Yes
2008	87	0	Yes
2009	1,065	282	Yes
2010	791	228	Yes
2011	8,301	750	Yes
2012	427	220	Yes
2013	0	0	No
2014	890	265	Yes
2015	2,634	689	Yes
2016	1,240	967	Yes
2017	129	129	Yes
2018	0	0	No
2019	0	0	No
2020	819	650	Yes
Min	*0*	*0*	
Max	*8,301*	*1,591*	
Mean	*1,473*	*338*	
Median	*819*	*186*	

Historical Call Regime Available Flow

As described in the "Model Approach" section above, the StateMod natural flow results for Coal Creek in combination with the historical call record are used to estimate the legally available flow. This analysis assumes that the call regime remains the same as historical and results in more days of legally available flow from Coal Creek. The call record is available starting in 1991.

Figure 13 shows the results of the Yamcolo Reservoir spreadsheet analysis using the historical call approach to estimating legally available flow on Coal Creek. The key observations from the graph is that the historical call approach finds days with available flow in every year from 1991 through 2020. Therefore, Yamcolo Reservoir is able to store flow from Coal Creek in dry years. There are four more

years in which the modified Yamcolo Reservoir is able to fill than historically (1993, 2001, 2018, and 2019).

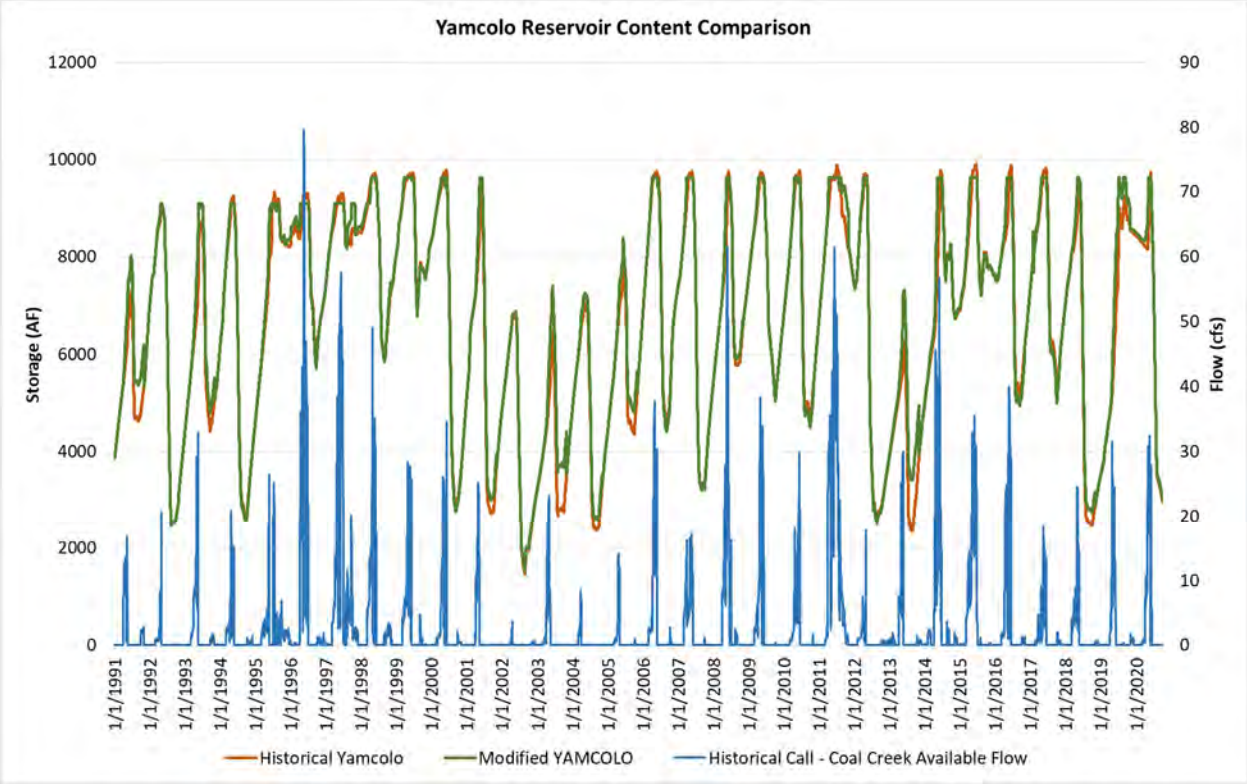


Figure 13: Yamcolo Reservoir content comparison using historical call analysis Coal Creek available flow results

Figure 14 shows a comparison of the monthly available flow volume from Coal Creek. StateMod results are the dashed blue line. Historical call results are the grey line. The historical call approach identifies more days with legally available flow, especially in dry years. This is because the historical call comes on later in the runoff season than the StateMod "call". Additionally, there are years when the historical call record shows a very small amount of available flow in the fall. StateMod does not find available flow outside of the runoff.

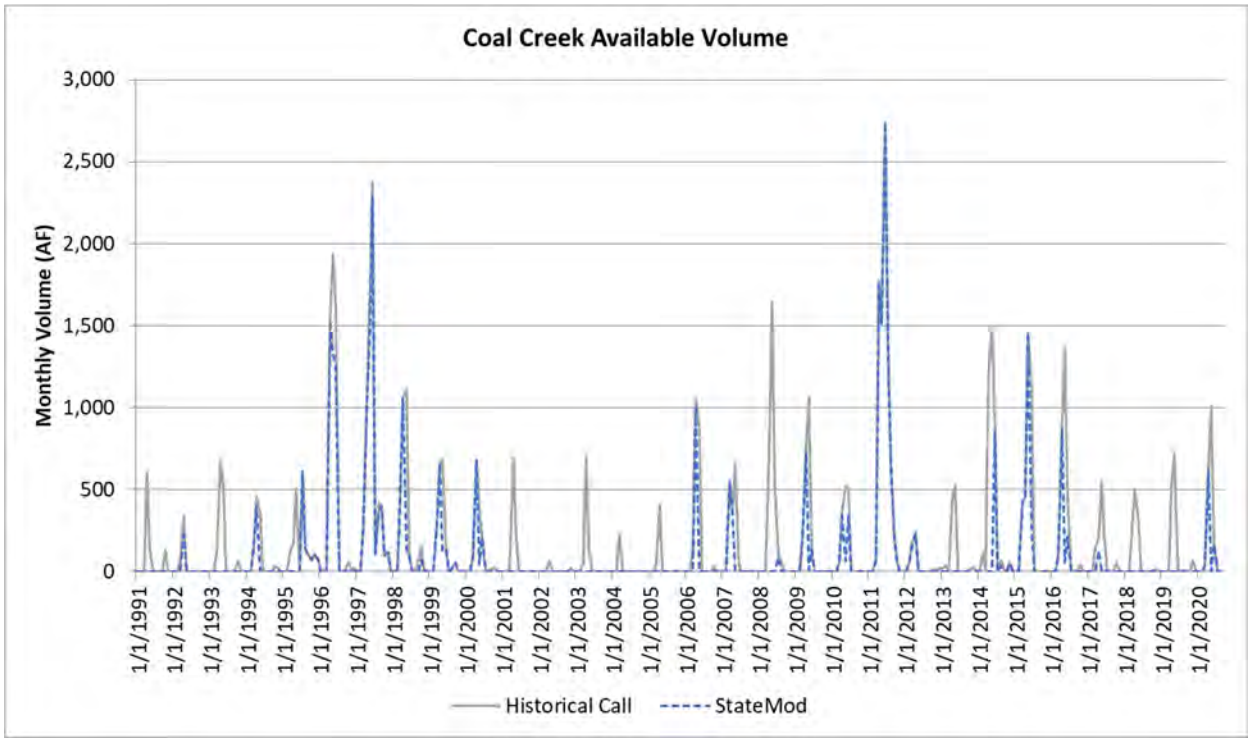


Figure 14: Comparison of monthly Coal Creek available volume from the StateMod and historical call approaches

Figure 15 shows a comparison of the Coal Creek legally available annual volume. Figure 16 shows a comparison of the volume of water stored in Yamcolo for the two approaches. The red stars indicate whether Yamcolo Reservoir filled historically, with a star at the top of the graph indicating that the reservoir filled to capacity and a star at the bottom indicating that the reservoir did not fill to capacity. Note that with the additional supply from Coal Creek, the spreadsheet model is able to fill Yamcolo Reservoir in 1993, 2001, 2018, and 2019. Note the difference in scales from Figure 15 to Figure 16. The difference between the two approaches is largest in dry years because StateMod determined there is no legally available flow while the historical call approach identifies days with legally available flow.

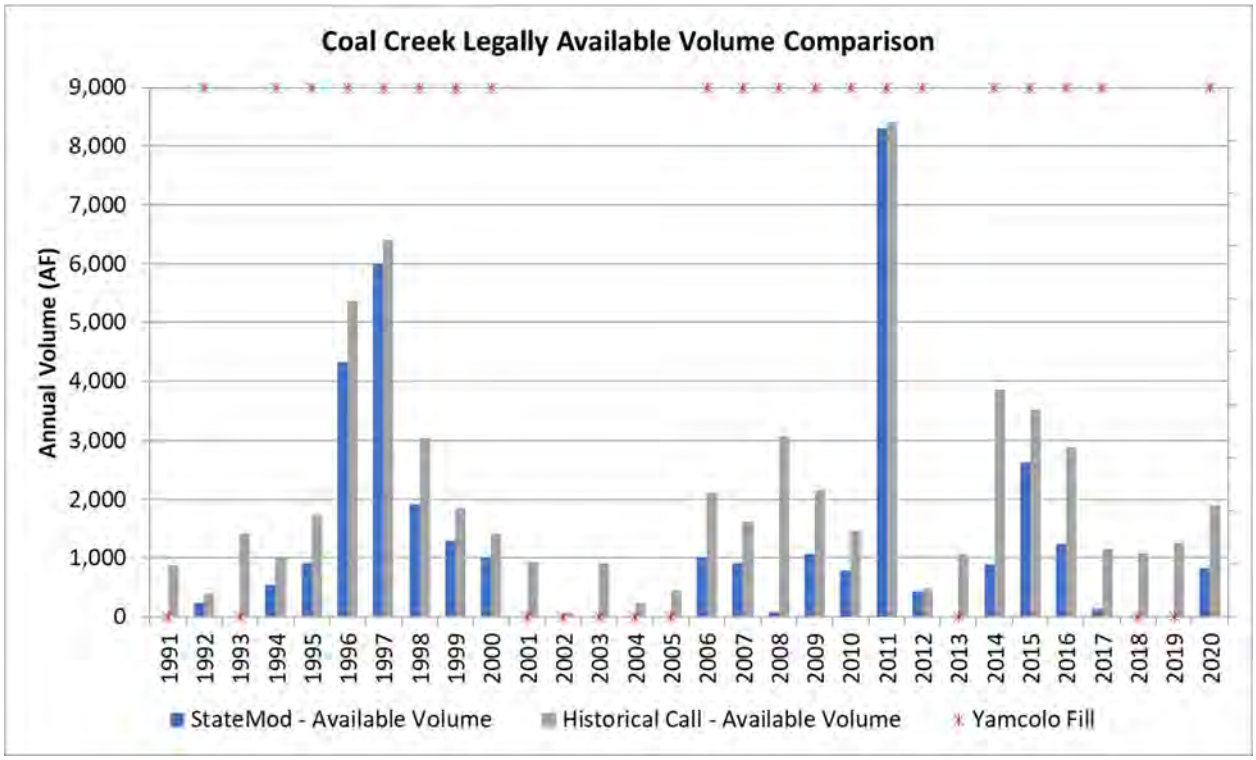


Figure 15: Comparison of Coal Creek legally available flow

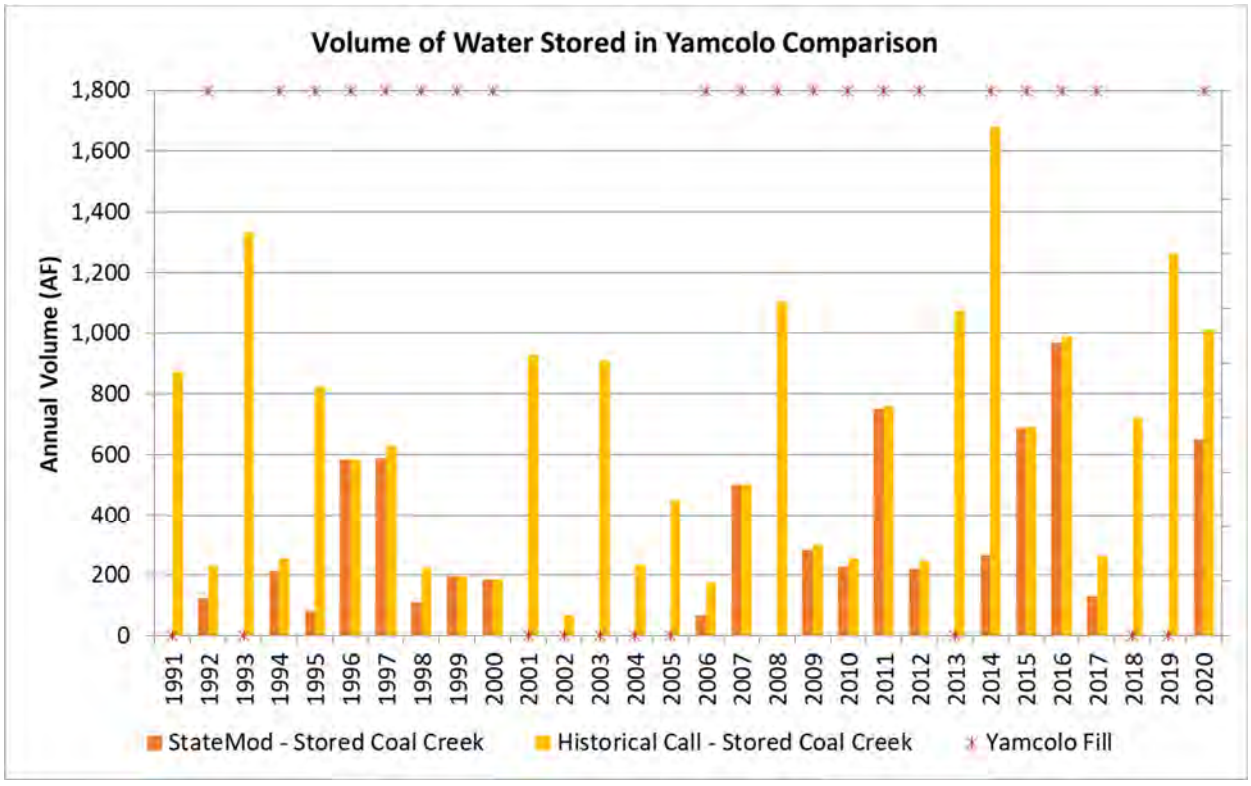


Figure 16: Comparison of Coal Creek stored in Yamcolo Reservoir

Table 4 reports the StateMod and historical call results for the annual available Coal Creek volume and the stored Coal Creek volume in Yamcolo Reservoir. The median stored volume increased from 186 acre-feet to 607 acre-feet and the mean stored volume increased from 338 acre-feet to 632 acre-feet. The total stored volume is computed as the difference between the storage in Yamcolo Reservoir on November 1 to the maximum volume during the reservoir administration year.

Table 4: StateMod and historical call results for annual available Coal Creek volume and stored volume in Yamcolo Reservoir

	StateMod Approach			Historical Call Approach		
Year	Available Coal Creek Volume (AF)	Stored Coal Creek Volume (AF)	Total Stored (Bear River + Coal Creek) (AF)	Available Coal Creek Volume (AF)	Stored Coal Creek Volume (AF)	Total Stored (Bear River + Coal Creek) (AF)
1991	0	0	4,646	871	871	5,385
1992	228	123	3,773	398	231	3,773
1993	0	0	5,481	1,412	1,333	5,853
1994	552	213	4,042	1,002	256	4,042
1995	917	83	5,706	1,742	825	5,706
1996	4,318	585	841	5,358	585	841
1997	6,002	588	2,404	6,405	628	2,404
1998	1,915	111	1,171	3,045	223	1,171
1999	1,290	197	2,372	1,844	197	2,372
2000	1,023	186	2,017	1,413	186	2,017
2001	0	0	5,743	932	932	6,030
2002	0	0	3,175	68	68	3,243
2003	0	0	4,070	910	909	4,979
2004	0	0	3,483	233	233	3,716
2005	0	0	4,684	449	449	5,126
2006	1,018	67	4,393	2,113	175	4,393
2007	912	502	3,238	1,621	502	3,238
2008	87	0	5,415	3,083	1,104	5,415
2009	1,065	282	3,028	2,155	299	3,028
2010	791	228	3,953	1,460	254	3,953
2011	8,301	750	4,278	8,415	761	4,278
2012	427	220	1,419	483	243	1,419
2013	0	0	3,101	1,072	1,072	4,155
2014	890	265	5,699	3,855	1,680	5,699
2015	2,634	689	2,809	3,522	691	2,809
2016	1,240	967	1,804	2,879	990	1,804
2017	129	129	3,466	1,162	261	3,466
2018	0	0	3,407	1,079	723	3,692
2019	0	0	6,354	1,266	1,262	6,729
2020	819	650	1,075	1,893	1,012	1,075

Min	*0*	*0*	*841*	*68*	*68*	*841*
Max	*8,301*	*1,591*	*6,354*	*8,415*	*1,680*	*6,729*
Mean	*1,473*	*338*	*3,568*	*2,071*	*632*	*3,727*
Median	*819*	*186*	*3,475*	*1,436*	*607*	*3,745*

Conclusion

The StateMod analysis provides an estimate of daily physical and legally available flow on Coal Creek. The legally available flow was used in a reservoir operation spreadsheet model, reflecting historical reservoir operations from 1982 through 2020, to determine the volume of supplemental supply for Yamcolo Reservoir. As represented by the described StateMod configuration, Coal Creek Diversion provides an annual maximum supplemental supply of about 1,590 acre-feet and a median supply of 190 acre-feet. Given the StateMod determined first day of river administration of January 1st in every year considered, in years when Yamcolo Reservoir did not fill, there is no legally available flow on Coal Creek. The StateMod determined river administration is artificially aggressive in this case for the Bear River reach of the Yampa system when compared to historical river administration.

As an alternative approach, the historical call record from 1991 through 2020 was used to determine the legally available flow on Coal Creek and was used in the same reservoir operations spreadsheet model. This approach finds that the Coal Creek Diversion can provide an annual maximum supplemental supply of about 1,680 acre-feet and a median supply of about 610 acre-feet. Available flow was identified in every year, with 2002 being the smallest volume of 68 acre-feet.

This analysis does not address the goals of smoothing the daily diurnals or providing a supplemental supply for hydropower production at Stagecoach Reservoir.

Appendix A: Yamcolo Representation in StateMod

Yamcolo Reservoir is operated by Upper Yampa Water Conservancy District for irrigation, municipal, and augmentation water supply.

Table 5: Yamcolo Reservoir Storage Contents and Surface Area

Storage Contents (ACFT)	Surface Acre (Acre)
0	0
606	58
1,305	81
1,644	87
2,007	93
2,394	96
2,805	105
3,243	113
3,711	120
4,210	123
4,738	135
5,295	142
5,883	150
6,500	156
7,149	165
7,829	173
8,541	181
9,284	188
9,621	202

Yamcolo Reservoir is represented by the State's identifier 5804240 in the model. It is an on-channel reservoir located on the Bear River. The reservoir capacity is 9,621 acre-feet and it is modeled with five accounts listed in Table 6.

Table 6: Yamcolo Reservoir Accounts

Fill Order	Account	Storage Amount (af)
1	Conservation	1,086
2	Yamcolo M&I	1,010
3	Yamcolo Irrigators Association	3,000
4	Stagecoach Exchange	4,000
5	Raise	525
	Total	**9,621**

The reservoir is filled with its current water rights portfolio, listed in Table 7. The accounts in the reservoir are filled in the order listed in Table 6. Note that the Yamcolo storage rights have different decreed uses. A simplified approach is taken in the model. After stored water is distributed to the accounts, it is no longer tracked by water right.

Table 7: Yamcolo Water Rights

Admin Number	Priority Date	Volume (af)	1st or 2nd Fill
41329.00000	02/26/1963	6,532	1
41727.39991	06/29/1959	2,500	1
47481.37136	09/04/1951	1,000	1
47905.00000	02/27/1981	914	2
50769.50653	09/06/1988	525	1

The current operations of Yamcolo Reservoir represent typical operations as of 2021:

- Fill accounts with in-priority water rights in the order listed in Table 6.
- Release to diversion structures. Many of the structures receive water from multiple accounts. The order in which the accounts release to the diversions is listed in Table 8.
- For Mt. Werner, total annual releases are limited to 300 acre-feet. This release occurs after a release from Stagecoach Reservoir to Mt. Werner.

Table 8: Yamcolo Releases

Destination WDID	Destination Name	1st Account	2nd Account	3rd Account
5804685_D	Stillwater Ditch	Yamcolo Irrigators	Exchange	Raise
5800564	Buckingham-Mandall	Exchange	Yamcolo Irrigators	Raise
5800763	Mandall	Exchange	Yamcolo Irrigators	Raise
5800500	Acton	Exchange	Yamcolo Irrigators	Raise
5800684	Hern-Kolbe	Exchange	Yamcolo Irrigators	Raise
5800622	Egeria	Exchange	Yamcolo Irrigators	Raise
5800539	Big Mesa	Yamcolo Irrigators	Raise	
5800738	Lindsey	Yamcolo Irrigators	Raise	
5800945	Wooley	Yamcolo Irrigators	Raise	
5800643	Fix	Yamcolo Irrigators	Raise	
5800777	Mill No. 1	Yamcolo Irrigators	Raise	
5800821	Pennsylvania	Yamcolo Irrigators	Raise	
5800541	Bird	Yamcolo Irrigators	Raise	
5800589	Coal Creek	Yamcolo Irrigators	Raise	
5800540	Bijou	Yamcolo Irrigators	Raise	
5800782	Moody	Yamcolo Irrigators	Raise	
5800634	Ferguson	Yamcolo Irrigators	Raise	
5800879	Stafford	Exchange	Raise	
5800731	Laughlin	Exchange	Raise	

5800933	Wipple	Exchange	Raise	
5800866	Snow Bank	Exchange	Raise	
5801074	Rossi Highline	Exchange	Raise	
5800807	Oak Dale	Exchange	Raise	
5800798	Nickell	Yamcolo M&I	Raise	
5805066	Mt. Werner	Yamcolo M&I		

Technical Memorandum

To: Andy Rossi, UYWCD General Manager
From: Lisa Brown, Project Manager
Date: 5/11/2022
Re: Additional Coal Creek Diversion Model Scenarios

Introduction

This Technical Memorandum serves as an appendix to the "Coal Creek Supply for Yamcolo Modeling" final report prepared by WWG for UYWCD, delivered December 15, 2021. Please refer to the main report for additional details on the Coal Creek Diversion and the modeling approaches.

After the final report was delivered, UYWCD requested additional modeling scenarios for the Coal Creek Diversion. This Tech Memo presents the results for three new modeling scenarios and additional results from an existing scenario. The new modeling scenarios are:

- Restrict the Coal Creek Diversion capacity to 70 cfs
- Use Coal Creek as an additional supply for some of the Yamcolo Reservoir storage rights
- Hot and Dry climate change (monthly only)

The additional results requested are:

- A comparison of the historical date of fill and the simulated date of fill for Yamcolo Reservoir. These results are presented in the "70 cfs Capacity" section.
- The daily natural inflows to Yamcolo Reservoir. These results were extracted from the existing daily natural flow scenario.

Results can be found in the "Yamcolo_Spreadsheet_Model.xlsx" or "Coal_Creek_Tech_Memo_Results.xlsx" spreadsheets.

70 cfs Capacity

In order to restrict the Coal Creek Diversion to a 70 cfs capacity, a new scenario in the spreadsheet model was developed. This scenario built on the modeling results presented in Figure 11, Figure 12, and Table 3 in the final report. This scenario uses the daily legally available flow results from StateMod and caps the flow at 70 cfs. The spreadsheet model then stores the flow from Coal Creek when there is space in Yamcolo Reservoir, based on the historical reservoir contents. The period of record is September 1, 1981 through September 30, 2020.

As described in the final report, for this scenario the StateMod model evaluates the legal availability of the conditional 2003 Coal Creek Diversion water right. This is a very junior water right for the Bear River system. The model only identified available flow in relatively wet years. With the exception of 1987, all of the years with available flow on Coal Creek are years in which Yamcolo Reservoir filled, both historically and in the model simulation. Therefore, the StateMod model did not divert any water from Coal Creek, since the Bear River supplies were sufficient. This result prompted the study to take the

hybrid-modeling approach of using the legally available supplies from StateMod and a spreadsheet model.

The results from the 70 cfs capacity for the Coal Creek Diversion very similar to the results presented in the final report because there are only 13 days from water year 1982 through 2020 that the legally available flow exceeded 70 cfs. The figures and tables below compare the 100 cfs capacity results (published in the final report) and the 70 cfs capacity results (developed for this memo). Figure 1 compares the modeled Yamcolo storage and the available Coal Creek flows limited to the diversion capacity. Notice that in 1984 and 1996, there are days in the 100 cfs scenario when the available Coal Creek flow exceeds 70 cfs. These are the days that are restricted to 70 cfs in the new scenario. Figure 2 and Table 1 provide annual summaries of the volume of available water and stored water. The years 1984 and 1996 have a slight difference in the available Coal Creek volume, however, the Stored Coal Creek Volume does not change because Yamcolo Reservoir filled in both of those years. The Yamcolo Reservoir contents are the same in both scenarios.

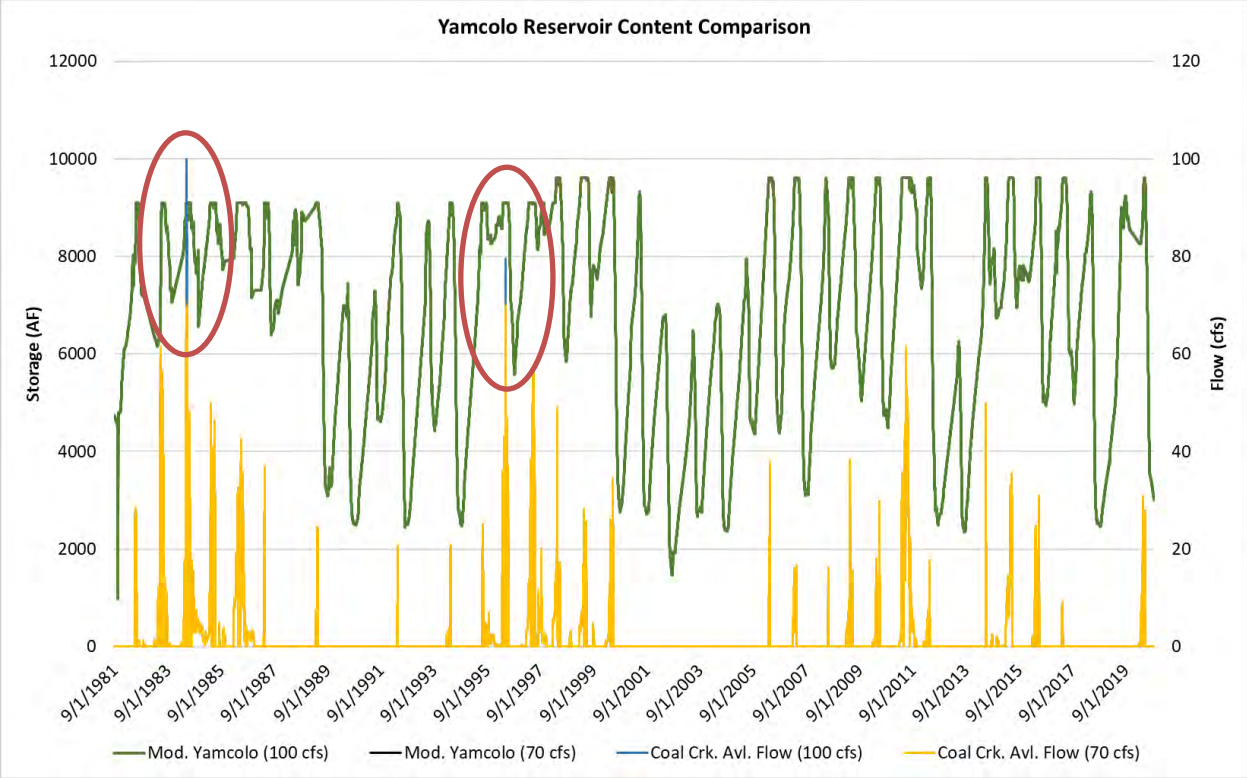


Figure 1:Comparison of the modeled daily Yamcolo Reservoir contents and daily available flow on Coal Creek for the 100 cfs and 70 cfs capapcity scenarios

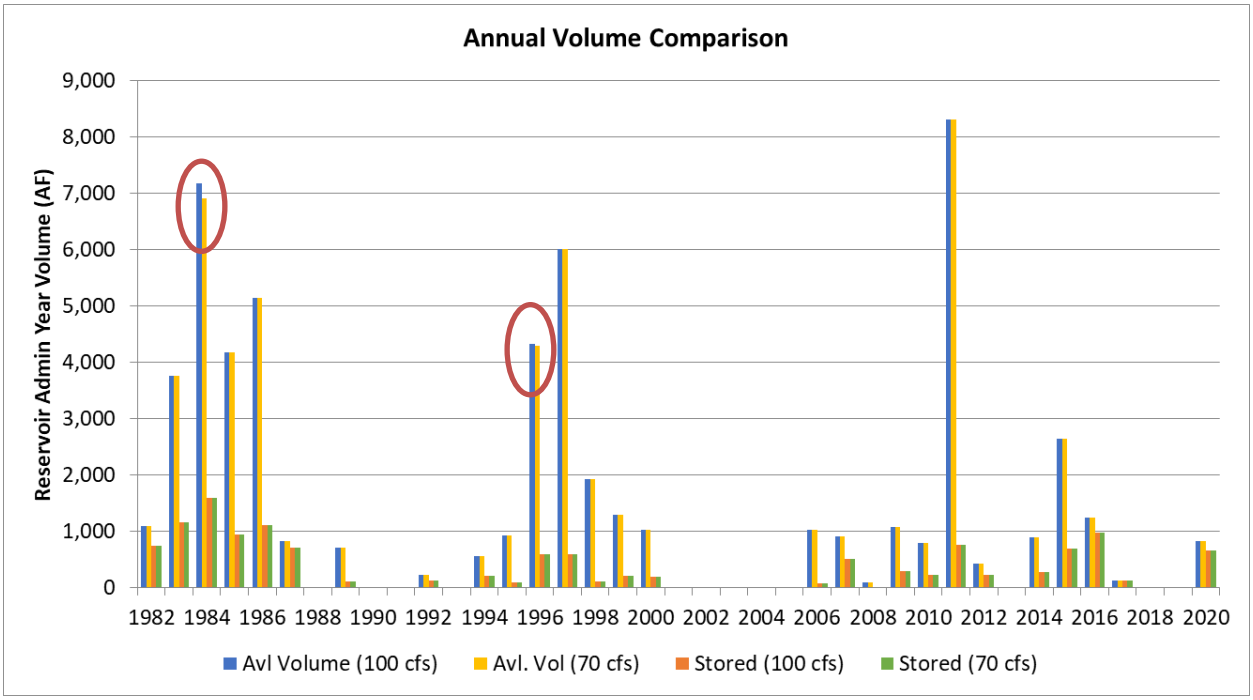


Figure 2: Comparison of the annual volumes of legally available flow (limited to either 100 cfs or 70 cfs) and stored flow from Coal Creek

Table 1: Comparing results from 100 cfs and 70 cfs capacity scenarios

Year	Available Coal Creek Volume with 100 cfs capacity (AF)	Available Coal Creek Volume with 70 cfs capacity (AF)	Stored Coal Creek Volume with 100 cfs capacity (AF)	Stored Coal Creek Volume with 70 cfs capacity	Yamcolo Fill
1982	1,093	1,093	745	745	Yes
1983	3,761	3,761	1,154	1,154	Yes
1984	7,186	6,915	1,591	1,591	Yes
1985	4,179	4,179	933	933	Yes
1986	5,145	5,145	1,105	1,105	Yes
1987	828	828	703	703	Yes
1988	0	0	0	0	No
1989	711	711	104	104	Yes
1990	0	0	0	0	No
1991	0	0	0	0	No
1992	228	228	123	123	Yes
1993	0	0	0	0	No
1994	552	552	213	213	Yes
1995	917	917	83	83	Yes
1996	4,318	4,291	585	585	Yes
1997	6,002	6,002	588	588	Yes

1998	1,915	1,915	111	111	Yes
1999	1,290	1,290	197	197	Yes
2000	1,023	1,023	186	186	Yes
2001	0	0	0	0	No
2002	0	0	0	0	No
2003	0	0	0	0	No
2004	0	0	0	0	No
2005	0	0	0	0	No
2006	1,018	1,018	67	67	Yes
2007	912	912	502	502	Yes
2008	87	87	0	0	Yes
2009	1,065	1,065	282	282	Yes
2010	791	791	228	228	Yes
2011	8,301	8,301	750	750	Yes
2012	427	427	220	220	Yes
2013	0	0	0	0	No
2014	890	890	265	265	Yes
2015	2,634	2,634	689	689	Yes
2016	1,240	1,240	967	967	Yes
2017	129	129	129	129	Yes
2018	0	0	0	0	No
2019	0	0	0	0	No
2020	819	819	650	650	Yes
Min	*0*	*0*	*0*	*0*	
Max	*8,301*	*8,301*	*1,591*	*1,591*	
Mean	*1,473*	*1,466*	*338*	*338*	
Median	*819*	*819*	*186*	*186*	

In addition to the results previously presented in the final report, UYWCD requested a comparison of the change in the fill date for Yamcolo Reservoir. Table 2 reports the date of historical fill for Yamcolo Reservoir, which is taken as the first day in the year that the reservoir reaches 9,090 acre-feet from 1982 through 1997 and 9,615 acre-feet from 1998 through present. These values are 6 acre-feet less than the reservoir capacity to allow for minor errors in measurement. Years that are blank indicate that Yamcolo Reservoir did not fill. The dates of fill for the 100 cfs capacity scenario and the 70 cfs capacity scenario are also presented Table 2. The dates are the same, even in 1984 and 1996. The change in fill date column is how many days faster Yamcolo Reservoir filled with the additional supply from Coal Creek compared to historical. The statistics reported at the bottom of the table are computed for the years with values.

Table 2: Date of Historical Fill and Date of Fill with Coal Creek Supplies

Year	**Historical** Date of Fill (9,090 or 9,615)	**100 cfs capacity** Date of Fill	**70 cfs capacity**	
			Date of Fill	**Change in Fill Date**
1982	7/10/1982	7/2/1982	7/2/1982	8
1983	6/22/1983	6/18/1983	6/18/1983	4
1984	6/1/1984	5/16/1984	5/16/1984	16
1985	6/13/1985	4/11/1985	4/11/1985	63
1986	6/4/1986	4/16/1986	4/16/1986	49
1987				
1988				
1989	4/23/1989	3/31/1989	3/31/1989	23
1990				
1991				
1992	4/30/1992	4/28/1992	4/28/1992	2
1993				
1994	4/21/1994	4/18/1994	4/18/1994	3
1995	6/29/1995	6/29/1995	6/29/1995	0
1996	5/5/1996	4/10/1996	4/10/1996	25
1997	4/25/1997	4/1/1997	4/1/1997	24
1998	4/15/1998	4/14/1998	4/14/1998	1
1999	4/25/1999	3/23/1999	3/23/1999	33
2000	4/25/2000	4/10/2000	4/10/2000	15
2001				
2002				
2003				
2004				
2005				
2006	4/17/2006	4/10/2006	4/10/2006	7
2007	4/18/2007	3/30/2007	3/30/2007	19
2008	5/29/2008	5/29/2008	5/29/2008	0
2009	4/24/2009	4/12/2009	4/12/2009	12
2010	5/1/2010	4/22/2010	4/22/2010	9
2011	5/28/2011	4/10/2011	4/10/2011	48
2012	4/10/2012	4/4/2012	4/4/2012	6
2013				
2014	6/6/2014	6/4/2014	6/4/2014	2
2015	5/5/2015	4/16/2015	4/16/2015	19
2016	5/24/2016	5/2/2016	5/2/2016	22
2017	5/9/2017	5/6/2017	5/6/2017	3
2018				

2019				
2020	5/29/2020	5/17/2020	5/17/2020	12
Min				*0*
Max				*63*
Mean				*16*
Median				*12*

One caveat to the analysis is the role that operational constraints may have played in the historical timing of filling Yamcolo Reservoir. The models simulate Yamcolo Reservoir operations driven by legal and physical water availability and calls for releases from reservoir users. The reality of operating the reservoir is more complex. Under more ideal conditions, Yamcolo Reservoir may have been able to fill faster using only Bear River supplies.

Coal Creek Diversion as Additional Supply for Reservoir Rights

UYWCD is interested in understanding if the supply from Coal Creek could be increased by using a more senior water right. Specifically, the four Yamcolo Reservoir storage rights in Table 3 may have the ability to divert from Coal Creek as an additional supply. This water would still be accounted for as part of the reservoir storage right. The "Reservoir Water Rights" (Reservoir WRs) scenario was set up in StateMod to represent diverting water from Coal Creek using reservoir storage rights in Table 3 using Type 11 operating rules. A Type 11 rule allows for water to be diverted from Coal Creek and from Bear River using the reservoir right priority. The model tracks both sources and stops using a right when the volumetric limitation has been reached for the reservoir accounting year (November through October). Unfortunately, StateMod does not take operating rules into consideration when reporting the available flow. Therefore, the StateMod results for the Reservoir WRs scenario are compared back to the StateMod results for the "Direct Water Right" scenario (instead of the hybrid StateMod/spreadsheet approach used in the final report) in order to see the difference in Yamcolo supply, Yamcolo Reservoir contents, and shortages to Yamcolo Reservoir users.

Table 3: Yamcolo Storage rights modeled with Coal Creek as an additional supply

Name	Volume (AF)	Admin Number	1st or 2nd Fill
Pleasant Valley	2,500	41727.39991	1st
1st Fill	1,000	47481.37136	1st
Refill	914	47905.00000	2nd
2nd Enlargement	525	50769.50653	1st

Figure 3 shows the water year annual volume of diversion from Coal Creek, color-coded by water right. Water is available in 28 of the 46 years in the model period (water year 1975 through 2020). The majority of the water is diverted under the Pleasant Valley right. The 1st Fill right is used in three years.

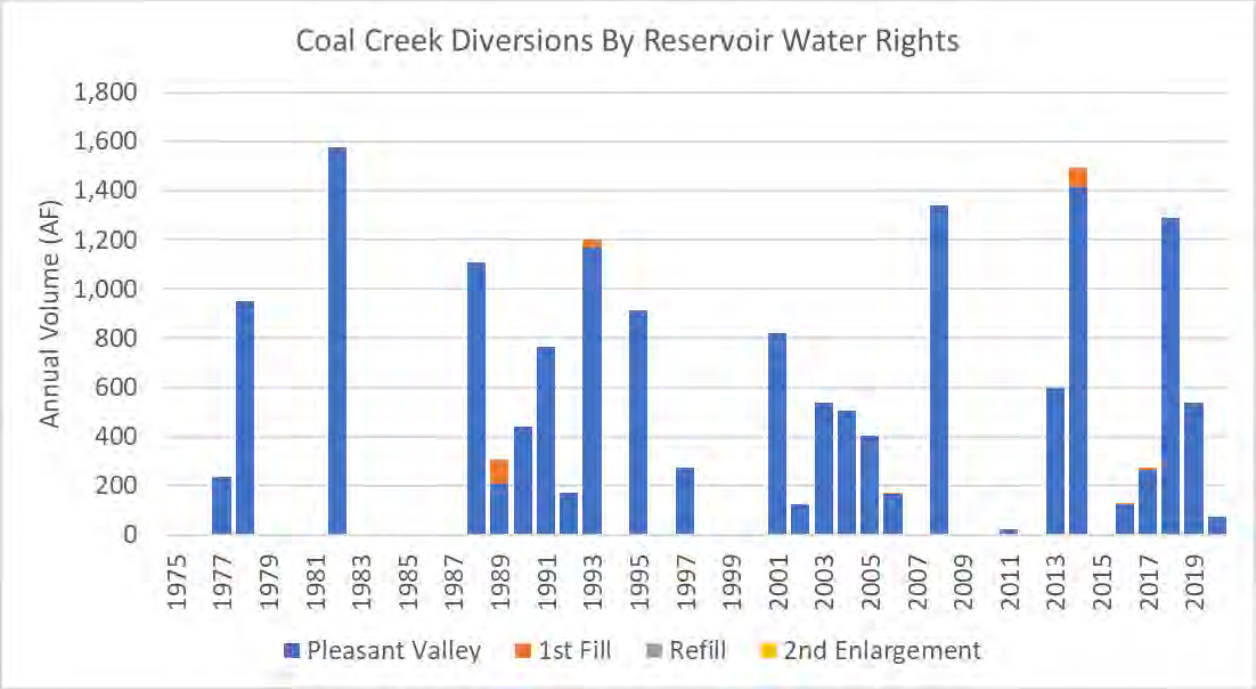


Figure 3: Reservoir Water Rights scenario water year total diversion from Coal Creek by water right (acre-feet)

Table 4 reports the details for the Reservoir Water Rights scenario. The total volume for the 46 year of the model scenario is about 16,300 acre-feet.

Table 4: Reservoir Water Rights scenario water year total diversions from Coal Creek by water right (acre-feet)

Date	Pleasant Valley (AF)	1st Fill (AF)	Refill (AF)	2nd Enlarge. (AF)	Total (AF)
1975	0	0	0	0	0
1976	0	0	0	0	0
1977	238	0	0	0	238
1978	951	0	0	0	951
1979	0	0	0	0	0
1980	0	0	0	0	0
1981	0	0	0	0	0
1982	1,576	0	0	0	1,576
1983	0	0	0	0	0
1984	0	0	0	0	0
1985	0	0	0	0	0
1986	0	0	0	0	0
1987	0	0	0	0	0
1988	1,110	0	0	0	1,110
1989	207	101	0	0	308
1990	440	0	0	0	440

1991	766	0	0	0	766
1992	170	0	0	0	170
1993	1,170	33	0	0	1,203
1994	0	0	0	0	0
1995	913	0	0	0	913
1996	0	0	0	0	0
1997	275	0	0	0	275
1998	0	0	0	0	0
1999	0	0	0	0	0
2000	0	0	0	0	0
2001	822	0	0	0	822
2002	124	0	0	0	124
2003	536	0	0	0	536
2004	504	0	0	0	504
2005	405	0	0	0	405
2006	167	6	0	0	173
2007	4	0	0	0	4
2008	1,341	0	0	0	1,341
2009	0	0	0	0	0
2010	7	0	0	0	7
2011	25	0	0	0	25
2012	0	0	0	0	0
2013	600	0	0	0	600
2014	1,415	78	0	0	1,493
2015	0	0	0	0	0
2016	124	3	0	0	127
2017	263	11	0	0	274
2018	1,290	0	0	0	1,290
2019	539	0	0	0	539
2020	74	0	0	0	74
Min	*0*	*0*	*0*	*0*	*0*
Max	*1,576*	*101*	*0*	*0*	*1,576*
Mean	*349*	*5*	*0*	*0*	*354*
Median	*124*	*0*	*0*	*0*	*126*
Total	*16,056*	*232*	*0*	*0*	*16,288*

Figure 4 and Figure 5 compare the monthly Yamcolo Reservoir content for the Direct Water Right (Direct WR) and Reservoir WRs scenarios from StateMod. For context, the observed historical Yamcolo Reservoir contents are shown in gray.

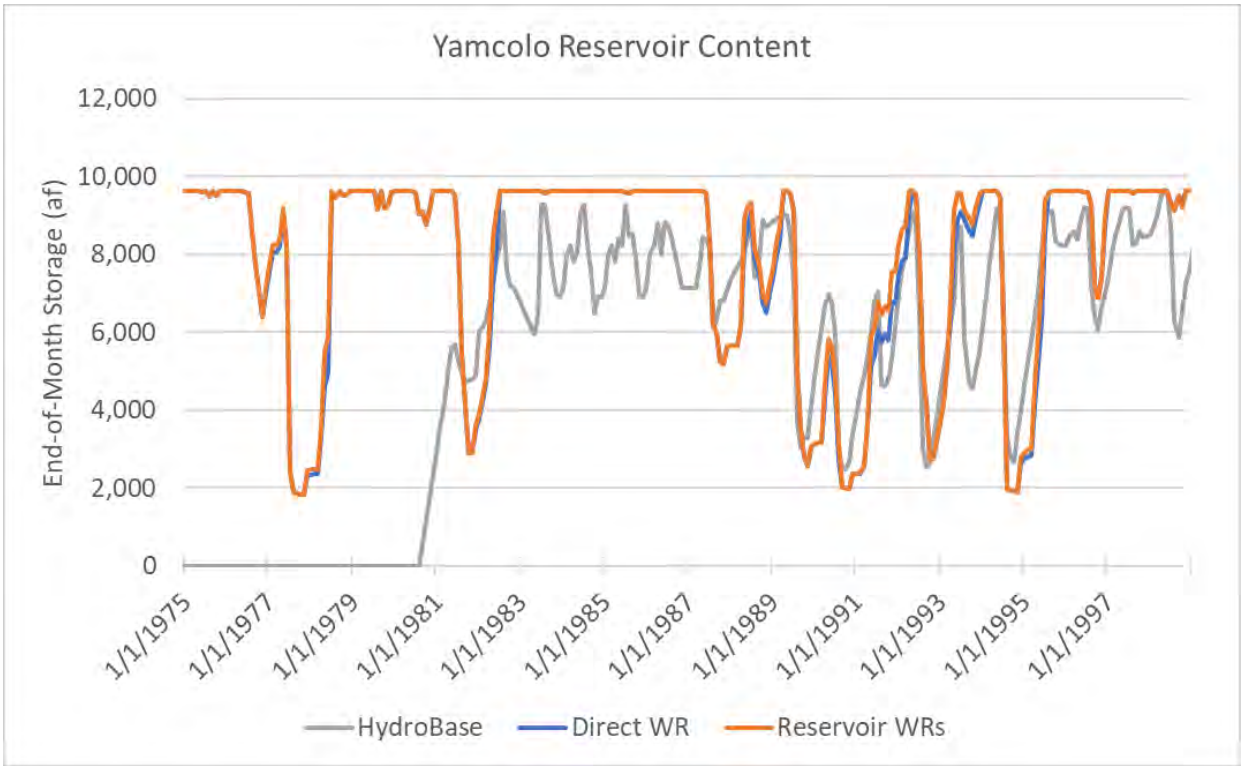


Figure 4: Yamcolo Reservoir storage content comparison (1975 - 1998)

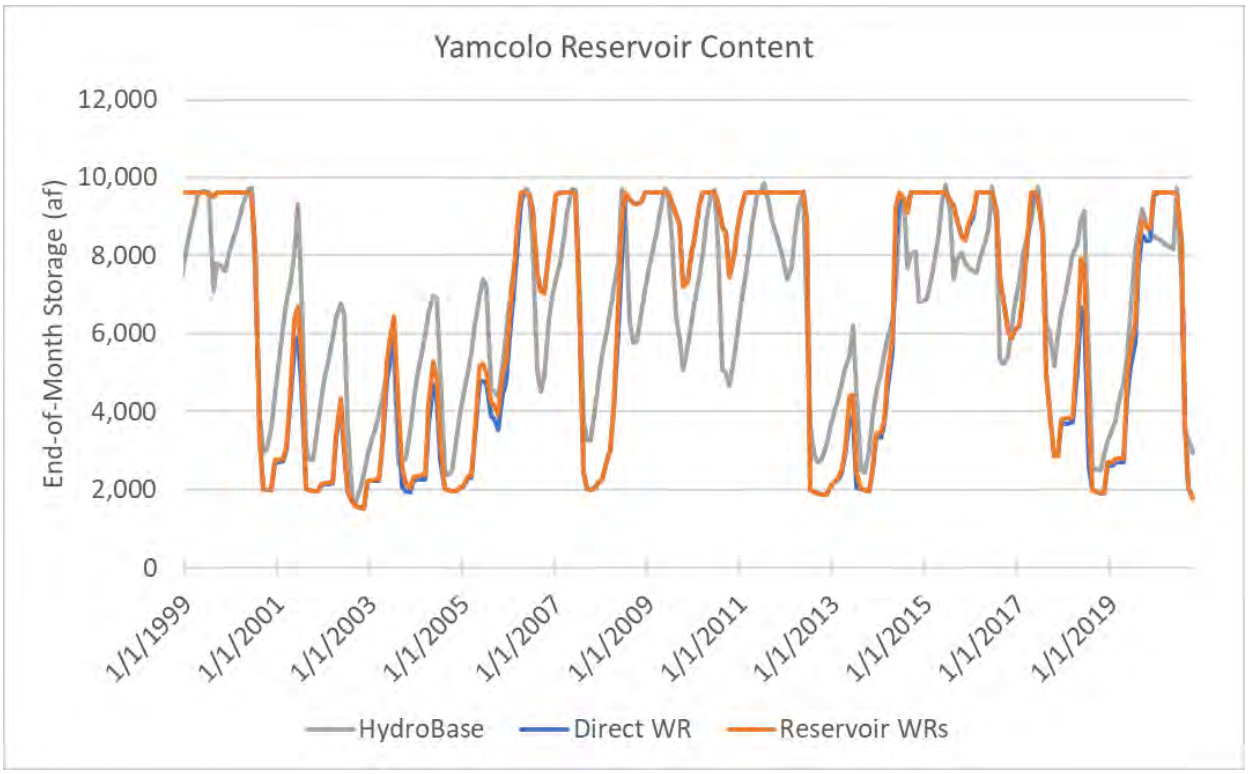


Figure 5: Yamcolo Reservoir storage content comparison (1999 - 2020)

Similar to the results from the hybrid StateMod/spreadsheet approach, the additional supplies from Coal Creek frequently are used to re-fill Yamcolo Reservoir faster. However, there are years when the diversions from Coal Creek increase the overall storage in Yamcolo Reservoir. Table 5 reports the annual maximum end-of-day Yamcolo Reservoir contents during the filling season (April through July) for the two scenarios. The difference between the contents is due to the additional supply from Coal Creek.

Table 5: Annual maximum end-of-day Yamcolo Reservoir contents during the filling season (April through July)

Water Year	Direct WR (AF)	Reservoir WRs (AF)	Difference (AF)
1975	9,620	9,620	0
1976	9,620	9,620	0
1977	9,103	9,172	68
1978	9,619	9,619	0
1979	9,620	9,620	0
1980	9,620	9,620	0
1981	9,620	9,620	0
1982	9,619	9,619	0
1983	9,620	9,620	0
1984	9,620	9,620	0
1985	9,620	9,620	0
1986	9,620	9,620	0
1987	9,620	9,620	0
1988	9,366	9,618	252
1989	9,620	9,620	0
1990	5,401	5,841	440
1991	6,110	6,834	724
1992	9,620	9,620	0
1993	9,451	9,619	168
1994	9,620	9,620	0
1995	9,619	9,619	0
1996	9,620	9,620	0
1997	9,620	9,620	0
1998	9,620	9,620	0
1999	9,620	9,620	0
2000	9,620	9,620	0
2001	5,925	6,702	777
2002	4,179	4,325	146
2003	6,282	6,817	535
2004	4,704	5,300	596
2005	4,872	5,283	411
2006	9,620	9,620	0
2007	9,620	9,620	0
2008	9,619	9,619	0

2009	9,620	9,620	0
2010	9,620	9,620	0
2011	9,620	9,620	0
2012	9,620	9,620	0
2013	3,879	4,446	567
2014	9,618	9,619	1
2015	9,620	9,620	0
2016	9,620	9,620	0
2017	9,620	9,620	0
2018	6,666	7,913	1,246
2019	7,999	8,469	470
2020	9,620	9,620	0

There are thirteen (13) years with increased storage in Yamcolo Reservoir due to the additional supply from Coal Creek diverted as an additional supply for the reservoir water rights. In those years, the additional supply helped to reduce shortages to Yamcolo Reservoir users. Figure 6 is a comparison of the annual shortages for Yamcolo Reservoir uses. The data displayed in Figure 6 and the percent change between the scenarios are included in Table 6. The additional supplies reduced shortages by a maximum amount of 74% and by at least 10% in six (6) years.

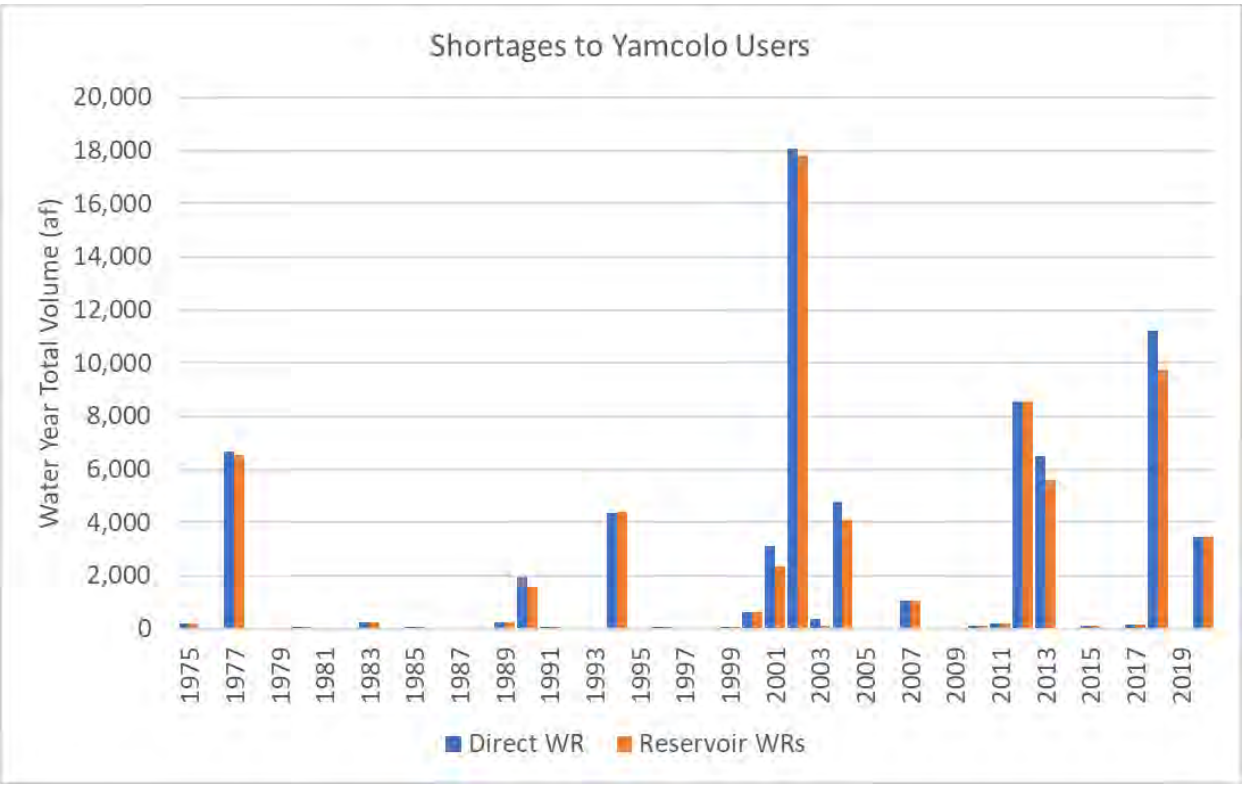


Figure 6: Comparison of annual shortages to Yamcolo Reservoir users

Table 6: Comparison of annual shortages to Yamcolo Reservoir users

Date	Direct Water Right (af)	Reservoir Water Rights (af)	Percent Change (%)
1975	176	176	0%
1976	0	0	0%
1977	6,657	6,553	2%
1978	31	31	0%
1979	30	30	0%
1980	69	69	0%
1981	13	13	0%
1982	0	0	0%
1983	242	242	0%
1984	32	32	0%
1985	55	55	0%
1986	16	16	0%
1987	5	5	0%
1988	41	41	0%
1989	252	252	0%
1990	1,945	1,571	19%
1991	72	72	0%
1992	15	15	-1%
1993	7	7	0%
1994	4,371	4,392	0%
1995	1	1	0%
1996	84	84	0%
1997	15	15	0%
1998	0	0	0%
1999	68	68	0%
2000	641	641	0%
2001	3,104	2,318	25%
2002	18,082	17,813	1%
2003	358	91	74%
2004	4,787	4,098	14%
2005	0	0	0%
2006	0	0	0%
2007	1,062	1,066	0%
2008	0	0	0%
2009	13	13	0%
2010	117	117	0%
2011	202	202	0%
2012	8,554	8,554	0%
2013	6,492	5,581	14%

2014	37	37	0%
2015	98	98	0%
2016	3	3	0%
2017	140	140	0%
2018	11,200	9,739	13%
2019	14	13	5%
2020	3,445	3,445	0%
Min	*0*	*0*	*-1%*
Max	*18,082*	*17,813*	*74%*
Mean	*1,577*	*1,472*	*4%*
Median	*68*	*68*	*0%*

Table 7 presents the comparison between the historical (observed) date of fill and results from the Direct WR and Reservoir WRs scenarios. The historical day of fill is the first day in the reservoir accounting year that the Yamcolo reaches 9,090 acre-feet from 1982 through 1997 and 9,615 acre-feet from 1998 through present. For the Direct WR and Reservoir WRs scenarios, this is the first day in the reservoir accounting year that the reservoir reached 9,615 acre-feet. Recall that for the StateMod scenarios, Yamcolo Reservoir is modeled with its current capacity of 9,621 acre-feet for the entire model simulation period (1975 – 2020). Yamcolo's reservoir accounting year starts November 1. There are many years in the StateMod simulation when Yamcolo Reservoir is full on November 1. This is because the StateMod model does not represent a winter-time draw down operation typically performed at Yamcolo Reservoir. This operation could be incorporated in the future. Blank rows indicate that the reservoir did not fill. In 1988 and 1993, Yamcolo fills in the Reservoir WRs scenario, but not in the Direct WR scenario.

Table 7: Comparison of the historical date of fill and results from the Direct WR and Reservoir WR scenarios

Water Year	Historical Date of Fill (9,090 or 9,615)	Direct WR	Reservoir WRs	No. of Days Reservoir WR Fills Before Direct WR
1975	-	11/1/1974	11/1/1974	0
1976	-	11/1/1975	11/1/1975	0
1977	-			
1978	-	7/1/1978	6/27/1978	4
1979	-	11/4/1978	11/4/1978	0
1980	-	12/2/1979	12/2/1979	0
1981	-	11/15/1980	11/15/1980	0
1982	7/10/1982	6/17/1982	6/10/1982	7
1983	6/22/1983	11/1/1982	11/1/1982	0
1984	6/1/1984	11/1/1983	11/1/1983	0
1985	6/13/1985	11/1/1984	11/1/1984	0
1986	6/4/1986	11/1/1985	11/1/1985	0
1987		11/1/1986	11/1/1986	0
1988			6/9/1988	

1989	4/23/1989	3/28/1989	3/18/1989	10
1990				
1991				
1992	4/30/1992	4/18/1992	3/27/1992	22
1993			6/2/1993	
1994	4/21/1994	12/17/1993	12/5/1993	12
1995	6/29/1995	7/4/1995	7/1/1995	3
1996	5/5/1996	11/1/1995	11/1/1995	0
1997	4/25/1997	12/25/1996	12/19/1996	6
1998	4/15/1998	11/1/1997	11/1/1997	0
1999	4/25/1999	11/1/1998	11/1/1998	0
2000	4/25/2000	11/1/1999	11/1/1999	0
2001				
2002				
2003				
2004				
2005				
2006	4/17/2006	4/6/2006	3/21/2006	16
2007	4/18/2007	1/3/2007	1/3/2007	0
2008	5/29/2008	7/2/2008	6/20/2008	12
2009	4/24/2009	11/11/2008	11/11/2008	0
2010	5/1/2010	2/17/2010	2/17/2010	0
2011	5/28/2011	1/19/2011	1/18/2011	1
2012	4/10/2012	11/1/2011	11/1/2011	0
2013				
2014	6/6/2014	6/1/2014	5/28/2014	4
2015	5/5/2015	11/1/2014	11/1/2014	0
2016	5/24/2016	2/1/2016	1/26/2016	6
2017	5/9/2017	4/17/2017	4/1/2017	16
2018				
2019				
2020	5/29/2020	12/8/2019	11/24/2019	14

For a more complete understanding of how StateMod simulates storage of the reservoir rights, Figure 7 shows the reservoir year annual volume of water stored under each water right. The Pleasant Valley and 1st Fill Right results are color-coded to indicate if the source is the Bear River or Coal Creek. The blue line shows the maximum fill of Yamcolo Reservoir in the year.

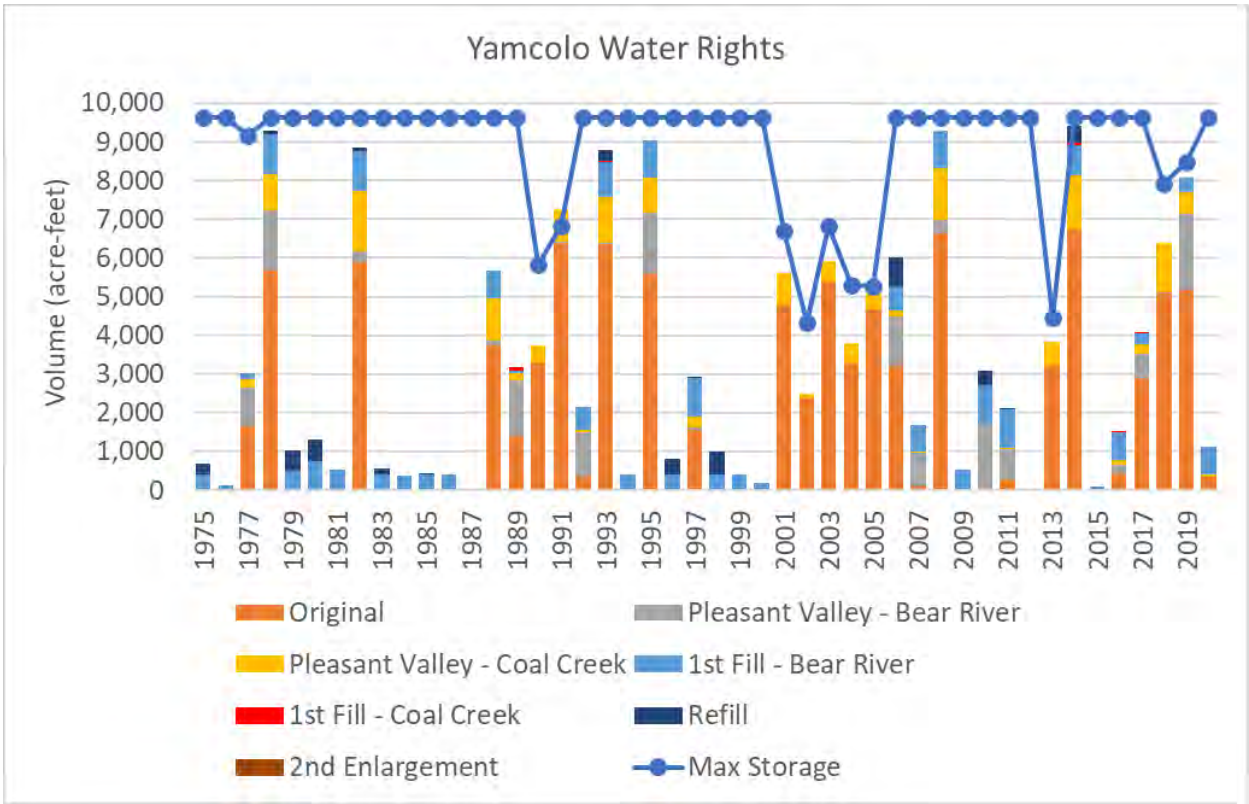


Figure 7: Reservoir Year Annual Volume of Water Stored by Water Right

The Original water right is the largest and most senior water right for Yamcolo Reservoir. The majority of the water is stored under the Original water right. In years when Yamcolo starts the reservoir year full or near full, the Original water right is charged for the water in storage. This explains why no water is stored under the Original water right during the mid-1980s. During years when water is stored under the Pleasant Valley water right, supply can be derived from both the Bear River and Coal Creek. During dry conditions, such as the early 2000's, water from Coal Creek is stored under the Pleasant Valley right. As shown in Table 5, the supply from Coal Creek during this period increases the reservoir storage levels.

Hot and Dry Climate Change Scenario

To set up the Hot and Dry climate change scenario, WWG used the Hot and Dry natural flow hydrology from the CWCB's 2019 Technical Update to the Colorado Water Plan and distributed on a monthly basis to Coal Creek using the precipitation-area ratios developed for this project. The agricultural demands were increased using the Hot and Dry-adjusted crop irrigation water requirements (IWR) from CWCB. The Hot and Dry time series from CWCB are available from 1950 through 2013. WWG extended the time series through 2020 using year-type matching. The municipal and industrial demands were set to Baseline. The Coal Creek diversion is operated with the conditional direct diversion right for 100 cfs.

Figure 8 shows the monthly physical streamflow volumes for Coal Creek at the Coal Creek Diversion simulated under historical hydrology and the Hot and Dry climate change hydrology. Hot and Dry scenario shows a shift in runoff timing to earlier in the year. There does not appear to be a substantial decline in monthly streamflow volume

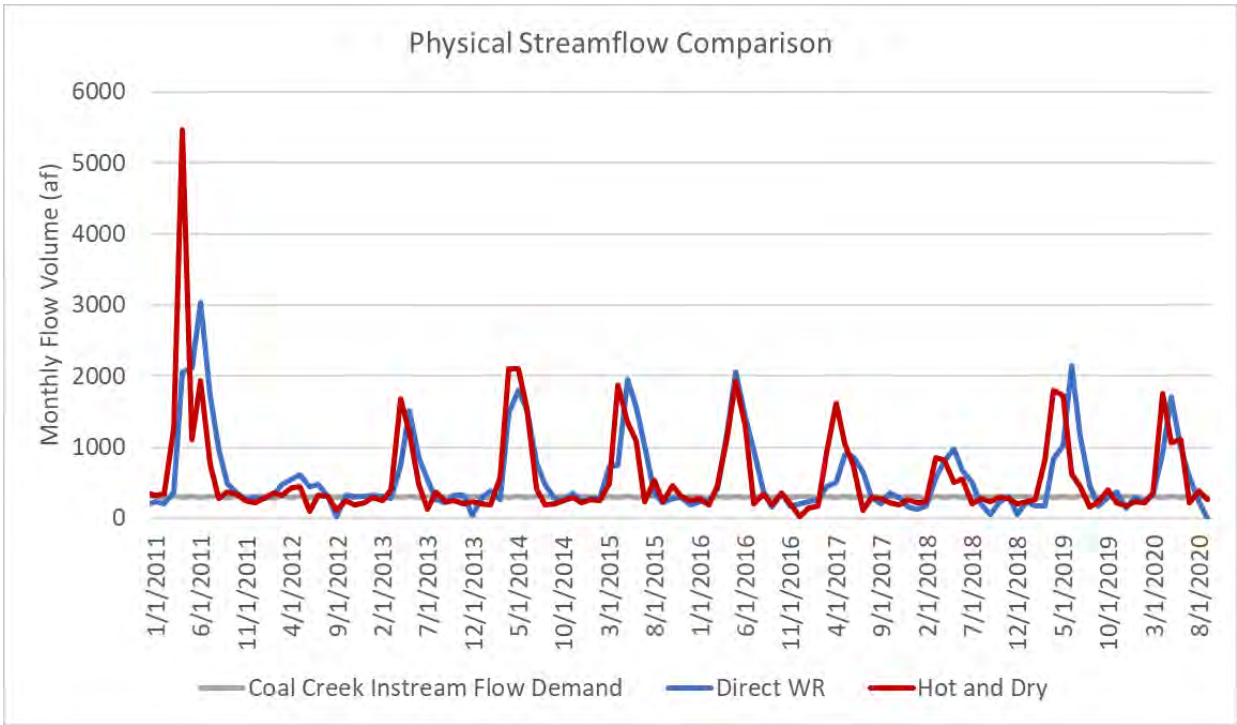


Figure 8: Monthly physical streamflow volume comparison (2011 - 2020)

Table 8 reports the water year annual statistics from 1975 through 2020 for Coal Creek physical streamflow volumes with the historical and Hot and Dry hydrologies. The mean and median volume of physical streamflow show declines less than 10 percent under the Hot and Dry scenario.

Table 8: Water year annual statistics for Coal Creek physical streamflow under historical and Hot and Dry hydrologies (1975 – 2020)

Annual Statistic	Historical Hydrology (af/yr)	Hot and Dry Hydrology (af/yr)
Min	3,159	2,917
Max	11,910	12,703
Mean	7,138	6,610
Median	7,084	6,438

Although the physical flow only has modest declines, the legally available flows are available less frequently. The decrease in natural flow throughout the Yampa Basin and an increase in agricultural demands results in less available flow on Coal Creek. Figure 9 compares the available Coal Creek flow volume from the Baseline scenario and the Hot and Dry scenario from 1975 through 2020. The Baseline scenario has 36 years with at least 100 acre-feet of available flow. The Hot and Dry scenario only has 14 years from 1975 through 2020. There are some months when the available flow under Hot and Dry is larger than under historical hydrology, likely because of the shift towards earlier runoff.

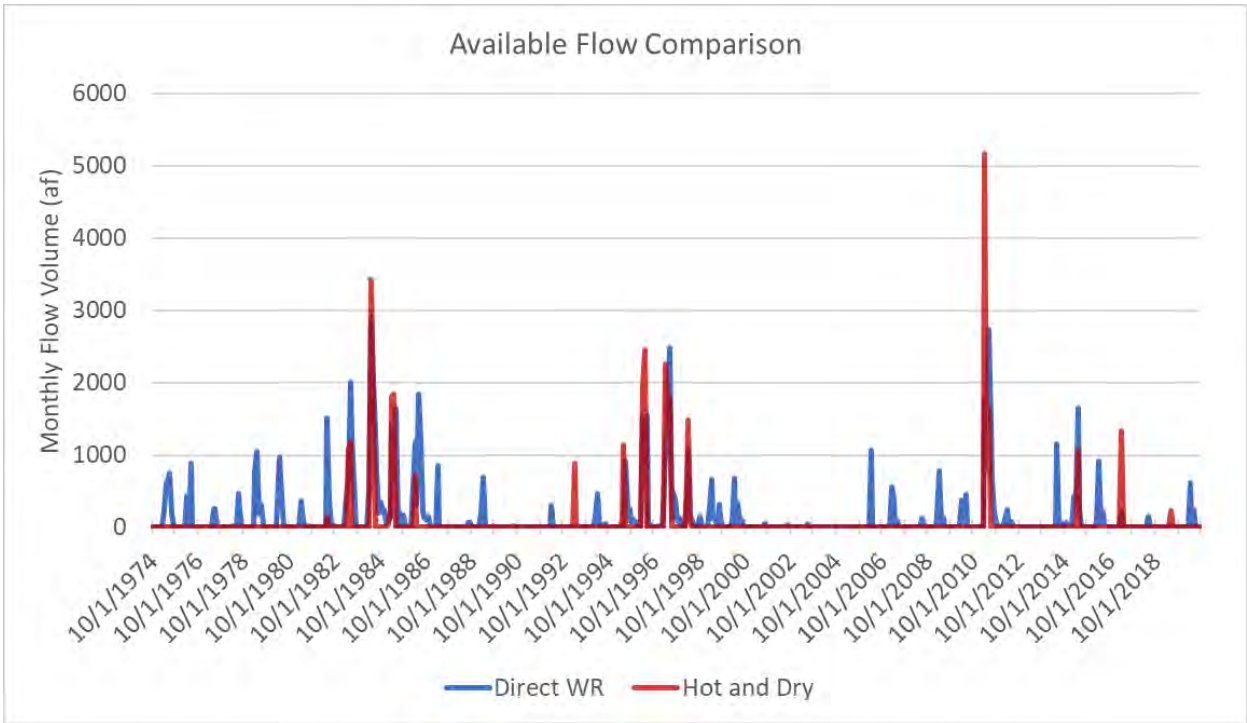


Figure 9: Monthly available flow volume comparison

Table 9 reports the water year annual statistics from 1975 through 2020 for Coal Creek available streamflow volumes with the historical and Hot and Dry hydrologies. The average annual available flow volume average declines by 52 percent.

Table 9: Water year annual statistics for Coal Creek available streamflow under historical and Hot and Dry hydrologies (1975 – 2020)

Annual Statistic	Historical Hydrology (af/yr)	Hot and Dry Hydrology (af/yr)
Min	0	0
Max	8,589	7,592
Mean	1,654	800
Median	976	0

For the Hot and Dry climate change scenario, supplies on Coal Creek are only available in months when Yamcolo Reservoir is able to fill using supplies from the Bear River. Figure 10 shows the simulated Yamcolo Reservoir contents and the time series of Coal Creek available flow. There are no diversions under the conditional water right. This result is consistent with the StateMod results using daily historical hydrology. Recall that the StateMod scenario using the conditional Coal Creek Diversion water right only identified legally available flow on Coal Creek when the model simulated Yamcolo Reservoir as full. Therefore, StateMod did not simulate any diversions under the conditional water right. This result prompted the development of the hybrid-model approach for this study (see Final Report for more details).

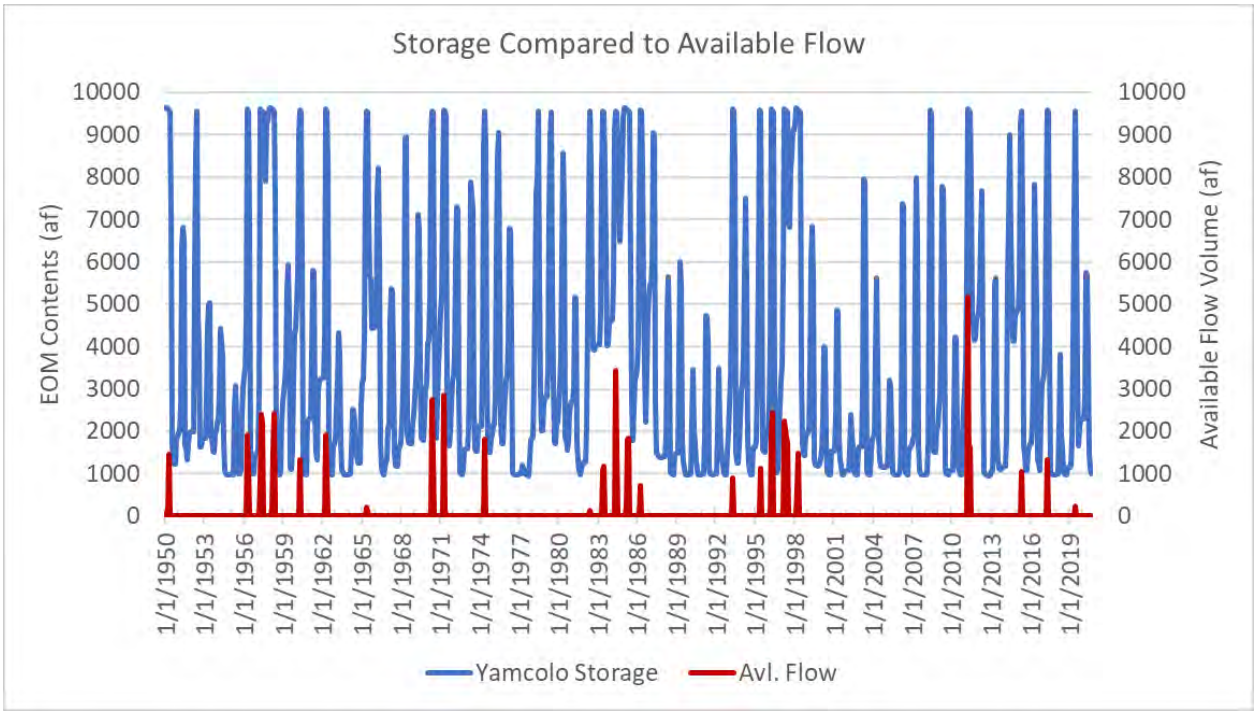
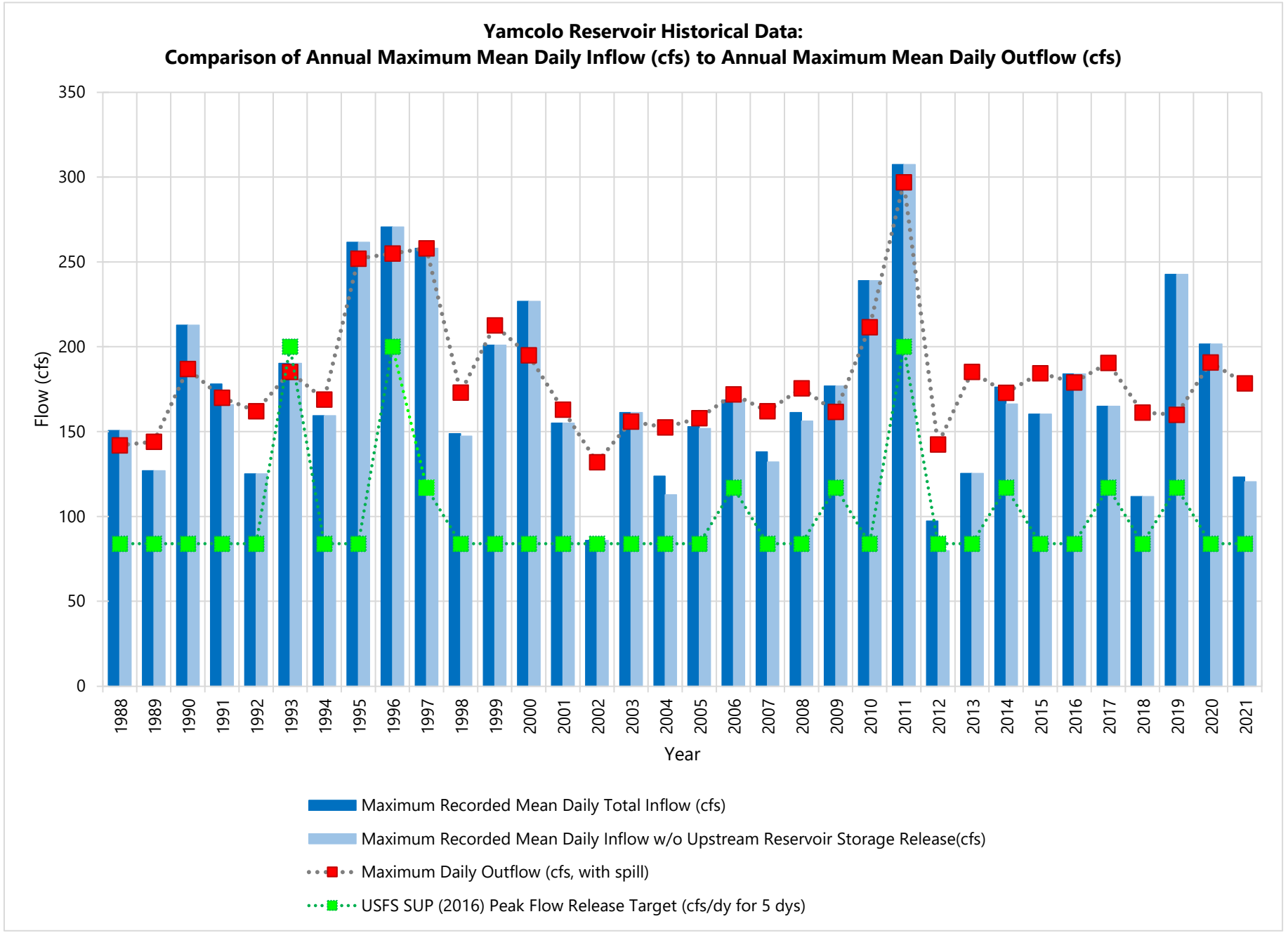


Figure 10: Yamcolo Reservoir simulated storage contents and Coal Creek available flow volume for Hot & Dry scenario

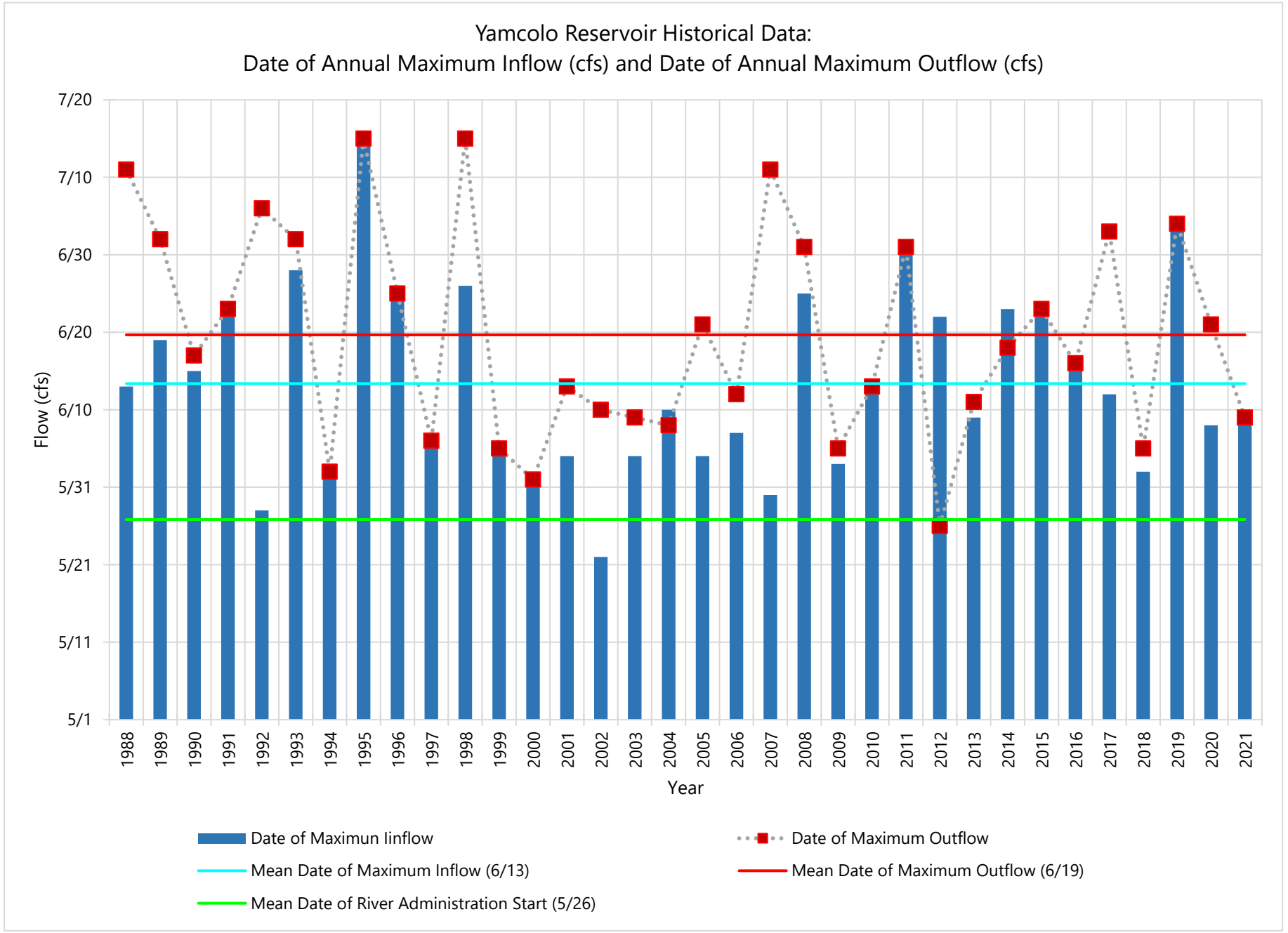

Yamcolo Reservoir Historical Data:
Comparison of Annual Maximum Mean Daily Inflow (cfs) to Annual Maximum Mean Daily Outflow (cfs)
Flow (cfs)
350
300
250
200
150
100
50
0
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
Year
Maximum Recorded Mean Daily Total Inflow (cfs)
Maximum Recorded Mean Daily Inflow w/o Upstream Reservoir Storage Release(cfs)
Maximum Daily Outflow (cfs, with spill)
USFS SUP (2016) Peak Flow Release Target (cfs/dy for 5 dys)

Yamcolo Reservoir

Comparison of Peak Flow Frequency Analyses

Historical Data 1988 - 2020

Flood Frequency Calculations using log-Pearson Analysis III (Period of record WY 1988-2020)		
Return Period	Outflow	Inflow
(years)	Q (cfs)	Q (cfs)
2	173	170
5	208	219
10	233	248
25	266	281
50	290	304
100	317	326
200	344	346


Yamcolo Reservoir Historical Data:
Date of Annual Maximum Inflow (cfs) and Date of Annual Maximum Outflow (cfs)
Flow (cfs)
7/20
7/10
6/30
6/20
6/10
5/31
5/21
5/11
5/1
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021
Year
Date of Maximun Iinflow
Date of Maximum Outflow
Mean Date of Maximum Inflow (6/13)
Mean Date of Maximum Outflow (6/19)
Mean Date of River Administration Start (5/26)

UPPER YAMPA WATER
CONSERVANCY DISTRICT

BOARD COMMUNICATION FORM

From: Andy Rossi, General Manager

Date: 05/09/22

Item: **Upper Yampa Watershed Soil Moisture Monitoring Network**

_____ DIRECTION
__X__ INFORMATION
_____ MOTION
_____ RESOLUTION

I. Request/Issue and Background Information:

The Center for Western Weather and Water Extremes (CW3E), Colorado Mountain College (CMC), Yampa Valley Sustainability Council (YVSC), and the Upper Yampa Water Conservancy District (UYWCD) are collaborating to install a soil moisture monitoring network of stations in the Upper Yampa River Basin in order to connect relevant climate change science with local and regional water managers' goals to better align decision-making capacity, water use practices, and water supply in a changing future.

II. Summary and Alternatives:

The development of the Upper Yampa River Basin Soil Moisture Monitoring Network is organized in two phases. Within each phase of the network development, specific periods are identified with associated work efforts.

Phase I, Period 1 of the soil moisture monitoring network development is to conduct a basin-wide analysis of the Upper Yampa basin to identify where soil moisture monitoring stations should be located in order to most effectively meet decision maker needs. Phase I, Period 2 also includes the installation of a pilot soil moisture monitoring station, and initial demonstrations of utility in the context of the existing observing network in the Upper Yampa, including snowpack and stream observations. Phase 1 provides the needed foundation from which to launch Phase 2 of the project, which includes locating and installing additional stations in the network, as well as capturing, storing, disseminating, and interpreting the data in ways that provide decision-support services to water managers and users in the Basin.

Soil Moisture Monitoring Network Program Principal Goals:

- Provide new observations in locations of highest scientific and operational value.
- Provide situational awareness on antecedent watershed conditions to operational partners.

- Provide decision-support tools to operational partners to connect watershed conditions to water user/manager needs.
- Provide a continuous record of changing landscape conditions with a changing climate.
- Improve forecasts of the hydrologic impacts of large storms through better understanding of physical processes such as runoff efficiency.
- Inform hydrologic modeling efforts leading to more accurate and reliable spring snowmelt volume forecasts.

The goals of Phase 1 of the project are to:

- Identify key observation gaps in the Upper Yampa River Basin and where existing instrumentation exists (e.g. USGS gages, SNOTEL sites, etc.) in order to develop a strategic plan and set of ideal sites to install soil moisture monitoring stations. (Period 1, 2021)
- Install a pilot soil moisture monitoring station. (Period 2, 2022)
- Develop basic data dissemination methods to make Site 1 data readily and openly accessible to water managers and users. (Period 2, 2022)
- Demonstrate station utility in context of other observations being collected in the basin.

Phase 1, Period 1 of the network development is complete. The final analysis report, including monitoring station siting recommendations, is included with this communication as an attachment. Phase 1, Period 1 efforts were completed with financial assistance from the Colorado Water Conservation Board and the UYWCD.

Efforts associated with Phase 1, Period 2 are currently underway. The recommended location for the pilot monitoring station is in the Flattops area, just north of the Bear River corridor. The project partners have completed extensive outreach to Natural Resource agencies to gather feedback and suggestions on the initial monitoring station locations. Final pilot monitoring station site selection will be determined following field visits scheduled for the summer of 2022.

III. Legal Issues:

NA

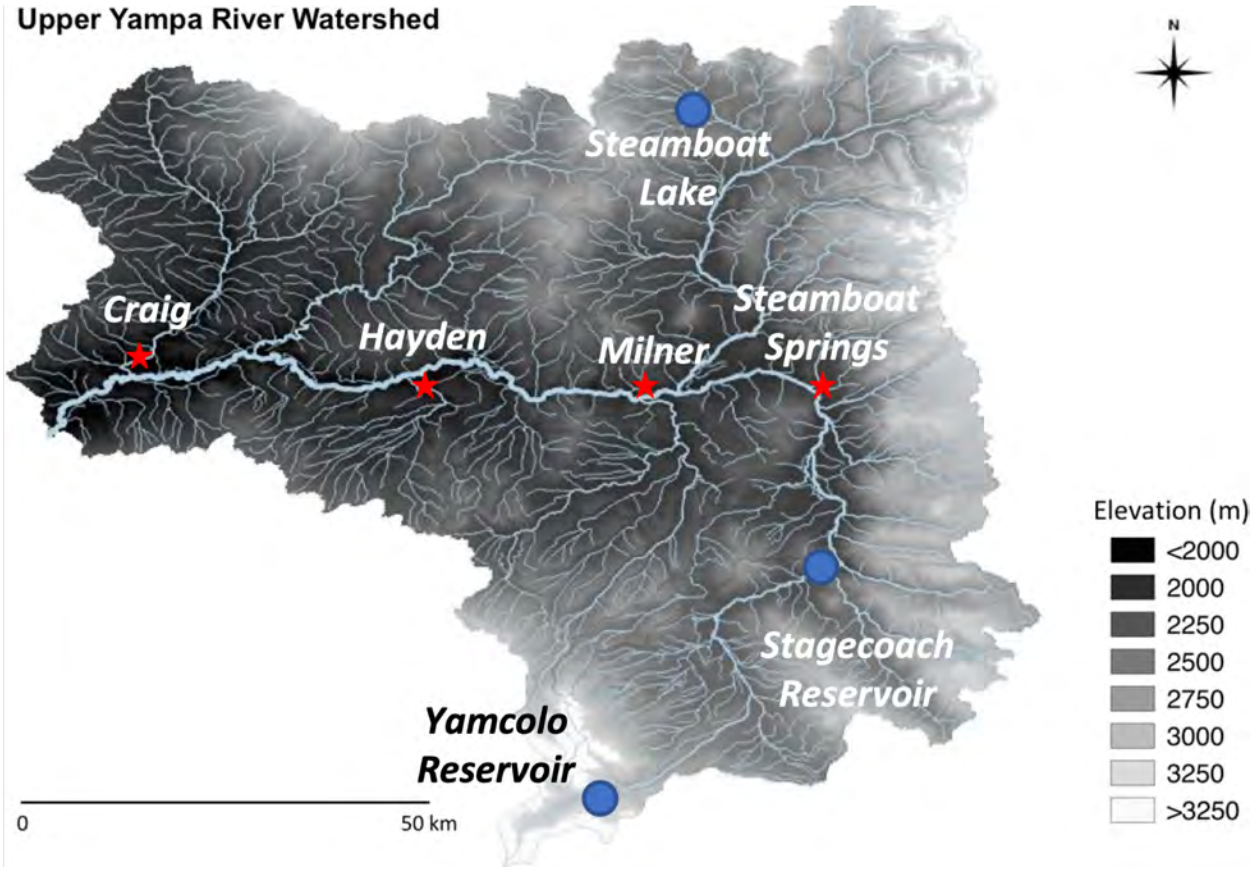
IV. Consistency with Board Goals and Policies:

UYWCD SP Objectives 4.4, 6.2

Attachments:

Attachment 1: Upper Yampa River Basin Analysis

Upper Yampa River Basin Analysis



Prepared by: F. Martin Ralph[1], Edwin Sumargo[1], Nicole Pepper[2], Kerstin Paulsson[1], Rob Hartman[3], Ming Pan[1], Anna Wilson[1], Michelle Stewart[2], Madison Muxworthy[2], Nathan Stewart[4]

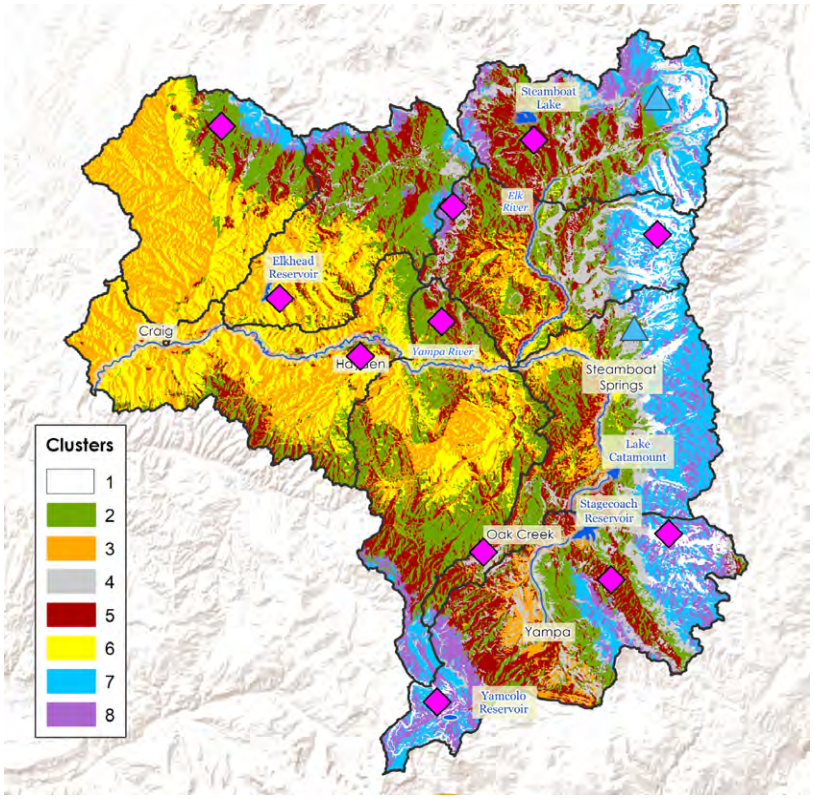
[1]*Center for Western Weather and Water Extremes,* [2]*Yampa Valley Sustainability Council,* [3]*RKH Consulting,* [4]*Colorado Mountain College*

Basin Analysis Executive Summary

Overarching Project Goal: Establish new long-term soil moisture measurements to provide data and scientific insight on the reduction of runoff by dry soils, provide a continuous record of changing landscape conditions with a changing climate, and support operational model and forecast improvements. The goal of this document is to recommend scientifically justified soil moisture station locations and priorities.

Basin Analysis Results and Recommendations

We conducted a basin analysis using available data and stakeholder input to produce a recommendation on soil moisture stations, and identified a top priority for the first station, which will be installed during 2022 as a part of this project. We assessed the atmospheric drivers of soil moisture availability and their changes over time, along with landscape characteristics key to modulating water movement throughout the basin, and incorporated this information with existing station locations and stakeholder input to produce our recommendations. We recommend a minimum of 13 stations within the Upper Yampa. These 13 stations include 2 each covering clusters representing mid to high elevation and precipitation accumulation bands, covering a variety of different aspects, slopes, and landcover, and one each covering the other clusters. Cluster 1 is the highest elevation and precipitation but covers very little of the basin area. Clusters 3 and 6 are lowest elevation and lowest precipitation. Since existing stations within the basin cover two of the clusters, we propose to install 11 new stations in total. The first station we propose installing is in the Headwaters in the Flat Tops. Analysis will be ongoing throughout the installation of the first station to further refine next steps and use the data from the existing stations to continue to refine future proposed installation locations.



1.0 Introduction

The goal of the basin analysis is to support the soil moisture (SM) monitoring effort in the Upper Yampa River Basin (UYRB) by providing the scientific, physically-based justification for proposed SM installation locations. A spatially and temporally high resolution SM observation network will allow for monitoring the antecedent catchment wetness at appropriate scales determined by the initial analysis and ongoing studies (Jasperse et al. 2020). This real-time knowledge of landscape conditions is crucial for runoff and flood forecasts during a precipitation (*P*) or a snowmelt event, as drier soils can act as a buffer for runoff generation during such events (Sumargo et al. 2020). This information may also be useful for seasonal-scale forecasts with additional information on antecedent soil moisture conditions before the start of snowpack accumulation, and drainage of the snowpack into the soils during the season. Over the long-term, the SM monitoring network will benefit the development of distributed hydrologic models, data assimilation systems, and climate change impact assessments.

The basin analysis was completed with stakeholder input. This engagement is meant to ensure the scientific and operational value of the stations, and to ensure the usability of the stations upon installation and accumulation of a period of record relevant for use cases.

This analysis is a key part of the 2-year plan to set up a framework and install a pilot site meant to support stakeholders' decision-making processes and to monitor the potential effects of climate change in UYRB. The work plan includes the design of an SM observing network with a set of recommended numbers of stations and their associated benefits by the end of the 1st calendar year, and installation of a pilot SM observation site in the 2nd calendar year. In future years, key subwatersheds may be a focus of future installations to increase spatial density of stations as appropriate. The pilot site will be installed based upon a balance of high value information and potential to install next year. The permitting process may be started with sites (e.g., National Forests) where the process takes longer, in anticipation of successful fund-raising for more installations. This report outlines the datasets, scope, and methodology used to complete the basin analysis, along with results. Stakeholders' input will also be described.

2.0 Methods

The basin analysis considered the meteorological drivers of SM variability, the land surface factors affecting SM variability, the water collection zones, and land use and stakeholder boundaries. Considering these factors in the analysis helped to identify basin areas that can provide information to support water resources decision making, and are potentially most sensitive to climate change. The analysis identified optimal locations to add new stations where no available soil moisture measurements currently exist. The analysis also provides a set up for future analyses and research pathways, particularly those involving *P*, snowmelt, SM, and runoff processes in UYRB. For this purpose, a compilation of the existing soil moisture observations in

UYRB is essential; they are provided here from SNOTEL, the only source of real time soil moisture information currently available in the watershed.

2.1 Stakeholder Input

Conversations with stakeholders were critical to finalizing the basin analysis. We focused on the Upper Yampa Water Conservancy District (UYWCD), the project sponsor, and the Colorado Basin River Forecast Center (CBRFC), the official forecast provider in the region. While RFC forecasts are not used operationally right now by UYWCD, model improvements throughout the National Weather Service in the coming decades are expected to include capacity to utilize observations like soil moisture as part of efforts to improve forecasts and support water resource decision making.

At the CBRFC, we spoke with Senior Hydrologist Brenda Alcorn and the Decision and Operations Hydrologist John Lhotak. Key takeaways from the interview included that the existing SNOTEL sites in and near the basin often get too wet and are not deep enough to fully understand the hydrologic processes within the soil. Furthermore, the sensor depths used did not correspond well with the model and different depths may be useful in new stations. The CBRFC hydrologists recommended a first look at middle elevations relative to the basin elevation distribution. They provided a link to elevation distributions in their model stratified by zone (found here). In their view, short term benefits of appropriately sited soil moisture stations could include understanding the soil state before the snowpack forms, and understanding how well the model is representing the soil moisture characteristics throughout the year. In the long term, benefits could include utility in next generation models, including with data assimilation of soil characteristics at model initialization.

At the UYWCD, our team spoke with General Manager Andy Rossi and District Engineer Emily Lowell. We learned that current operations successfully use information from two SNOTEL sites near the basin, Ripple Creek and Lynx Pass, in order to predict inflows and make management decisions. This is starting to work less well as the climate changes. In the short and long term, potential benefits from these stations include understanding how much of the water from the snowpack might be draining into the soils throughout the season instead of entering the streams, and how this varies spatially. Soil moisture information would be valuable before the snowpack forms as well as tracking the moisture from the snowpack during snowmelt, and understanding soil moisture drainage throughout the rest of the year. This information could initially be used for situational awareness. In the longer term, information from these stations may be added directly into the planning process, similar to how the two SNOTEL sites are currently used.

2.2 Atmospheric drivers of soil moisture variability

Atmospheric processes strongly influence SM variability. In a snow-dominated basin like the UYRB, *P* and temperature (*T*) are dominant drivers of the surface water budget. The relative contributions of these quantities to the SM fluctuations vary depending on the season. For example, *P* is the dominant moisture source in fall and winter, while *T* is a dominant source in the spring through driving snowmelt-runoff processes (Bales et al. 2006). *T* and other quantities, such as solar radiation and humidity, can modulate the SM during the summer through evapotranspiration (Hanson 1991). Consequently, analyses of the basin hydrometeorology and hydroclimatology can provide essential support for the SM instrumentation effort, and in this phase of the project we focus on *P* and *T*.

The annual and daily 4-km gridded Parameter-elevation Regressions on Independent Slopes Model (PRISM: PRISM Climate Group 2004) datasets were used for the *P* and *T* analyses. We computed the mean (μ), standard deviation (σ), and coefficients of variation (CV) of annual-total (*P)* and seasonal average temperature (*T*) for the 30-year period of 1981-2010. The 1981-2010 period is an established baseline for "climate normals" (NOAA NCEI 2021). CV refers to the ratio of the standard deviation (σ) to the mean (μ) of each variable, i.e., the interannual variability relative to the climatological average. This metric is especially useful when multiple variables with different μ states are considered or compared. These were compared to the mean, standard deviation, and coefficient of variation during 2011-2019 to understand how these atmospheric drivers of soil moisture variability may be changing with climate. We included the 4-month period March-June in addition to other seasons (here defined as Jan/Feb/Mar; Apr/May/Jun; Jul/Aug/Sep; Oct/Nov/Dec). The March-June period represents the snowmelt/water supply operation season in the region.

2.3 Cluster Analysis

In the cluster analysis, we used atmospheric and land surface variables to explore where SM stations will be most useful to capture the basin scale soil moisture on event, seasonal, and climate scales. This approach was used successfully in northern California's Russian River watershed (Sumargo et al. 2020) and is currently being replicated for other Forecast Informed Reservoir Operations (FIRO) projects, which require state of the art monitoring to support successful water resource management. The Russian River watershed covers approximately 1500 mi^2, while the Upper Yampa covers about 2000 mi^2. However, the portion covered by the additional soil moisture stations funded through FIRO was a single subwatershed covering just 105 mi^2. Here, we start the process with the entire watershed. As these stations begin to accumulate observations and start to provide critical information, key subwatersheds may be a focus of future installations to increase spatial density of stations as appropriate.

The first step in this analysis is to identify appropriate variables. Here, with the help of stakeholder input described in Section 2.1, we consider *P*, vegetation, and terrain features such

as elevation, slope, aspect, and land cover (Table 2.3.1). Other variables, such as soil type, were considered for their usefulness in identifying the cluster areas relevant for the SM observation installation.

Table 2.3.1 Variables considered in the cluster analysis. Note that gray shade and italics indicates that the variables were evaluated based on the clusters identified by the other variables.

Variable	**Resolution**	**Source**	**Reasoning**
Total Annual Precip - 30 Year Norm	800m	PRISM	necessary to understand water input to soils
Digital Elevation Model (DEM)	30m	USGS	topographic characteristics critical to understanding how water moves through the landscape
Slope	30m	USGS	
Aspect	30m	USGS	
Normalized Difference in Vegetation Index (NDVI)	30m	Landsat 8	land surface characteristics that can modulate how much precipitation reaches the soil
National Land Cover Database (NLCD) 2019	*30m*	*NLCD*	
POLARIS Soil Type	*30m*	*POLARIS*	probabilistic soil series map of the contiguous United States

Cluster analysis was conducted using the k-means clustering algorithm, an unsupervised machine learning technique that assigns numerical data to clusters by finding the mean distance between data points (MacQueen 1967). The k-means clustering algorithm is sensitive to varying ranges in variables, such that a variable with a larger range will contribute larger influence to the clustering than a variable with a smaller range. For this reason, data standardization is a recommended step before performing the analysis to transform the variables into a unitless, standardized range of values. We performed a minimum maximum transformation function, a common transformation used for skewed sample data, to reclassify the data to a range of 0 -100. Next we transformed the digital elevation model 30 meter resolution raster grid into points and

extracted the values for each of the standardized variables into a single table for use in JMP statistical software.

In JMP we performed a k-means clustering analysis for 2-15 clusters on the 5 reclassified variables. For each k-means the tool calculates the cubic clustering criterion (CCC) value as a method to select the optimal number of clusters by minimizing the sum of squares. The CCC peak value indicated the optimal number of classes for our sample to be 8 (Figure 2.3.1), although additional peaks after that choice indicate potential utility in more stations. We converted the results of the 8 clusters back into a 30 by 30 meter raster grid for spatial analysis.

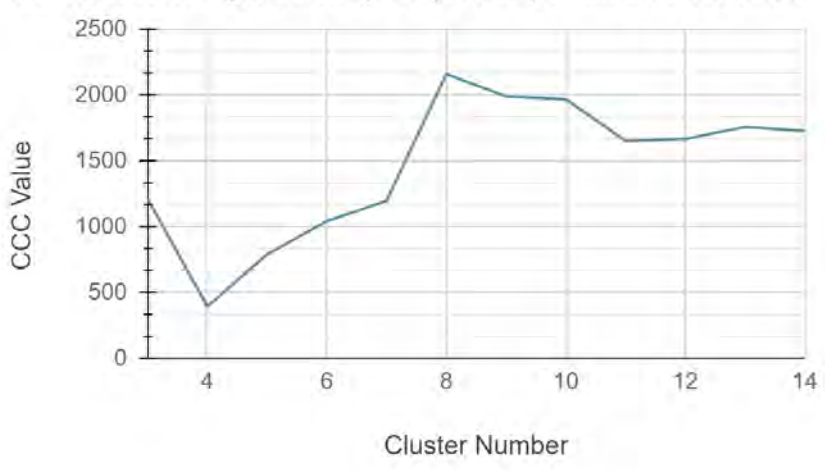


Figure 2.3.1: Cubic Clustering Criterion (CCC) value per total number of clusters.

2.4 Water Collection Zones

To assess areas key to sample for water management support, we combined our results from the stakeholder analysis, atmospheric drivers, and land surface factors. As the project continues we will leverage ongoing modeling efforts and the beginning of our data collection to further understand areas critical to water management - e.g., to answer the question: Where do the soils have the greatest effect on how precipitation enters the tributaries and the main stem of the Yampa River?

3.0 Results

3.1 Atmospheric Drivers of Soil Moisture Variability

First, we assess the climate normals for 1981-2010 and consider basin-scale *P*. The μ field exhibits high annual total *P* of up to 2000 mm over the high-elevation areas in the eastern and southern flanks of the basin, reflecting the orographic enhancement. This number is almost 10 times that in the low elevation areas, where the annual *P* is as low as 200 mm. The σ field exhibits high variability of up to 300 mm over the high elevation, high *P* zones. In contrast, the CV field shows highest variability of up to 0.2 over the low elevation areas to the western and

southwestern flanks (Figure 3.1). A pocket of high CV is also apparent over the northeastern corner of the basin. This CV pattern suggests that the interannual variabilities of *P* over these areas are relatively large compared to their climatological averages. However, other low elevation areas in the north and in the southeast exhibit CV of as low as 0.14. Based on Dettinger et al. (2011), this range of CV is nearly as significant as the difference in *P* variability between Colorado and some other regions in the U.S., such as the Midwest.

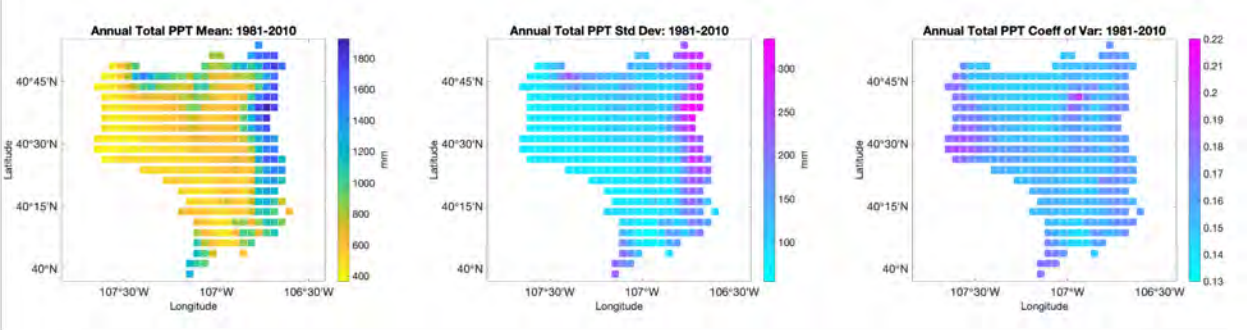


Figure 3.1. The average (left), standard deviation (middle), and coefficient of variation (right) of the annual-total PRISM precipitation for the 1981-2010 period.

For *T,* we present mean and standard deviation only, as the CV spatial patterns did not display any differences from the standard deviation. The μ field, as expected, shows higher average *T* of over 5°C over the lower elevations for Oct-Dec, increasing to over 10°C over Jan-Mar (Figure 3.2). The variability as shown by the σ is as high as 2°C over the far western portions of the basin during Jan-Mar, and under 1°C over the eastern part of the basin in Oct-Dec (Figure 3.3).

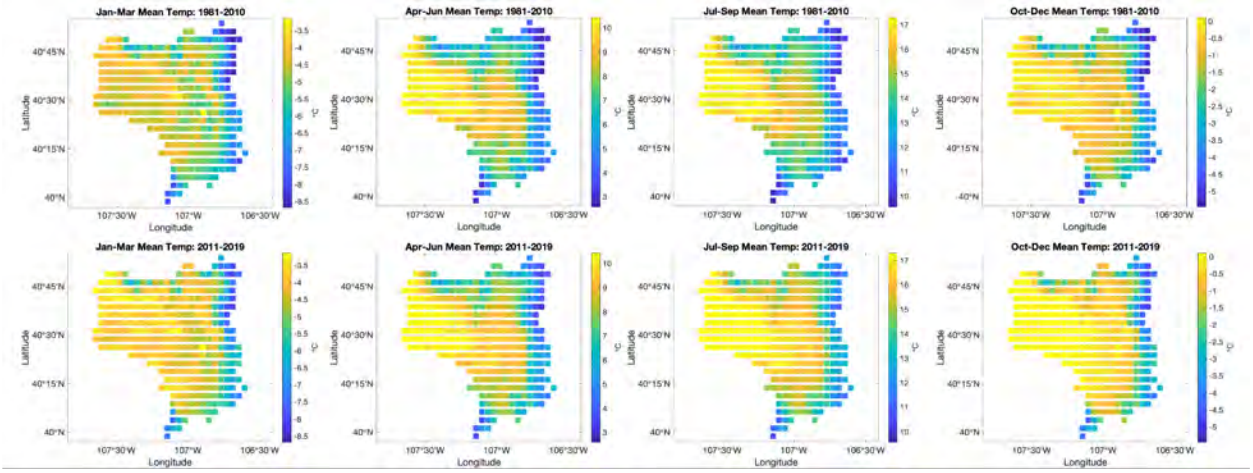


Figure 3.2. Seasonal-mean temperature for both the 30 year period 1981-2010 (top row) and the period 2011-2019 (bottom row). Note the different scales per season (row). Scales are the same for each season (column).

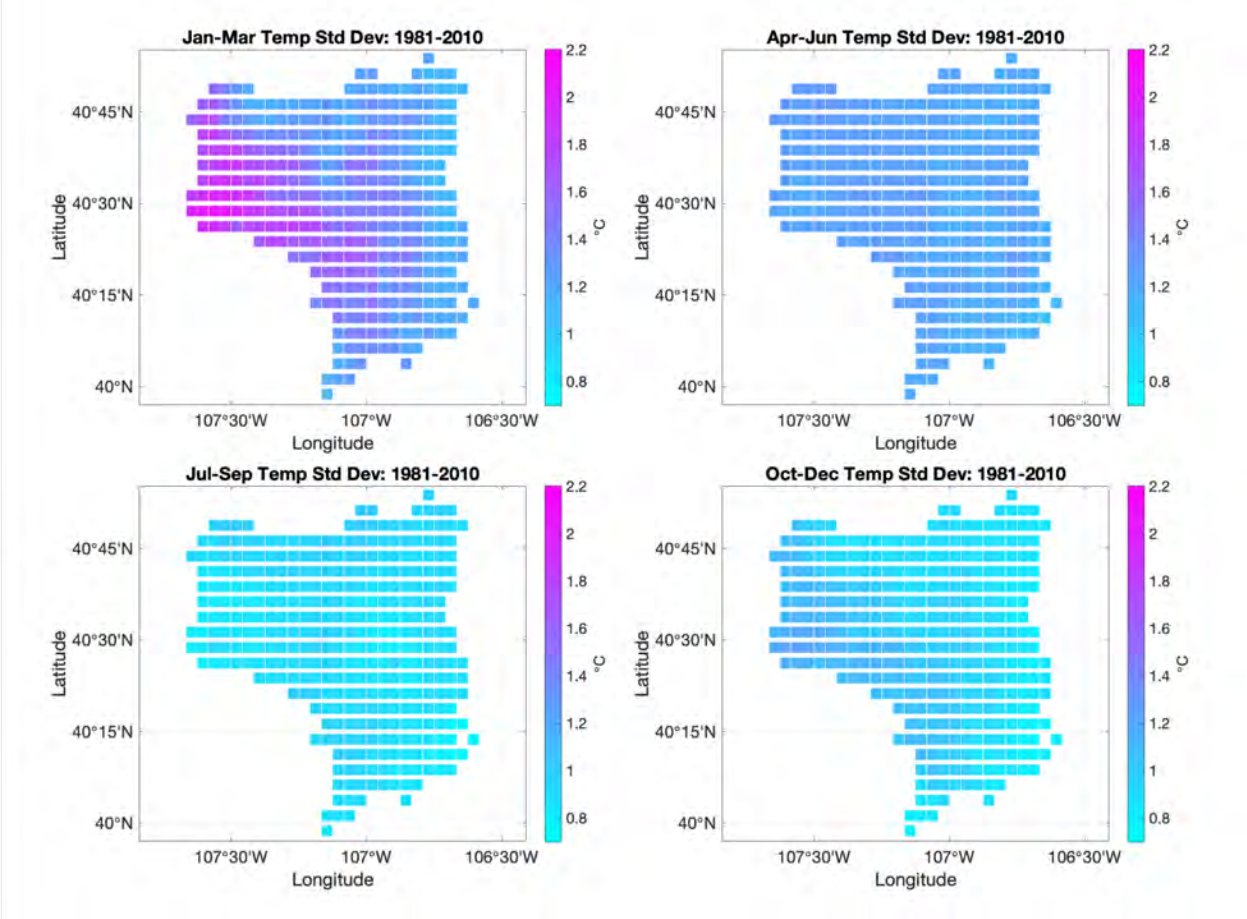


Figure 3.3. Seasonal standard deviations of temperature.

When looking at the change in average over the past decade by season, the temperatures show the largest increase in the higher elevations and far eastern part of the basin in Jul-Sep (Figure 3.4). This could affect the drying out of the soils before the snowpack begins to accumulate in the fall. Unsurprisingly, average temperatures are rising across all grid points in the basin. We also looked at these quantities for the period most critical to snowmelt - the four month period Mar-Jun (Figure 3.5). Compared to Apr-Jun, the average highest temperature is lower. The highest standard deviation is also lower than either period Apr-Jun or Jan-Mar, and there is a small increase in the highest average change in precipitation, closer to Jan-Mar. As noted above, there is no big difference in the pattern of the CV and the σ for this period.

For annual total P, the decade 2011-2019 showed a decrease in almost all grid points over the climate normals from 1981-2010, with some outliers showing decreases of over 250mm/year in the southernmost part of the basin (Figure 3.6).

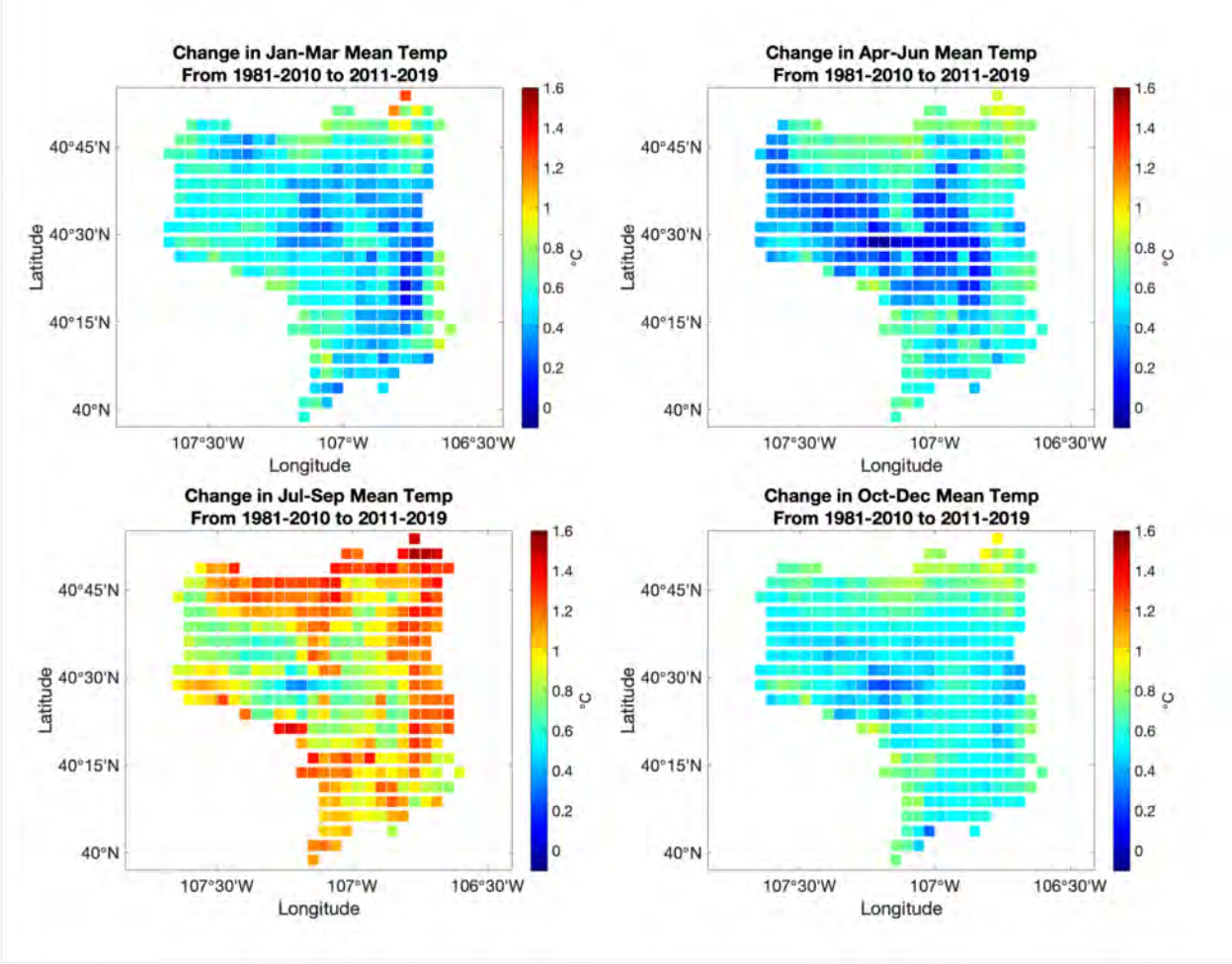


Figure 3.4. Seasonal change in temperature average from 1981-2010 to 2011-2019.

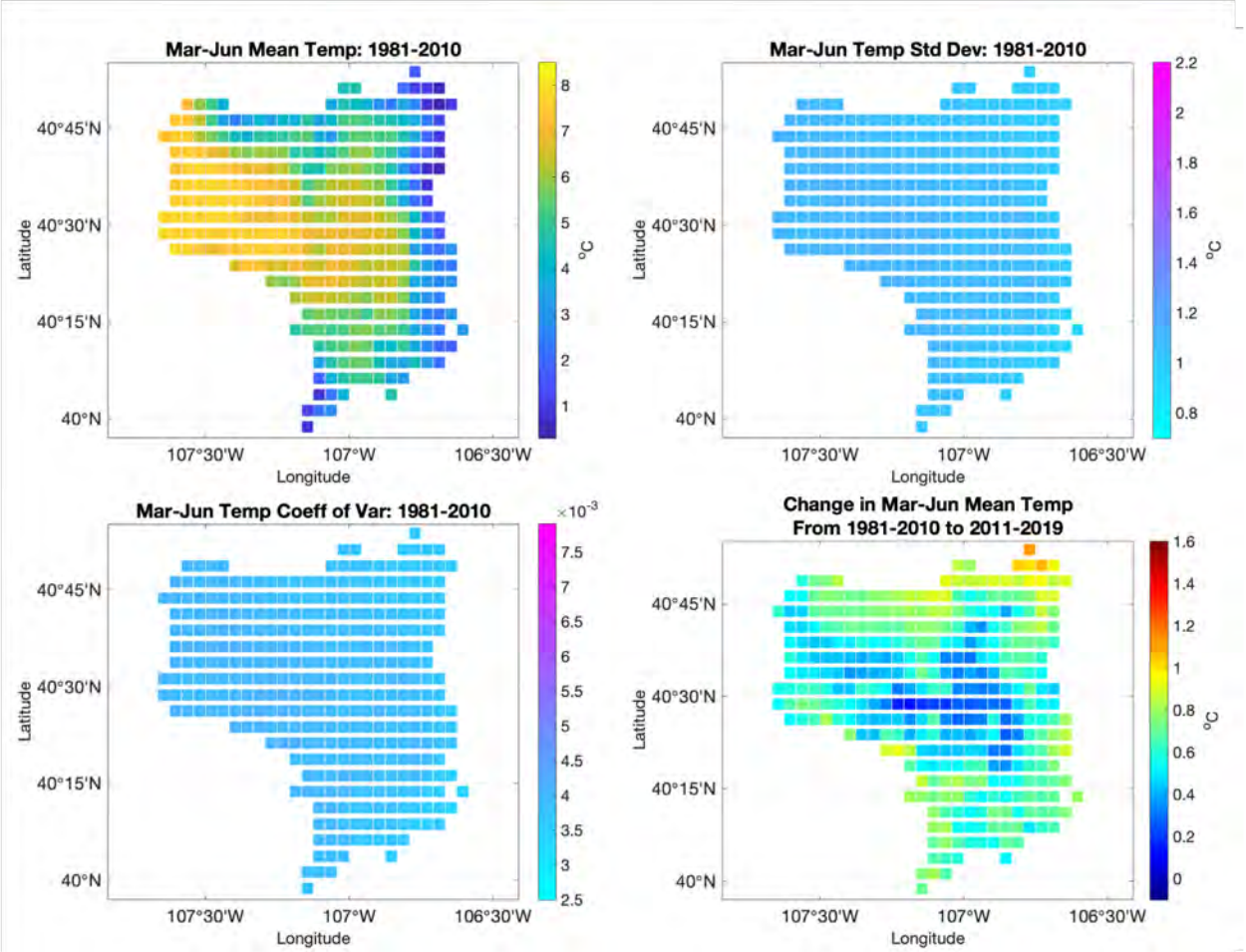


Figure 3.5. Average, standard deviation, coefficient of variation, and change in average temperature during March-June from 1981-2010 to 2011-2019.

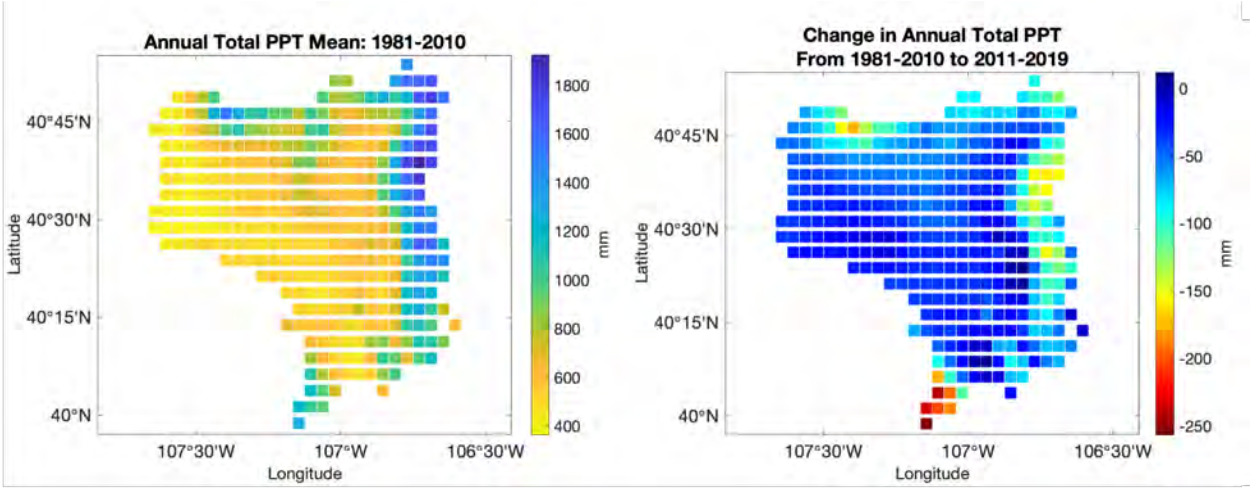


Figure 3.6. Average annual change in precipitation from 1981-2010 to 2011-2019.

3.2 Assessing the Land Surface Factors Affecting the Soil Moisture Variability

Cluster analysis results indicate a robust separation into precipitation bands, elevation bands, and terrain characteristics (Figure 3.2.1, Table 3.2.1). With sufficient resources, each cluster could be covered in every HUC10 (up to 55 stations, see Figure 3.2.2 for the spatial distribution at each cluster), or the cluster analysis could be redone at that spatial scale.

The cluster analysis was also conducted at 800m resolution with, as might be expected, coarser results showing 6 identified clusters as the first reasonable number. Because of the importance of the terrain variables which were available at high resolution, the decision was made to use the results at 30m scale. The analysis was also done with temperature data as well as precipitation, but temperature in particular is so highly correlated with elevation that it was noted as redundant (not shown). Datasets on this analysis can be made available, including Geographic Information System (GIS) layers and databases. Figures can also be made available showing, for example, boxplots of the distribution of the different parameters by cluster.

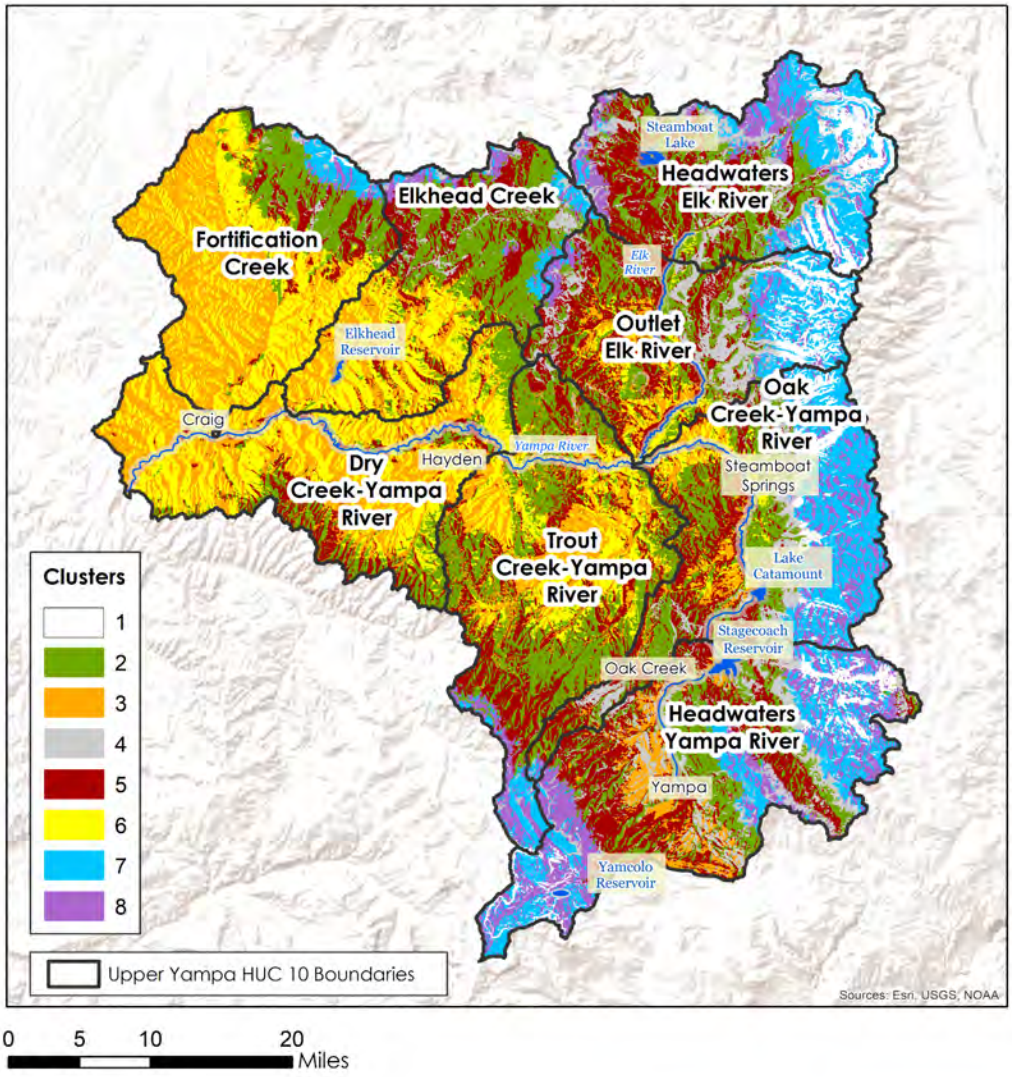


Figure 3.2.1: Spatial map of identified clusters in the Upper Yampa River Basin.

Table 3.2.1 Clusters and their characteristics. Total basin area 2161.4 mi^2. Shaded rows are similar to the same color in terms of precipitation and elevation, with key differences in terrain characteristics.

Cluster	% Basin Area	Precipitation (mm) Percentile: 25th Median 75th	Elevation (m) - Percentile: 25th Median 75th	Characteristics
1	3.8	1211 1407 1594	2978 3140 3304	highest precip/elevation/slope, sandy soil, scrub, less dense forest
2	20	560 645 759	2255 2435 2598	low-mid precip, mid elevation, forested, S/W aspect, low-mod slope, wide mix of soils
3	16	425 479 523	1995 2059 2148	low precip/elevation/slope, NE-SE facing, wide mix of soils, pasture/developed
4	8.6	544 638 790	2255 2421 2614	low-mid precip, mid elevation, lower slopes, S/W facing, sandy soil, forested
5	19	551 617 713	2240 2441 2589	lowest-mid precip, mid elevation, lower slopes, E facing, wide mix of soils and land cover
6	15	432 484 532	2002 2067 2154	low precip/elevation/slope, wide mix of soil, W-facing, developed land/pasture
7	9.8	1071 1223 1418	2880 3012 3165	high-mid precip/elevation, some higher slopes, sandy soil, S/W facing, less dense forest
8	7.8	963 1099 1269	2837 2954 3093	high-mid precip/elevation, some higher slopes, sandy soil, N/E facing, less dense forest

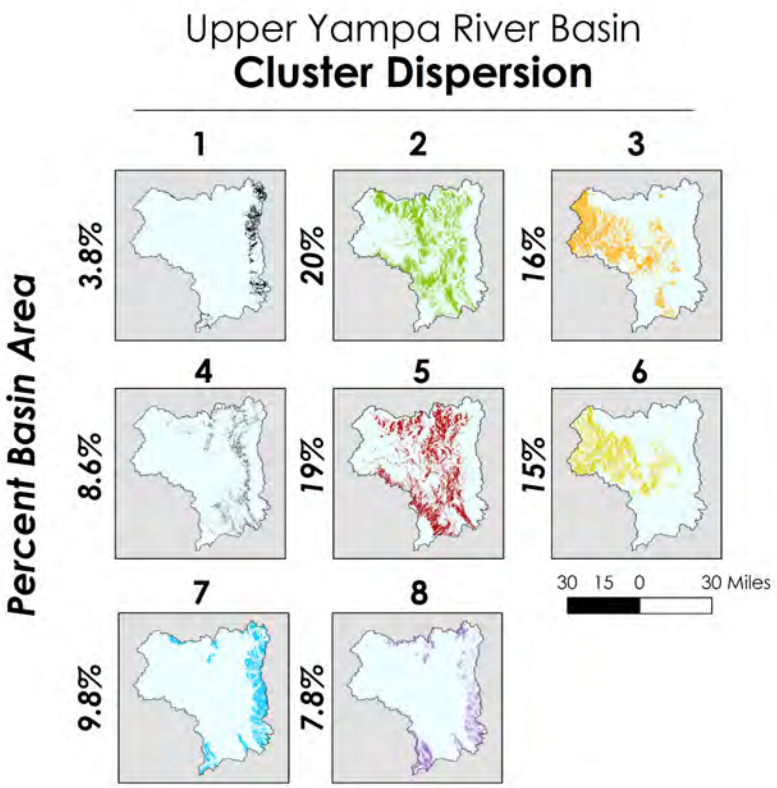


Figure 3.2.2. Spatial maps of each cluster independently, along with percent of basin area.

3.3 Water Collection Zones

Per the combination of stakeholder input on locations where peak snow water equivalent (SWE) information is currently used, and the limitations of existing soil moisture stations, we focus on understanding where we might site new stations to cover both high variability precipitation and temperature, changing precipitation and temperature over the past decade of PRISM data, along with making sure that we adequately cover representative areas as defined by the cluster analysis. We did this via map overlays in GIS. Note that these are currently proxies for the areas that might be most important for water management. As the project continues, we will look at existing soil moisture observations, new observations, and leverage existing modeling studies to understand where the soils have the highest influence on runoff generation.

4.0 Recommendations

We recommend that all of the identified clusters be covered with two stations each. If needed, these can be reduced to one each at Cluster 1, which has a very small overall contribution

to basin area (under 5%), and Clusters 3 and 6, which are low elevation and low precipitation. Lost Dog and Lynx Pass already cover Cluster 7 and Dry Lake covers Cluster 2 (see Table 4.1). However, Lynx Pass is slightly outside the watershed, while Lost Dog and Dry Lake are not particularly useful yet as they were sited not for soil moisture but primarily for snowpack measurements (see Section 2.1). Therefore, we still recommend adding one station each in Cluster 7 and 2. This gives a total of 11 recommended additional stations, with one funded to be installed during the course of this project (see Figure 4.1). Within clusters, we recommend a focus on the areas identified in Section 3.1 that show high precipitation variability and large precipitation and temperature changes over the last decade. With this in mind, the priority for Station 1 is located in the Flat Tops at the southwestern end of the Upper Yampa Headwaters basin. The clusters that were identified through this exercise do not correspond with the zones used in the Colorado Basin River Forecast Center model (not shown). However, the recommended area, which contains areas in both Cluster 7 and Cluster 8, is a part of the Yampa-Above Stagecoach zone in the model. Middle elevation in that zone ranges from 8000-9500 feet, and we recommend a site within that band.

If additional funding should become available, more stations, for example one per cluster in each HUC10 within the watershed, could be very useful. This recommendation will gather strength as we enter the second year of the project and begin showing utility in the soil moisture gauges as the period of record lengthens.

Table 4.1 List of SNOTEL stations in and near the Upper Yampa River watershed with soil moisture measurements.

Station Name	Latitude	Longitude	Elevation (ft)	Start Date of soil moisture obs	Cluster
Lynx Pass	40.08	-106.67	8880	25 Sep 2002	7
Lost Dog	40.82	-106.75	9320	9 Sep 1999	7
Dry Lake	40.53	-106.78	8400	29 Jul 2003	2

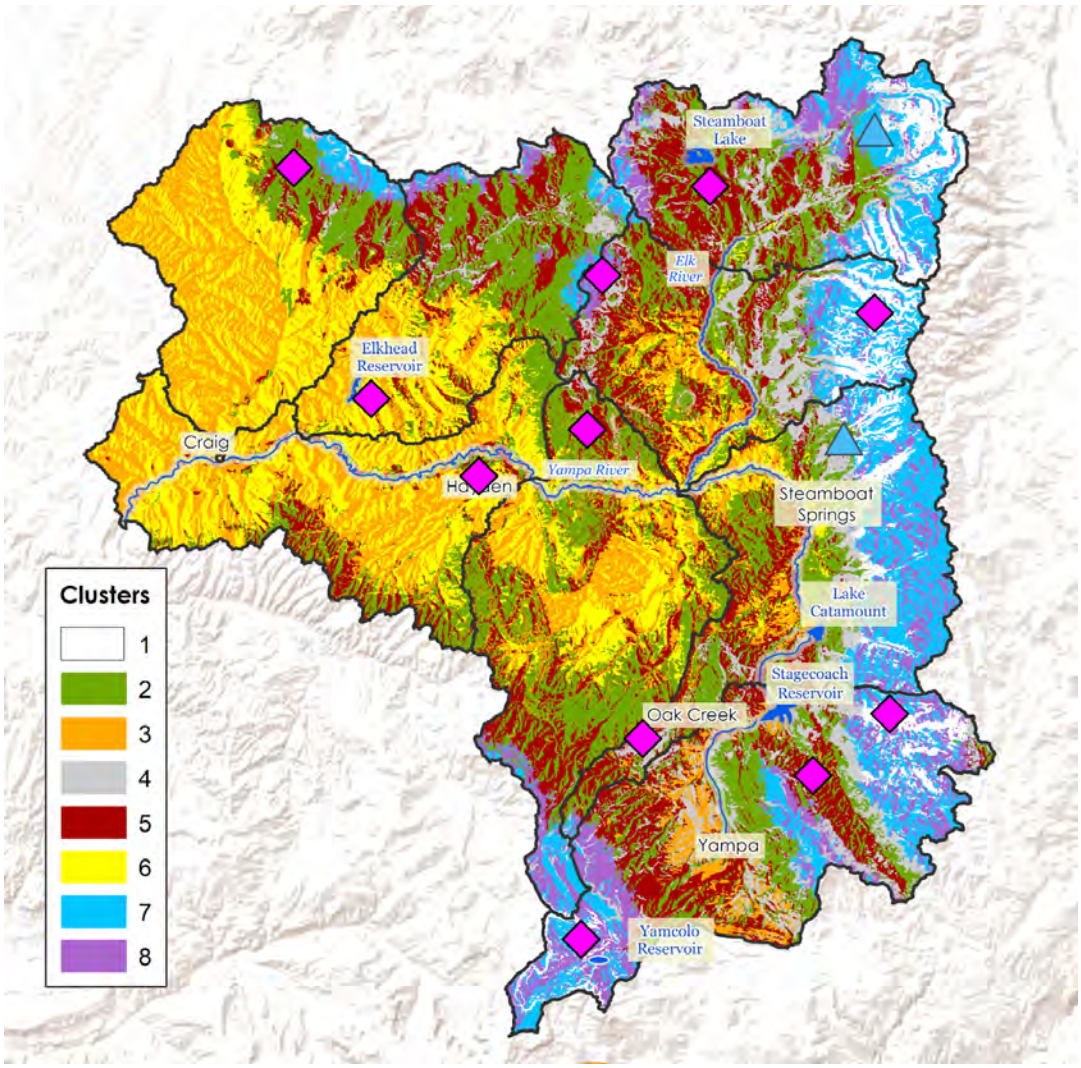


Figure 4.1 Map of the clusters identified by k-means, with HUC10 outlines, existing soil moisture stations (blue triangles) and proposed new soil moisture stations locations (pink diamonds).

Acknowledgements

All of the work conducted for this basin analysis was directly supported by the Upper Yampa Water Conservancy District.

References

Bales, R. C., N. P. Molotch, T. H. Painter, M. D. Dettinger, R. Rice, and J. Dozier, 2006: Mountain hydrology of the western United States. *Water Resources Research*, **42**(8).

Dettinger, M. D., F. M. Ralph, T. Das, P. J. Neiman, and D. R. Cayan, 2011: Atmospheric rivers, floods and the water resources of California. *Water*, **3**(2), 445-478.

Hanson, R. L., 1991: Evapotranspiration and droughts. *US Geological Survey Water-Supply Paper*, **2375**, 99-104.

Jasperse, J., and Coauthors, 2020: *Lake Mendocino Forecast Informed Reservoir Operations Final Viability Assessment*.

MacQueen, J. "Some Methods for Classification and Analysis of Multivariate Observations." Eds. L.M. Le Cam and J. Neyman. Proceedings of the Fifth Berkeley Symposium on Mathematical Statistics and Probability. Statistics, University of California Press, Berkeley, Ca., 1967, pp. 281–285.

National Oceanic and Atmospheric Administration's National Center for Environmental Information (NOAA NCEI), 2021: Data Tools: 1981-2010 Normals. Accessed 2 September 2021, https://www.ncdc.noaa.gov/cdo-web/datatools/normals.

PRISM Climate Group, Oregon State University, 2004: PRISM Climate Data. Accessed 2 September 2021, http://prism.oregonstate.edu.

Sumargo, E., A.M. Wilson, F.M. Ralph, R. Weihs, A. White, J. Jasperse, M.A. Lamjiri, S. Turnbull, C. Downer, and L. Delle Monache, 2020: The Hydrometeorological Observation Network in California's Russian River Watershed: Development, Characteristics and Key Findings from 1997 to 2019. *Bull. Amer. Meteor. Soc.*, **101**(10), E1781–E1800.

Sumargo, E., H. McMillan, R. Weihs, C. J. Ellis, A. M. Wilson, and F. M. Ralph, 2021: A soil moisture monitoring network to assess controls on runoff generation during atmospheric river events. *Hydrological Processes*, **35**(1), e13998.

United States Department of Agriculture (USDA), 2004: Part 630 Hydrology National Engineering Handbook: Snowmelt. Accessed 2 September 2021, https://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17753.wba.

USDA National Resources Conservation Service (NRCS), 2021: Snow Telemetry (SNOTEL) and Snow Course Data and Products. Accessed 2 September 2021 https://www.wcc.nrcs.usda.gov/snow/.

United States Geological Survey (USGS), 2021: USGS Current Water Data for the Nation. Accessed 2 September 2021, https://waterdata.usgs.gov/nwis/rt.

CW3E HYDROMETEOROLOGICAL INSTRUMENTATION FOR YAMPA BASIN FIELD SITES

PURPOSE:

The scientific goals of the soil moisture monitoring network campaign are to observe and monitor the hydrometeorology of western watersheds in all seasons of the year to understand temporal variations in soil conditions, and specifically to provide critical information before and during:

- Impactful precipitation events that result in high streamflow rates (often associated with atmospheric rivers, which provide the majority of annual inflows to reservoirs throughout California)
- Snow melt events during warm precipitation and during the warm season

Specific scientific goals are: (1) Improve understanding of spatial variability of precipitation and soil moisture within the watershed to inform hydrologic model forecasts of streamflow; (2) Improve understanding of the physical processes that modify runoff efficiency during heavy precipitation; (3) Aid in understanding snowpack evolution and draining throughout the winter and snowmelt seasons; (4) Providing near-real time data on hydrometeorological conditions within the watershed that will likely be of operational value to partners.

Potential Collaborations (following Science Goal 4 above):

- Add sensors that may be useful for existing monitoring efforts (e.g. fuel moisture and temperature) to CW3E maintained stations, reporting in near real time
- Consult with collaborators on site selection whether it be on FS land or nearby private property
- Add sensors to existing stations and provide help with maintenance

SITE REQUIREMENTS:

We conduct field visits to determine the best location and understand specific installation requirements**.** General considerations include: preference for open areas with minimum hill and tree shade, minimal surrounding built environments. Drive-up access and cellular reception for communications are preferred but not required. Some potential instruments need line power and others can operate from a solar panel.

INSTRUMENTATION:

Yampa Soil Moisture Surface Met sites can include all the following components:

- Surface Meteorology**:** Sensors in the Yampa will be installed on either a 20ft or 10m (32ft) rhone tower. On the rhone tower, we will mount a small solar panel, meteorological sensors for temperature, relative humidity, pressure, wind speed and direction, solar radiation, and precipitation, an enclosure containing the datalogger, cell modem or GOES telemetry, and solar power regulator, where all the instruments are plugged in. Precipitation measurements are made with tipping bucket rain gauges with 24.5cm funnels that tip at 0.1mm resolution, Texas Electronics model TE525MM. The rain gauges are equipped with bird spikes, do not have windshields, and can be heated if the site has access to 120V power. The incoming shortwave solar radiation is measured with a Campbell Scientific digital thermopile pyranometer model CS320. Wind speed and direction are measured with RM Young anemometer model 05108-45. The pressure is measured with Campbell Scientific barometer model CS106. Temperature and relative humidity are measured with a Campbell Scientific HygroVue10 probe that uses a sensing element (Sensirion SHT35) based on Sensirion's CMOSens technology. We use a CR1000X datalogger with either RV50 cell modem or GOES telemetry, SP20 solar panel and CH150 charging regulator, all from Campbell Scientific.
- Soil Moisture and Temperature: Sensors are installed in a vertical profile at 6 depths beneath the ground (5, 10, 15, 20, 50, and 100 cm). The soil moisture and temperature sensors are Stevens' Water Hydraprobe
- Snow depth: SnowVUE from Campbell Scientific

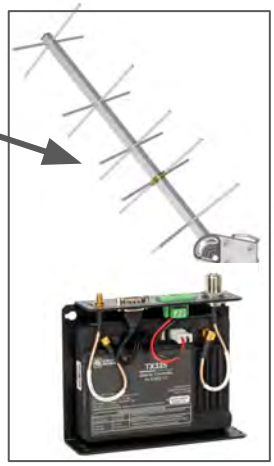
RM Young Alpine Anemometer 05108-45

RV50 cell or GOES telemetry

20' OR 32' Rohn Tower

SP20 solar panel

CS SnowVUE Snow Depth



TE525MM Tipping Bucket

CS320 Pyranometer

CR1000X datalogger

CS HygroVue10 Temp/RH and Solar Shield

CS106 Barometer

TOWER STEEL HEIGHT = 20 F

10'

25G

Qty 6, vertical profile (5,10,15,20,50,100cm depths) Stevens' Water Hydraprobe

Fuel Moisture and Temperature: CS506/26601+ CS205/107 OR FS-3-1 Fuel Moisture/Temp

DATA:

Data are received remotely via cell or GOES telemetry hourly in near real time. Data collection happens every 2 minutes and is housed at the CW3E website (all instruments reporting in near real time); NOAA HMT (surface meteorology and soil moisture); MesoWest (surface meteorology and soil moisture); and CDEC (surface meteorology and soil moisture).

BOARD COMMUNICATION FORM

May 18 Board Meeting

From: Bob Weiss, Legal Counsel

Date: May 9, 2022

Item: Parks Lease Renewal

X DIRECTION
X INFORMATION
_____ MOTION
_____ RESOLUTION

I. Request/Issue and Background Information: The current lease agreement with the State of Colorado, Division of Parks and Recreation (now the Division of Parks and Wildlife) became effective August 5, 2004 and expires May 1, 2024. The negotiating committee met with the State representatives to discuss the process for renewing the lease in April, 2021. Last year, the CPW's real estate specialist sent me the CPW "lease template," a very generic document which contains boilerplate provisions which they refer to as "Colorado special provisions" and which they say are standard in Colorado State leases. The purpose of this memo is to discuss with the Board the lease process and the staff recommendation on the best way to proceed in the District's negotiations with the State.

II. Summary and Alternatives: The 1984 lease is a little more than 10 pages long excluding the exhibits. It was extensively negotiated between the State and the District and comprehensively addresses use of the surface of the Stagecoach Reservoir and the surrounding District property for parks and recreational purposes operated by the State of Colorado, Division of Parks and Recreation. It is safe I think to assume that many if not most of the material lease terms will remain the same or very similar in any new lease. The most logical approach is to start the negotiation process by use of the existing lease agreement. Some of the Colorado special provisions are already in the existing lease, but not all. Therefore, at Andy's request, I integrated the Colorado special provisions into the existing lease and revised the exiting lease to remove or modify lease language that has become obsolete such as the provisions regarding the MountainAir agreement which has been terminated. I did not change any of the basic business terms of the Lease.

III. Staff Recommendation: Staff requests Board direction on the Lease Terms.

IV. Legal Issues: Any legal issues in the lease can be addressed as needed in the negotiating process.

V. **Consistency with Board Goals and Policies:** Subject to negotiation of acceptable Lease terms, the Board's goal and policies include continued operation of the of Stagecoach State Park by CPW under a lease from the District.

VI. **Fiscal Impact:** Depending on the final terms the new lease will result in various fiscal impacts to the District.

LEASE AGREEMENT

THIS LEASE AGREEMENT, made effective as of this _____ day of _____ ~~200~~420~~–~~2_, by and between the STATE OF COLORADO, acting by and through the Department of Natural Resources for the use and benefit of the Division of Parks and ~~Outdoor Recreation~~Wildlife and the Board of Parks and ~~Outdoor Recreation~~Wildlife (hereinafter referred to as the "State"), whose legal address is 1313 Sherman Street, Room 618, Denver, Colorado 80203[AR1], and the UPPER YAMPA WATER CONSERVANCY DISTRICT (hereinafter referred to as the "District"), a public corporation and quasi-governmental entity organized pursuant to §37-45-101 to §37-45-153, C.R.S., acting by and through the Board of Directors of the Upper Yampa Water Conservancy District, whose legal address is P.O. Box ~~880339~~775529, Steamboat Springs, Colorado ~~80488-0339~~80477.

WHEREAS, required approval, clearance, and coordination has been accomplished from and with appropriate agencies; and

WHEREAS, the District has been organized as a quasi-governmental entity pursuant to the provisions of §37-45-101 through §37-45-153, C.R.S., to operate, manage, and store water for irrigation and other beneficial purposes in a reservoir; and

WHEREAS, the District owns certain property upon which it has constructed water works and a water storage reservoir known as the Stagecoach Reservoir (hereinafter referred to as "Reservoir," including any expansion or enlargement thereof); and

WHEREAS, the District has agreed and desires, pursuant to authority in §37-45-118, C.R.S., to make a portion of such property available to the State for public recreational purposes; and

WHEREAS, the parties hereto desire to define their respective rights and obligations regarding management, operation, maintenance, repair, and replacement of the Recreational Facilities as defined herein; and

WHEREAS, the State desires to lease the Reservoir Property, as hereinafter defined and as may be hereafter changed, from the District in order to manage and operate the Recreational Facilities ~~thereon~~ for public recreational purposes; and

WHEREAS, the District has constructed certain of the Recreational Facilities on the Reservoir Property and desires to lease the Reservoir Property and such Recreational Facilities to the State for public recreational purposes pursuant to the terms hereof and

WHEREAS, the District has agreed to provide certain funds to the State for use by the State to defray in part the operation and maintenance cost of the Recreational Facilities subject to the terms and limitations set forth herein; and

WHEREAS, ~~the District may be required under~~ that certain Property Contribution Agreement dated October 1, 1986 ~~to~~ which is referenced in previous leases between the parties for the Reservoir Property and which required the District to grant easements or other interests in the Reservoir Property to third parties at locations and for certain commercial purposes identified in such Agreement (the "MountainAir Agreement") has expired and is no longer in force.

NOW, THEREFORE, in consideration of the mutual covenants, terms conditions, restrictions, and requirements contained herein, it is hereby agreed that:

1. This Agreement is subject to and subordinate to the terms, covenants, and conditions of all agreements, licenses, permits, easements, reservations, covenants, restrictions, and water rights decrees now and hereafter entered, and all governmental licenses, permits, and approvals now or hereafter obtained or issued, pertaining to the Reservoir, the Reservoir Property, the Recreational Facilities, or the District's construction, operation, maintenance, repair, replacement, change, modification, enlargement, expansion, or use of the Reservoir and the waters stored therein and all appurtenant facilities including but not limited to the power plant at the dam of the Reservoir.

2. The District hereby leases to the State for recreational purposes only all that portion of the real property described in Exhibit "A" attached hereto excluding from such lease, however, any of the following: (1) water and water rights, (2) real property subject to a Conservation Easement in gross to the State of Colorado, (3) a 60-foot-wide strip of land whose centerline is the access roadway to Stagecoach Dam, the Dam itself, all appurtenances and facilities attached or related to the dam including the power plant (but excluding the trail across the Dam unless the trail is closed by the District for security or construction purposes by notice to the State), and such real property surrounding the Dam as is reasonably necessary for the operation, protection, maintenance, improvement, enlargement, and security of the Dam and Power Plant and delivery of water and power therefrom and being not less than 200 feet wide , (4) that portion of the real property located east of the north-south centerline of the Stagecoach Reservoir dam and south of a line 20 feet northerly of the north high water line of the Yampa River, (5) so much of the land and water surface of the Reservoir along and adjacent to the south shoreline of the Reservoir as are hereafter designated by the District in its sole discretion for a marina and related docks and facilities ~~pursuant to the MountainAir Agreement or any other legal requirement of the District now in existence~~, (6) any other conveyances, licenses or grants of easements for utilities and utility facilities, roads, fences, signs, drives, paths, wildlife or conservation purposes which the District, in its sole discretion, may hereafter grant to any other person or entity, (7) the surface of the reservoir adjoining the spillway in the dam and for a reasonable safe distance away from such spillway up to 200 feet as the District shall from time to time designate in writing to the State, and (8) such other real property as the District, from time to time in its sole and exclusive discretion, may withdraw and exclude from the real property subject to this Lease by written notice to the State (hereinafter all of the real property subject from time to time to this Lease shall be referred to as the "Reservoir Property"). No portion of the Reservoir Property shall be excluded or withdrawn from this Lease or made subject to any conveyance, license or grant of easement under subparagraphs 2(5), 2(6), or 2(8) of this paragraph 2 except following written notice given by the District to the State no later than 90 days prior to the effective date of such exclusion, withdrawal or other action. In addition, the District agrees to consult with the State regarding any such notice within 30 days after such notice is given.

3. State shall have the use, control of, and responsibility for the Reservoir Property, including the surface of the Reservoir, and for the management, administration, and

maintenance of permitted public recreational purposes and the Recreational Facilities existing thereon or hereafter constructed thereon as it deems necessary for the use of this Reservoir Property by the general public, such use to be exclusive for recreational activities only, pursuant to the State's authority and discretion as set forth in §33-10-101 through §33-10-114, C.R.S., as may be amended, and in rules and regulations. The aquatic wetland habitat refuge located on the western portion of the Reservoir Property is included as part of the Recreational Facilities which shall be maintained by the State at its cost in the manner and to the degree required of the District in all obligations of the District regarding this refuge, including the irrigation system for the refuge, such maintenance obligation to include operation of the irrigation system and annual ditch cleaning and vegetation removal, but not major repairs [AR2]or replacement of the irrigation system, which shall be the responsibility of the District. The State agrees that the District shall have no responsibility for livestock damage which occurs to Recreational Facilities or other facilities or property or equipment of the State or any portion of the Reservoir Property. No portion of the Reservoir Property shall be leased by the District for grazing without the prior written consent of the State.

4. The District shall have the use, control of, and total responsibility for the Reservoir Property for all other purposes, including (but not limited to) operation and expansion, modification, repair, replacement, protection, and maintenance of the Reservoir works, dam and appurtenances, water intake, outlet, and storage, power plant and appurtenances, the generation and delivery of electricity, the release and delivery of water, and compliance with all agreements, easements, reservations and restrictions, and all governmental licenses, permits, and approvals to which the Reservoir or Reservoir Property is now or hereafter becomes subject (except to the extent assumed by the State under this agreement). The rights of the District in the preceding sentence shall at all times be senior and paramount to the rights of the State granted under this Lease Agreement. Additionally, the District or its licensee, easement beneficiary, grantee, or designee, shall have the use, control of, and total responsibility for so much of the land and water surface of the Reservoir along and adjacent to the south shoreline of the Reservoir as are hereafter designated by the District in its sole discretion for a marina and related docks and facilities ~~pursuant to any legal requirement of the District under the MountainAir Agreement,~~, and may withdraw such area from the Reservoir Property under this Agreement in the sole discretion of the District. Further, the District reserves the right to make and grant any other conveyances, licenses or grants of easements for utilities and utility facilities, roads, drives, parking areas, paths, fences, gates, signs, boat ramps, or wildlife or conservation purposes which the District, in its sole discretion, shall determine, to any other person or entity, which shall be senior and paramount to the interests of the State under this Lease Agreement. If the District enlarges the Reservoir, the District may in its sole discretion withdraw any Reservoir Property, and any Recreational Facilities located on such withdrawn Reservoir Property (which may include but not be limited to the swim beach, volleyball court, boat ramp, courtesy docks and fueling station), as may be in the sole discretion of the District be necessary or convenient for the enlargement of the Reservoir and the use, operation, and management of the enlarged Reservoir. The District may in its sole discretion withdraw portions of the Reservoir Property southerly of the Reservoir for inclusion in a golf course or for adjusting the boundaries of the Reservoir Property. Any withdrawal or exclusion of property from the Reservoir Property pursuant to this paragraph, or the grant or license of

any interest in the Reservoir Property by the District pursuant to this paragraph is subject to the notice and consultation requirements set forth in paragraph 2 hereof. If the enlargement of the Reservoir results in the inundation of any Recreational Facility, the District, at its cost, shall replace such facilities with equivalent facilities at the location or locations approved by the State, which approval shall not be unreasonably withheld. However, if the replacement cost of the inundated Recreational Facilities at the new location is greater than 125% of the estimated current replacement cost of such Recreational Facilities at the original location, the District shall not be required to replace such Recreational Facilities unless the State contributes toward the cost of such replacement an amount equal to the actual cost of replacement of the inundated Recreational Facilities at the new location less 125% of the estimated cost of replacement of the inundated Recreational Facilities at the original location. Any expenditure made by the State pursuant to the preceding sentence shall qualify as an expenditure for Capital Improvements under paragraph 9 of this Lease.

5. The State has prepared and provided to the District a Master Plan dated ~~April 30, 1997~~ _____ ([AR3]the "Master Plan"), which supersedes and replaces prior versions of such plan, that specifically identifies the Reservoir Property and designates and locates the type, location, and specifications of all of the existing Recreational Facilities thereon.. Any change to the Master Plan shall be made only with the prior written approval of the District, which approval shall not be unreasonably withheld. The Master Plan includes the following facilities, which, together with any expansions, modifications, or replacements thereof, shall hereinafter be referred to as the " Recreational Facilities":

    1. One-hundred (100) unit campground
    2. 8 Seventy-five (75) car parking lots.
    3. Swim beach, volleyball court, concrete patio
    4. One (1) marina boat ramp with courtesy docks and fueling station along the north shore
    5. Picnic pavilion
    6. Park Headquarters building, including shop, visitors center, garage, and on-site employee housing
    7. Dump station
    8. Entrance station
    9. Fifty (50) picnic sites
    10. Three (3) campgrounds with electrical outlets for RVs
    11. Concession building with showers and bathrooms
    12. Three (3) restrooms with water and 6 vault toilets
    13. Grills and picnic tables
    14. Eighty (80) acre wetland outdoor recreation center
    15. Dual potable water and irrigation systems and the electric system
    16. Sanitary facilities including land treatment and nursery site
    17. The aquatic wetland habitat refuge at the westerly end of the Reservoir and all paths, structures, facilities, and improvements related to or integrated therewith

[BW4]

In addition, "Recreational Facilities" shall include the non-motorized hiking trail along the south ~~shore, and~~shore and shall also include the existing parking lot and boat ramp on the south shore of the Reservoir near the South Shore Subdivision unless and except if the

District shall in its sole discretion withdraw such parking lot and boat ramp from the Reservoir Property pursuant to paragraph 2(5) above. The non-motorized hiking trail may be relocated or modified by the District or its designee at the District's cost at any time, and shall not be fenced or gated without the prior written consent of the District. "Recreational Facilities" shall include any other facility or property interest which the State and the District hereafter mutually agree be added as Recreational Facilities hereunder.

6. In the administration, operation, and maintenance of the Reservoir Property and the Recreational Facilities for recreational purposes, and including any further development by the State of Recreational Facilities on the Reservoir Property, the State shall follow the Management Plan dated October 15, 2000, as may hereafter be amended (the "Management Plan") [AR5] Amendments to the Management Plan shall be prepared by the State pursuant to its statutory authority and discretion in cooperation with and subject to the written approval of the District and any other appropriate agencies, and shall comply with State recreational policies and procedures. All Recreational Facilities shall be managed, repaired, improved, replaced, maintained and operated in a manner that will not interfere with the rights of the District reserved in this Lease Agreement, including (but not limited to) the operation and maintenance of the Reservoir Property by the District for power generation and water storage and delivery purposes and the expansion and enlargement of the Reservoir. The Management Plan shall not be amended without the prior written approval of the District, which approval shall not be unreasonably withheld.

7. The State shall be responsible for payment of all costs, including electrical utility bills, incurred by the State in the operation of all existing and future Recreational Facilities and support facilities constructed by the State or the District at the Reservoir Property pursuant to the terms of the Master Plan and the Management Plan.

8. The District shall provide to the State up to 25 acre feet of water from the Reservoir annually at no charge for public use at the Recreational Facilities. Such water is allocated from the ~~recreational~~ Preferred Remainder pool of the Reservoir and is not charged to any storage water now or hereafter allocated by the District for sale or lease from the Reservoir. The State shall be responsible for the maintenance, repair, and replacement of the entire potable water system and the quality and fitness of water for public use, domestic purposes, and human consumption. The water delivered pursuant to this paragraph shall be raw untreated water in the condition existing after diversion from the Reservoir and the District shall have no obligation with respect to water quality. The State shall provide only water that has been suitably treated and is wholesome and sanitary for such public purposes pursuant to this Agreement.

9. Subject to the limitations of this paragraph 9, the District shall provide a limited operational and maintenance subsidy to the State ("O&M Subsidy"). The O&M Subsidy provided by the District shall be paid to the State no later than December 31st of each year of this Lease (May 1, 2024 is the end of the last year of this Lease), provided that during such calendar year the State (a) has physically expanded, modified or replaced Recreational Facilities permanently on site as approved by the District in advance of construction in a manner consistent with the Master Plan at an actual out-of-pocket cost to the State equal to no less than the amount of the O& M Subsidy otherwise payable at

the end of that calendar year less $10,000 (the "Capital Improvements"), and (b) has certified such facts with detail of such costs by letter to the District given by no later than December 1 of such calendar year. The annual O&M Subsidy payable, if at all, on December 31 each year shall be the lesser of (a) $35,000, or (b) the actual costs of the Capital Improvements made by the State that calendar year, or deemed to have been made by the State that calendar year as provided below in this paragraph 9, all as certified by the State to the District by the preceding December 1, plus $10,000. Costs of Capital Improvements shall not include "soft costs" such as office overhead, travel, planning work by State personnel, or staff time by State personnel other than actual on-site supervision and performance of construction activities. If the cost of the Capital Improvements performed by the State in any calendar year, plus the carry-forward "excess" Capital Improvements cost from the preceding year pursuant to this sentence, exceeds $25,000 in any calendar year, such excess over $25,000 shall carry over to the next calendar year, and shall be deemed in that year to be a Capital Improvement cost incurred in that succeeding year, the same as if actually expended by the State in that year, for purposes of calculating the State's entitlement to the O&M Subsidy that year. However, the District's O&M Subsidy obligation shall never exceed $700,000 over the 20-year Lease term. If the O&M Subsidy in any year is less than $35,000 because the State has not spent $25,000 or more in Capital Improvements for that year, then the deficiency from that year shall forever be waived and the District shall not be required to make up such deficiency in future years. If the District's O&M Subsidy obligation of $700,000 is not paid during the Lease term, the District shall have no obligation to make up the difference at the end of the Lease term.

[BW6]

10. The term of this Lease shall be from May 1, 2024 to May 1,_____ unless sooner renewed or terminated as herein provided.

[BW7]

11. Either party may terminate this Lease without cause at any time. To terminate the Lease, the party wanting to terminate shall give the other party written notice in the manner provided for in Paragraph 23 below. Termination shall be effective one hundred eighty (180) days after said notice. Upon termination, a party's rights and obligations under this Lease shall cease, except that liability for acts or omissions occurring prior to transfer shall survive transfer.

12 The State may establish and collect use fees for the recreational purposes of the Reservoir Property in the amount of and in accordance with a uniform fee schedule [AR8]adopted by the State for Colorado State Parks. Said fees shall belong exclusively to the State. The District shall not charge or collect fees for recreational purposes on the Reservoir Property.

13. Consistent with any budgetary constraints and with personnel availability, and within its lawful discretion, the State shall operate and manage the Reservoir Property for recreational purposes in accordance with the Management Plan, and enforce the laws, rules, and regulations relating to parks and recreation areas on the Reservoir Property in order to supervise and control the public recreational use of the Reservoir Property. The State shall consult with the District prior to the adoption of any new rules and regulations by the State regarding public use of the Reservoir Property, which are specific to the Reservoir Property. In addition, the State shall at all times maintain at its cost all

Recreational Facilities and support facilities in good and safe order, condition, and state of repair, usable by the public.

14. The State shall have the right to construct, operate, and maintain on the Reservoir Property Recreational Facilities, provided that such Facilities are in accordance with the Master Plan prepared and existing pursuant to Paragraph 5, as may be amended, the Management Plan prepared and existing pursuant to Paragraph 6, as may be amended, such amendments to be as approved in writing by the District. All Recreational Facilities or improvements or structures constructed by the State or the District shall become the property of the District and shall not be removed by the State without the written consent of the District. After the termination of the Lease, the District may remove such improvements and Recreational Facilities in its sole discretion.

15. The State shall have the right to enter into any written contract or permit with a third party ("Agent") to act as the agent of the State for the purpose of performing and carrying out any of the functions provided for in this Agreement which, in the State's sole authority and discretion, it deems appropriate to delegate to such Agent, provided that (a) the State shall promptly provide a true copy of each such contract or permit to the District, (b) such contract or permit shall refer to and incorporate by reference this Lease Agreement, and (c) no such contract or permit shall relieve the State from the full and complete performance of its obligations and responsibilities under this Lease Agreement . Said contracts shall be subject and subordinate to this Agreement and to all matters referenced in paragraph 1 of this Agreement. Said contracts shall specifically include concession contracts, provided that concession contracts shall be subject to the prior written approval of the District. The District shall be named as an additional insured in all such contracts and agreements. Notwithstanding the above, the State shall not delegate by contract or permit to any person the obligation of the State to manage and operate the entry stations into Stagecoach State Park and the campgrounds, RV campgrounds, parking lots, swimming beach, picnic sites and pavilion, boat ramps, non-motorized hiking trail, and potable water and sanitary sewer buildings within the Recreational Facilities, all of which must be managed and operated by the State itself. The State's obligation to provide copies of contracts to the District under this paragraph shall be limited to concession contracts and contracts for the construction of Capital Facilities exceeding $10,000.

16. To the greatest extent possible, the State and District shall cooperate with each other to assure that each is able to exercise its rights and perform its obligations under this Lease with minimum interference to the other party's activities. Further, each party shall use every reasonable effort to prevent damage to the property and facilities managed, operated, or maintained by the other party. The State's manager of Stagecoach State Park, and the manager of the District, shall meet at least ~~semi-~~annually to discuss issues of mutual concern to the parties.

17. The District shall have sole control in its sole discretion over the diversion, intake, storage, allocation, and release or disposal of water in and from the Reservoir, generation of power from the power plant at the dam, the enlargement and expansion of the Reservoir, the timing and rate of increase and drawdown of water, the water levels and fluctuations thereof, water temperatures, circulation of water in the Reservoir, dredging

of the Reservoir, and prohibition of boats and persons on the water surface for a reasonable safe distance from the spillway and intake structure, and the State shall have no right, interest, or entitlement thereto whatsoever except as provided in the first sentence of paragraph 9. Further, the District, its agents, and employees shall have access at all times to the control of structures, dams, headgates, and all of the Reservoir Property and Recreational Facilities in order to manage, control, protect, and administer the intake, diversion, storage, management, allocation, and release or disposition of water in and from the Reservoir, generation of power at the power plant, and the expansion or enlargement of the Reservoir. If the District intends to cause or is aware of the pending occurrence of a substantial reduction in the water level of the Reservoir resulting from the release from storage at a rate of more than 200 cfs, it shall, within 24 hours, notify the State in writing of such fact in order that fish and wildlife may be salvaged and other necessary steps may be taken to ensure the safety of public recreation users. The District shall also have the right to raise the level of the dam at Stagecoach Reservoir for the purpose of expanding the storage capacity of the Reservoir and subject additional land area within and outside of the Reservoir Property and portions of the Recreational Facilities to inundation.

18. The parties acknowledge that the District benefits from limitations on potential liability which may arise from use of the Reservoir Property by members of the public for public recreational purposes, pursuant to the provisions of Article 41 of Title 33, C.R.S. and to §13-21-115, C.R.S., as may be amended. In accordance with the provisions of § 33-41-103(2)(e)(II.5), C.R.S., the District acknowledges that it has been advised of its right to bargain for indemnification from liability for injury resulting from use of the Reservoir Property by all persons or guests of persons on the Reservoir Property for recreational purposes, at the invitation or consent of the State, and all persons present on the Reservoir Property at the invitation or consent of the District or the State for business or other purposes relating to or arising from the use of the Reservoir Property for recreational purposes. No such indemnification agreement has been entered into by the parties hereto.

19. Notwithstanding any other provision of this Lease to the contrary, no term or condition [BW9]of this Lease shall be construed or interpreted as a waiver, either expressed or implied, of any of the immunities, rights, benefits, or protection provided to the parties under the Colorado Governmental Immunity Act, §§ 24-10-101, et seq., C.R.S., as amended or as may be amended (including, without limitation, any amendments to such statute, or under any similar statute which is subsequently enacted). The parties hereto understand and agree that liability for claims for injuries to persons or property arising out of the negligence of the State of Colorado, its departments, institutions, agencies, boards, officials, and employees is controlled and limited by the provisions of §§ 24-10-101, et seq., C.R.S., as amended or as may be amended, and §§ 24-30-1501, et seq., C.R.S., as amended or as may be amended. Any provision of this Lease, whether or not incorporated herein by reference, shall be controlled, limited, and otherwise modified so as to limit any liability of the parties to the above-cited laws.

20. To the extent authorized by § 24-30-1510(3)(e), C.R.S., the State shall defend and hold harmless the District against claims arising from the alleged negligent acts or omissions of the State and its public employees which occurred or are alleged to have occurred during the performance of their duties and within the scope of their employment, except

where such acts or omissions are willful and wanton. Such claims shall be subject to the limitations of the "Colorado Governmental Immunity Act," §§ 24-10-101 to 24-10-120, C.R.S., as now or hereafter amended.

21. It is an express condition of this Lease Agreement that no employee of the Colorado Division of Parks and ~~Outdoor Recreation~~Wildlife or member of the Colorado Board of Parks and ~~Outdoor Recreation~~Wildlife, and no person acting as Agent under paragraph 15 above or as agent for or pursuant to the direction and instruction from any such employee or member, will express verbally or in writing to any governmental agency or entity or public official the opposition of the State or of such employee or member or of the Colorado Board of Parks and ~~Outdoor Recreation~~Wildlife to the enlargement and expansion of Stagecoach Reservoir or the storage, use, or release of additional water in such enlargement as may hereafter be proposed by the District, or to the design, permitting, or construction of such Reservoir expansion and enlargement by the District. If such condition is for any reason broken, violated, or in default, then at any time within one year thereafter the District may at its sole election and upon written notice to the State terminate and rescind this Lease Agreement and may re-enter and take possession of the Recreational Facilities as in the prior estate, without liability to the State or any concessionaire or licensee of the State or any third party beneficiaries or the public. It is the intent and purpose of the parties that the District shall have a valid and enforceable right of entry on condition broken under the provisions of the preceding sentence until termination of this Lease Agreement or until completion of the Reservoir enlargement and expansion, whichever first occurs. The prohibition set forth in this paragraph shall not apply to any employee of the Division of Parks and Wildlife, Colorado Water Conservation Board or other State agency, or any concessionaire of the State on the Reservoir Property, nor shall such prohibition apply to any employee of the State or member of the Colorado Board of Parks and ~~Outdoor Recreation~~Wildlife who expresses an opinion in his or her private capacity.

22. This Lease shall be binding upon the parties hereto, their successors, and assignees. However, the State shall not assign this Lease without the prior written consent of the District. Time is of the essence of this Lease Agreement. In case any one or more of the provisions contained in this Lease Agreement shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall conclusively be presumed to affect adversely all other provisions hereof, as one integrated Lease Agreement, and therefore any such holding shall conclusively be deemed to be a complete termination of this Lease Agreement. This Lease Agreement may not be altered or amended, and no right under this Lease Agreement may be waived, except by a written instrument executed by the parties (or, in the case of a waiver, by a written instrument executed by the party granting the waiver) to this Lease Agreement. No waiver of any breach of any portion of this Lease Agreement shall be deemed a waiver of any preceding or succeeding breach of that provision. No extension of time for performance of any obligations or acts shall be deemed an extension of the time for performance of any other obligations or acts. This Lease Agreement, and the Master Plan and the Management Plan to which this Agreement refers, contain the entire agreement between the parties with respect to the subject matter of this Lease and supersedes the prior lease between the parties and all prior understandings with respect to the subject matter of this Lease, the Master Plan, and the Management Plan. The parties have made

no prior representations and have given no warranties with respect to the subject matter of this Lease Agreement except as specifically provided herein. The parties do not intend to confer any benefit on any person, firm or corporation other than the signatory parties to this Lease Agreement.

23. Notices. Any notice required or permitted to be provided hereunder shall be deemed given when either personally delivered or mailed by certified mail, return receipt requested, to the parties at their following addresses or such other addresses as they may designate in a notice duly delivered:

If to the District: Upper Yampa Water Conservancy District
P.O. Box ~~880339~~775529
Steamboat Springs, CO ~~80488-0339~~80477
Attn: Manager

If to State: Colorado Division of Parks and ~~Outdoor Recreation~~Wildlife
Attn: Stagecoach Lake Park Manager
P.O. Box 98
Oak Creek, CO 80467

24. The District warrants and represents itself to be the owner of the Reservoir Property in the form and manner as stated herein; that it has the authority to enter into this Lease with the State and that it has taken appropriate action to approve this Lease; and that during the term of this Lease it covenants and agrees to warrant and defend the State in the quiet, peaceable enjoyment and possession of the premises against the adverse property claims of any person which arise by, through, or under the District.

25. COLORADO SPECIAL PROVISIONS (COLORADO FISCAL RULE 3-3)
These Special Provisions apply to all contracts except where noted in italics.

A. STATUTORY APPROVAL. §24-30-202(1), C.R.S.
This Lease shall not be valid until it has been approved by the Colorado State Controller or designee. If this Lease is for a Major Information Technology Project, as defined in §24-37.5-102(2.6), then this Lease shall not be valid until it has been approved by the State's Chief Information Officer or designee.

B. FUND AVAILABILITY. §24-30-202(5.5), C.R.S.
Financial obligations of the State payable after the current State Fiscal Year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available.

C. GOVERNMENTAL IMMUNITY.
Liability for claims for injuries to persons or property arising from the negligence of the State, its departments, boards, commissions committees, bureaus, offices, employees and officials shall be controlled and limited by the provisions of the Colorado Governmental Immunity Act, §24-10-101, et seq., C.R.S.; the Federal Tort Claims Act, 28 U.S.C. Pt. VI, Ch. 171 and 28 U.S.C. 1346(b), and the State's risk management statutes, §§24-30-1501, et seq. C.R.S. No term or condition of this Lease shall be construed or interpreted

as a waiver, express or implied, of any of the immunities, rights, benefits, protections, or other provisions, contained in these statutes.

D. COMPLIANCE WITH LAW.
The District shall comply with all applicable federal and State laws, rules, and regulations in effect or hereafter established, including, without limitation, laws applicable to discrimination and unfair employment practices.

E. CHOICE OF LAW, JURISDICTION, AND VENUE.
Colorado law, and rules and regulations issued pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this Lease. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. All suits or actions related to this Lease shall be filed and proceedings held in the State of Colorado and venue shall be in the county in which the Property is located. Venue shall be proper in any county in which the Property is located if it is situate in more than one county.

F. PROHIBITED TERMS.
Any term included in this Lease that requires the State to indemnify or hold the District harmless; requires the State to agree to binding arbitration; limits the District's liability for damages resulting from death, bodily injury, or damage to tangible property; or that conflicts with this provision in any way shall be void ab initio. Nothing in this Lease shall be construed as a waiver of any provision of §24-106-109 C.R.S.

G. EMPLOYEE FINANCIAL INTEREST/CONFLICT OF INTEREST. §§24-18-201 and 24-50-507, C.R.S.
The signatories aver that to their knowledge, no employee of the State has any personal or beneficial interest whatsoever in the service or property described in this Lease. The District has no interest and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with the performance of the District's services and the District shall not employ any person having such known interests.

H. VENDOR OFFSET AND ERRONEOUS PAYMENTS. §§24-30-202(1) and 24-30-202.4, C.R.S. [BW10]
[Not applicable to intergovernmental agreements] Subject to §24-30-202.4(3.5), C.R.S., the State Controller may withhold payment under the State's vendor offset intercept system for debts owed to State agencies for: (i) unpaid child support debts or child support arrearages; (ii) unpaid balances of tax, accrued interest, or other charges specified in §§39-21-101, et seq., C.R.S.; (iii) unpaid loans due to the Student Loan Division of the Department of Higher Education; (iv) amounts required to be paid to the Unemployment Compensation Fund; and (v) other unpaid debts owing to the State as a result of final agency determination or judicial action. The State may also recover, at the State's discretion, payments made to the District in error for any reason, including, but not limited to, overpayments or improper payments, and unexpended or excess funds received by the District by deduction from subsequent payments under this Lease, deduction from any payment due under any other contracts, grants or agreements between the State and the District, or by any other appropriate method for collecting debts owed to the State.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the date first above written.

CONTRACTOR:

UPPER YAMPA WATER CONSERVANCY DISTRICT

By _____
Thomas R. Sharp[AR12], President

Attest: _____
~~John R. Fetcher~~Andy Rossi,
Secretary

STATE OF COLORADO

Bill Owens[AR11], Governor

By _____
Executive Director

DEPARTMENT OF NATURAL RESOURCES

BOARD OF PARKS AND OUTDOOR RECREATION

By: _____

APPROVED – C.R.S. 24-30-1510(3)(e)[AR13]
Executive Director
Department of Personnel

By:_____
Cristina Valencia[AR14]
Risk Manager

Nrbw9218.doc

UPPER YAMPA WATER
CONSERVANCY DISTRICT

BOARD COMMUNICATION FORM

From: Andy Rossi, General Manager
Date: 05/011/22
Item: **Existing Stagecoach Reservoir Municipal Water Storage Contract Amendment**

_____ DIRECTION
__X__ INFORMATION
__X__ MOTION
_____ RESOLUTION

I. Request/Issue and Background Information:

The Upper Yampa Water Conservancy District (UYWCD) Board of Directors (BOD) approved a proposed Stagecoach Reservoir Municipal Storage Contract Amendment at the October 20, 2021, UYWCD BOD regular meeting. UYWCD offered the approved contract amendment to the existing municipal contract holders in November of 2021. A summary of the status of the proposed amendment acceptance by municipal contract holders is presented below.

II. Summary:

The status of the acceptance of the proposed contract amendment is indicated in the following table.

Existing Stagecoach reservoir Municipal Contract Amendment Final Status

Contract Holder	Contract Volume (AF)	Accepted Contract Amendment
Agate Creek	20	Y
Alpine Mountain Ranch	100	Y
City of Steamboat Springs	552	N
Dakota Ridge	50	Y
Mount Werner Water	200	N
Town of Hayden	200	Y
Tree Haus	50	Y
Stahl 1	58	N*
Stahl 2	192	N*

* Stahl requests termination of existing water storage contracts. Termination of Water Contracts Agreement included with this communication.

As indicate in the notes for the table above, the Stahl Family requests the termination of two Stagecoach Reservoir water storage contracts. A termination of Water Contracts Agreement is included with this communication for UYWCD BOD consideration for approval.

Edexco, Inc.'s (and Raindrop Water's) Stagecoach Reservoir water storage contract expired on July 15, 2021. Edexco, Inc. requests a new Stagecoach Reservoir water storage contract. A new contract is included with this communication for UYWCD BOD consideration for approval.

III. Staff Recommendation:

1. Authorize the signature of the Termination of Water Contract Agreement for the two existing Stagecoach Reservoir water storage contracts for Stahl.
2. Approve the new Stagecoach Reservoir water storage contract for Edexco, Inc.

IV. Legal Issues:

Formal UYWCD BOD action for termination of the municipal water storage contracts for Stahl recommended by UYWCD General Council.

V. Consistency with Board Goals and Policies:

UYWCD SP Objective 3.1

Attachments:

Termination of Water Contracts Agreement (Stahl)
Edexco, Inc. Stagecoach Reservoir Water Storage Contract
05/02/22 Communication from City of Steamboat Springs
05/10/22 Communication from Mount Werner Water

TERMINATION OF WATER ALLOTMENT CONTRACTS

THIS TERMINATION OF WATER ALLOTMENT CONTRACTS (the "**Termination"**), is made and entered into effective as of the _____ day of _____, 2022 ("**Effective Date**"), between the UPPER YAMPA WATER CONSERVANCY DISTRICT, a political subdivision of the State of Colorado (the "**District**"), on one side, and ROBERT STAHL, an individual, VIRGINIA STAHL, an individual (Robert Stahl and Virginia Stahl shall collectively be referred to as the "**Stahls**"), and ACORN INN GP, a California General Partnership ("**Acorn Inn**" and together with the Stahls, the "**Allottees**"), on the other side. The District and the Allottees shall collectively be referred to as the "Parties."

RECITALS

WHEREAS, the District is a statutory water conservancy district and political subdivision of the State of Colorado located in Routt County and a portion of Moffat County, Colorado; and

WHEREAS, District and the Stahls and Brian Stahl entered into two annual water Allottment Contracts both approved by the District on March 4, 2002 (the "Contracts"), one in the original amount of 142 acre feet (increased to 192 acre feet in 2005) and one in the amount of 58 acre feet; and

WHEREAS, Allottees have previously represented to the District that all of Brian Stahl's right, title and interest in the in the Contracts was assigned to Acorn Inn and that Brian Stahl has no direct or indirect interest in the Contracts; and

WHEREAS, all payments required to be made to the District under the Contracts have been made, including the payment for water placed in storage as of July 15, 2021 for the benefit of Allottees under the Contracts; and

WHEREAS, Allottees have requested that the District agree to the termination of the Contracts as of the Effective Date and the District is willing to agree to such termination in accordance with the terms of this Termination.

TERMINATION

NOW, THEREFORE, for and in consideration of the covenants, conditions, representations, and agreements contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. Incorporation of Recitals. The Recitals set forth above are hereby incorporated into and made part of this Termination.

2. Termination. The Parties hereby mutually terminate the Contracts in their entirety.

3. Non-Survival. The Parties acknowledge and agree that no right, remedy, default, obligation, duty, permit, or benefit of any party to the Contracts which accrued or allegedly accrued prior to Effective Date shall survive termination or have any independent existence.

4. Representations of Allottees. Each of the Allottees severally and not jointly represent and warrant to the District that (a) Brian Stahl's right, title and interest in the Contracts was assigned to Acorn Inn and that Brian Stahl has no direct or indirect interest in the Contracts, (b) Allottees collectively own one hundred percent (100%) of the rights, title and interest in and to the Contracts; and (c) Allottees have the full legal right and authority to terminate the Contracts and the consent of no other party is required.

5. Successors and Assigns. All of the terms and provisions of this Termination shall inure to the benefit of, and shall be enforceable by and binding upon, the heirs, personal representatives, successors and assigns of each of the Parties hereto.

6. Attorneys' Fees. In the event any of the Parties to this Termination brings an action or proceeding to enforce this Termination or any provision thereof, the prevailing party in such action or proceeding shall be entitled to recover reasonable attorneys' fees and costs, including court costs, expert witness fees and other necessary costs, whether or not such action or proceeding is prosecuted to judgment.

7. Notices. All notices, consents, claims, demands, waivers and other communications hereunder shall be in writing and shall be deemed to have been given (a) when delivered by hand (with written confirmation of receipt); (b) when received by the addressee when sent by a nationally recognized overnight carrier (receipt requested); (c) on the date sent by email (with confirmation of transmission) if sent during normal business hours of the recipient, and on the next business day if sent after normal business hours of the recipient; (d) on the date actually delivered if sent by certified or registered U.S. mail, return receipt requested (with written confirmation of receipt). Such communications must be sent to the respective parties at the following addresses (or such other address for a party as shall be specified in a notice given in accordance with this Section 7):

If to the District:

Upper Yampa Water Conservancy District
Attn: District Manager
Email: Andy Rossi <arossi@upperyampawater.com>

If by U.S. Mail:
PO Box 775529
Steamboat Springs, CO 80477

If by Private Carrier:
2220 Curve Plaza, Suite 201
Steamboat Springs, CO 80487

with a copy to:

Weiss and Van Scoyk LLP
Attn: Robert Weiss, Esq.
1625 Mid Valley Drive, Suite 1-PMB 82
Steamboat Springs, CO 80487
Email: BWeiss@wvsc.com

If to Allottees:

Robert Stahl, Virginia Stahl and Acorn Inn GP, a California general partnership
Attn: Denise Stahl Altaffer
105 2nd Street
Oakland, CA 94607
Email: stahlinvestment@gmail.com

with a copy to:

Law Office of John A. Vanderbloemen, LLC
Attn: John A. Vanderbloemen, Esq.
405 South Lincoln Avenue, Suite B-207
P.O. Box 773990
Steamboat Springs, CO 80477
E-mail: jav@lvlaw.net

8. Governing Law; Forum Selection. This Termination shall be governed by and construed in accordance with the laws of the State of Colorado without giving effect to any choice or conflict of law provision or rule (whether of the State of Colorado or any other jurisdiction). The Parties agree that any disputes arising out of this Termination or any subject matter herein shall be litigated in the state courts of the State of Colorado.

9. Entire Agreement. This Termination constitutes the sole and entire agreement of the Parties with respect to the subject matter hereof, and supersedes all prior and contemporaneous understandings and agreements, both written and oral, with respect to such subject matter.

10. Headings. The section headings in this Termination are for reference only and shall not affect the meaning or interpretation of this Termination.

11. Severability. If any term or provision of this Termination is invalid, illegal or unenforceable in any jurisdiction, such invalidity, illegality or unenforceability shall not affect any other term or provision of this Termination or invalidate or render unenforceable such

term or provision in any other jurisdiction. Upon such determination that any term or other provision is invalid, illegal or unenforceable, the Parties hereto shall negotiate in good faith to modify this Termination so as to effect the original intent of the Parties as closely as possible in a mutually acceptable manner in order that the transactions contemplated hereby be consummated as originally contemplated to the greatest extent possible.

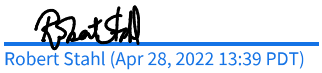
[Remainder of page intentionally left blank; signature pages to follow]

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed as of the date first written above.

UPPER YAMPA WATER CONSERVANCY DISTRICT:

By: _____
Doug Monger
Its President

ALLOTTEES:

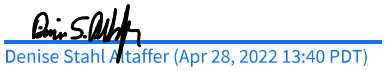

Robert Stahl (Apr 28, 2022 13:39 PDT)

Robert Stahl


Virginia Stahl (Apr 28, 2022 13:40 PDT)

Virginia Stahl

ACORN INN GP, a California General Partnership

By: 
Denise Stahl Altaffer (Apr 28, 2022 13:40 PDT)

Denise Stahl Altaffer
Its general partner

Stahl Water Contract Termination-4.28.22

Final Audit Report 2022-04-28

Created:	2022-04-28
By:	Deb Bastian (dbastian@upperyampawater.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAOB3COAbZNjv1CyCYayUziqfSeahUO0Gt

"Stahl Water Contract Termination-4.28.22" History

Document created by Deb Bastian (dbastian@upperyampawater.com)
2022-04-28 - 7:53:18 PM GMT- IP address: 63.224.69.143

Document emailed to Robert Stahl (stahlinvestment@gmail.com) for signature
2022-04-28 - 7:55:23 PM GMT

Email viewed by Robert Stahl (stahlinvestment@gmail.com)
2022-04-28 - 8:38:12 PM GMT- IP address: 66.249.84.85

Document e-signed by Robert Stahl (stahlinvestment@gmail.com)
Signature Date: 2022-04-28 - 8:39:19 PM GMT - Time Source: server- IP address: 107.77.211.224

Document emailed to Virginia Stahl (stahlinvestment@gmail.com) for signature
2022-04-28 - 8:39:21 PM GMT

Email viewed by Virginia Stahl (stahlinvestment@gmail.com)
2022-04-28 - 8:39:29 PM GMT- IP address: 66.249.84.73

Document e-signed by Virginia Stahl (stahlinvestment@gmail.com)
Signature Date: 2022-04-28 - 8:40:04 PM GMT - Time Source: server- IP address: 107.77.211.224

Document emailed to Denise Stahl Altaffer (stahlinvestment@gmail.com) for signature
2022-04-28 - 8:40:06 PM GMT

Email viewed by Denise Stahl Altaffer (stahlinvestment@gmail.com)
2022-04-28 - 8:40:17 PM GMT- IP address: 66.249.84.85

Document e-signed by Denise Stahl Altaffer (stahlinvestment@gmail.com)
Signature Date: 2022-04-28 - 8:40:52 PM GMT - Time Source: server- IP address: 107.77.211.224

Agreement completed.
2022-04-28 - 8:40:52 PM GMT

WATER SUPPLY CONTRACT

(Special Purposes)

THIS WATER SUPPLY CONTRACT ("Contract") is entered into by and between EDEXCO INC d/b/a Raindrop Water, Inc.("Contractor"), and UPPER YAMPA WATER CONSERVANCY DISTRICT, a Colorado water conservancy district ("Upper Yampa"), individually each a "Party" and collectively referred to herein as the "Parties," effective as of the Effective Date set forth below.

RECITALS

A. Upper Yampa is a Colorado water conservancy district formed under the Water Conservancy Act, C.R.S. §§37-45-101 through 153 and is the owner and operator of Stagecoach Reservoir (hereinafter referred to as the "Reservoir" or "Stagecoach Reservoir") in Routt County, Colorado.

B. Upper Yampa has stored and expects annually to store water in the Reservoir on the Yampa River under the absolute storage water rights it owns ("Water Rights").

C. Contractor is a Colorado corporation which utilizes water within the boundaries of Upper Yampa for the purposes described herein.

D. Upper Yampa has designated certain pools of water within the Reservoir for the purpose of administration of the storage and release of water from the Reservoir (the below-described "Contract Pools," or individually, a "Contract Pool"). Upper Yampa has adopted a filling priority for the various Contract Pools under Upper Yampa Fill Policy as follows:

(i) 9,000 acre-feet "Municipal/Industrial Pool" – The Municipal/Industrial Pool consists of water currently formerly allocated to Tri-State Generation and Transmission Association, Inc. ("TriState") under Upper Yampa's expired contract with Tri-State or the municipal or industrial allottees of water from Stagecoach Reservoir who contract for all or part of the 7,000 acre-feet formerly allotted to TriState; and 2,000 acre-feet allocated for municipal use pursuant to existing contracts between Upper Yampa and such contracting entities or the municipal or industrial allottees of water from Stagecoach Reservoir who contract for all or part of the 2,000 acre-feet allotted to such contracting municipal users if Upper Yampa's current or former contracts with any such municipal user for water from Stagecoach is terminated or released or amended in whole or in part;

(ii) 2,000 acre-feet "Augmentation Pool" – The Augmentation Pool consists of water allocated for augmentation use pursuant to the decree of the Water Court entered in Case No. 06CW49, Water Division 6;

(iii) 4,000 acre-feet "General Supply Pool" – The General Supply Pool consists of water formerly under contract to Tri-State and deliverable out of Yamcolo Reservoir pursuant to an exchange agreement which expired and was not renewed; the

General Supply Pool water is not subject to any exchange obligation or right or limitations on storage and use other than Upper Yampa Fill Priority;

(iv) 3,164 acre-feet "Raise Pool" – The Raise Pool consists of water that represents the increase in capacity of the Reservoir resulting from the raise in the level of the spillway completed in 2011; the Raise Pool water is not subject to any right or limitations on storage and use other than Upper Yampa Fill Priority, but is called the "Raise Pool" only for definitional purposes;

(v) 3,125 acre-feet "Preferred Remainder Pool" – The Preferred Remainder Pool consists of water not currently under contract, which represents a defined quantity of water in the Reservoir not allocated to the Contract Pools described in paragraphs D (i) through D(iv) above; the Preferred Remainder Pool water is not subject to any right or limitations on storage and use other than Upper Yampa Fill Priority, but is called the "Preferred Remainder Pool" only for definitional purposes; and

(vi) 15,000 acre-feet, approximately, is the "Emergency Remainder Pool" – The Emergency Remainder Pool consists of water that represents the remaining capacity of the Reservoir not allocated to the Contract Pools described in paragraphs D(i) through D(v) above.

E. Upper Yampa and the Contractor desire to enter into this Contract for Upper Yampa to store and release unto Contractor 50 acre-feet of water stored in Stagecoach Reservoir from the Municipal/Industrial Pool for beneficial uses by the Contractor on an annual basis during the Term of this Contract (the "Contracted Water").

F. Subject to the terms of this Contract, Contractor will pay Upper Yampa for the use of Contracted Water.

NOW THEREFORE, in consideration of the mutual agreements contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Contractor and Upper Yampa agree as follows:

USE OF WATER RIGHTS

1. Contract Price and Payment Procedure.

1.1 The purchase price for the Contracted Water from the Reservoir storage water allocated to the Contractor for Water Year 2022 under this Contract (the "First Water Year") shall be $**86.28** (the "Base Price") for each acre-foot of such Contracted Water stored in the Reservoir and available for release to the Contractor in such First Water Year.

1.2 The annual price per acre-foot for the Contracted Water stored in the Reservoir and allocated and available for release to the Contractor in the next Water Year after the First Water Year, and in each Water Year thereafter during the Term of this Contract, shall be an amount equal to the greater of (i) the price per acre-foot charged to the Contractor for the

Contracted Water the prior Water Year, or (ii) the product obtained by multiplying the Base Price by a fraction, the denominator of which is the Consumer Price Index for All Urban Consumers, Denver-Boulder-Greeley Metropolitan Area, "All Items" (1982 – 84 = 100), published by the Bureau of Labor Statistics of the United States Department of Labor (the "CPI") for the semi-annual period ending December 31 in the Water Year prior to the First Water Year and the numerator of which is the CPI for the semi-annual period ending December 31 of the prior Water Year. In the event the Bureau of Labor Statistics discontinues publication of the CPI in the format existing as of the Effective Date, then Upper Yampa shall select a reasonably comparable price index, which index shall be substituted for the CPI in this paragraph. If the base year used in computing the CPI is changed, the adjustment to the purchase price shall be changed accordingly, so that all applicable increases in the CPI are considered, notwithstanding any such change in the base year. For purposes of this Contract, a "Water Year" shall be the 12-month period from March 1 in a year through February 28 of the subsequent year, unless the beginning and end of such Water Year is changed by the Division Engineer for Water Division 6.

1.3 The annual payments for the Contracted Water shall be made by Contractor to Upper Yampa on or before August 1st of each year during the term of this Contract, beginning August 1, 2022. Any annual payment not made within thirty (30) days after the due date shall bear interest at the rate of twelve percent (12%) per annum until paid. Payments due are based on the amount of Contracted Water and shall be made regardless of the amount of water delivered to Contractor and there shall be no abatement or setoff against any such payment, nor shall Contractor be permitted to withhold any payment required for any reason whatsoever, except only in the event the full Contracted Water has not been stored in the Reservoir by July 15 as described in Section 2.5 below.

1.4 If the duration of this Contract exceeds 20 years, Upper Yampa reserves the right and authority to increase, at its sole discretion, the annual base contract pricing per acre foot of water, in the 2042 Water Year of such Contract, up to a price then competitive with the market for similar municipal water supplies in similar quantities in the Yampa River Basin, such competitive pricing to include reference to contracts from Upper Yampa to others for municipal water supplies which have been executed after this Contract, and thereafter during each year of such Contract beyond the 2042 Contract Year such annual price shall continue to be adjusted by the CPI as provided in Subsection 1.2 above. The Parties agree that this Contract does not exceed 20 years and that this Subsection 1.4 does not apply to this Contract.

2. Storage and Delivery of Contracted Water.

2.1 Upper Yampa agrees, subject to physical water supply conditions, terms of the license issued by the Federal Energy Regulatory Commission, the administration of water rights by State of Colorado water officials, and the terms of this Contract, to store the Contracted Water in Stagecoach Reservoir prior to July 15th of each calendar year for release for Contractor's beneficial use, upon request between July 15th and March 1st of the then current Water Year. Contractor shall be entitled to one use of the water delivered hereunder to extinction but shall not be entitled to the reuse or successive uses of such water. Contracted Water may only be used during the then current Water Year and no unreleased Contracted Water

will be booked over to the succeeding Water Year. Unreleased Contracted Water does not carry-over from one Water Year to the next. The water released to Contractor shall be used by Contractor solely as a source of water for Contractor's business of supplying rural residential customers with water by tanker truck. Responsibility for carriage of the water to the place where Contractor removes it from the river, including stream loss and evaporation, and the cost of necessary water treatment after removal from the river shall be the responsibility of the Contractor.

2.2 The Contracted Water shall be stored as part of the Municipal/Industrial Pool of Upper Yampa, to be stored in the priority of such Contract Pool under the Stagecoach Fill Policy.

2.3 Except in times of emergency, Contractor shall give at least forty-eight (48) hours' advance written notice to Upper Yampa specifying the time and quantity of the Contracted Water requested to be released out of the Reservoir. The point of delivery of the Contracted Water shall be the discharge of the outlet works of the Reservoir. Responsibility for transportation and delivery of such Contracted Water after the point of delivery, and for all transit and transportation and carriage losses sustained in such delivery, shall be borne solely by Contractor. Upper Yampa shall maintain records of all releases of water from storage in the Reservoir and shall maintain records of water levels in the Reservoir measured not less frequently than once per week. Contractor shall be entitled to inspect such records and copies shall be furnished to Contractor upon written request.

2.4 Upper Yampa shall allocate and charge any evaporation losses from water stored in the Reservoir against the Emergency Remainder Pool, and if there is insufficient water stored in the Emergency Remainder Pool, against the next most senior of the Contract Pools in ascending order of priority until all evaporation is accounted for and charged. If evaporation is charged against the Contract Pool in which the Contracted Water is stored (*i.e.* either the General Supply Pool or the Municipal/Industrial Pool), then Upper Yampa shall first charge the evaporation against the unallocated water in that Contract Pool, and only if there is evaporation that still needs to be accounted for, then against the Contractor's storage account on a pro rata basis with other water that is stored and allocated to other water users in that Contract Pool.

2.5 In any calendar year when insufficient water is stored in the Reservoir to supply the full Contract Pools as measured at time of peak annual storage as reasonably determined by Upper Yampa, then the amount of water captured by Upper Yampa to fill the Reservoir shall be allocated for filling purposes to the Contract Pools in descending order of priority so that each Contract Pool is filled before allocation of any storage water to the next lower Contract Pool. Parties holding water from a Contract Pool that does not completely fill due to insufficient water available to that Contract Pool shall abate and share proportionately in any shortfall of stored water in that Contract Pool. If any part of the water allocated to Contractor by this Contract is reduced by such abatement, Upper Yampa shall notify Contractor in writing of such fact, and of the amount of the reduction in such water, by July 25th of that year, and in the absence of such notice the full amount of water for Contractor shall be deemed to have been in storage on or prior to July 15th of that year. The Contractor will be credited against that

Water Year's contract purchase price for the amount of such abatement shortage in acre-feet allocated to the Contractor, multiplied by that year's purchase price per acre-foot.

2.6 The Contracted Water shall only be beneficially used by Contractor for municipal the purposes described herein and within the larger of (a) the lawful boundary of Contractor, including any lawful annexations, inclusions, or expansions of Contractor's boundaries or (b) the approved urban growth boundary of Contractor if Contractor is a municipality, or (c) the approved water service area boundary if Contractor is a municipality or special district, each as may be determined by the governing board of Contractor from time to time during the Term (a through c above each including the Contractor's legally approved out of service area water contracts and service to its own facilities).

2.7 The Parties acknowledge that the turbine capacity to release stored water through the outlet works of Stagecoach Reservoir is 105 cfs, and that Upper Yampa may diminish the instantaneous rate of release of the Contracted Water after a request from Contractor, proportionally with diminishment of rates of releases of stored water to other Contractors without discrimination, to the extent that, in conjunction with other adjusted required release rates by Upper Yampa for such other Contractors, the maximum safe release rate of stored water and required bypasses through the outlet works is not exceeded. The District shall not be required to deliver water to Contractor at an instantaneous rate of delivery exceeding 1 cfs.

3. Contractor's Water Use Obligations of the Contracted Water.

3.1 **Carriage and Transit Losses**. Contractor shall bear carriage and transit losses in the Contracted Water released by Upper Yampa, in such amounts as are determined by the Division Engineer for Water Division 6, from the point of delivery of Contracted Water to Contractor's point(s) of use and/or exchange or augmentation.

3.2 **Use per Contract and Law**. Contractor's use of Contracted Water shall in all instances be in accordance with the terms of this Contract, the permits and decrees of Upper Yampa's Water Rights, Upper Yampa's adopted Policies and Procedures, as they may change from time to time, and in accordance with applicable law and all decrees related to the Contracted Water. Upper Yampa warrants and represents to Contractor that the Contracted Water may be used by Contractor for municipal purposes, subject to (a) transit losses after release from Stagecoach Dam, (b) the terms of Section 3.3 below and any plan of exchange or augmentation obtained by Contractor to which Upper Yampa has consented, and (c) administration of the Yampa River at and above Contractor's point(s) of use and/or exchange or augmentation. Upper Yampa does not, however, warrant or represent that any augmentation plan of Contractor is sufficient, adequate, effective, or lawful to accomplish its objectives or to protect the continued diversion of the Contracted Water during administration of the Yampa River. Contractor is not authorized to apply for or secure any change in the Water Rights of Upper Yampa for or associated with any of the sources of supply of the Contracted Water.

3.3 **Legal Approvals**. If Contractor requires a plan of augmentation or SWSP to utilize the Contracted Water, Contractor shall at its sole expense adjudicate such plan of

augmentation, or obtain approval of such SWSP, needed for Contractor to use its Contracted Water. Upper Yampa may in its discretion become a co-applicant or opposer in the prosecution of any such applications, or submit comments regarding any SWSP, for the purpose of protecting its Water Rights and related policies and the operation of the Reservoir by Upper Yampa. If a Water Court decree is required for Contractor to use the Contracted Water, Contractor shall cause to be included in any final decree of the Water Court a provision conditioning Contractor's use of the Contracted Water on the existence of an Upper Yampa contract.

3.4 **Limitation on Disposition**. Contractor shall not sublet, sell, donate, loan, or otherwise dispose of any of its rights to Contracted Water without prior written notice to, and the written approval of, Upper Yampa, and the payment of a transfer fee at the prevailing rate set forth by Upper Yampa, which approval may be given, withheld or conditioned by Upper Yampa in its sole discretion.

3.5 **Assignment**. This Contract shall not be assigned or otherwise transferred by Contractor without the prior written consent of Upper Yampa, such consent to be given, withheld, or conditioned by Upper Yampa in its sole discretion.

3.6 **Nondiscrimination**. Contractor and its employees shall not discriminate in the availability of or charges for any water service or water supply made available pursuant to or based upon the Contracted Water on account of race, color, religion, sex, disability, national origin, or any other criteria prohibited under state or federal law.

3.7 **Accounting of Use**. Contractor shall maintain an accounting of its use of all water used or supplied by Contractor on form(s) acceptable to Upper Yampa specifically to enable Upper Yampa to prove the use of the Water Rights and to administer and operate the Reservoir and water right decrees and/or administrative approvals related to Contractor's use of Contracted Water. Contractor shall submit its accounting forms and records to Upper Yampa promptly upon request and shall assist Upper Yampa as it may reasonably request in presenting and/or verifying such evidence of use in court or before administrative agencies by testimony of Contractor or its authorized and informed officers or agents.

3.8 Section 404 of the Clean Water Act (33 U.S.C. 1344) regulates the discharge of dredged or fill material into the waters of the United States. Contractor shall consult with the Army Corps of Engineers if construction of facilities necessary to use the Contracted Water requires Section 404 compliance, which may include obtaining a permit. Further consultation and approval by the United States Fish and Wildlife Service may be required to ensure compliance with the Endangered Species Act (16 U.S.C. 1531, et seq.) if Contractor proposes physical alterations to the designated critical habitat of the Colorado River endangered fish species.

4. Term.

4.1 **Term**. Except in the event of an early termination as provided in Section 5 below, the term of this Contract shall commence on the Effective Date (as defined below) and shall end at the end of the 2041 Water Year (the "Term").

4.2 **Contract Renewal**. This Contract is not renewable, although the Parties may at any time prior to the expiration of the Term enter into a new water allotment contract for the Contracted Water

5. Contract Termination.

5.1 **Termination by Upper Yampa**.

5.1.1 Upper Yampa may terminate this Contract for a material breach of the terms of this Contract by Contractor, including Contractor's failure to pay timely any amount due under this Contract, provided that Upper Yampa has first given at least 60 days' prior written notice specifying in detail such material breach and giving Contractor the right within such 60-day period to cure and remedy such material breach.

5.1.2 Upper Yampa may also terminate this Contract if it reasonably believes that any judicial or administrative proceedings initiated by Contractor as contemplated in Section 3 above materially threaten or interfere with Upper Yampa's authority to contract for delivery of Contracted Water or in any other way may injure Upper Yampa's Water Rights, permits, or other interests associated with Upper Yampa's Water Rights or the Reservoir or Reservoir operations.

5.1.3 Upper Yampa may terminate this Contract if its legal ability to deliver Contracted Water is materially impaired or is eliminated because of the termination or adverse modification of permits, decrees or other authorizations which are needed to deliver the Contracted Water.

5.1.4 Upper Yampa may terminate this Contract, in its sole discretion, upon written notice to Contractor prior to its stated termination date without liability of any kind to the Contractor if Contractor physically uses the stored water to replace water lawfully available to Contractor from direct flow water rights or other storage supplies and Contractor or its affiliates obtains economic benefits from the absence of use of lawfully available direct flow water rights or other storage supplies in an amount exceeding the pricing paid or payable by Contactor hereunder.

5.2 **Termination by Contractor**.

5.2.1 Contractor may terminate this Contract only in whole and not in part, for any material breach of the terms of this Contract by Upper Yampa, including Upper Yampa's failure or inability to deliver Contracted Water for an extended period of time, provided that Contractor has first given at least 60 days' prior written notice from Contractor to Upper Yampa specifying in detail such material breach and giving Upper Yampa the right within such 60-day period to cure and remedy such material breach.

5.2.2 Except as provided in these preceding sections, Contractor has no right to terminate or reform or rescind this Contract.

5.3 **Notice of Termination to Affected Officials**. Either Party may notify the Division Engineer and any other appropriate governmental officials of any termination of this Contract.

6. Force Majeure. Upper Yampa shall not be responsible for any losses or damages incurred as a result of Upper Yampa's inability to perform pursuant to this Contract due to the following causes if beyond Upper Yampa's control and when occurring through no direct or indirect fault of Upper Yampa, including without limitation: acts of God; natural disasters; actions or failure to act by governmental authorities; unavailability of supplies or equipment critical to Upper Yampa's ability to perform; major equipment or facility breakdown; and changes in Colorado or federal law, including, without limitation, changes in any permit requirements.

7. Inspections. Upper Yampa grants to the managerial staff of Contractor and any of its professional consultants access to Stagecoach Reservoir and Stagecoach Dam subject to this Contract at reasonable times and under reasonable protective terms and conditions.

8. Miscellaneous Provisions.

8.1 Upper Yampa may assign this Contract without necessity of Contractor's consent or approval to any entity which succeeds Upper Yampa in the ownership of Stagecoach Reservoir, and Upper Yampa or such successor may collaterally assign the proceeds of this Contract to any entity providing financing to Upper Yampa or its successor.

8.2 This Contract does not and is not intended to confer any rights or remedies upon any person or entity other than the Parties.

8.3 The Parties agree to communicate, coordinate and cooperate, if needed, on any required or desired water use accounting.

8.4 It is expressly acknowledged that Upper Yampa shall be solely responsible for operating, repairing, maintaining, enlarging, permitting, changing, renovating, or modifying the Reservoir, and that Upper Yampa shall be the sole owner of the Water Rights and the dam and all facilities and all lands used in connection with the construction, operation, repair, maintenance, enlarging, permitting, changing, renovating, or modifying the Reservoir and all facilities in which Upper Yampa has ownership or rights which providing supplies of water for storage in the Reservoir.

8.5 No amendment, modification, or novation of this contract or its provisions and implementation shall be effective unless documented in writing which is approved and executed by both parties with the same formality as they have approved and executed this Contract.

8.6 Any notice required or permitted to be given by a party under or in connection with this Contract shall be in writing and shall be deemed duly given when

personally delivered or sent by (i) registered or certified mail, return receipt requested, postage prepaid, (ii) expedited courier service, or (iii) email with confirmation of receipt, to the following addresses:

If to Contractor: Ed's Excavating
31925 Routt County Road 41
Steamboat Springs, CO
80487
Email: josh@edsexcavating.com

With a copy to: _____
_____
_____
_____
Email: _____

If to Upper Yampa: Upper Yampa Water Conservancy District
Attention: General Manager
P.O. Box 775529
Steamboat Springs, Colorado 80477
Email: uywcd@upperyampawater.com

Each party may change its address or contact information for notices under this Contract upon written notice to the other party in accordance with this paragraph.

9. Limited Representations by the Parties. Upper Yampa represents and warrants that it has full power and authority to execute this Contract, allocate and deliver the Contracted Water, and perform its obligations hereunder during the Term. Contractor represents and warrants that it has full power and authority to execute this Contract, receive Contracted Water at the delivery point and cause it to be delivered to Contractor's point and locations of use, and pay for and perform its obligations hereunder during the Term.

10. Enforcement of this Contract; Remedies on Default.

10.1 Before commencing any action for enforcement of this Contract, the Party alleging a material breach of this Contract shall first give at least 60 days' prior written notice to the other Party specifying in detail such material breach and giving the other Party the right within such 60-day period to cure and remedy such material breach.

10.2 Specific performance and/or restraining orders and/or injunctive relief shall be the exclusive remedies for the violation or default by a Party in any provision of this Contract, except that Upper Yampa shall have all remedies at law for collection of sums required to be paid by Contractor hereunder which are not paid when due, including interest and attorneys' fees.

10.3 In the event of litigation between the Parties with respect to this Contract or any alleged material breach of the terms of this Contract, the Party substantially prevailing in such litigation shall recover from the other Party all reasonable attorneys' fees and costs of discovery and suit incurred by the substantially prevailing Party.

11. **Effective Date**. The effective date of this Contract shall be the last date below it is executed by all Parties (the "Effective Date").

IN WITNESS WHEREOF, Contractor and Upper Yampa have executed this Contract on the dates set forth below.

UPPER YAMPA WATER CONSERVANCY DISTRICT

BY: _____

_____, President

DATE: _____

ATTEST:

_____

_____, Secretary

Contractor: EDEXCO, INC.

BY: _____

_____
Name (print)

_____
Title

City of Steamboat Springs

May 2, 2022

Upper Yampa Water Conservancy District
Attention: Andy Rossi, General Manager
PO Box 775529
Steamboat Springs, CO 80477-5529

RE: Response to Proposed Amendment of Water Allotment Contract

Dear Andy,

This letter is written in response to the District's proposal to amend the City's 1988 water allotment contract.

By way of background, the District and the City entered into a Water Allotment Contract in 1988 (the "1988 Contract"), providing for the storage of 552 acre-feet (AF) of water in Stagecoach Reservoir prior to July 15 of each calendar year for release for the City's use upon request by the City between July 15 and April 1 of the then current year. Pursuant to the 1988 Contract, the City's annual purchase price during the 30-year period described in Section 4.1 was $35.00 per AF. Once that 30-year period ended, as is the current situation, the City's annual purchase price is to be determined by Section 4.3 (*i.e.* "The price per acre-foot for any given year will be computed by dividing an estimate of the annual costs (computed each year) the District expects to incur for the operation, repair, renovation and maintenance of Stagecoach Reservoir (including replacement costs) as computed pursuant to the standard accounting procedures, by 15,000 acre-feet."). While the District and the City agreed to maintain the $35/AF price for 2020 and 2021, the District provided the City with a proposed amendment to the 1988 Contract on November 11, 2021, to establish pricing over the next 20 years ("Proposed Amendment").

After a thorough review of the Proposed Amendment, the City does not desire to enter into the Proposed Amendment in its current form and would prefer instead to operate under the terms of the 1988 Contract. While the Proposed Amendment is not acceptable in its current form, the City appreciates the value of entering into a contract amendment with the District to establish pricing over the next twenty years, as such an amendment would provide both predictability as well as operational efficiencies year-over-year. To that end, if the District would like to enter into an amendment that is strictly limited to establishing pricing, the City would be happy to discuss this simplified approach. However, if the District is not interested in such an amendment, then the City prefers to continue under the original terms of the 1988 Contract.

While the District's stated intent of the Proposed Amendment is to establish pricing over the next twenty years, the City finds the terms contained within the Proposed Amendment go well beyond the stated intent, to the detriment of the City. While the City's concerns about the Proposed Amendment are extensive, a few highlights are set forth below.

<u>Proposed Amendment Recitals</u>

The City disagrees with some liberties that were taken in the recital section of the Proposed Amendment. Some proposed recitals appear to redefine the 1988 Contract, while others are inaccurate, unnecessary, or overcomplicate the primary objective of establishing pricing for the next 20 years. For example:

- The District inaccurately describes and defines the 1988 Contract in the first and second recitals by introducing or changing elements in a manner not consistent with the original agreement. For example, the 1988 Contract is based on a calendar year and yet the District's definition mentions a water year in the first recital. The second recital, in addition to other inaccuracies, includes additional language that was not in the 1988 Contract, yet it appears to imply that it was part of the 1988 Contract (*i.e.* "without right of appeal by Contractor or 'true up' based after actual costs are expended and computed."). Recitals that imply a change of terms to the 1988 Contract are problematic and cannot be accepted.

- The 5th, 6th, and 7th recitals also contain inaccuracies, are inconsistent with the 1988 Contract, and are unnecessary to the primary objective of the Proposed Amendment. For example, the 5th recital asserts that "at the time the [1988 Contract] was entered into, the District had entered into, or expected to enter into, similar M&I water allotment contracts for storage of water in Stagecoach Reservoir totaling approximately 15,000 AF of such storage water, including the [1988 Contract] and including either 13,000 AF or 11,000 AF of storage water contracted for allocation to [Colorado-Ute Electric Cooperative/Tri-State]." This is inconsistent with Section 1.b of the 1988 Contract wherein it was anticipated that 2,000 AF was going to be allocated for municipal users, 9,000 AF for industrial users, and 4,000 AF for agricultural users. The municipal and industrial uses were not combined in the 1988 Contract, nor did those two categories add up to 15,000 AF as alleged in the Proposed Amendment. In addition, the District's summary of various pools within Stagecoach Reservoir in the 7th recital are not only confusing and overly complicated, but in many instances the descriptions are inconsistent with the District's own Stagecoach Reservoir Fill and Release Policy adopted January 20, 2021. The City's perspective is that these recitals serve to inappropriately redefine the 1988 Contract.

<u>Further Miscellaneous Amendments</u>

Section 3 of the Proposed Amendment also goes far beyond the stated intent of establishing pricing terms for the next twenty years. Many of the proposed amendments to the 1988 Contract in Section 3 are not in the City's best interests or advisable. For example:

- Section 3.C proposes to shorten the City's timeframe for annual releases by approximately one month (*i.e.* from April 1 to the last day of February). While in and of itself this term may not be a deal-breaker, it could negatively impact the City's future interests. The City views this change as unnecessary.

- Section 3.C also proposes to change the 1988 Contract that is based on calendar years to water years. The amendment seeks to define a water year but allows for that water year to be changed without notice to the City. It is not advisable to have a provision that could trigger a ripple effect of other changes to the terms of the 1988 Contract that is outside the ability of either party to control or approve, let alone one that can take place without notice to one or both parties. The use of a water year, especially one that can change without notice, makes it particularly difficult to manage CPI adjustments (that are based on calendar years) as proposed by the District. It also reduces the City's window for releases as discussed above.

- Section 3.C also proposes to include additional terms into the 1988 Contract that are unusual, ambiguous, and inconsistent with the 1988 Contract. The District proposes additional restrictions that were not part of the 1988 Contract, nor are they necessary for administration by the Division of Water Resources (DWR) (*e.g.* no uses that haven't been decreed absolute (precluding use of conditional uses), no use that would trigger a paper fill or otherwise restrict refill rights, and no IER uses downstream of the confluence of the Yampa and Elk Rivers). These proposed restrictions and terms would unnecessarily reduce the flexibility of the water

stored in Stagecoach, thus decreasing its value. The ambiguity of some of the language makes it impossible to fully evaluate the potential implications on the City – particularly its use of water at its wastewater treatment plant to help meet the City's water quality requirements, which is a municipal use of water that the District has, at times, mischaracterized. Moreover, why would the District want to voluntarily devalue Stagecoach Reservoir – as this section could potentially do - particularly at a time when more flexible arrangements are being evaluated and approved?

- Section 3.D proposes to increase the City's requirement for advanced notice for releases from 24 hours to 48 hours. While the City strives to provide as much advanced notice as possible, and while it is likely that in most cases 48 hours will be sufficient, this proposed amendment is unnecessary as it benefits one party at the expense of the other.

- Other language in Section 3.D provides the District the ability to diminish the City's requested release rates at the District's discretion. While the City can appreciate physical and operational constraints, this proposed language goes too far. Whether intended or not, the proposed language could be interpreted to provide the District unilateral discretion at the policy level beyond the intent of the 1988 Contract. This provision would render Stagecoach water unreliable and negatively impact the City's ability to utilize it when needed. There is also no provision to compensate the City if the District is unable to release the requested amount of water, which means that only the City will be injured in a scenario where the City has paid the District for the stored water, but then cannot utilize it in the right time or amounts needed to meet its own obligations. A fair agreement should include provisions to make an injured party whole. Furthermore, turbine capacity can be modified and given that the 1988 Contract is for the life of Stagecoach Reservoir this provision could become outdated.

- The District's proposal in Section 3.E attempts to modify Section 4.3 of the 1988 Contract from an ongoing right to purchase to an ongoing obligation to purchase. This proposed change is not acceptable. A legal right is not interchangeable with a legal obligation.

In summary, the City finds the Proposed Amendment too one-sided. An amendment must respect the intent of the original contract while benefitting both parties equally. If the District is interested in an amendment that is strictly limited to establishing pricing, the City would be happy to discuss this simplified approach. However, if the District is not interested in such an amendment, then the City is comfortable operating under the original terms of the 1988 Contract. Regardless, while this negotiation may not have turned out how any of us desired, the City looks forward to working with the District on many of the other initiatives important to our basin in the coming years.

Sincerely,

Jon Snyder, PE
Public Works Director
City of Steamboat Springs

May 9, 2022

Andy Rossi, General Manager
Upper Yampa Water Conservancy District
2220 Curve Plaza, Suite 201
P.O. Box 775529
Steamboat Springs, CO 80477-5529

Re: Mt. Werner Water's, Water Allotment Agreements with Upper Yampa

Dear Andy,

As previously stated in my e-mail correspondence from May 6, 2022, the Mount Werner Water & Sanitation District (District) is no longer interested in relocating its contract water in Yamcolo Reservoir to Stagecoach Reservoir and does not desire to enter into the Proposed Amendment to the District's 1988 water allotment agreement in Stagecoach Reservoir.

On behalf of the District Board of Directors, thank you and the Upper Yampa Board for allowing us to explore the possibility of relocating our contract water in Yamcolo to Stagecoach. While we decided not to pursue this option, we appreciate the time devoted to our request by you, the Upper Yampa Executive Committee and Board. Soon, I would like to meet with you to discuss the District's stored water in Yamcolo, to better understand its reliability and learn more about potential projects at the reservoir, i.e., the Coal Creek Diversion Project.

The District recognizes the importance of our contract water in both reservoirs, values our partnership and looks forward to the working with Upper Yampa into the future.

Sincerely,

Frank Alfone
General Manager

CC: Gavin Malia, Board Chair
Wade Gebhardt, Board Member
Jeff Houpt
Mark Hamilton
Jonathan Kelly

Location · Fish Creek Filtration Plant ·3310 Clear Water Trail
Mailing Address ·P.O. Box 880339 ·Steamboat Springs, CO 80488-0339
Ph (970) 879-2424 ·Fax (970) 879-8169 ·E-mail: info@mwwater.com ·Website: www.mwwater.com

UPPER YAMPA WATER
CONSERVANCY DISTRICT

BOARD COMMUNICATION FORM

From: Andy Rossi, General Manager

Date: May 9, 2022

Item: Yampa and Elk River Augmentation Plans Service Contracts Update

---

_____ DIRECTION
__X__ INFORMATION
_____ MOTION
_____ RESOLUTION

I. Request/Issue and Background Information:

The Upper Yampa Water Conservancy District's (UYWCD) purpose is to conserve, develop, and stabilize supplies of water for domestic, irrigation, manufacturing, and other beneficial uses and by the construction of works for such purposes. The UYWCD also plans for and assists with the development of water resources of the UYWCD for municipal, domestic, industrial, recreational, and other beneficial uses of water resources within the District among other purposes. The UYWCD's water rights include rights to Stagecoach and Yamcolo reservoir water among others.

The UYWCD is authorized to appropriate water rights and initiate and implement plans for augmentation for the benefit of water users within the UYWCD's boundaries. Water is available to provide contracts to UYWCD constituents to augment their out-of-priority depletions pursuant to the Augmentation Decrees of the District Court for Water Division No. 6, Case No. 06CW049 (Yampa River Supply) and 15CW3058 (Elk River Supply). The UYWCD's Board of Directors (BOD) has approved the marketing of such water and other UYWCD water supplies as may be used to complement the use of such Reservoirs' water supplies through a contracting program.

Information about the authorities approved by the UYWCD BOD, definitions of terms used for the UYWCD Augmentation Plans, and summary contract data are included with this communication for reference.

II. Summary:

1. Authorities: The authorities approved by the UYWCD BOD under the Water Marketing Policies for the District's Augmentation Service Plans for the Yampa and Elk Rivers are as follows:

a. The General Manager is delegated the authority of the Board to implement and administer this Policy and the issuance of the augmentation contracts made pursuant to this Policy for Small Applications and Small Commercial Applications as defined in this Policy, and authority for assignments of all contracts issued for both Small and Large Applications. The General Counsel shall assist in the negotiation and drafting of the contracts.

b. The Board retains authority to approve Large Applications and Large Commercial Applications along with all other powers not specifically delegated.

2. UYWCD Augmentation Plan Definitions:

a. "Large Applications": A contract application to the UYWCD to augment uses, other than commercial or industrial uses, with a planned average daily diversion rate in excess of 112 gallons per minute (0.25 c.f.s.) or that identifies planned total annual diversions exceeding thirty (30) acre feet per year.

b. "Large Commercial Applications": A contract application to the UYWCD to augment commercial or industrial uses that either exceeds a planned average daily diversion rate of 15 gallons per minute or for which the following commercial (Equivalent Residential Unit) EQR ratings do not apply, or both:

- Office = 0.6 EQR/1,000 square feet.
- Warehouse – 0.30 EQR/1,000 square feet.
- Retail Sales = 0.60 EQR/1,000 square feet.

c. "Small Applications": A contract application to the District to augment commercial or industrial uses with planned diversions not to exceed an average daily diversion rate of 15 gallons per minute and for which the diversion and depletion criteria detailed in paragraphs 9.A through 9.E of the Augmentation Decree apply, or to augment any other uses with planned diversions not to exceed 112 gallons per minute (0.25 c.f.s.) or that identifies planned total annual diversions not exceeding thirty (30) acre feet per year and for which the diversion and depletion criteria detailed in paragraphs 9.A through 9.E of the Augmentation Decree apply.

d. "Small Commercial Applications": A contract application to the UYWCD to augment commercial or industrial uses that does not exceed a planned average daily diversion rate of 15 gallons per minute and for which the following commercial EQR ratings apply:

- Office = 0.6 EQR/1,000 square feet.
- Warehouse – 0.30 EQR/1,000 square feet.
- Retail Sales = 0.60 EQR/1,000 square feet.

e. Uses:

i. "Commercial Use": Water for motels, hotels, restaurants, office buildings, shops stores and other commercial facilities, military and nonmilitary institutions, and water for off-stream fish hatcheries.

ii. "Domestic Use": The use of water by individuals, cities, towns, public or quasi-public districts, private corporations, homeowners' associations, or other entities used for all such indoor household purposes as drinking, food preparation, bathing, washing clothes and dishes, flushing toilets, and such outdoor purposes as watering lawns and gardens, excepting only the commercial, industrial and irrigation uses of water defined.

iii. "Industrial Use": Water used for fabrication, processing, washing, and cooling, and includes such industries as chemical and allied products, food, mining, paper and allied products, petroleum refining, and steel, including cooling system, cooling-system type, mining water use, public-supply deliveries, public-supply water use, self-supplied water use, and thermoelectric-power water use.

iv. "Irrigation Use": Water that is applied by an irrigation system to assist in the growing of crops and pastures or to maintain vegetative growth in recreational lands such as parks and golf courses including water that is applied for pre-irrigation, frost protection, chemical application, weed control, field preparation, crop cooling, harvesting, dust suppression, the leaching of salts from the root zone, and water lost in conveyance.

v. "Livestock Use": Water used to water domesticated livestock such as cattle or horses, such use shall require 11 gallons of water per day per head and is considered 100% consumptive.

vi. "Recreation Use": The use of water to replace the evaporative loss from ponds, reservoirs, stream channels, spas, pools and similar water feature

III. Staff Recommendation:
NA

IV. Legal Issues:
NA

V. Consistency with Board Goals and Policies:
UYWCD SP Goal 4.2

Attachments:
Attachment 1: Yampa and Elk River Augmentation Plans Contract Summary

Yampa and Elk River Augmentation Plans Contract Summary

Yampa River Augmentation Plan

	Contract ID	Contractor	Reservoir Source	Yampa River Service Area	Contract Volume (AF)	Application Type	Augmented Use	Contract Start Year	Contract End Year	Contract Assign Date
1	**A1-001**	Brady Glauthier & Bridget Hiles	Stagecoach	A-1	1.2	Small	Domestic, irrigation	2022	2062	5/2/2022
2	A1-002	Youngs Peak Preserve, LLC-Lot #2	Stagecoach	A-1	1.0	Small	Domestic, irrigation	2022	2062	
3	A1-003	Youngs Peak Preserve, LLC-Lot #4	Stagecoach	A-1	1.0	Small	Domestic, irrigation	2022	2062	
4	A1-004	Youngs Peak Preserve, LLC-Lot #5	Stagecoach	A-1	1.0	Small	Domestic, irrigation	2022	2062	
5	A1-005	Youngs Peak Preserve, LLC-Lot #6	Stagecoach	A-1	1.0	Small	Domestic, irrigation	2022	2062	
6	**A2-001**	Dudley, Gayle	Stagecoach	A-2	2.2	Small	Recreation	2011	2051	
7	A2-002	Walton Creek, LLC	Stagecoach	A-2	1.2	Small	Domestic, Irrigation, Recreation	2012	2052	
8	A2-003	Amethyst Ranch, LLC No. 1	Stagecoach	A-2	0.4	Small Commercial	Commercial	2012	2052	
9	A2-004	Rostermund, Elizabeth	Stagecoach	A-2	0.4	Small	Irrigation	2015	2055	
10	A2-005	Amethyst Ranch, LLC No. 2	Stagecoach	A-2	0.8	Small Commercial	Commercial, Domestic, Irrigation	2014	2054	
11	A2-006	Yampa Realty Holdings, LLC	Stagecoach	A-2	17.3	Small	Domestic, Irrigation, Recreation	2017	2057	
12	A2-008	STARS	Stagecoach	A-2	1.2	Small Commercial	Irrigation, Livestock, Commercial, Recreation	2018	2058	
13	A2-011	Broadnax, Robert	Stagecoach	A-2	3.0	Small	Domestic, Recreation. Livestock	2021	2061	
14	A2-012	Hubbell, Paul & Susan	Stagecoach	A-2	0.1	Small	Domestic, Irrigation	2021	2061	
15	A2-013	Douglas Snyder Trust	Stagecoach	A-2	3.6	Small	Recreation, Livestock	2021	2061	
16	A2-014	City of Steamboat Springs (Lufkin Well)	Stagecoach	A-2	0.2	Small Commercial	Commercial	2021	2061	
17	A2-015	Head, Benjamin & Kristin	Stagecoach	A-2	2.2	Small	Domestic, irrigation, Recreation	2021	2061	
18	A2-016	Ferruginous LLC	Stagecoach	A-2	1.6	Small Commercial	Commercial, Domestic, Irrigation, Livestock	2021	2061	
19	A2-017	CG 17 LLC	Stagecoach	A-2	0.2	Small	Domestic, Irrigation, Livestock	2021	2061	
20	**A3-001**	Stone Yard LLC	Stagecoach	A-3	2.6	Small	Irrigation, Recreation	2015	2055	
21	A3-007	Berkey-Borden-Buku-Foundry	Stagecoach	A-3	1.7	Small Commercial	Commercial, Irrigation, Livestock, Fire Suppression	2016	2056	
22	A3-009	KTH Enterprises	Stagecoach	A-3	3.0	Small	Domestic	2020	2060	
23	A3-010	Whitehaven LLC	Stagecoach	A-3	0.5	Small	Domestic	2021	2061	
24	A3-011	Asta, Amy & John	Stagecoach	A-3	0.5	Small	Domestic, Irrigation	2021	2061	
25	**A4-001**	Flanders Ranch, LLC	Stagecoach	A-4	2.0	Small	Domestic, Irrigation, Livestock	2021	2061	
26										
27										
28										
29										

Total Volume Stagecoach = 49.890 AF

Total Volume Yamcolo = 0.000 AF

Elk River Augmentation Plan

	Contract ID	Contractor	Reservoir Source	Elk River Service Area	Contract Volume (AF)	Application Type	Augmented Use	Contract Start Year	Contract End Year	Contract Assign Date
1	E-A1-001	CCJG Ranch LLC	Steamboat Lake	A-1	2.2	Small	Recreation (pond)	2021	2061	
2	E-A1-002	John Klein	Steamboat Lake	A-1	0.1	Small	Domestic, Irrigation	2022	2062	
3										
4										
5										

UPPER YAMPA WATER
CONSERVANCY DISTRICT

BOARD COMMUNICATION FORM

From: Emily Lowell, District Engineer

Date: 5/9/2022

Item: Reservoir Water Status

_____ DIRECTION
X____ INFORMATION
_____ MOTION
_____ RESOLUTION

I. Request/Issue and Background Information:

Water storage data for Yamcolo Reservoir and Stagecoach Reservoir are included as reference materials for a summary discussion of the 2022 water year to date.

II. Summary:

Yamcolo Reservoir Status as of 5/9/2022- Filling

Current Storage Volume: 4,650 AF

Volume Stored in last 30 days: 484 AF

Volume Stored in last 60 days: 960 AF

Current Outflow: 12 cfs

Stagecoach Reservoir Status as of 5/9/2022 – Filling

Current Storage Volume: 30,578 AF

Volume Stored in last 30 days: 1,981 AF

Volume Stored in last 60 days: 3,502 AF

Current Inflow: 73 cfs

Current Outflow: 40 cfs

UPPER YAMPA WATER
CONSERVANCY DISTRICT

III. Staff Recommendation:
N/A

IV. Legal Issues:
N/A

V. Consistency with Board Goals and Policies:
Policy Statement: 2

Attachments:

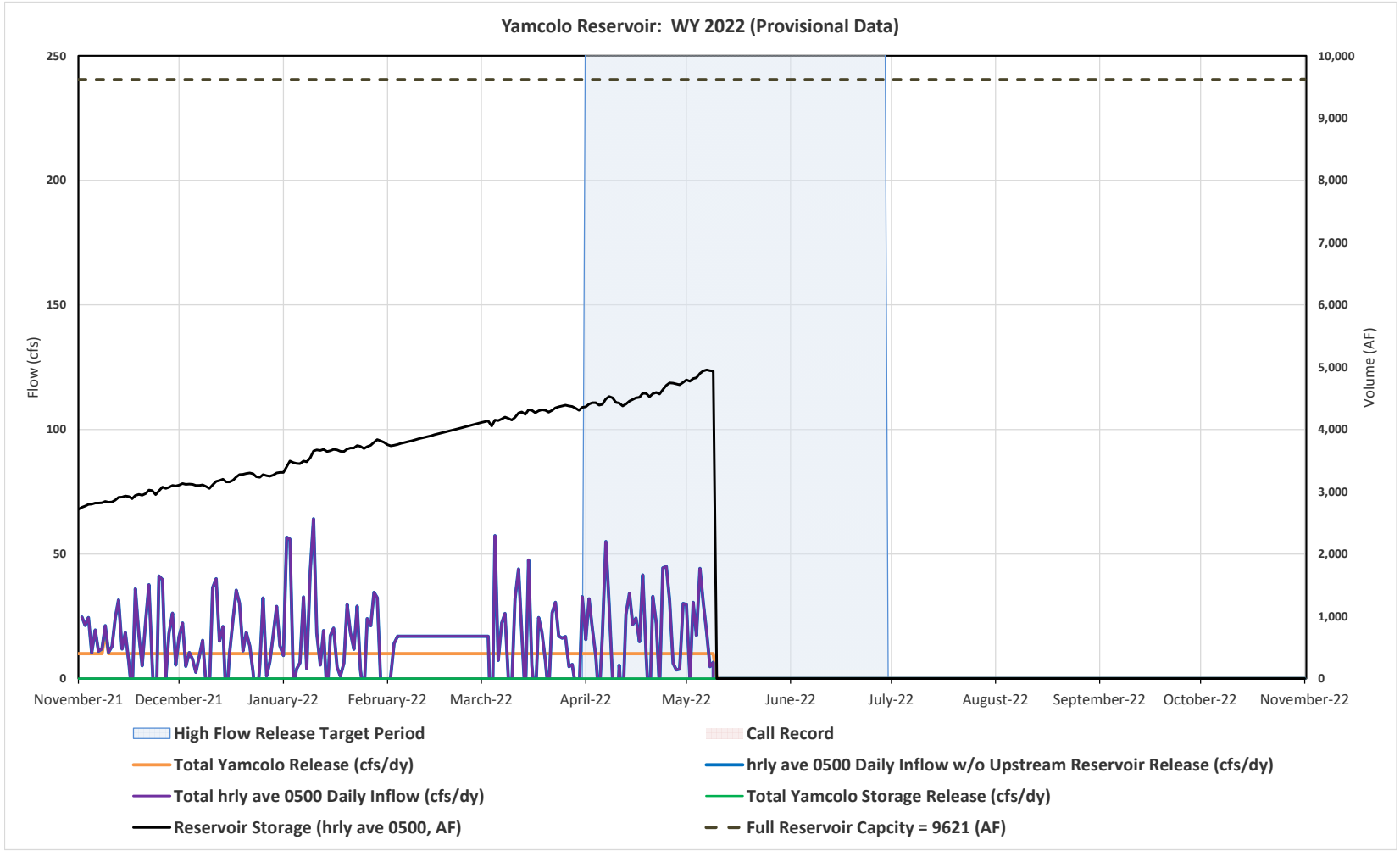
1. Yamcolo Water Storage Data (WY 2022)
2. Stagecoach Water Storage Data (WY 2022)
3. Colorado SWE Update Map
4. DNR Drought Update
5. Yampa SWE Hydrograph
6. Yampa White Little Snake SWE Hydrograph
7. May Water Supply Outlook Report

Yamcolo Reservoir Operations
Total Monthly Volume (AF)

Water Year 2022

INFLOW	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
Physical	966	832	1,098	858	873	996	361						5,984
Storable	490	340	607	414	381	520	171						2,922
Stored	375	217	484	303	244	390	144						2,157

OUTFLOW	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
Operator	611	615	615	555	615	595	178						3,784
Spill													0
Gage	611	615	615	555	615	595	178						3,784



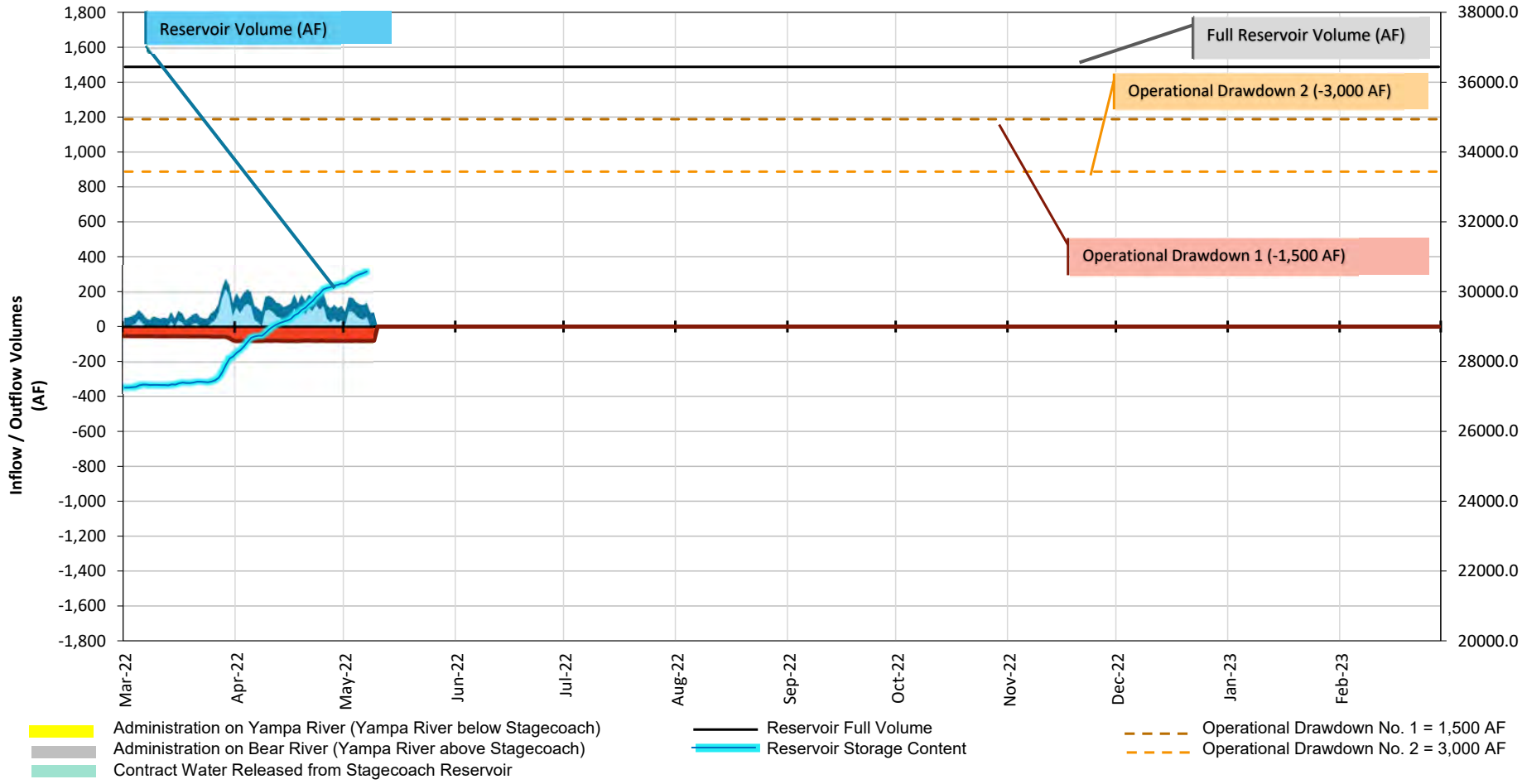
Stagecoach Reservoir Operations

Total Monthly Volume (AF)

Accounting Year 2022

INFLOW	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Total
Physical	2,644	4,629	1,124										8,397
Storable	997	2,248	410										3,656
Stored	997	2,208	395										3,600

OUTFLOW	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Total
Operator	-1,700	-2,420	-729										-4,850
Spill	0	0	0										0
Gage	-1,700	-2,420	-729										-4,850



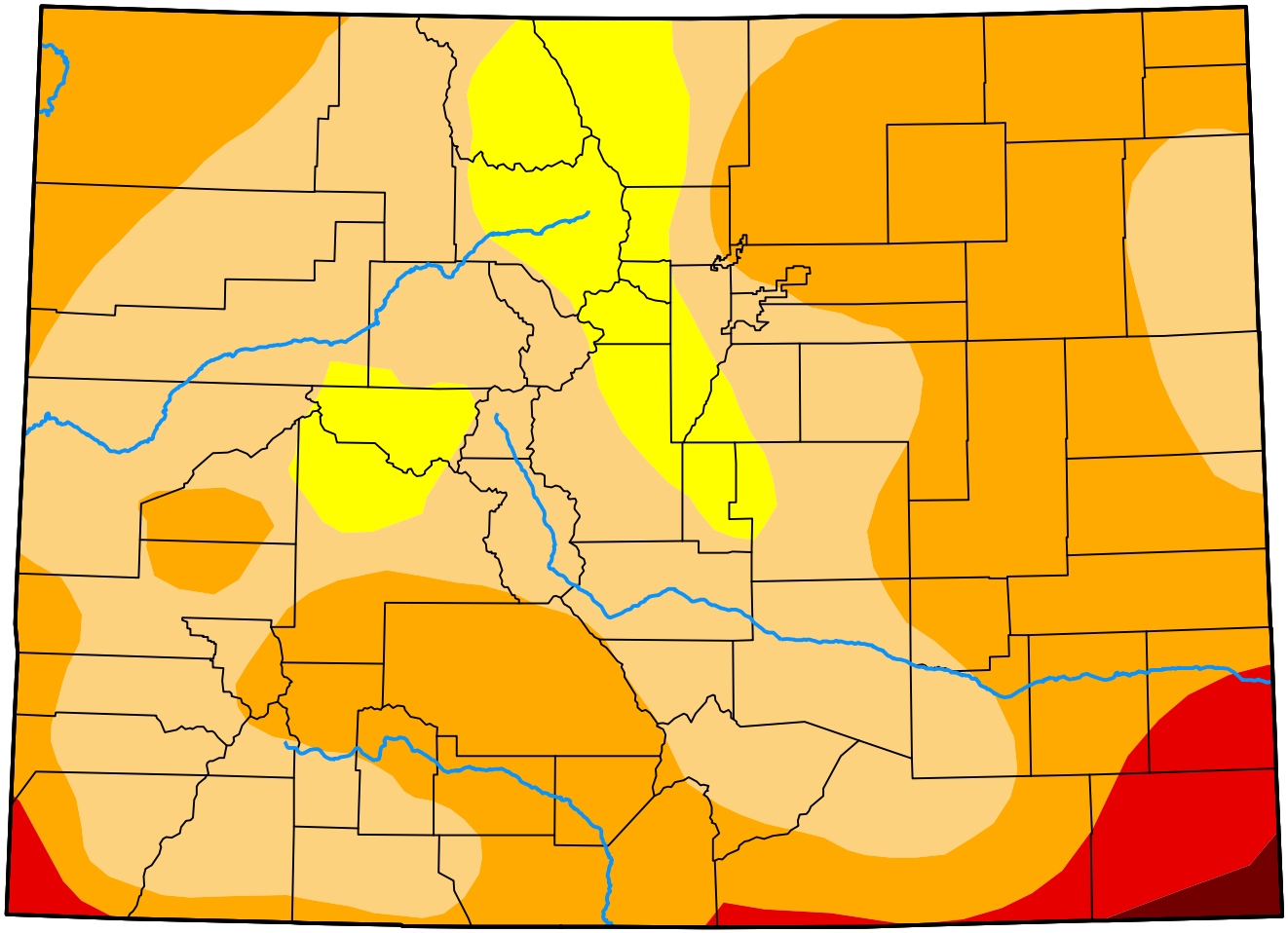
U.S. Drought Monitor

Colorado

May 3, 2022

(Released Thursday, May. 5, 2022)

Valid 8 a.m. EDT



Intensity:

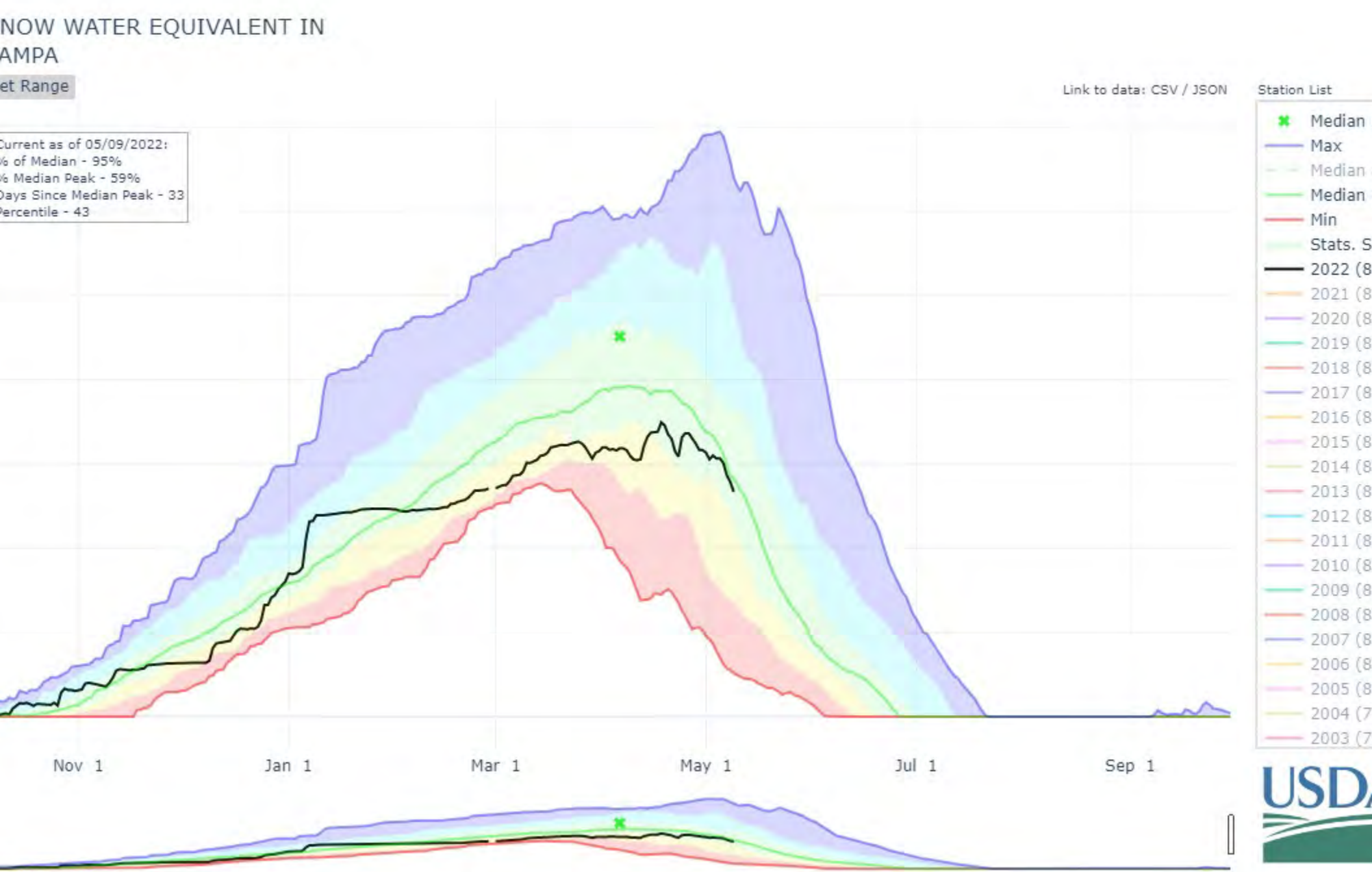
- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

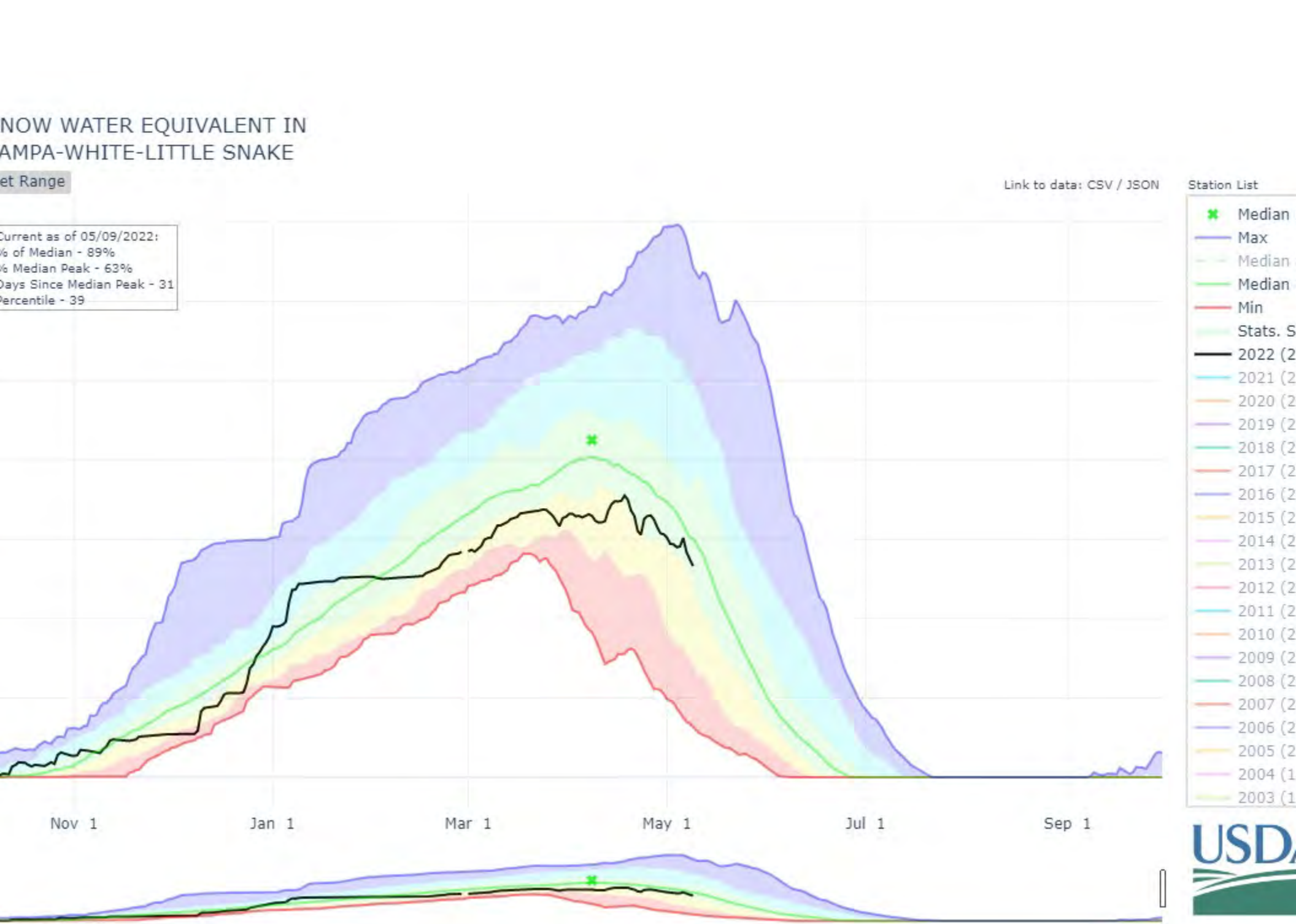
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to https://droughtmonitor.unl.edu/About.aspx

Author:

David Simeral
Western Regional Climate Center

droughtmonitor.unl.edu


NOW WATER EQUIVALENT IN
AMPA
et Range
Link to data: CSV / JSON
Station List
Current as of 05/09/2022:
% of Median - 95%
% Median Peak - 59%
Days Since Median Peak - 33
Percentile - 43
Median
Max
Median
Median
Min
Stats. S
2022 (8
2021 (8
2020 (8
2019 (8
2018 (8
2017 (8
2016 (8
2015 (8
2014 (8
2013 (8
2012 (8
2011 (8
2010 (8
2009 (8
2008 (8
2007 (8
2006 (8
2005 (8
2004 (7
2003 (7
Nov 1
Jan 1
Mar 1
May 1
Jul 1
Sep 1
USDA


NOW WATER EQUIVALENT IN
AMPA-WHITE-LITTLE SNAKE
et Range
Link to data: CSV / JSON
Station List
Current as of 05/09/2022:
% of Median - 89%
% Median Peak - 63%
Days Since Median Peak - 31
Percentile - 39
Median
Max
Median
Median
Min
Stats. S
2022 (2
2021 (2
2020 (2
2019 (2
2018 (2
2017 (2
2016 (2
2015 (2
2014 (2
2013 (2
2012 (2
2011 (2
2010 (2
2009 (2
2008 (2
2007 (2
2006 (2
2005 (2
2004 (1
2003 (1
Nov 1
Jan 1
Mar 1
May 1
Jul 1
Sep 1
USD

USDA United States Department of Agriculture
Natural Resources Conservation Service

Colorado
Water Supply Outlook Report
May 1st, 2022

The photo above shows the San Juan Mountains seen from an airplane on April 18th. The grey-red color of the snowpack shows that significant dust has accumulated on the surface. Dust on the surface of the snowpack can significantly increase melt because dust absorbs short wave radiation (sunlight), unlike pristine snow, and transfers that energy as heat to the surrounding snowpack.

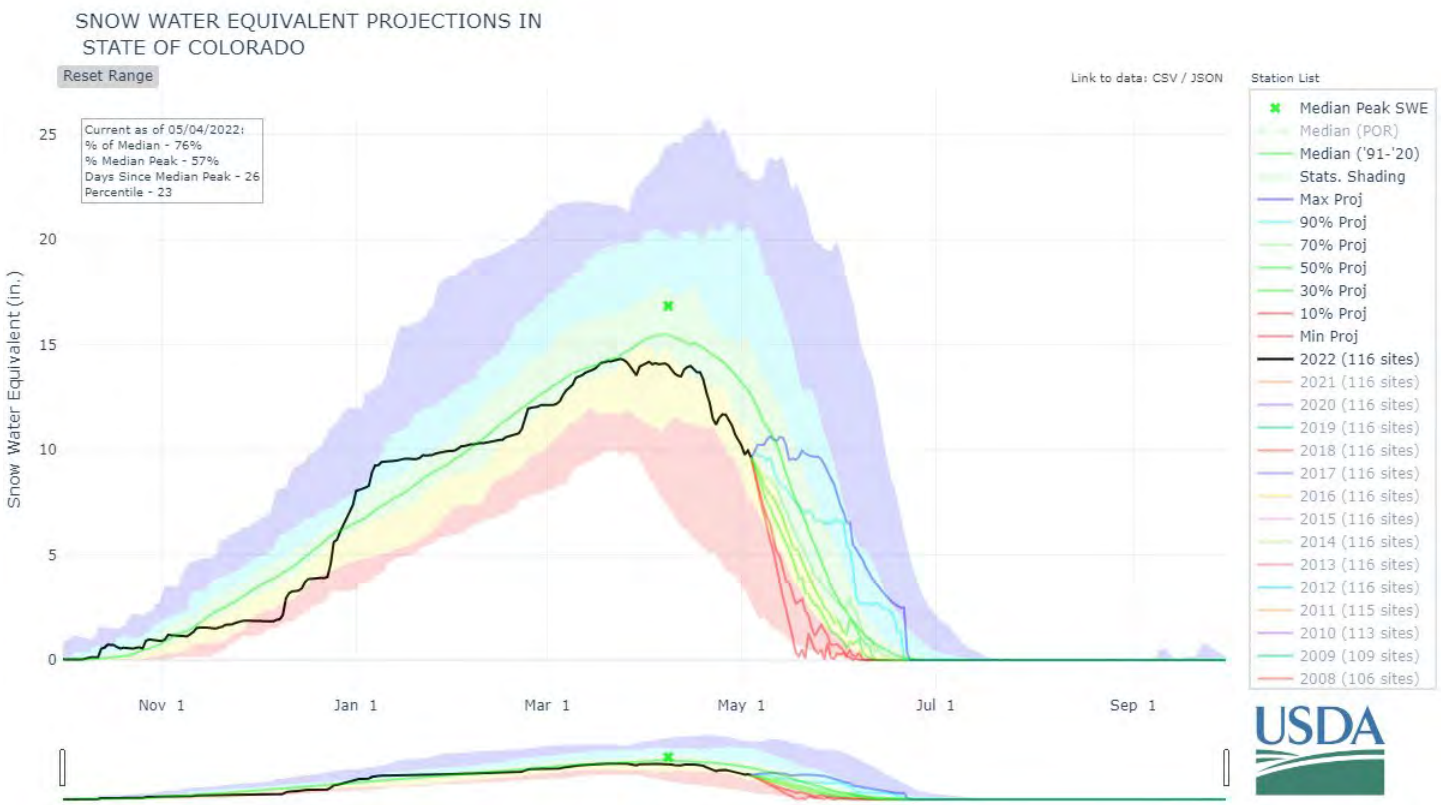
Photo By: Adam Pate

REMINDER: We are soliciting field work photos from the field again this year. Each month we will pick one to grace the cover of this report! Please include information on where, when and of who/what the photo was taken.

Contents

Colorado Statewide Water Supply Conditions for May 1st

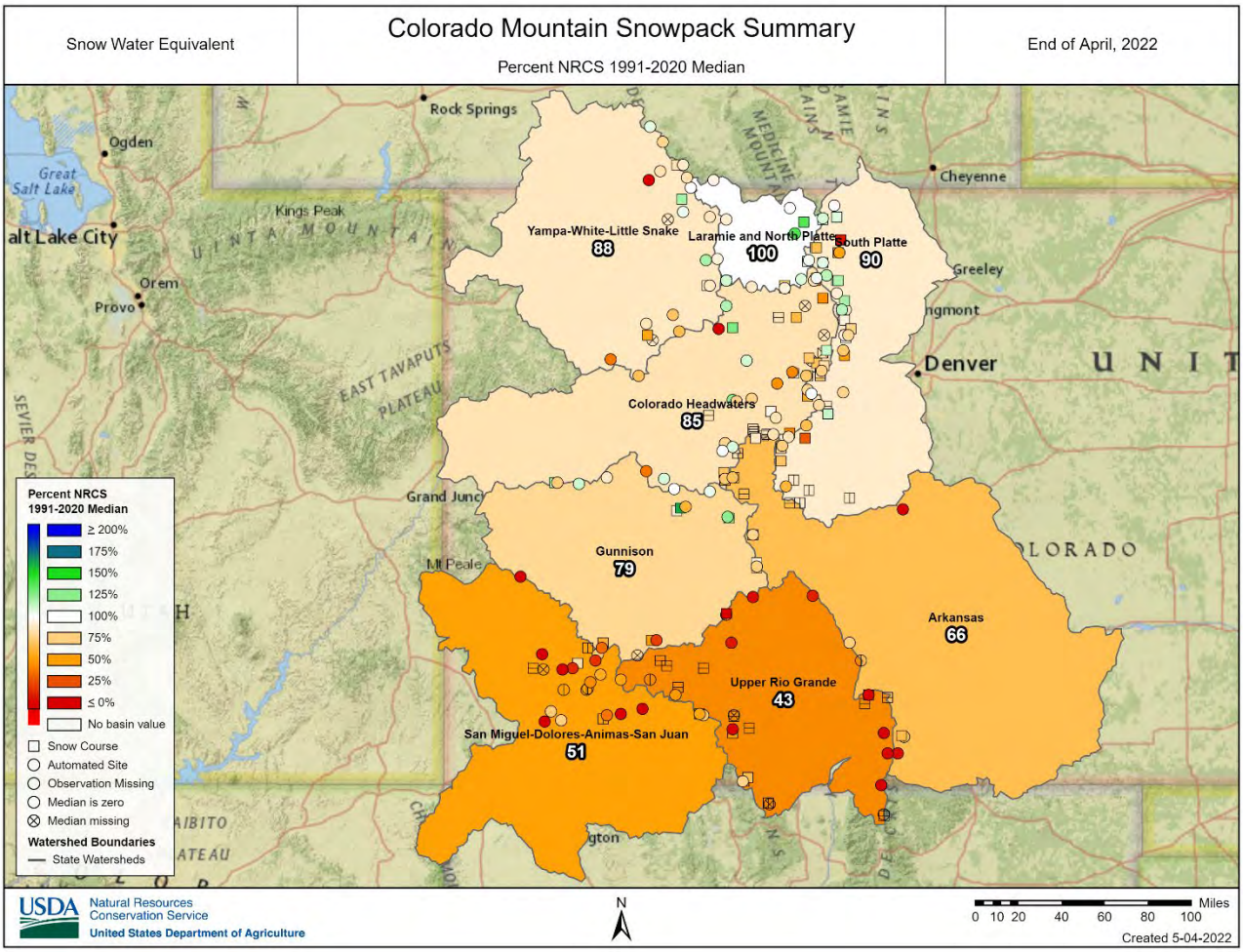
Summary



*For the above graph, snow water equivalent (SWE) values are calculated using daily SNOTEL data only. SWE numbers presented in the text are values from the first of the month and include manual Snow Course measurements along with SNOTEL data.

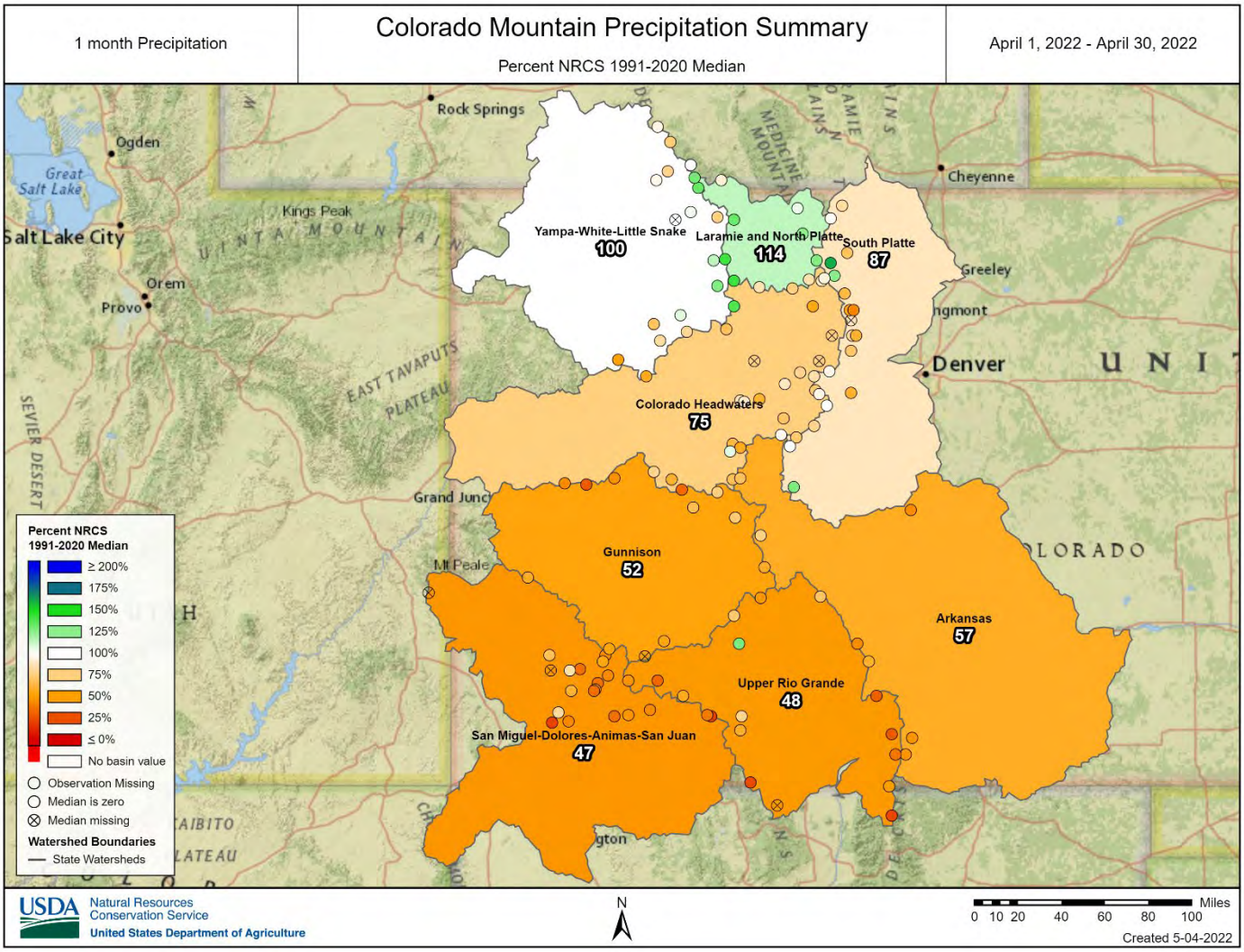
The month of April provided near median precipitation for parts of northern Colorado, but also brought dryer conditions and warmer temperatures for much of the state causing early and fast snowmelt. A large percentage of Colorado snowpack accumulation occurred during a very short interval at the end of December. While March precipitation kept snowpack levels near normal, significant large storms did not appear for the remainder of winter. As of May 1st, statewide snowpack is below normal at 80 percent of median, similar to May last year. Basin snowpack on May 1st ranged from a high of 100 percent of median in the Laramie and North Platte river basin to 43 percent of median in the Upper Rio Grande. As of May 1st, water year-to-date precipitation for Colorado is 92 percent of median. However, monthly precipitation was below median for the month of April and declined from 107 percent of median in March to 79 percent of median during April. As of May 1st, water year-to-date precipitation ranged from 99 percent of median in the Laramie-North Platte river basin to 83 percent of median for the Upper Rio Grande river basin. Statewide streamflow forecasts as of May 1st are 77 percent of median, with a high of 100 percent of median at Elk River near Milner and a low of 18 percent of median at Sangre De Cristo Creek. Reservoir storage across the state has mostly remained below normal due to drought conditions for several years. End of April statewide reservoir storage is 77 percent of median. Despite near normal precipitation for the water year to date, the effects of early snowmelt, consistently low precipitation months this winter and previous drought conditions warrant lower streamflow runoff forecasts. If May provides large precipitation increases, Colorado may experience larger runoff volumes than forecasted. However, this is not expected to be the case.

Snowpack



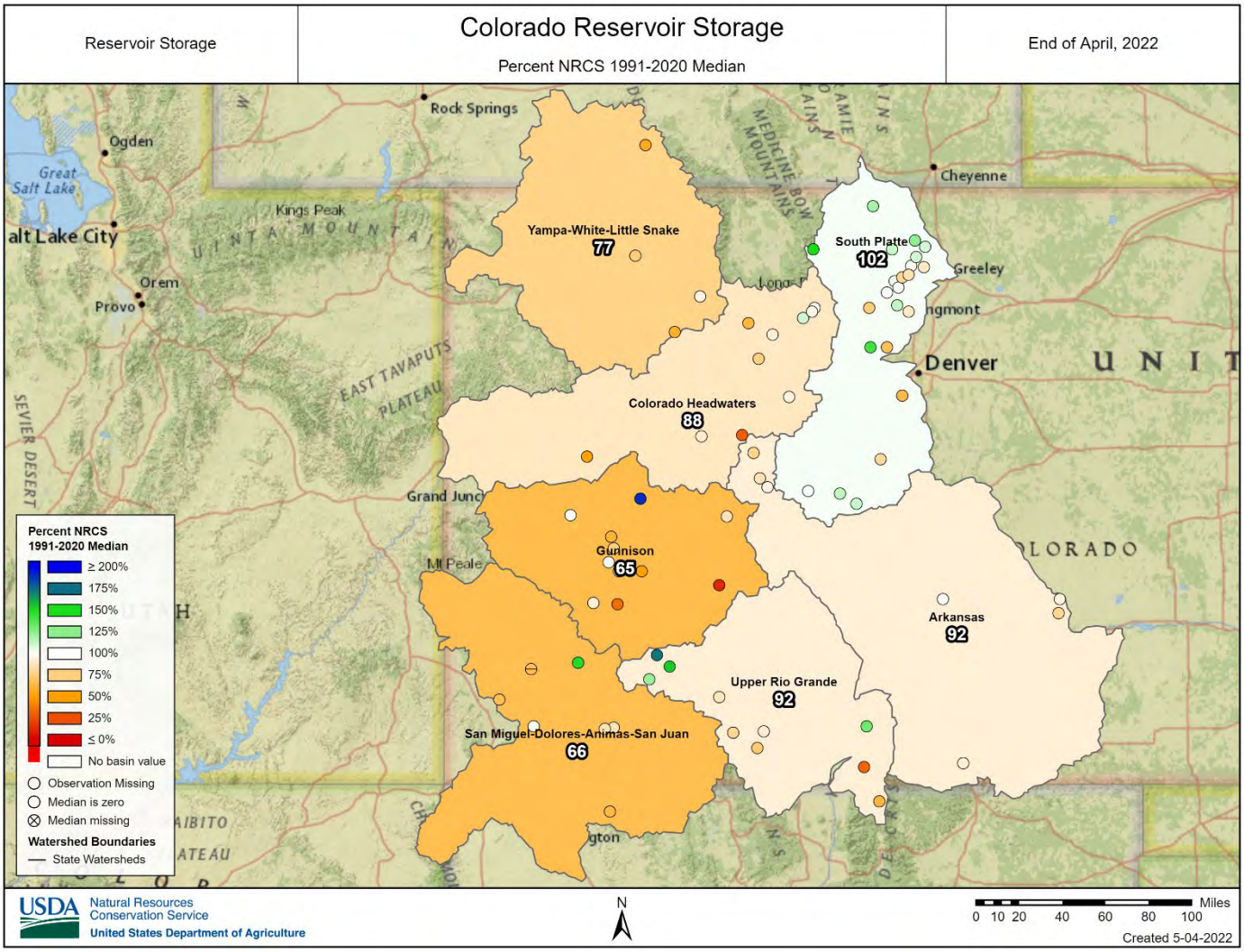
The month of April continued the dry trend that has been observed for much of this spring, providing few new contributions to the snowpack. During the month of April the statewide median has continued to fall below the norm to its current value of 80 percent. The CO Dust-on-Snow Program documented several significant events that impacted the state from the San Juan to the Front Range mountains during the month of April. These events contributed to rapid melting at many of the SNOTEL sites-primarily those in the southern mountains and at lower altitude sites. In the San Juan Mountains, a loss of ten inches of SWE was observed at the Wolf Creek Summit SNOTEL site during the month of April. Despite the unfavorable conditions, two major river basins made small gains in snowpack over the past month. The combined Yampa-White-Little Snake and Laramie-North Platte river basins are currently at 88 and 100 percent, respectively. The remaining major river basins across the state, however, did not fare as well. The South Platte, Colorado Headwaters, and Gunnison river basins saw decreases from last month's values of 92, 94, and 100 percent of median to their current values of 85, and 79 percent of median. On the lower end of the spectrum, the combined San Miguel-Dolores-Animas-San Juan, Upper Rio Grande, Arkansas river basins saw even more dramatic decreases to 51, 43, and 66 percent of median from 92, 101, and 98, respectively. With the ablation season well upon us, it is unlikely that we will see any more major gains in this season's snowpack. Hopefully, the recent snow showers and cooler temperature in the mountains can provide a temporary reprieve from the rapid snowmelt we have observed over the past month.

Precipitation



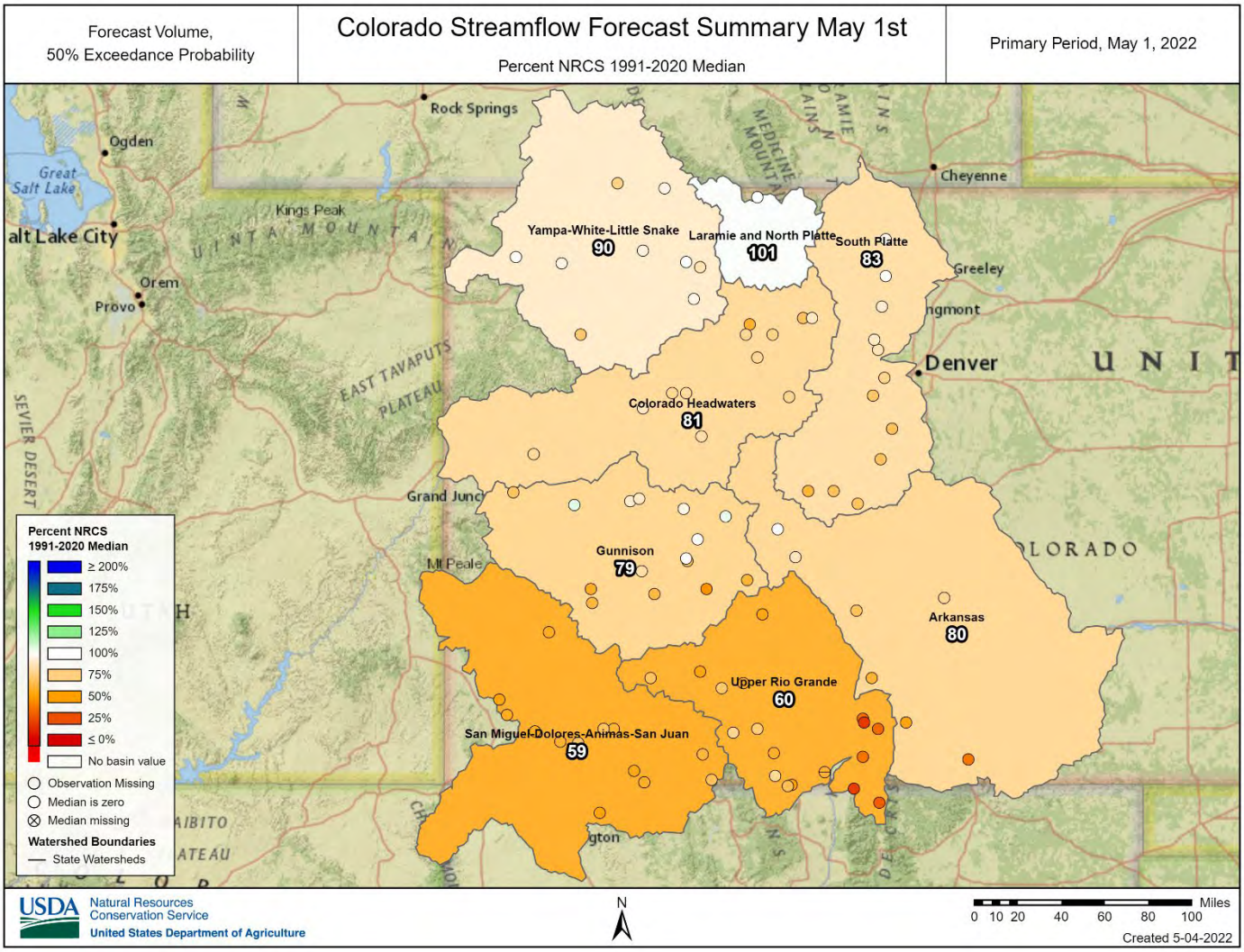
The month of April saw a reversal in precipitation trends from March with the northern-most basins receiving the bulk of the moisture this time around. NOAA's Regional Climate Center Departure from Normal Precipitation plot for April highlights these patterns. The statewide precipitation for the month of April was below normal at 79 percent of median. In the north, the combined Yampa-White-Little Snake and Laramie-North Platte river basins amounts increased from 93 and 90 percent of median monthly precipitation to 100 and 114 percent, respectively. The South Platte river basin also saw a modest increase of 77 to 87 percent of median precipitation. Warm and windy conditions combined with unproductive storms over the past month have resulted in precipitation amounts far below normal for the Central and Southern portions of the state. The Colorado Headwaters river basin saw a decrease in precipitation from last month of 95 to 75 percent of median. The Gunnison, combined San Miguel-Dolores-Animas-San Juan, Upper Rio Grande, and Arkansas basins are currently at 52, 47, 48 and 57 percent of median, respectively. This is a stark change from last month's precipitation totals for these basins that were all well above normal. The current U.S. Drought Monitor Map for Colorado shows little change from the previous month with much of the state still experiencing moderate drought. It appears that the dry trend will continue based on the most recent Climate Prediction Center's Monthly Precipitation Outlook that predicts below average precipitation for the upcoming month.

Reservoir Storage



Reservoir storage has not fluctuated much during the 2021-2022 winter season in Colorado; with most major river basins only changing reservoir storage by a couple precent. Statewide reservoir storage has remained below median this water year; the end of April statewide reservoir storage was 77 percent of median, one percent higher than March. This water year, only the South Platte river basin has had above median reservoir storage and is at 102 percent of median for April. The Upper Rio Grande and Arkansas river basins have close to median reservoir storage at 92 percent of median. The Colorado river basin ended April with 88 percent of median reservoir storage. Reservoir storage in the Gunnison and combined San Miguel-Dolores-Animas-San Juan river basins remained below median at 65 and 66 percent of median, respectively. The combined Yampa-White-Little Snake river basin is at 77 percent of median storage. Overall, most river basins show below median reservoir storage, and many have less acre-feet of stored water than this time last year. Several reservoirs throughout the state are alongside Lake Meade and Powell, holding some of the lowest water levels for their period of record. Without increased precipitation and runoff, some of these already historic low levels are expected to decline further.

Streamflow

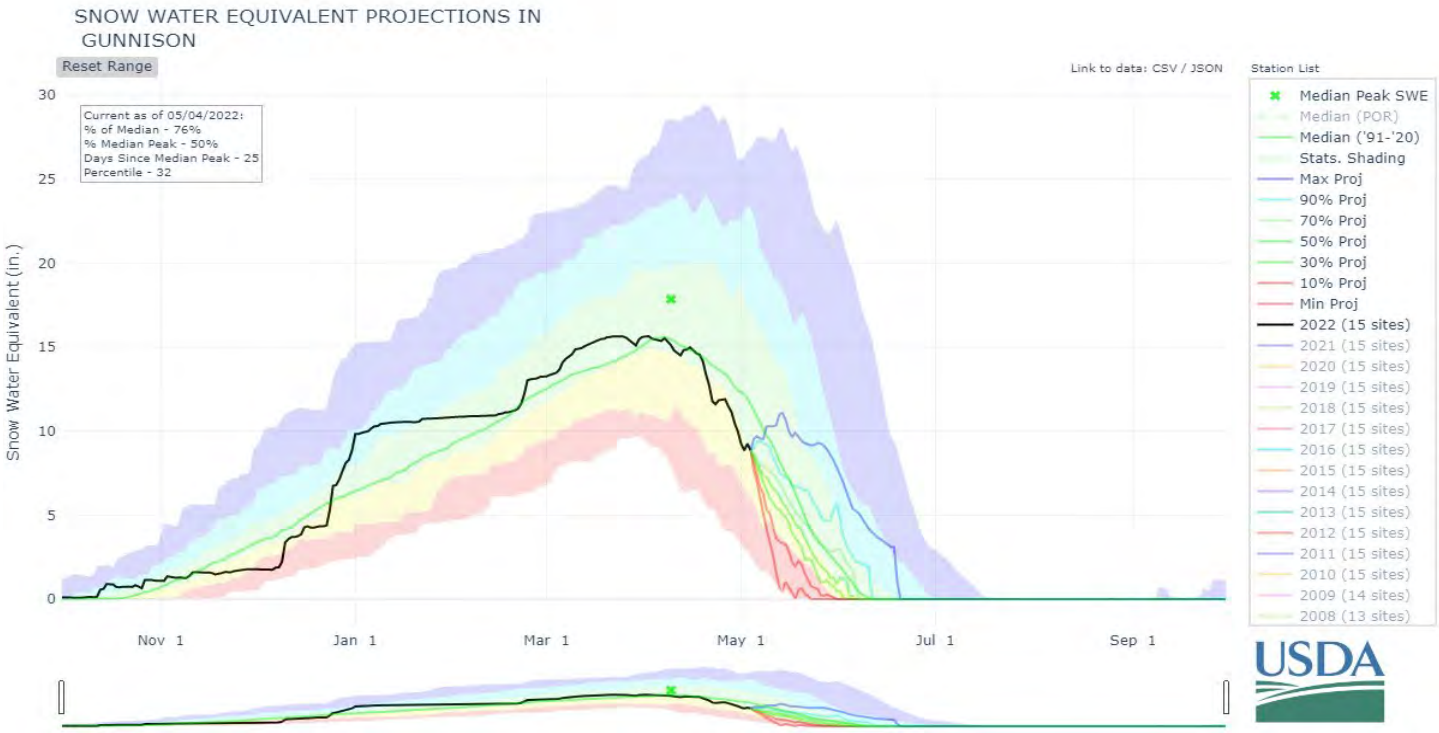


Streamflow forecasts remain below median and have decreased from April forecasts for most of the state. Contributing factors like below median precipitation, high wind, early warm temperatures and dust accumulation on snow are causing an early and rapid melt of mountain snowpack especially in the south-western parts of Colorado. The early and fast snowmelt bolstered runoff during April, but lowered runoff volume projections later in the year. Statewide, streamflow forecasts are 77 percent of median, dropping from 86 percent of median in April. The forecasts for all basins range from 59 percent of median in the combined San Miguel-Dolores-Animas-San Juan river basins to 101 percent of median in the Laramie-North Platte river basin. The combined Yampa-White-Little Snake river basin is currently 90 percent of median. The Colorado Headwaters and Gunnison River basins are 81 percent and 79 percent of median, respectively. The Upper Rio Grande is at 60 percent of median compared to 82 percent in April. The South Platte and Arkansas river basin decreased to 83 and 80 percent of median, respectively. Although a couple small portions of the state are forecast to have near-median streamflow this year, most of the state is forecasted to have well-below median streamflow volumes. Despite near median snowpacks for much of the winter, runoff during the spring and summer months will likely be shorter and less than anticipated without significantly increased precipitation in the coming weeks. Please refer to individual basin sections in this report for more details on individual forecast points.

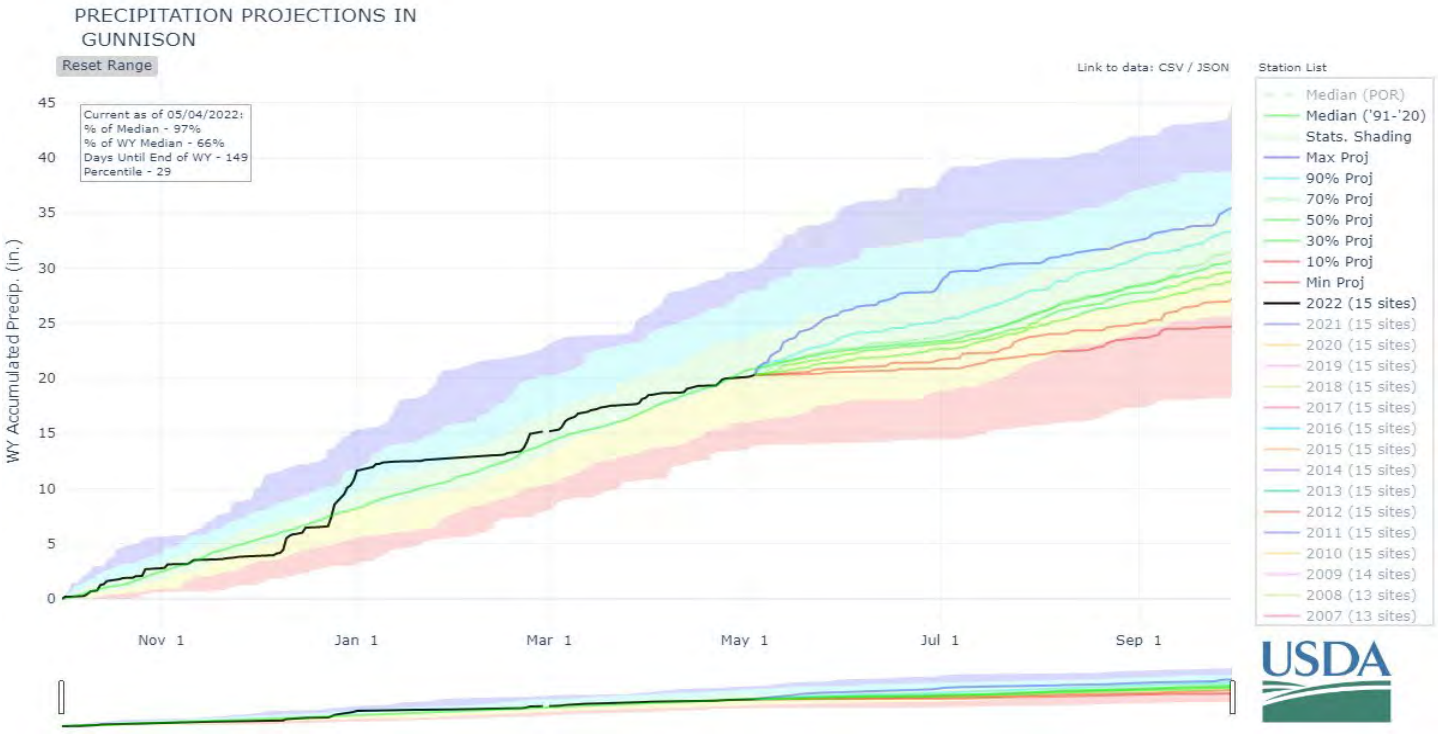
GUNNISON RIVER BASIN

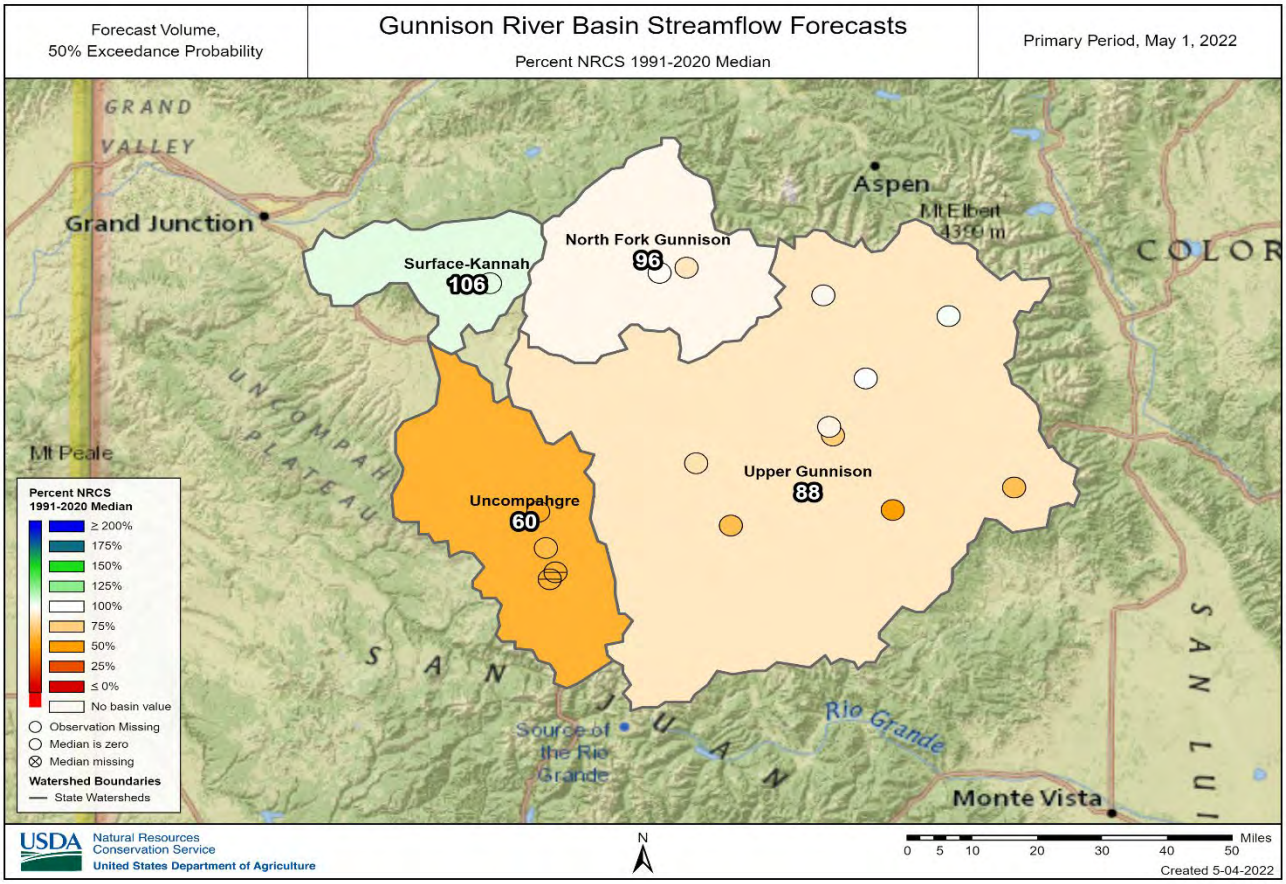
May 1st, 2022

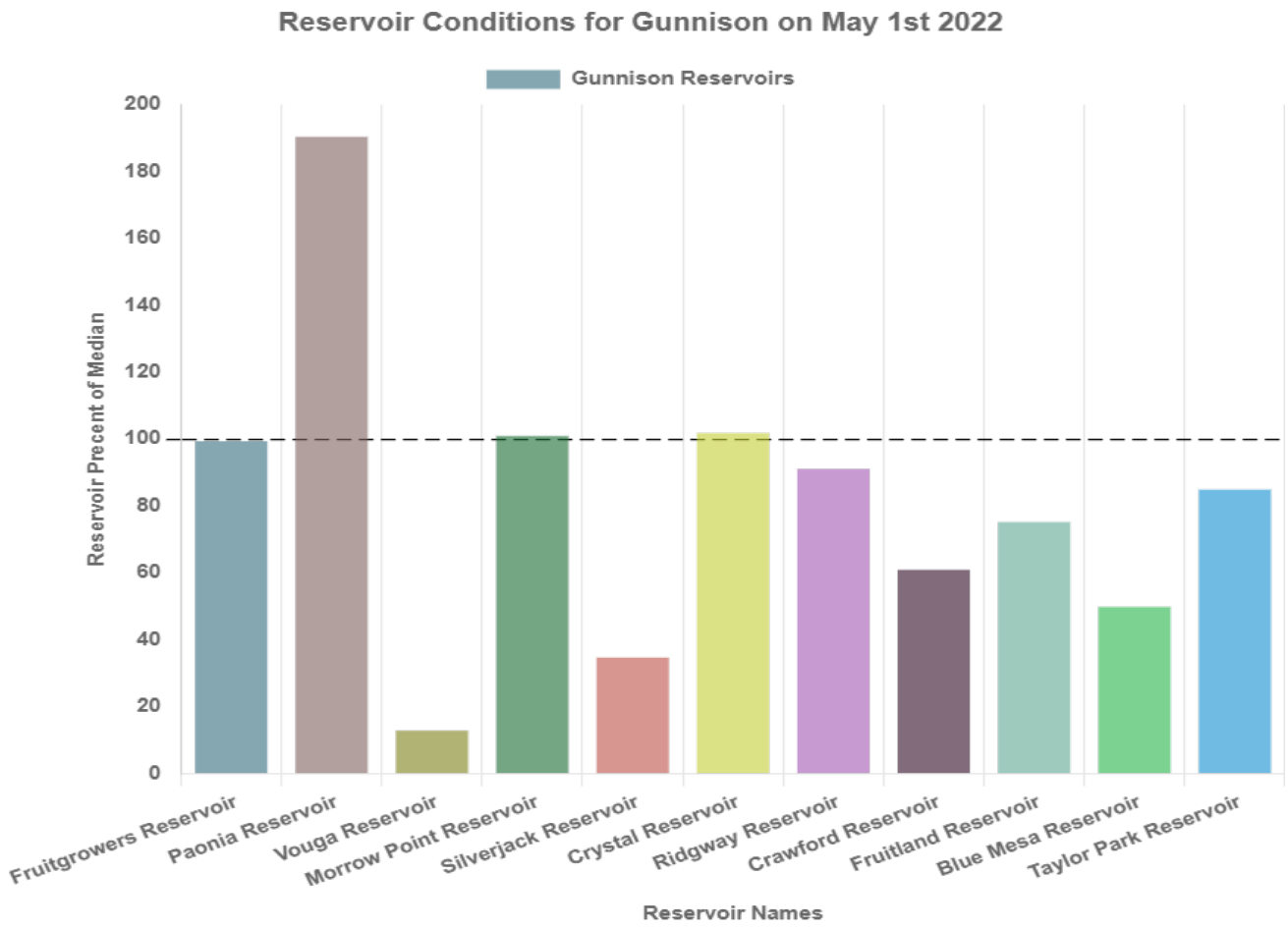
Snowpack in the Gunnison River basin is below normal at 79% of median. Precipitation for April was 52% of median which brings water year-to-date precipitation to 97% of median. Reservoir storage at the end of April was 65% of median compared to 78% last year. Current May – July streamflow forecasts range from 46% of median at Cochetopa Creek near Parlin to 106% of median at Surface Creek at Cedaredge.



*Snow water equivalent (SWE) values are calculated using daily SNOTEL data only for the above graph. In the paragraph SWE is calculated for the first of the month using both SNOTEL and Snow Course data.


PRECIPITATION PROJECTIONS IN GUNNISON
Reset Range
Link to data: CSV / JSON
Station List
Current as of 05/04/2022:
% of Median - 97%
% of WY Median - 66%
Days Until End of WY - 149
Percentile - 29
WY Accumulated Precip. (in.)
45
40
35
30
25
20
15
10
5
0
Nov 1
Jan 1
Mar 1
May 1
Jul 1
Sep 1
Median (POR)
Median ('91-'20)
Stats. Shading
Max Proj
90% Proj
70% Proj
50% Proj
30% Proj
10% Proj
Min Proj
2022 (15 sites)
2021 (15 sites)
2020 (15 sites)
2019 (15 sites)
2018 (15 sites)
2017 (15 sites)
2016 (15 sites)
2015 (15 sites)
2014 (15 sites)
2013 (15 sites)
2012 (15 sites)
2011 (15 sites)
2010 (15 sites)
2009 (14 sites)
2008 (13 sites)
2007 (13 sites)
USDA


Forecast Volume,
50% Exceedance Probability
Gunnison River Basin Streamflow Forecasts
Percent NRCS 1991-2020 Median
Primary Period, May 1, 2022
GRAND VALLEY
Grand Junction
Aspen
Mt Elbert
North Fork Gunnison
96
Surface-Kannah
106
UNCOMPAHGRE PLATEAU
Mt Peale
Uncompahgre
60
Upper Gunnison
88
SAN JUAN
Source of the Rio Grande
Rio Grande
Monte Vista
SAN LUIS
Percent NRCS
1991-2020 Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 5 10 20 30 40 50 Miles
Created 5-04-2022



Watershed Snowpack Analysis May 1st, 2022

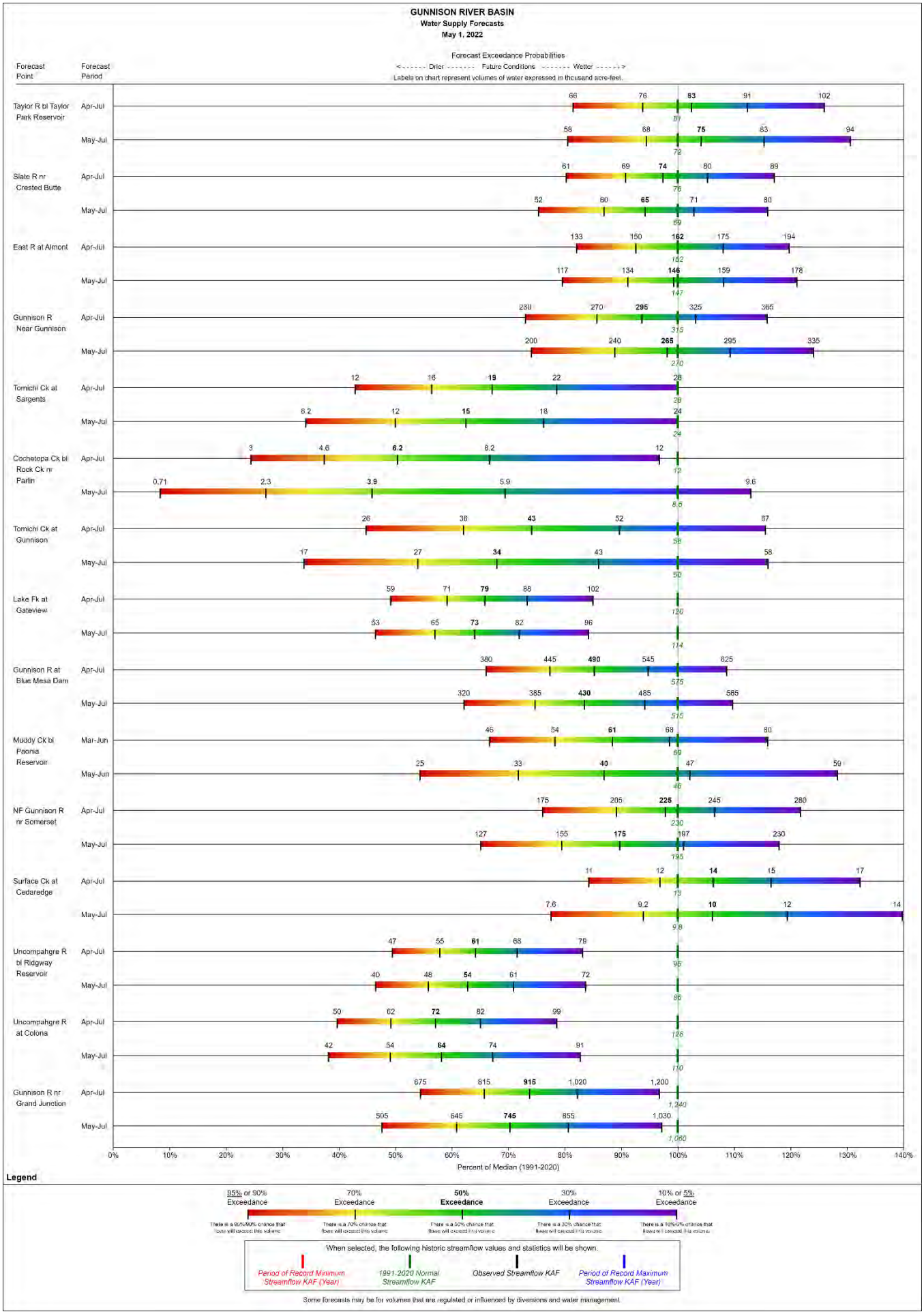
Gunnison Sub-Basin Snow Data

	# of Sites	% Median	Last Year % Median
Upper Gunnison	15.0	78.6	63.5
North Fork Gunnison	3.0	87.6	46.6
Uncompahgre Plateau	1.0	0.0	9.1
Uncompahgre	3.0	60.5	61.8
Surface-Kannah	3.0	102.5	49.5

Reservoir Storage End of April 2022

Gunnison Reservoir Data

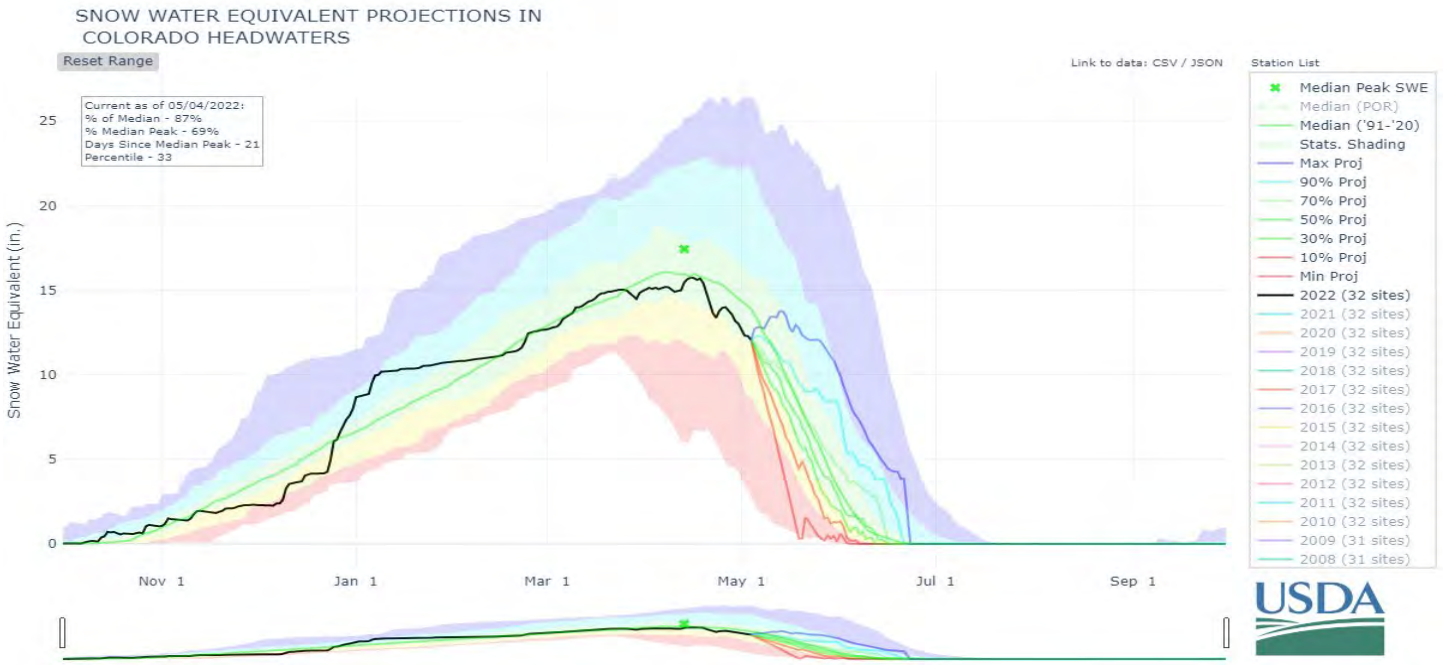
	Current Storage (KAF)	LY Storage (KAF)	Median (KAF)	Percent of Median
Crawford Reservoir	6.89	5.26	11.3	61.0
Fruitgrowers Reservoir	3.48	1.57	3.5	99.4
Taylor Park Reservoir	59.28	63.63	69.8	84.9
Ridgway Reservoir	61.49	57.76	67.5	91.1
Morrow Point Reservoir	111.67	102.62	110.6	101.0
Silverjack Reservoir	2.5	2.35	7.2	34.7
Blue Mesa Reservoir	252.32	365.22	506.3	49.8
Crystal Reservoir	9.06	9.16	8.9	101.8
Paonia Reservoir	7.61	10.15	4.0	190.2
Fruitland Reservoir	4.06	2.58	5.4	75.2
Vouga Reservoir	0.12	0.6	0.9	13.3


GUNNISON RIVER BASIN
Water Supply Forecasts
May 1, 2022
Forecast Exceedance Probabilities
<------- Drier -------- Future Conditions -------- Wetter ------->
Labels on chart represent volumes of water expressed in thousand acre-feet.
Forecast Point
Forecast Period
Taylor R bl Taylor Park Reservoir Apr-Jul 66 76 83 91 102 87
May-Jul 58 68 75 83 94 72
Slate R nr Crested Butte Apr-Jul 61 69 74 80 89 76
May-Jul 52 60 65 71 80 69
East R at Almont Apr-Jul 133 150 162 175 194 152
May-Jul 117 134 146 159 178 147
Gunnison R Near Gunnison Apr-Jul 230 270 295 325 365 315
May-Jul 200 240 265 295 335 270
Tomichi Ck at Sargents Apr-Jul 12 16 19 22 28 28
May-Jul 8.2 12 15 18 24 24
Cochetopa Ck bl Rock Ck nr Parlin Apr-Jul 3 4.6 6.2 8.2 12 12
May-Jul 0.71 2.3 3.9 5.9 9.6 8.6
Tomichi Ck at Gunnison Apr-Jul 26 36 43 52 67 58
May-Jul 17 27 34 43 58 50
Lake Fk at Gateview Apr-Jul 59 71 79 88 102 120
May-Jul 53 65 73 82 96 114
Gunnison R at Blue Mesa Dam Apr-Jul 380 445 490 545 625 575
May-Jul 320 385 430 485 565 515
Muddy Ck bl Paonia Reservoir Mar-Jun 46 54 61 68 80 69
May-Jun 25 33 40 47 59 46
NF Gunnison R nr Somerset Apr-Jul 175 205 225 245 280 230
May-Jul 127 155 175 197 230 195
Surface Ck at Cedaredge Apr-Jul 11 12 14 15 17 13
May-Jul 7.6 9.2 10 12 14 9.8
Uncompahgre R bl Ridgway Reservoir Apr-Jul 47 55 61 68 79 95
May-Jul 40 48 54 61 72 86
Uncompahgre R at Colona Apr-Jul 50 62 72 82 99 126
May-Jul 42 54 64 74 91 110
Gunnison R nr Grand Junction Apr-Jul 675 815 915 1,020 1,200 1,240
May-Jul 505 645 745 855 1,030 1,060
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100% 110% 120% 130% 140%
Percent of Median (1991-2020)
Legend
95% or 90% Exceedance
70% Exceedance
50% Exceedance
30% Exceedance
10% or 5% Exceedance
There is a 95%/90% chance that flows will exceed this volume
There is a 70% chance that flows will exceed this volume
There is a 50% chance that flows will exceed this volume
There is a 30% chance that flows will exceed this volume
There is a 10%/5% chance that flows will exceed this volume
When selected, the following historic streamflow values and statistics will be shown.
Period of Record Minimum Streamflow KAF (Year)
1991-2020 Normal Streamflow KAF
Observed Streamflow KAF
Period of Record Maximum Streamflow KAF (Year)
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

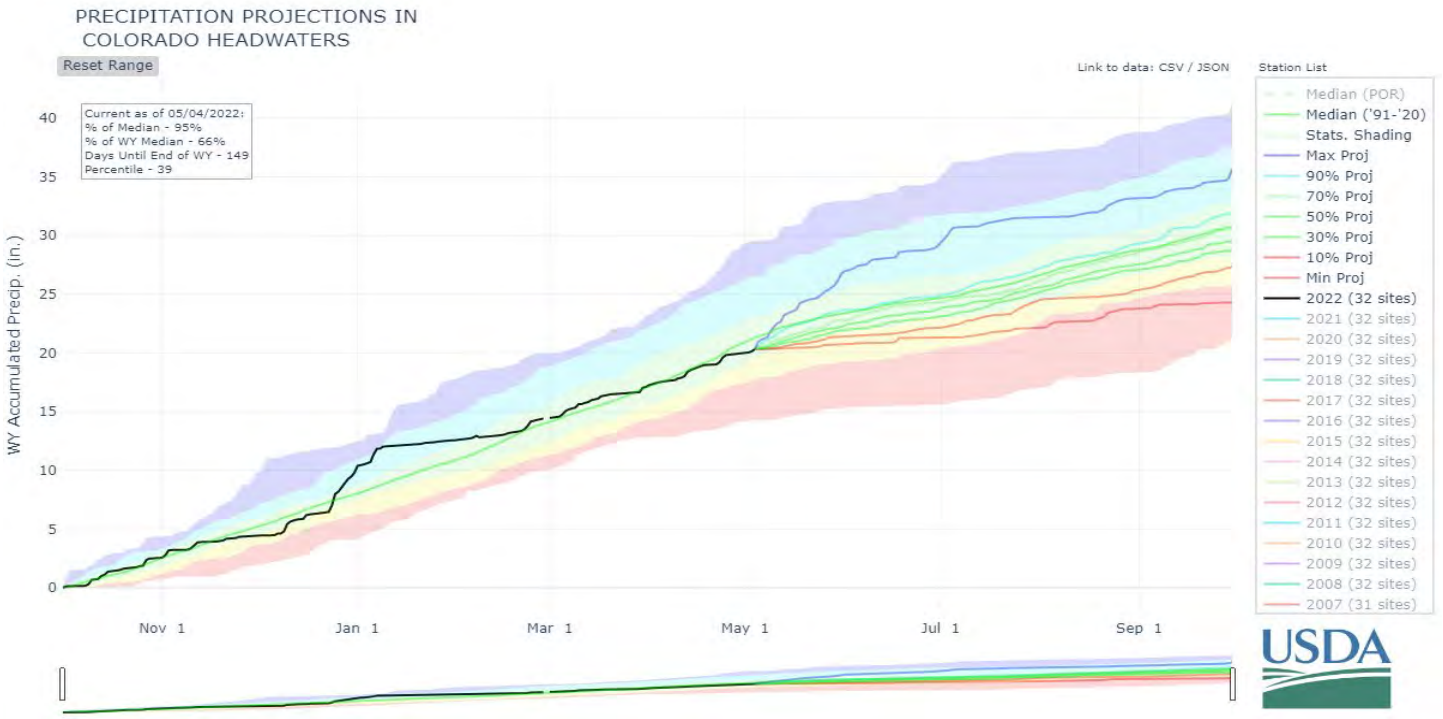
COLORADO HEADWATERS RIVER BASIN

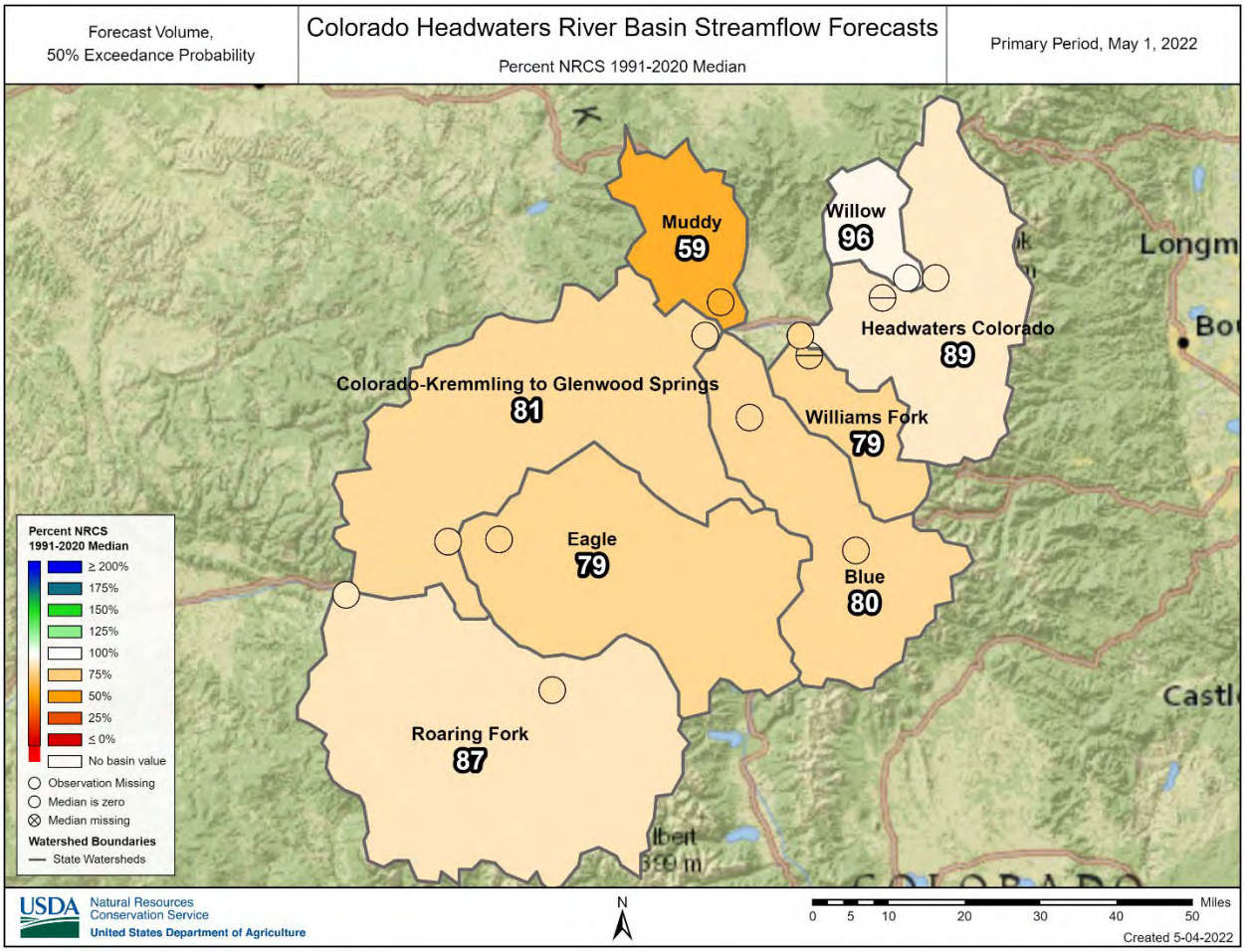
May 1st, 2022

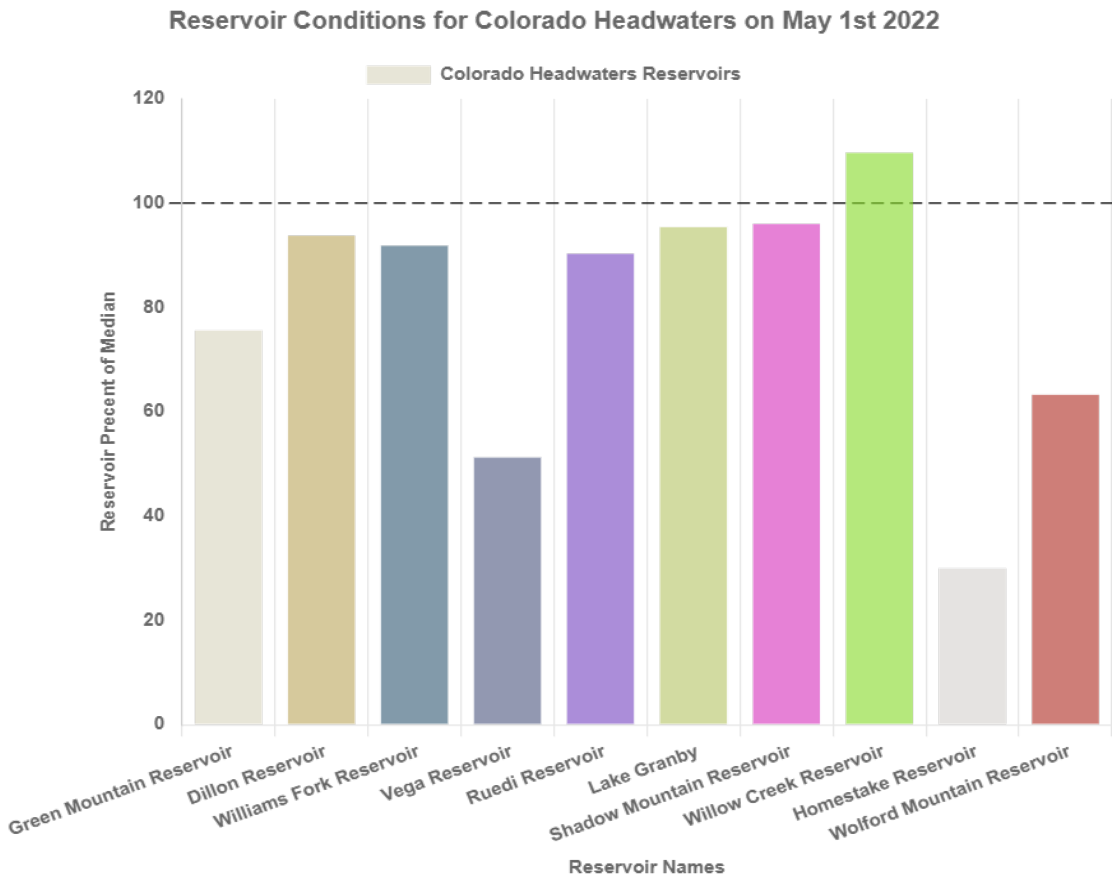
Snowpack in the Colorado River basin is below normal at 85% of the median. Precipitation for April was 75% of median which brings water year-to-date precipitation to 95% of median. Reservoir storage at the end of April was 88% of median compared to 94% last year. Current streamflow forecasts range from 60% of median at Muddy Creek below Wolford Mtn Reservoir to 88% of median at Colorado River below Lake Granby.



*Snow water equivalent (SWE) values are calculated using daily SNOTEL data only for the above graph. In the paragraph SWE is calculated for the first of the month using both SNOTEL and Snow Course data.




Forecast Volume,
50% Exceedance Probability
Colorado Headwaters River Basin Streamflow Forecasts
Percent NRCS 1991-2020 Median
Primary Period, May 1, 2022
Muddy
59
Willow
96
Headwaters Colorado
89
Colorado-Kremmling to Glenwood Springs
81
Williams Fork
79
Eagle
79
Blue
80
Roaring Fork
87
Percent NRCS
1991-2020 Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
USDA
Natural Resources
Conservation Service
United States Department of Agriculture
N
0 5 10 20 30 40 50
Miles
Created 5-04-2022


Reservoir Conditions for Colorado Headwaters on May 1st 2022
Colorado Headwaters Reservoirs
Reservoir Precent of Median
120
100
80
60
40
20
0
Green Mountain Reservoir
Dillon Reservoir
Williams Fork Reservoir
Vega Reservoir
Ruedi Reservoir
Lake Granby
Shadow Mountain Reservoir
Willow Creek Reservoir
Homestake Reservoir
Wolford Mountain Reservoir
Reservoir Names

Watershed Snowpack Analysis May 1st, 2022

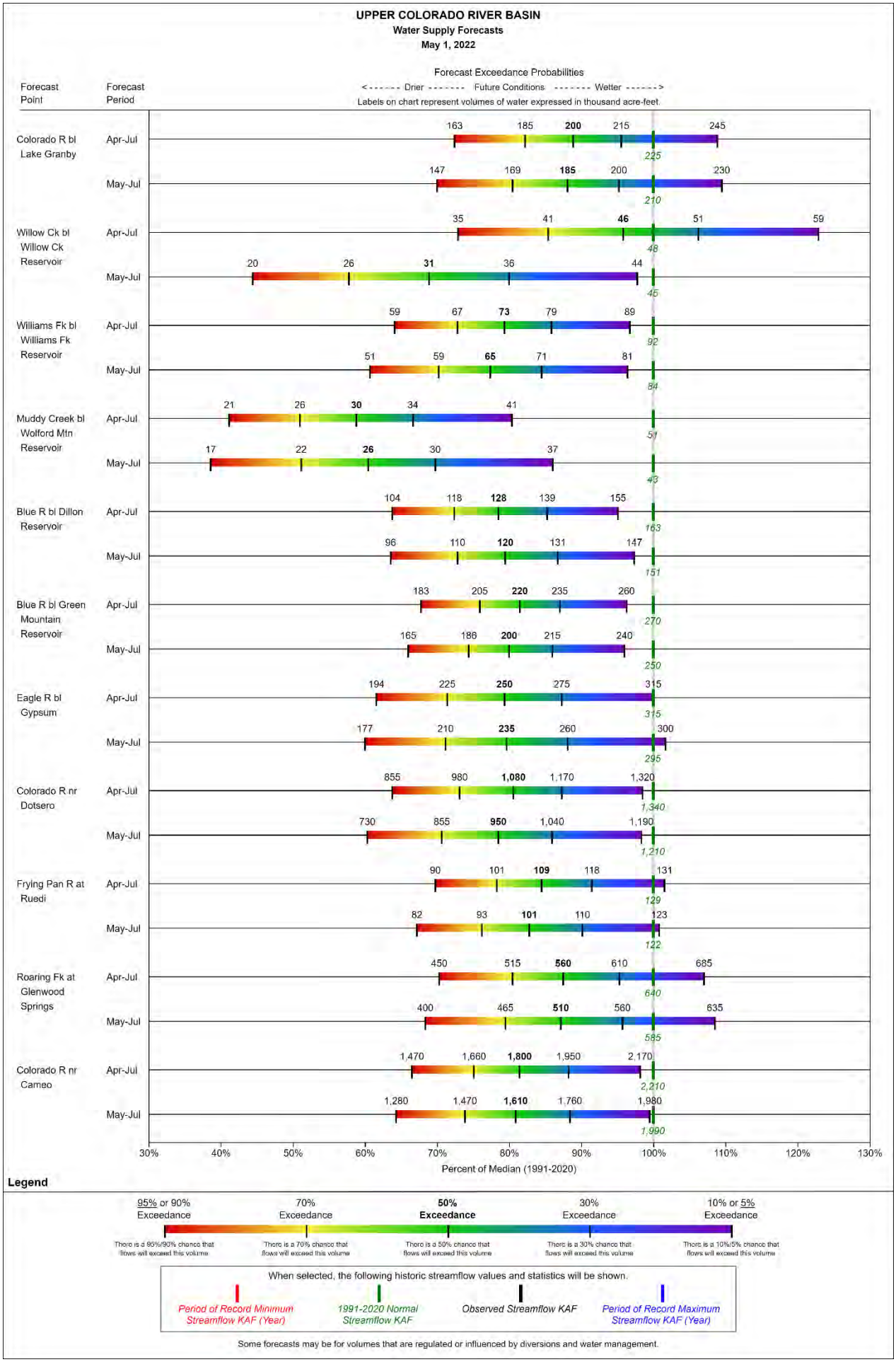
Colorado Headwaters Sub-Basin Snow Data

	# of Sites	% Median	Last Year % Median
Headwaters Colorado	10.0	76.6	86.2
Roaring Fork	11.0	84.7	62.5
Colorado-Kremmling to Glenwood Springs	5.0	81.0	79.6
Eagle	6.0	89.3	60.7
Blue	9.0	87.5	77.4
Plateau	4.0	101.1	45.9
Williams Fork	4.0	73.0	49.8
Muddy	4.0	112.5	79.9
Willow	3.0	89.0	70.4
Troublesome	1.0	89.2	90.1

Reservoir Storage End of April 2022

Colorado Headwaters Reservoir Data

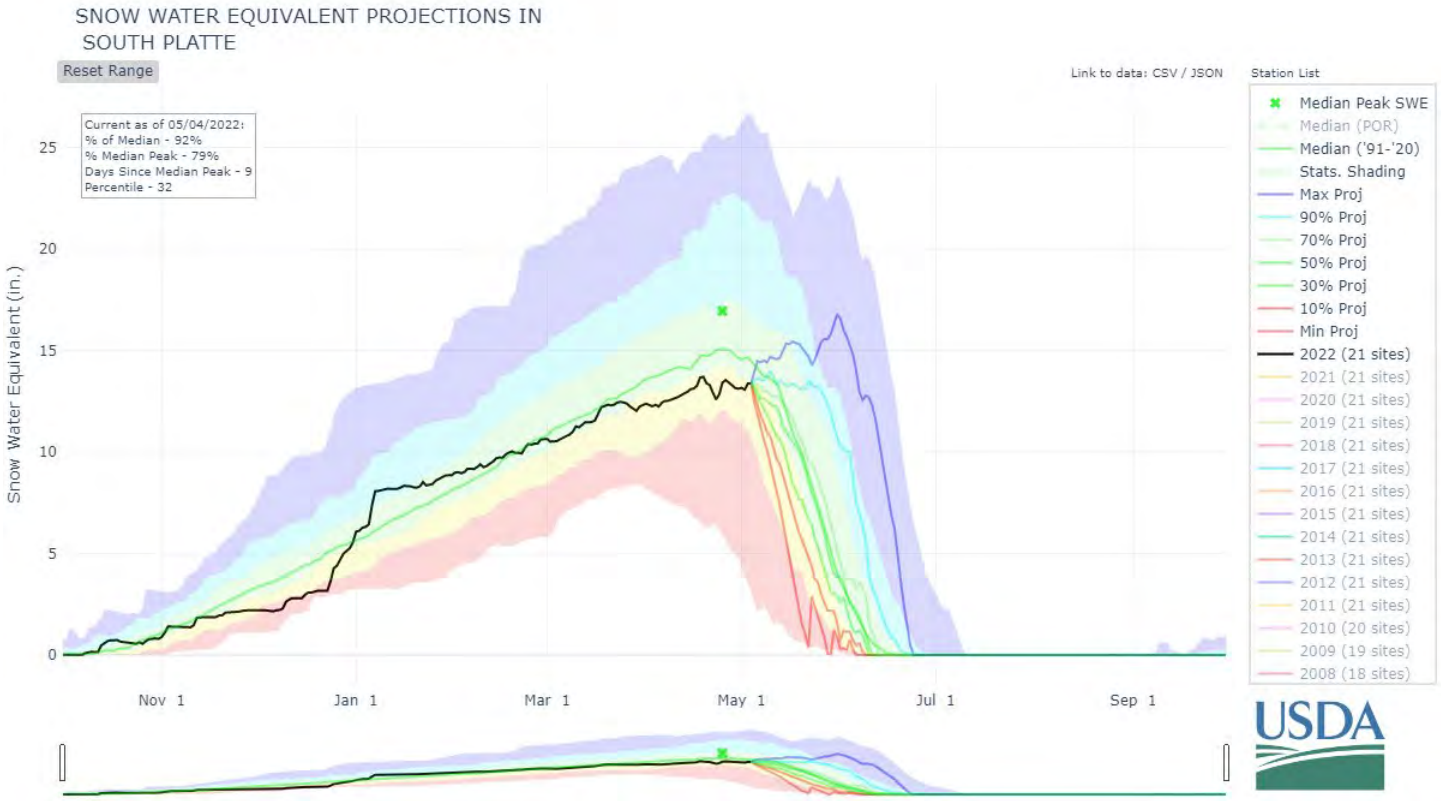
	Current Storage (KAF)	LY Storage (KAF)	Median (KAF)	Percent of Median
Homestake Reservoir	5.3	12.09	17.7	29.9
Green Mountain Reservoir	45.79	47.28	60.6	75.6
Ruedi Reservoir	59.24	59.31	65.6	90.3
Willow Creek Reservoir	7.02	5.52	6.4	109.7
Williams Fork Reservoir	63.19	61.0	68.8	91.8
Wolford Mountain Reservoir	32.13	52.87	50.8	63.2
Lake Granby	257.1	275.2	269.5	95.4
Dillon Reservoir	192.76	197.9	205.6	93.8
Vega Reservoir	8.96	7.31	17.5	51.2
Shadow Mountain Reservoir	16.51	17.33	17.2	96.0


UPPER COLORADO RIVER BASIN
Water Supply Forecasts
May 1, 2022
Forecast Exceedance Probabilities
<------ Drier ------- Future Conditions ------- Wetter ------>
Labels on chart represent volumes of water expressed in thousand acre-feet
Forecast Point
Forecast Period
Colorado R bl Lake Granby
Apr-Jul 163 185 200 215 245 225
May-Jul 147 169 185 200 230 210
Willow Ck bl Willow Ck Reservoir
Apr-Jul 35 41 46 51 59 48
May-Jul 20 26 31 36 44 45
Williams Fk bl Williams Fk Reservoir
Apr-Jul 59 67 73 79 89 92
May-Jul 51 59 65 71 81 84
Muddy Creek bl Wolford Mtn Reservoir
Apr-Jul 21 26 30 34 41 51
May-Jul 17 22 26 30 37 43
Blue R bl Dillon Reservoir
Apr-Jul 104 118 128 139 155 163
May-Jul 96 110 120 131 147 151
Blue R bl Green Mountain Reservoir
Apr-Jul 183 205 220 235 260 270
May-Jul 165 186 200 215 240 250
Eagle R bl Gypsum
Apr-Jul 194 225 250 275 315 315
May-Jul 177 210 235 260 300 295
Colorado R nr Dotsero
Apr-Jul 855 980 1,080 1,170 1,320 1,340
May-Jul 730 855 950 1,040 1,190 1,210
Frying Pan R at Ruedi
Apr-Jul 90 101 109 118 131 129
May-Jul 82 93 101 110 123 122
Roaring Fk at Glenwood Springs
Apr-Jul 450 515 560 610 685 640
May-Jul 400 465 510 560 635 585
Colorado R nr Cameo
Apr-Jul 1,470 1,660 1,800 1,950 2,170 2,210
May-Jul 1,280 1,470 1,610 1,760 1,980 1,990
30% 40% 50% 60% 70% 80% 90% 100% 110% 120% 130%
Percent of Median (1991-2020)
Legend
95% or 90% Exceedance
There is a 95%/90% chance that flows will exceed this volume
70% Exceedance
There is a 70% chance that flows will exceed this volume
50% Exceedance
There is a 50% chance that flows will exceed this volume
30% Exceedance
There is a 30% chance that flows will exceed this volume
10% or 5% Exceedance
There is a 10%/5% chance that flows will exceed this volume
When selected, the following historic streamflow values and statistics will be shown.
Period of Record Minimum Streamflow KAF (Year)
1991-2020 Normal Streamflow KAF
Observed Streamflow KAF
Period of Record Maximum Streamflow KAF (Year)
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

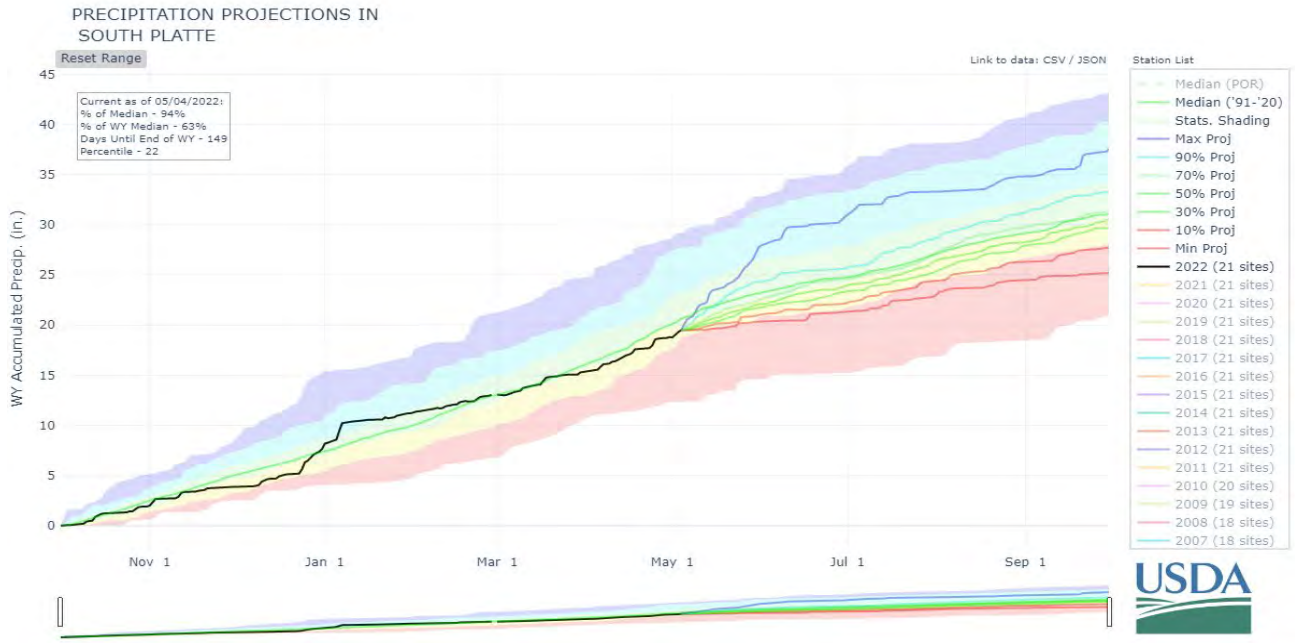
SOUTH PLATTE RIVER BASIN

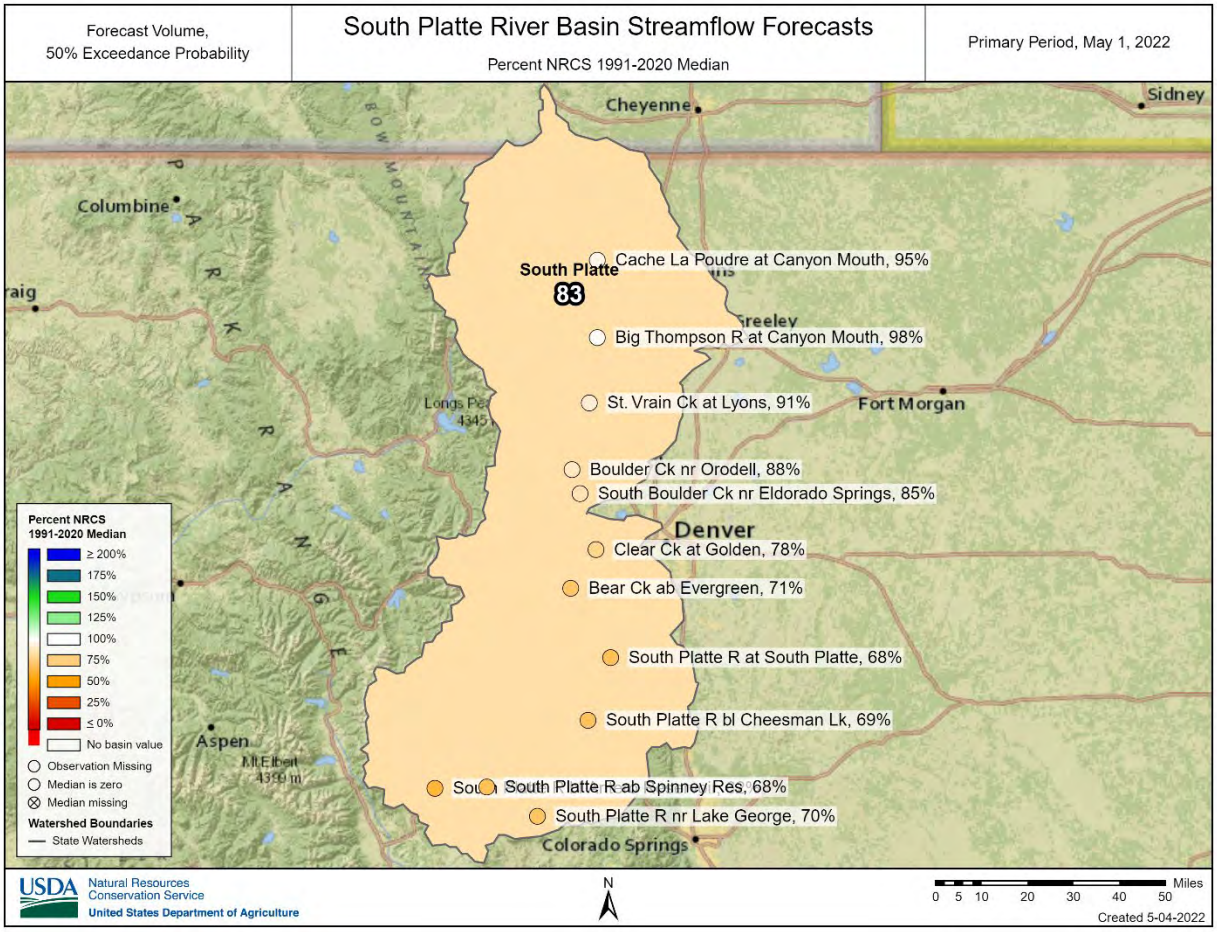
May 1st, 2022

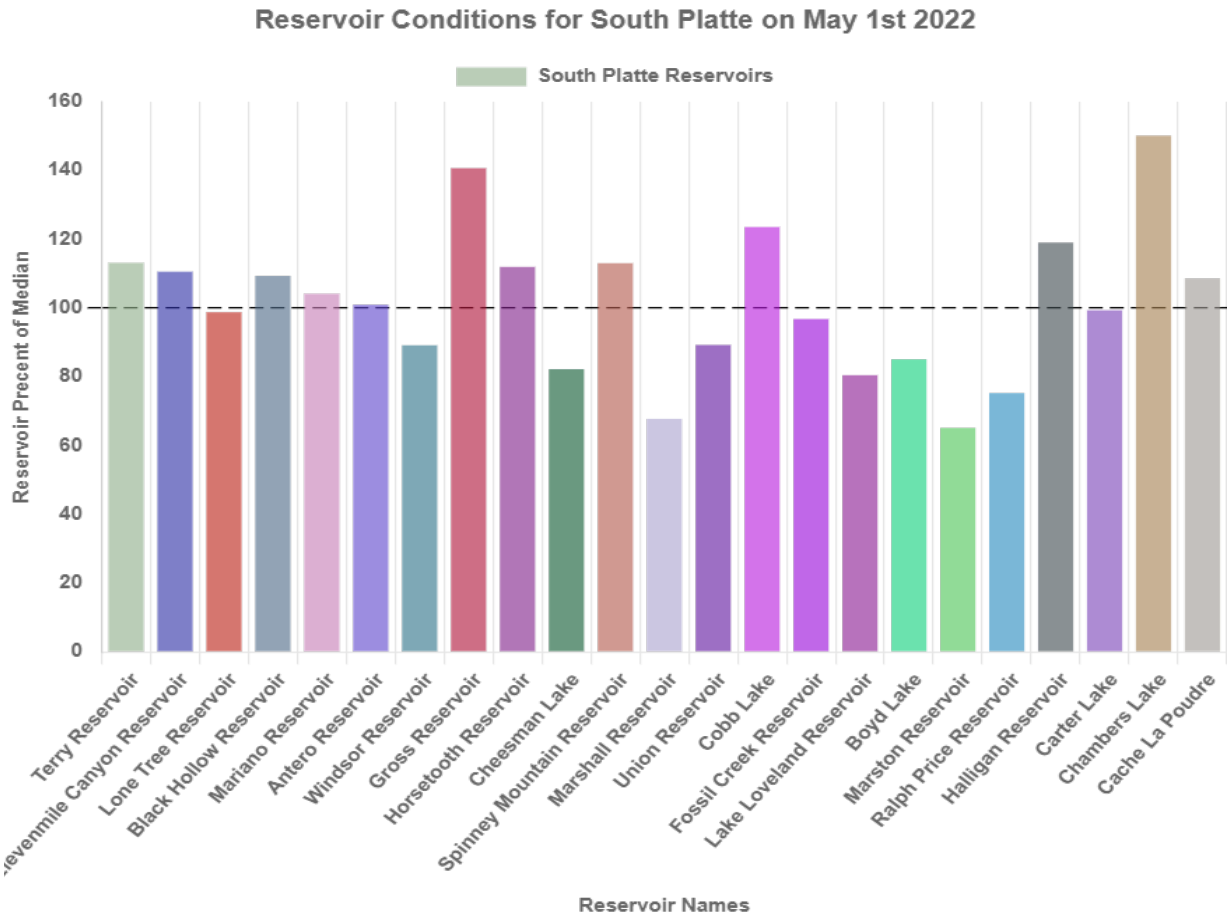
Snowpack in the South Platte River basin is below normal at 90% of median. Precipitation for April was 87% of median which brings water year-to-date precipitation to 93% of median. Reservoir storage at the end of March was 105% of median compared to 92% last year. Current streamflow forecasts range from 60% of median at Antero Reservoir inflow to 102% of median at St. Vrain Creek at Lyons.



*Snow water equivalent (SWE) values are calculated using daily SNOTEL data only for the above graph. In the paragraph SWE is calculated for the first of the month using both SNOTEL and Snow Course data.




Forecast Volume,
50% Exceedance Probability
South Platte River Basin Streamflow Forecasts
Percent NRCS 1991-2020 Median
Primary Period, May 1, 2022
Cheyenne
Sidney
Columbine
South Platte
83
Cache La Poudre at Canyon Mouth, 95%
Big Thompson R at Canyon Mouth, 98%
St. Vrain Ck at Lyons, 91%
Fort Morgan
Boulder Ck nr Orodell, 88%
South Boulder Ck nr Eldorado Springs, 85%
Denver
Clear Ck at Golden, 78%
Bear Ck ab Evergreen, 71%
South Platte R at South Platte, 68%
South Platte R bl Cheesman Lk, 69%
South Platte R ab Spinney Res, 68%
South Platte R nr Lake George, 70%
Colorado Springs
Aspen
Percent NRCS
1991-2020 Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
USDA
Natural Resources
Conservation Service
United States Department of Agriculture
N
Miles
0 5 10 20 30 40 50
Created 5-04-2022


Reservoir Conditions for South Platte on May 1st 2022
South Platte Reservoirs
Reservoir Precent of Median
160
140
120
100
80
60
40
20
0
Terry Reservoir
Lone Tree Reservoir
Black Hollow Reservoir
Mariano Reservoir
Antero Reservoir
Windsor Reservoir
Gross Reservoir
Horsetooth Reservoir
Cheesman Lake
Spinney Mountain Reservoir
Marshall Reservoir
Union Reservoir
Cobb Lake
Fossil Creek Reservoir
Lake Loveland Reservoir
Boyd Lake
Marston Reservoir
Ralph Price Reservoir
Halligan Reservoir
Carter Lake
Chambers Lake
Cache La Poudre
Reservoir Names

Watershed Snowpack Analysis May 1st, 2022

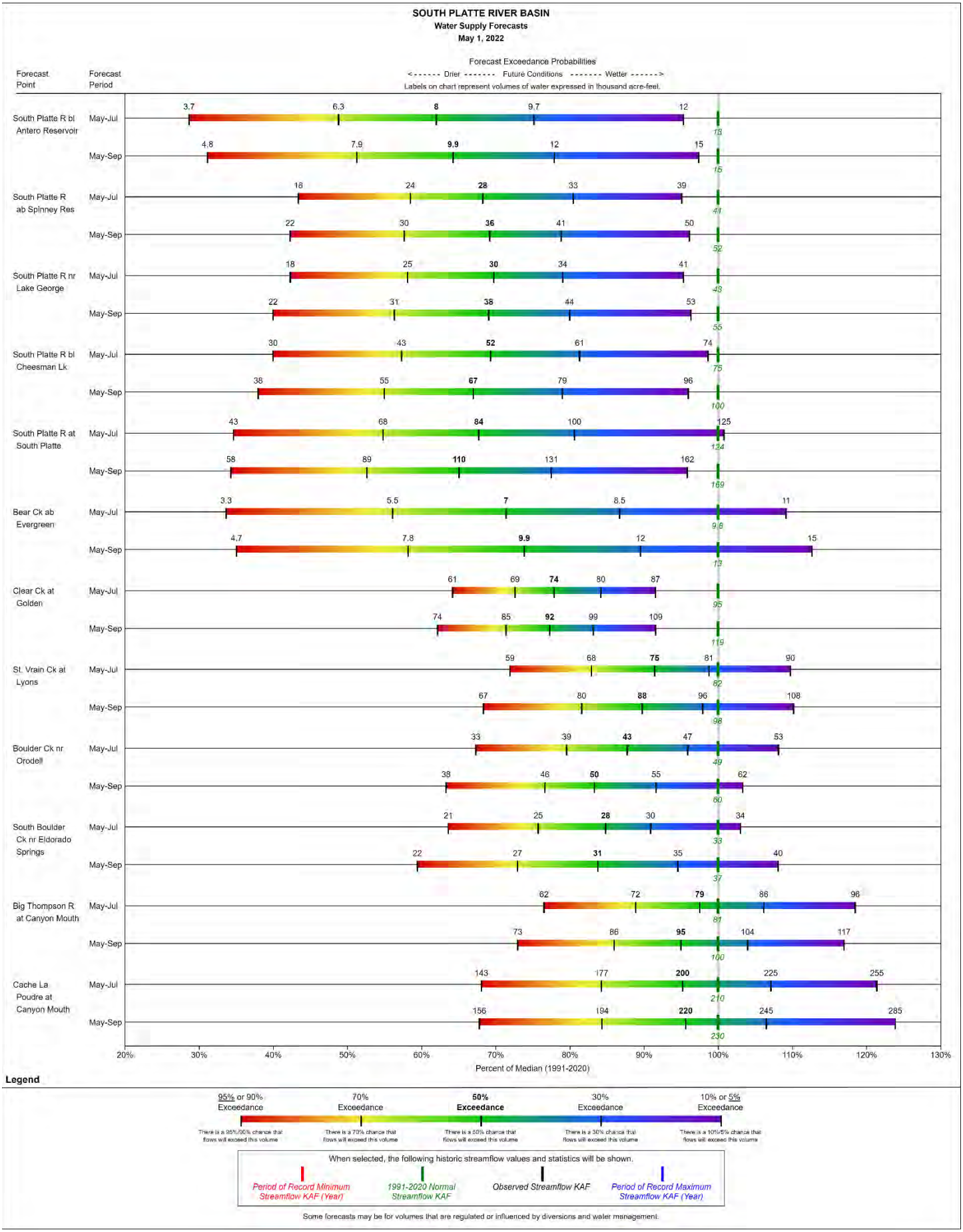
South Platte Sub-Basin Snow Data

	# of Sites	% Median	Last Year % Median
Upper South Platte	14.0	75.0	96.6
North Fork Cache La Poudre	4.0	104.5	118.1
Cache La Poudre	12.0	92.8	106.6
Big Thompson	7.0	97.4	107.4
Clear	5.0	76.8	93.7
Boulder	6.0	87.6	112.6
Saint Vrain	6.0	103.2	124.3

Reservoir Storage End of April 2022

South Platte Reservoir Data

	Current Storage (KAF)	LY Storage (KAF)	Median (KAF)	Percent of Median
Windsor Reservoir	12.4	12.1	13.9	89.2
Marshall Reservoir	6.1	7.12	9.0	67.8
Mariano Reservoir	5.0	3.1	4.8	104.2
Spinney Mountain Reservoir	34.14	26.7	30.2	113.0
Cheesman Lake	56.34	54.98	68.5	82.2
Cobb Lake	17.55	15.9	14.2	123.6
Antero Reservoir	19.79	19.88	19.6	101.0
Horsetooth Reservoir	140.64	132.9	125.6	112.0
Gross Reservoir	15.05	6.78	10.7	140.7
Carter Lake	101.64	98.77	102.3	99.4
Halligan Reservoir	6.43	6.4	5.4	119.1
Cache La Poudre	10.43	9.2	9.6	108.6
Chambers Lake	5.4	4.7	3.6	150.0
Marston Reservoir	5.54	9.08	8.5	65.2
Elevenmile Canyon Reservoir	110.14	97.17	99.6	110.6
Black Hollow Reservoir	3.17	3.8	2.9	109.3
Terry Reservoir	6.68	7.3	5.9	113.2
Union Reservoir	10.54	8.03	11.8	89.3
Lake Loveland Reservoir	6.6	5.0	8.2	80.5
Boyd Lake	26.3	29.6	30.9	85.1
Ralph Price Reservoir	9.71	14.4	12.9	75.3
Fossil Creek Reservoir	9.39	9.3	9.7	96.8
Lone Tree Reservoir	8.2	6.2	8.3	98.8

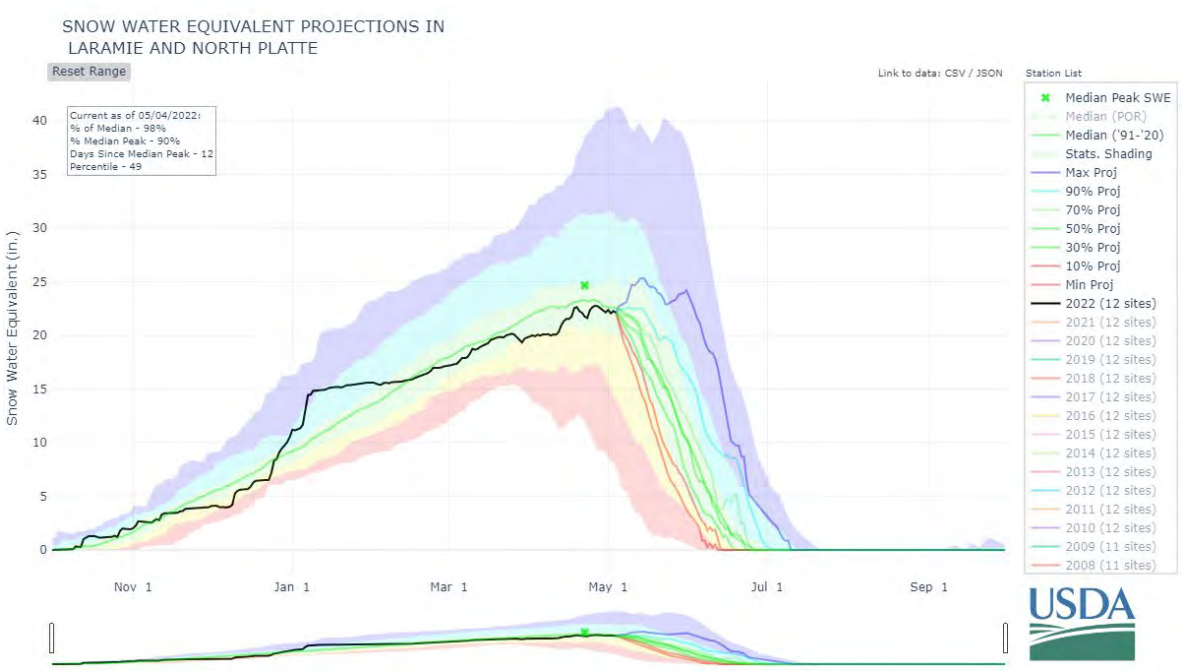

SOUTH PLATTE RIVER BASIN
Water Supply Forecasts
May 1, 2022
Forecast Exceedance Probabilities
<------- Drier ------- Future Conditions ------- Wetter ------>
Labels on chart represent volumes of water expressed in thousand acre-feet.
Forecast Point
Forecast Period
South Platte R bl Antero Reservoir
May-Jul 3.7 6.3 8 9.7 12 13
May-Sep 4.8 7.9 9.9 12 15 15
South Platte R ab Spinney Res
May-Jul 18 24 28 33 39 41
May-Sep 22 30 36 41 50 52
South Platte R nr Lake George
May-Jul 18 25 30 34 41 43
May-Sep 22 31 38 44 53 55
South Platte R bl Cheesman Lk
May-Jul 30 43 52 61 74 75
May-Sep 38 55 67 79 96 100
South Platte R at South Platte
May-Jul 43 68 84 100 125 124
May-Sep 58 89 110 131 162 169
Bear Ck ab Evergreen
May-Jul 3.3 5.5 7 8.5 11 9.8
May-Sep 4.7 7.8 9.9 12 15 13
Clear Ck at Golden
May-Jul 61 69 74 80 87 95
May-Sep 74 85 92 99 109 119
St. Vrain Ck at Lyons
May-Jul 59 68 75 81 90 82
May-Sep 67 80 88 96 108 98
Boulder Ck nr Orodell
May-Jul 33 39 43 47 53 49
May-Sep 38 46 50 55 62 60
South Boulder Ck nr Eldorado Springs
May-Jul 21 25 28 30 34 33
May-Sep 22 27 31 35 40 37
Big Thompson R at Canyon Mouth
May-Jul 62 72 79 86 96 81
May-Sep 73 86 95 104 117 100
Cache La Poudre at Canyon Mouth
May-Jul 143 177 200 225 255 210
May-Sep 156 194 220 245 285 230
20% 30% 40% 50% 60% 70% 80% 90% 100% 110% 120% 130%
Percent of Median (1991-2020)
Legend
95% or 90% Exceedance
There is a 95%/90% chance that flows will exceed this volume
70% Exceedance
There is a 70% chance that flows will exceed this volume
50% Exceedance
There is a 50% chance that flows will exceed this volume
30% Exceedance
There is a 30% chance that flows will exceed this volume
10% or 5% Exceedance
There is a 10%/5% chance that flows will exceed this volume
When selected, the following historic streamflow values and statistics will be shown.
Period of Record Minimum Streamflow KAF (Year)
1991-2020 Normal Streamflow KAF
Observed Streamflow KAF
Period of Record Maximum Streamflow KAF (Year)
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

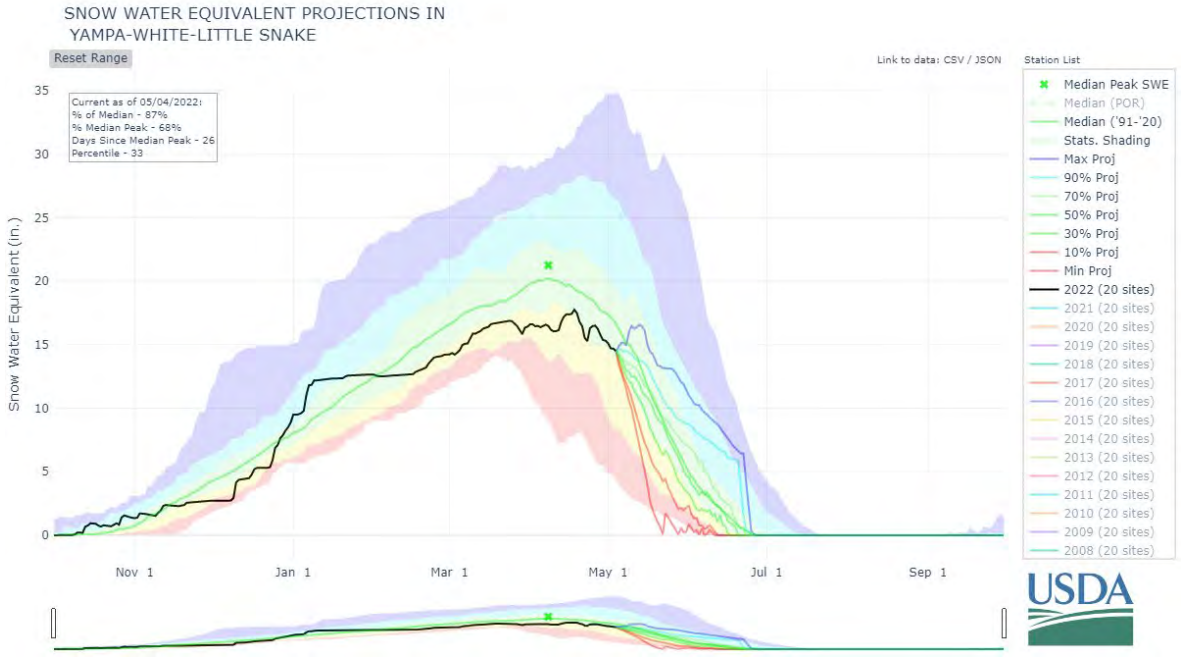
YAMPA-WHITE-LITTLE SNAKE AND LARAMIE-NORTH PLATTE RIVER BASINS

May 1st, 2022

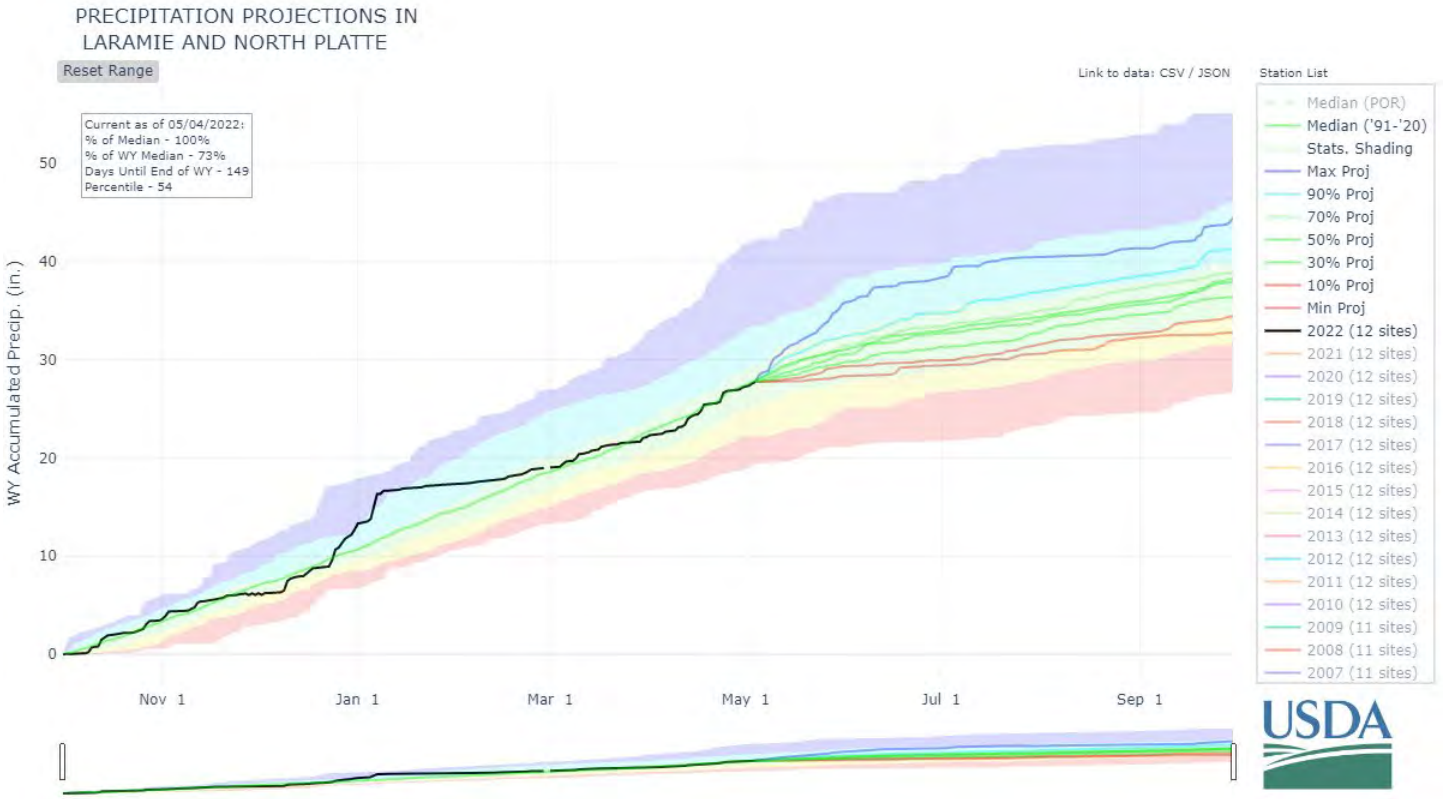
Snowpack in the Yampa-White-Little Snake and the Laramie-North Platte River basins were variable at 88% and 100% of the median. Precipitation for April was 100% and 114% of median and water year-to-date precipitation is 95% and 99% of median, respectively. Reservoir storage at the end of April for the Yampa-White-Little Snake was 77% of median compared to 89% last year. Current streamflow forecasts range from 77% of median at Yampa River at Steamboat Springs to 95% of median at North Platte River near Northgate.

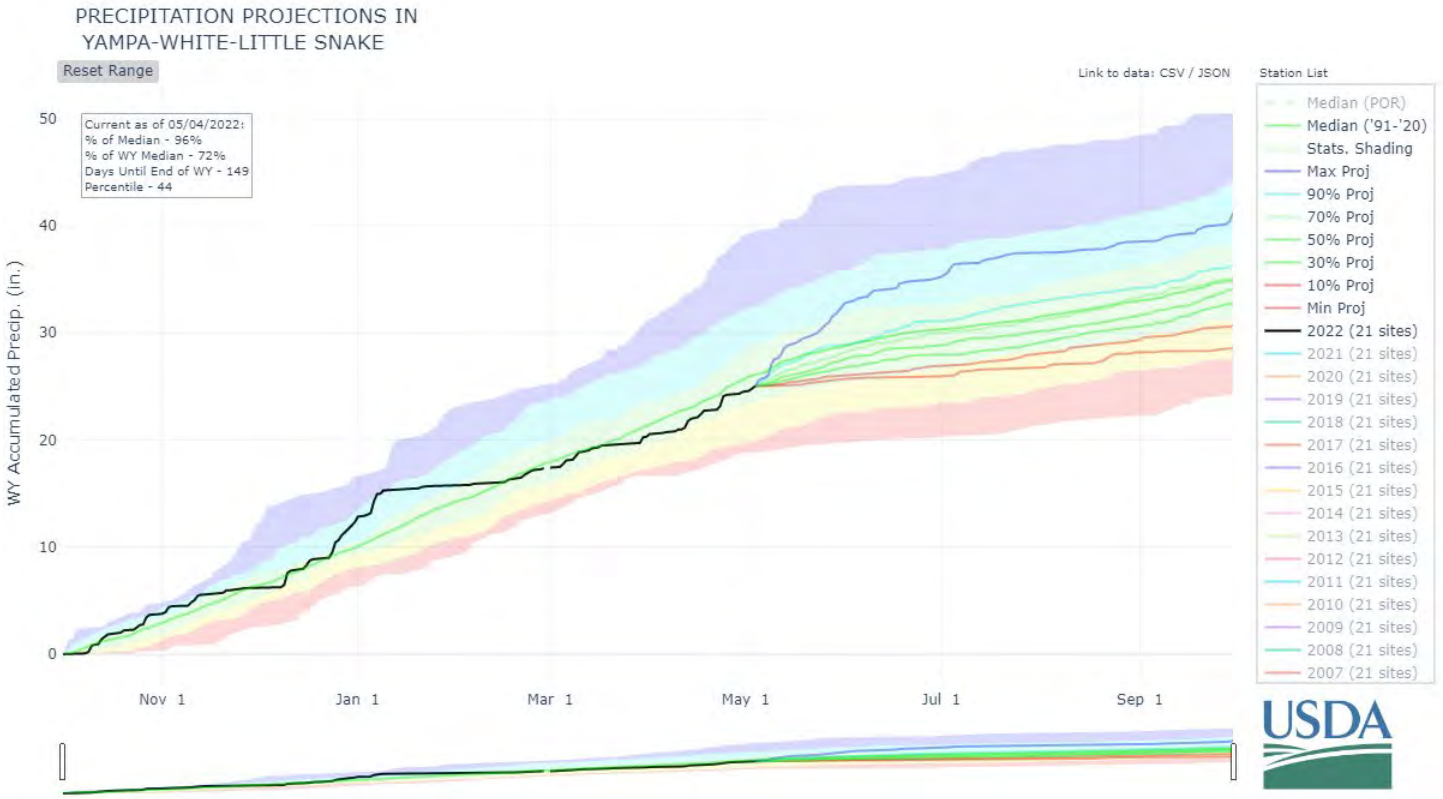
*SWE values calculated using daily SNOTEL data only

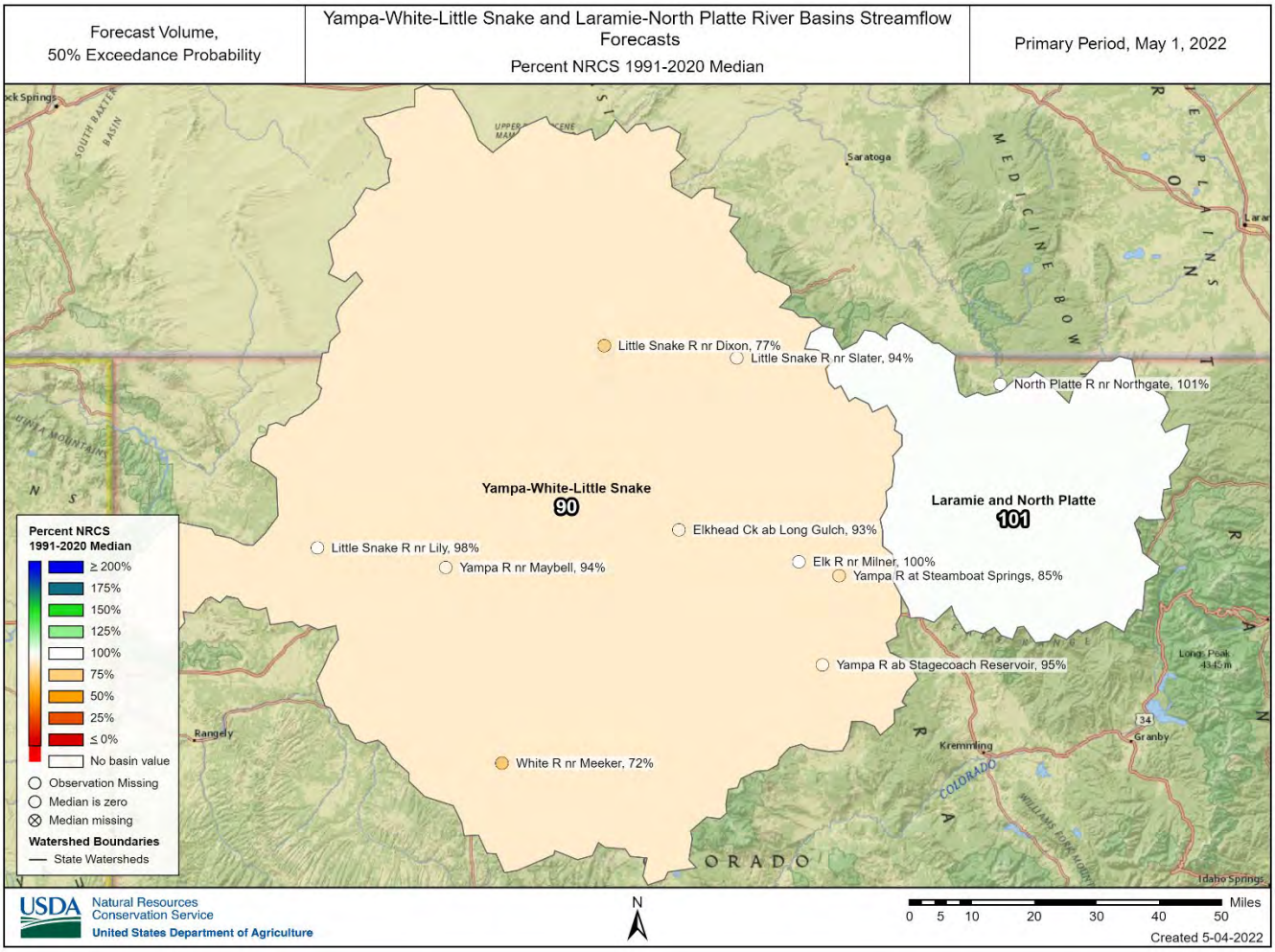


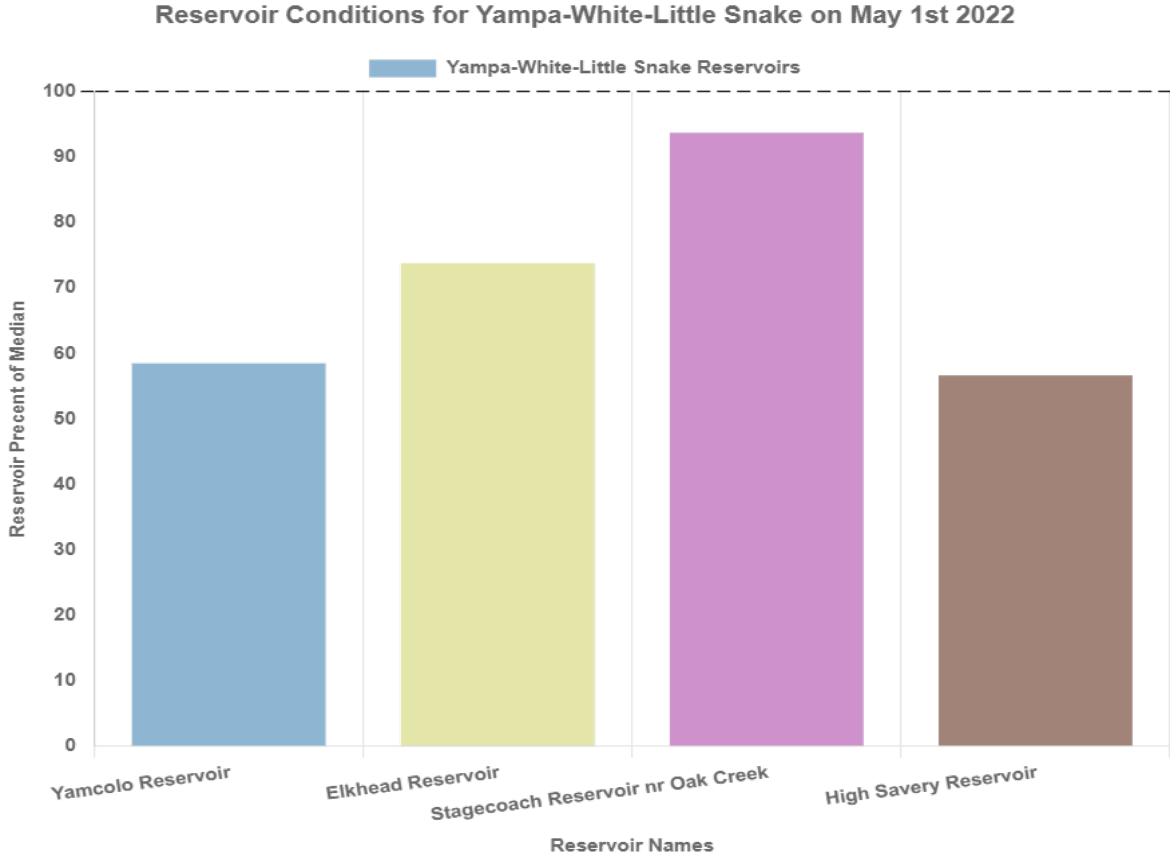


*Snow water equivalent (SWE) values are calculated using daily SNOTEL data only. In the paragraph SWE is calculated for the first of the month using both SNOTEL and Snow Course data.


PRECIPITATION PROJECTIONS IN
LARAMIE AND NORTH PLATTE
Reset Range
Link to data: CSV / JSON
Station List
Current as of 05/04/2022:
% of Median - 100%
% of WY Median - 73%
Days Until End of WY - 149
Percentile - 54
WY Accumulated Precip. (in.)
0
10
20
30
40
50
Nov 1
Jan 1
Mar 1
May 1
Jul 1
Sep 1
Median (POR)
Median ('91-'20)
Stats. Shading
Max Proj
90% Proj
70% Proj
50% Proj
30% Proj
10% Proj
Min Proj
2022 (12 sites)
2021 (12 sites)
2020 (12 sites)
2019 (12 sites)
2018 (12 sites)
2017 (12 sites)
2016 (12 sites)
2015 (12 sites)
2014 (12 sites)
2013 (12 sites)
2012 (12 sites)
2011 (12 sites)
2010 (12 sites)
2009 (11 sites)
2008 (11 sites)
2007 (11 sites)
USDA


PRECIPITATION PROJECTIONS IN
YAMPA-WHITE-LITTLE SNAKE
Reset Range
Link to data: CSV / JSON
Station List
Current as of 05/04/2022:
% of Median - 96%
% of WY Median - 72%
Days Until End of WY - 149
Percentile - 44
WY Accumulated Precip. (in.)
0
10
20
30
40
50
Nov 1
Jan 1
Mar 1
May 1
Jul 1
Sep 1
Median (POR)
Median ('91-'20)
Stats. Shading
Max Proj
90% Proj
70% Proj
50% Proj
30% Proj
10% Proj
Min Proj
2022 (21 sites)
2021 (21 sites)
2020 (21 sites)
2019 (21 sites)
2018 (21 sites)
2017 (21 sites)
2016 (21 sites)
2015 (21 sites)
2014 (21 sites)
2013 (21 sites)
2012 (21 sites)
2011 (21 sites)
2010 (21 sites)
2009 (21 sites)
2008 (21 sites)
2007 (21 sites)
USDA


Forecast Volume,
50% Exceedance Probability
Yampa-White-Little Snake and Laramie-North Platte River Basins Streamflow Forecasts
Percent NRCS 1991-2020 Median
Primary Period, May 1, 2022
Little Snake R nr Dixon, 77%
Little Snake R nr Slater, 94%
North Platte R nr Northgate, 101%
Yampa-White-Little Snake
90
Laramie and North Platte
101
Elkhead Ck ab Long Gulch, 93%
Little Snake R nr Lily, 98%
Yampa R nr Maybell, 94%
Elk R nr Milner, 100%
Yampa R at Steamboat Springs, 85%
Yampa R ab Stagecoach Reservoir, 95%
White R nr Meeker, 72%
Percent NRCS
1991-2020 Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
Saratoga
Rangely
Kremmling
Granby
Idaho Springs
Natural Resources
Conservation Service
United States Department of Agriculture
N
Miles
0 5 10 20 30 40 50
Created 5-04-2022


Reservoir Conditions for Yampa-White-Little Snake on May 1st 2022
Yampa-White-Little Snake Reservoirs
Reservoir Precent of Median
100
90
80
70
60
50
40
30
20
10
0
Yamcolo Reservoir
Elkhead Reservoir
Stagecoach Reservoir nr Oak Creek
High Savery Reservoir
Reservoir Names

*No reservoirs are currently monitored in the Laramie-North Platte combined basin.

Watershed Snowpack Analysis May 1st, 2022

Laramie and North Platte Sub-Basin Snow Data

	# of Sites	% Median	Last Year % Median
North Platte Headwaters	14.0	97.8	79.6
Laramie	6.0	110.6	100.2

Yampa-White-Little Snake Sub-Basin Snow Data

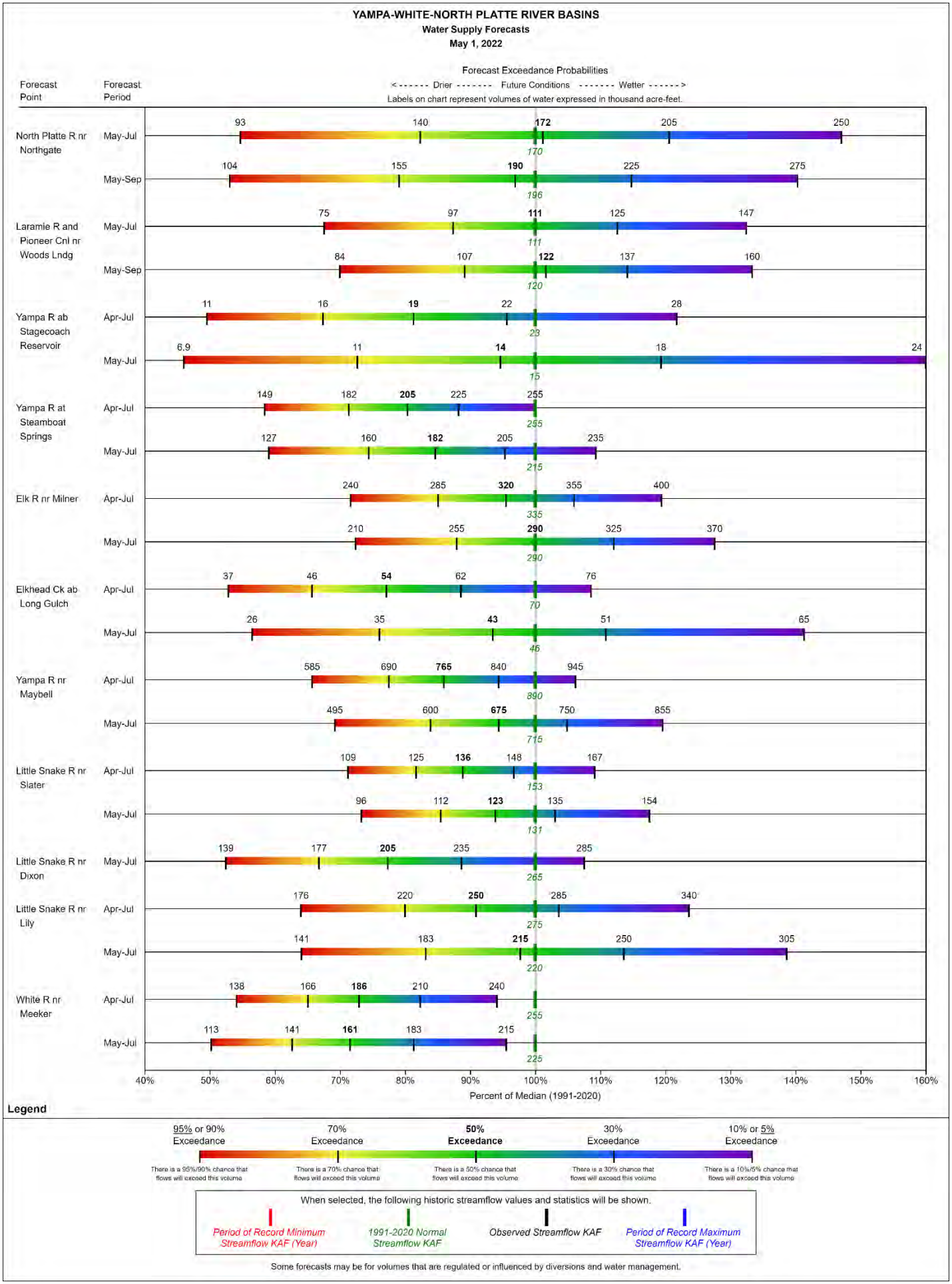
	# of Sites	% Median	Last Year % Median
Yampa	10.0	94.1	63.6
Little Snake	10.0	90.2	73.3
White	4.0	68.4	66.2
Williams Fork of the Yampa	1.0	85.6	70.4
Elk	2.0	93.0	64.1

Reservoir Storage End of April 2022

Yampa-White-Little Snake Reservoir Data

	Current Storage (KAF)	LY Storage (KAF)	Median (KAF)	Percent of Median
Yamcolo Reservoir	4.8	4.76	8.2	58.5
Elkhead Reservoir	18.08	21.09	24.5	73.8
High Savery Reservoir	8.5	11.31	15.0	56.7
Stagecoach Reservoir nr Oak Creek	29.9	34.03	31.9	93.7

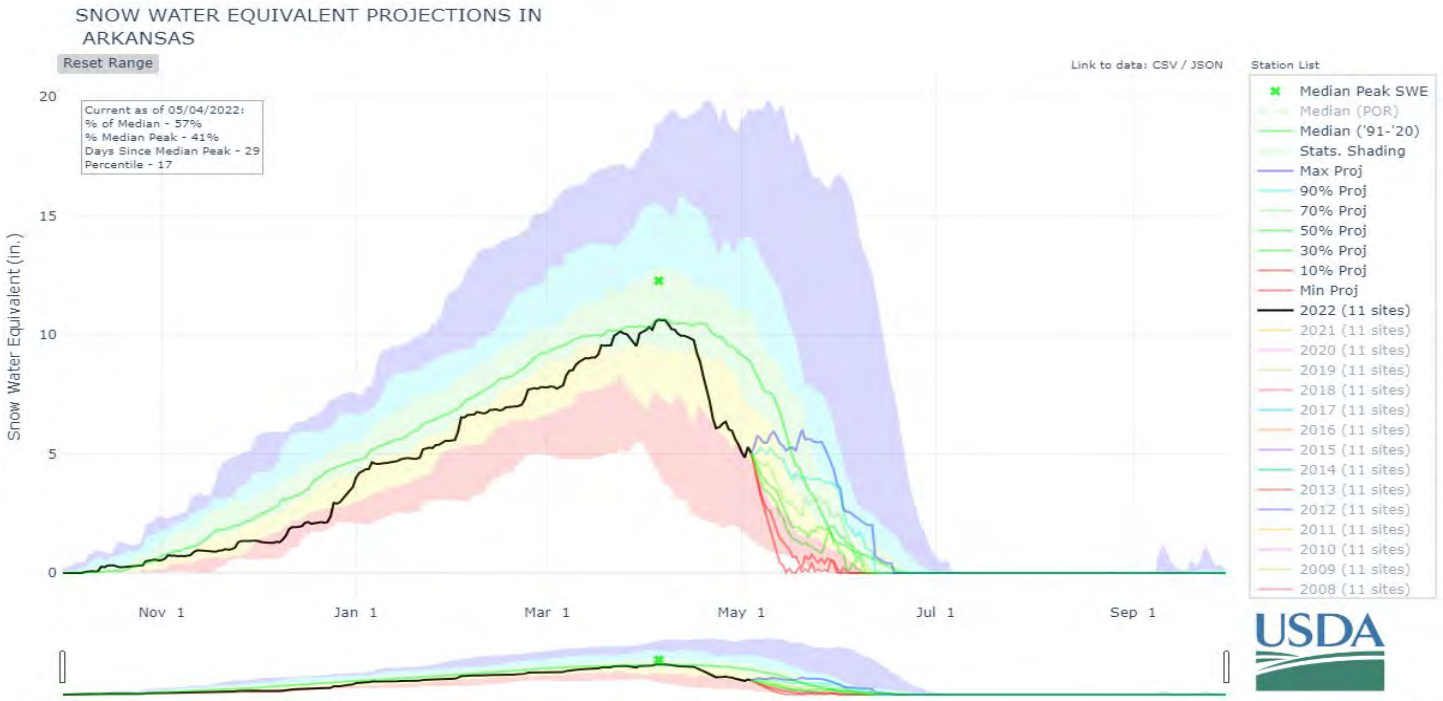
*No reservoirs are currently monitored in the Laramie-North Platte combined basin.


YAMPA-WHITE-NORTH PLATTE RIVER BASINS
Water Supply Forecasts
May 1, 2022
Forecast Exceedance Probabilities
Forecast Point
Forecast Period
< ------- Drier ------- Future Conditions ------- Wetter ------- >
Labels on chart represent volumes of water expressed in thousand acre-feet.
North Platte R nr Northgate
May-Jul 93 140 172 205 250 170
May-Sep 104 155 190 225 275 196
Laramie R and Pioneer Cnl nr Woods Lndg
May-Jul 75 97 111 125 147 111
May-Sep 84 107 122 137 160 120
Yampa R ab Stagecoach Reservoir
Apr-Jul 11 16 19 22 28 23
May-Jul 6.9 11 14 18 24 15
Yampa R at Steamboat Springs
Apr-Jul 149 182 205 225 255 255
May-Jul 127 160 182 205 235 215
Elk R nr Milner
Apr-Jul 240 285 320 355 400 335
May-Jul 210 255 290 325 370 290
Elkhead Ck ab Long Gulch
Apr-Jul 37 46 54 62 76 70
May-Jul 26 35 43 51 65 46
Yampa R nr Maybell
Apr-Jul 585 690 765 840 945 890
May-Jul 495 600 675 750 855 715
Little Snake R nr Slater
Apr-Jul 109 125 136 148 167 153
May-Jul 96 112 123 135 154 131
Little Snake R nr Dixon
May-Jul 139 177 205 235 285 265
Little Snake R nr Lily
Apr-Jul 176 220 250 285 340 275
May-Jul 141 183 215 250 305 220
White R nr Meeker
Apr-Jul 138 166 186 210 240 255
May-Jul 113 141 161 183 215 225
40% 50% 60% 70% 80% 90% 100% 110% 120% 130% 140% 150% 160%
Percent of Median (1991-2020)
Legend
95% or 90% Exceedance
There is a 95%/90% chance that flows will exceed this volume
70% Exceedance
There is a 70% chance that flows will exceed this volume
50% Exceedance
There is a 50% chance that flows will exceed this volume
30% Exceedance
There is a 30% chance that flows will exceed this volume
10% or 5% Exceedance
There is a 10%/5% chance that flows will exceed this volume
When selected, the following historic streamflow values and statistics will be shown.
Period of Record Minimum Streamflow KAF (Year)
1991-2020 Normal Streamflow KAF
Observed Streamflow KAF
Period of Record Maximum Streamflow KAF (Year)
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

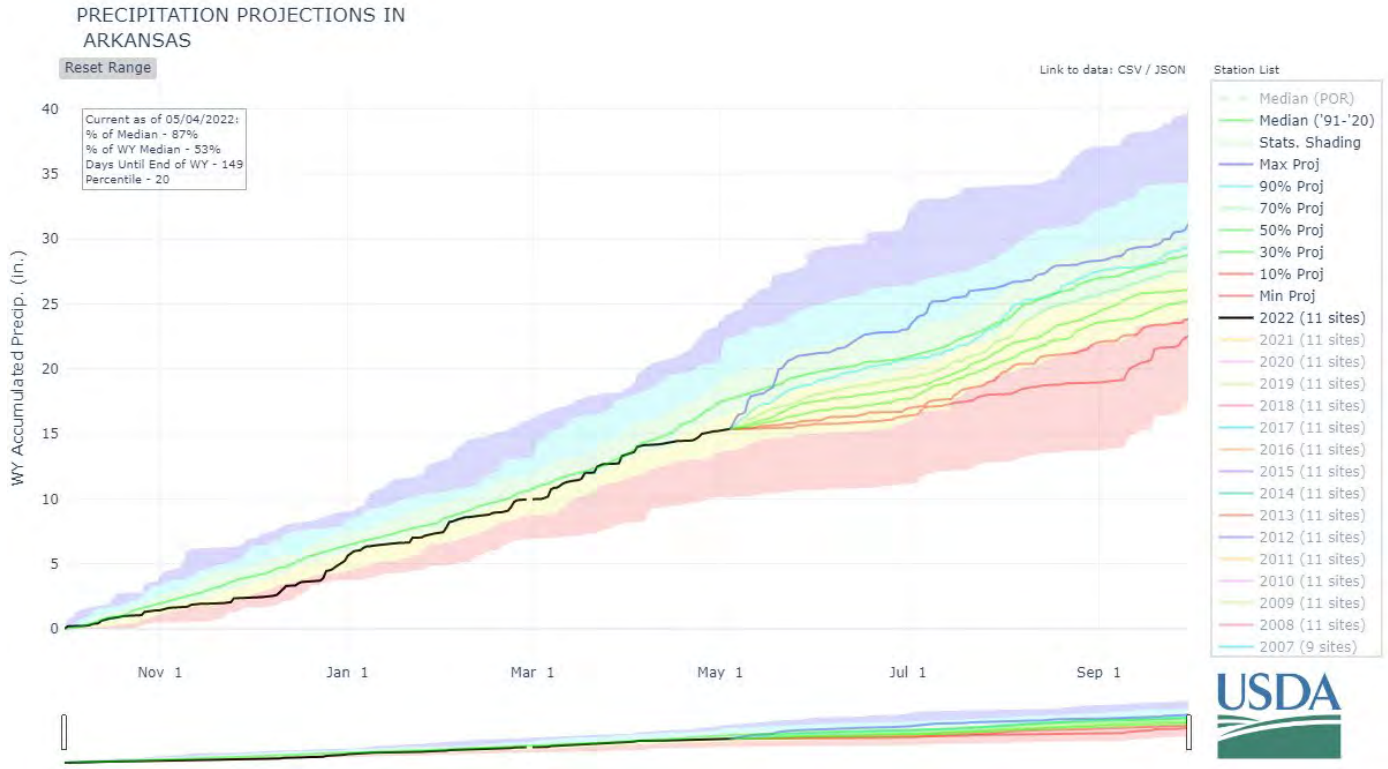
ARKANSAS RIVER BASIN

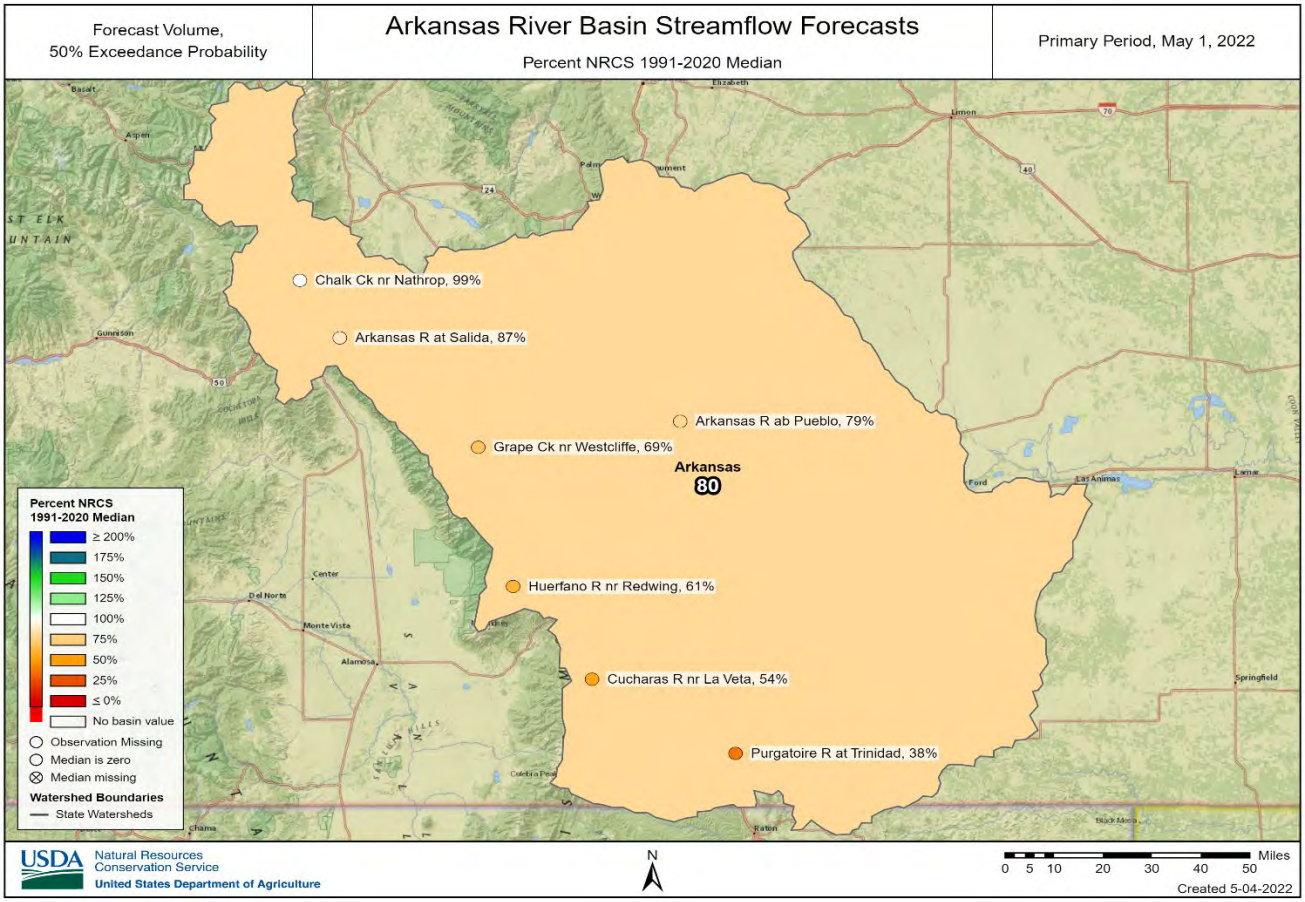
May 1st, 2022

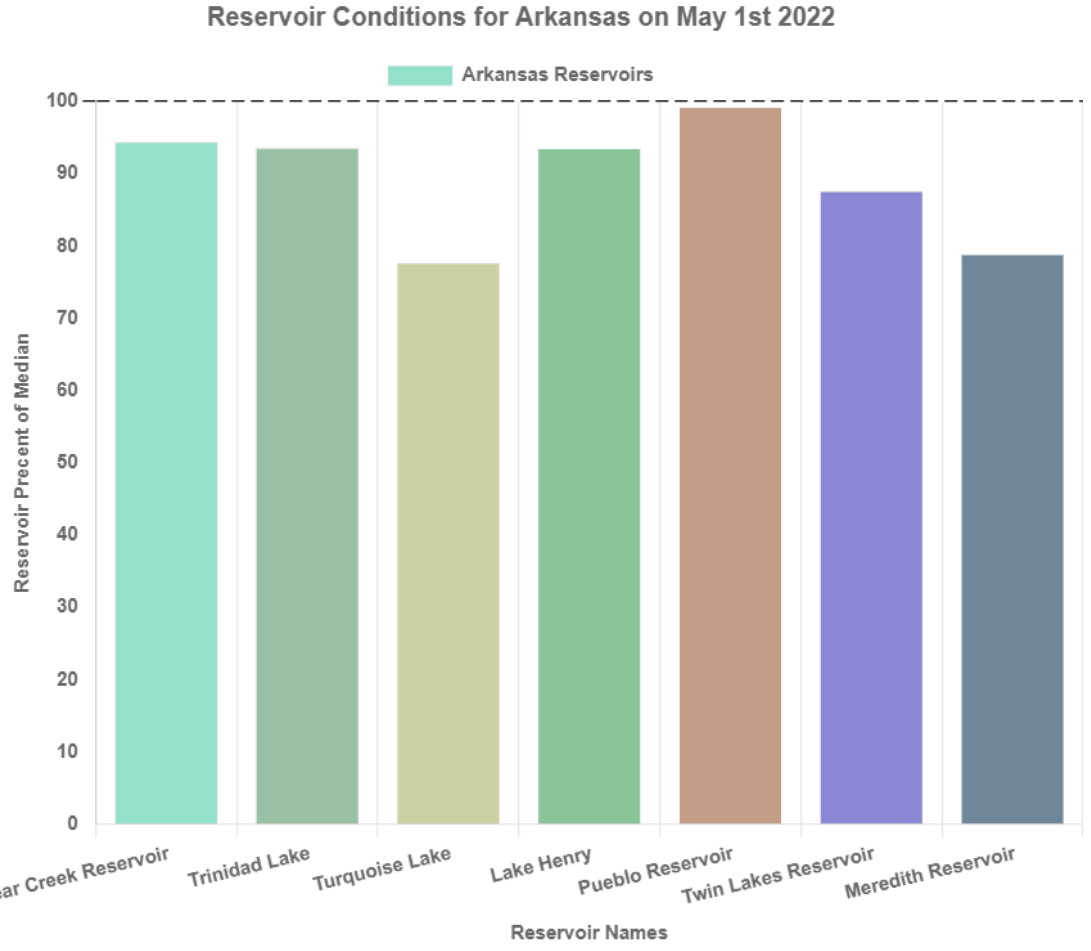
Snowpack in the Arkansas River basin is below normal at 66% of median. Precipitation for April was 57% of median which brings water year-to-date precipitation to 87% of median. Reservoir storage at the end of April was 92% of median compared to 89% last year. Current streamflow forecasts range from 46% of median at Trinidad Lake inflow to 110% of median at Chalk Creek near Nathrop.



*Snow water equivalent (SWE) values are calculated using daily SNOTEL data only for the above graph. In the paragraph SWE is calculated for the first of the month using both SNOTEL and Snow Course data.




Forecast Volume,
50% Exceedance Probability
Arkansas River Basin Streamflow Forecasts
Percent NRCS 1991-2020 Median
Primary Period, May 1, 2022
Chalk Ck nr Nathrop, 99%
Arkansas R at Salida, 87%
Arkansas R ab Pueblo, 79%
Grape Ck nr Westcliffe, 69%
Arkansas
80
Huerfano R nr Redwing, 61%
Cucharas R nr La Veta, 54%
Purgatoire R at Trinidad, 38%
Percent NRCS
1991-2020 Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
USDA Natural Resources Conservation Service
United States Department of Agriculture
N
0 5 10 20 30 40 50 Miles
Created 5-04-2022


Reservoir Conditions for Arkansas on May 1st 2022
Arkansas Reservoirs
Reservoir Precent of Median
100
90
80
70
60
50
40
30
20
10
0
Clear Creek Reservoir
Trinidad Lake
Turquoise Lake
Lake Henry
Pueblo Reservoir
Twin Lakes Reservoir
Meredith Reservoir
Reservoir Names

Watershed Snowpack Analysis May 1st, 2022

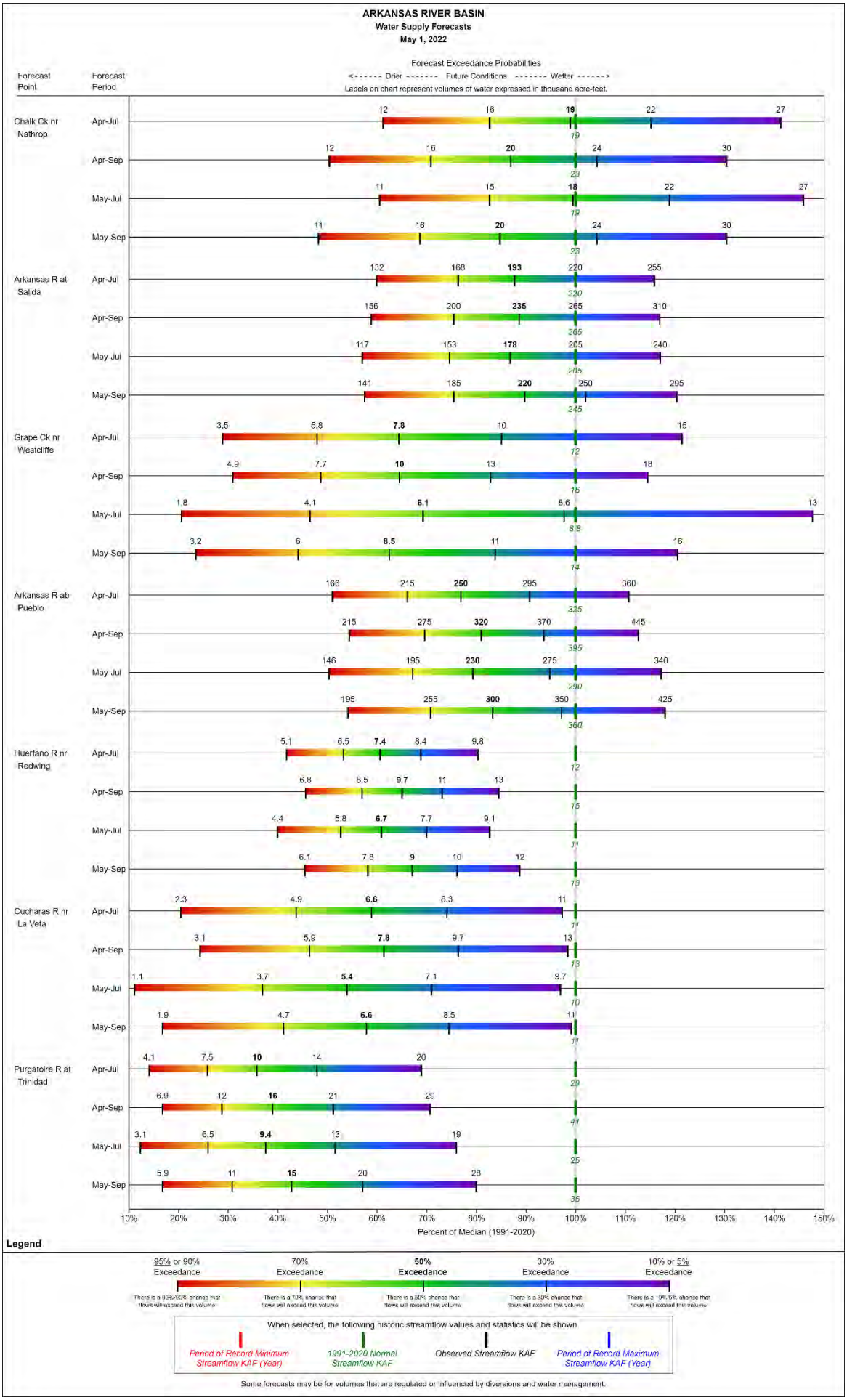
Arkansas Sub-Basin Snow Data

	# of Sites	% Median	Last Year % Median
Cucharas & Huerfano	4.0	29.3	71.7
Upper Arkansas Headwaters	9.0	81.6	75.0
Lower Arkansas Headwaters	3.0	43.0	87.7
Purgatoire	3.0	40.7	102.8
Apishapa	2.0	72.4	106.9

Reservoir Storage End of April 2022

Arkansas Reservoir Data

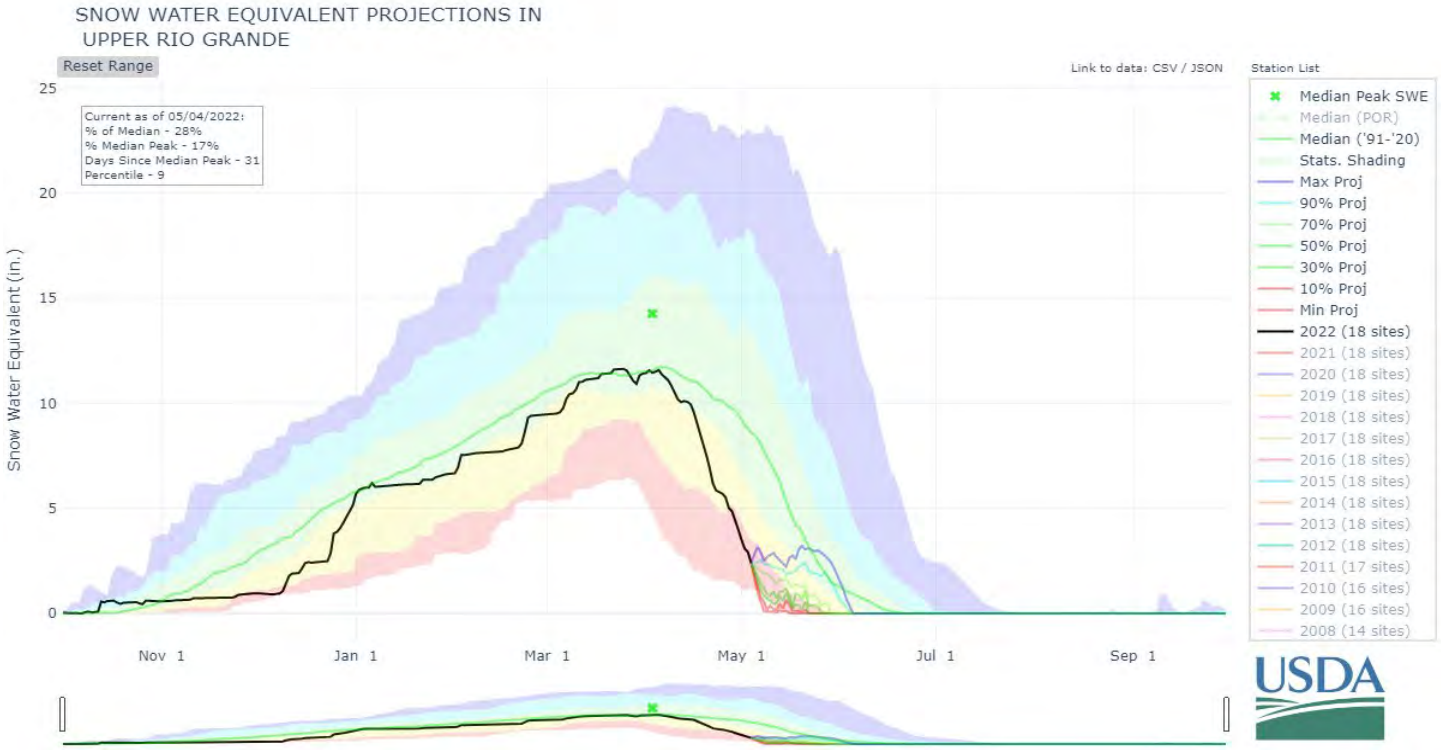
	Current Storage (KAF)	LY Storage (KAF)	Median (KAF)	Percent of Median
Turquoise Lake	46.6	59.72	60.1	77.5
Pueblo Reservoir	217.22	207.15	219.2	99.1
Meredith Reservoir	24.8	20.27	31.5	78.7
Clear Creek Reservoir	7.54	6.37	8.0	94.2
Twin Lakes Reservoir	30.27	26.74	34.6	87.5
Trinidad Lake	23.93	18.22	25.6	93.5
Lake Henry	6.82	6.98	7.3	93.4


ARKANSAS RIVER BASIN
Water Supply Forecasts
May 1, 2022
Forecast Exceedance Probabilities
<------ Drier ------- Future Conditions ------- Wetter ------>
Labels on chart represent volumes of water expressed in thousand acre-feet.
Forecast Point
Forecast Period
Chalk Ck nr Nathrop
Apr-Jul 12 16 19 22 27 19
Apr-Sep 12 16 20 24 30 23
May-Jul 11 15 18 22 27 19
May-Sep 11 16 20 24 30 23
Arkansas R at Salida
Apr-Jul 132 168 193 220 255 220
Apr-Sep 156 200 235 265 310 265
May-Jul 117 153 178 205 240 205
May-Sep 141 185 220 250 295 245
Grape Ck nr Westcliffe
Apr-Jul 3.5 5.8 7.8 10 15 12
Apr-Sep 4.9 7.7 10 13 18 16
May-Jul 1.8 4.1 6.1 8.6 13 8.8
May-Sep 3.2 6 8.5 11 16 14
Arkansas R ab Pueblo
Apr-Jul 166 215 250 295 360 325
Apr-Sep 215 275 320 370 445 395
May-Jul 146 195 230 275 340 290
May-Sep 195 255 300 350 425 360
Huerfano R nr Redwing
Apr-Jul 5.1 6.5 7.4 8.4 9.8 12
Apr-Sep 6.8 8.5 9.7 11 13 15
May-Jul 4.4 5.8 6.7 7.7 9.1 11
May-Sep 6.1 7.8 9 10 12 13
Cucharas R nr La Veta
Apr-Jul 2.3 4.9 6.6 8.3 11 11
Apr-Sep 3.1 5.9 7.8 9.7 13 13
May-Jul 1.1 3.7 5.4 7.1 9.7 10
May-Sep 1.9 4.7 6.6 8.5 11 11
Purgatoire R at Trinidad
Apr-Jul 4.1 7.5 10 14 20 20
Apr-Sep 6.9 12 16 21 29 27
May-Jul 3.1 6.5 9.4 13 19 25
May-Sep 5.9 11 15 20 28 35
10% 20% 30% 40% 50% 60% 70% 80% 90% 100% 110% 120% 130% 140% 150%
Percent of Median (1991-2020)
Legend
95% or 90% Exceedance
There is a 95%/90% chance that flows will exceed this volume
70% Exceedance
There is a 70% chance that flows will exceed this volume
50% Exceedance
There is a 50% chance that flows will exceed this volume
30% Exceedance
There is a 30% chance that flows will exceed this volume
10% or 5% Exceedance
There is a 10%/5% chance that flows will exceed this volume
When selected, the following historic streamflow values and statistics will be shown.
Period of Record Minimum Streamflow KAF (Year)
1991-2020 Normal Streamflow KAF
Observed Streamflow KAF
Period of Record Maximum Streamflow KAF (Year)
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

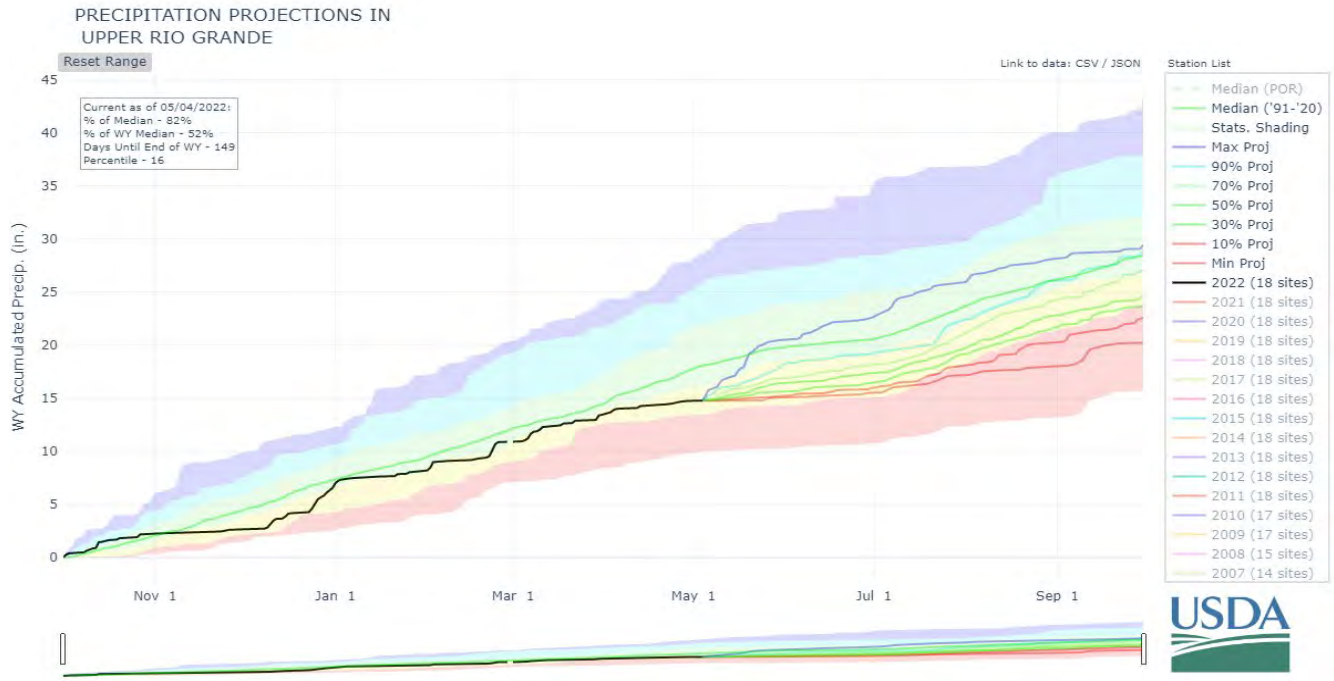
UPPER RIO GRANDE RIVER BASIN

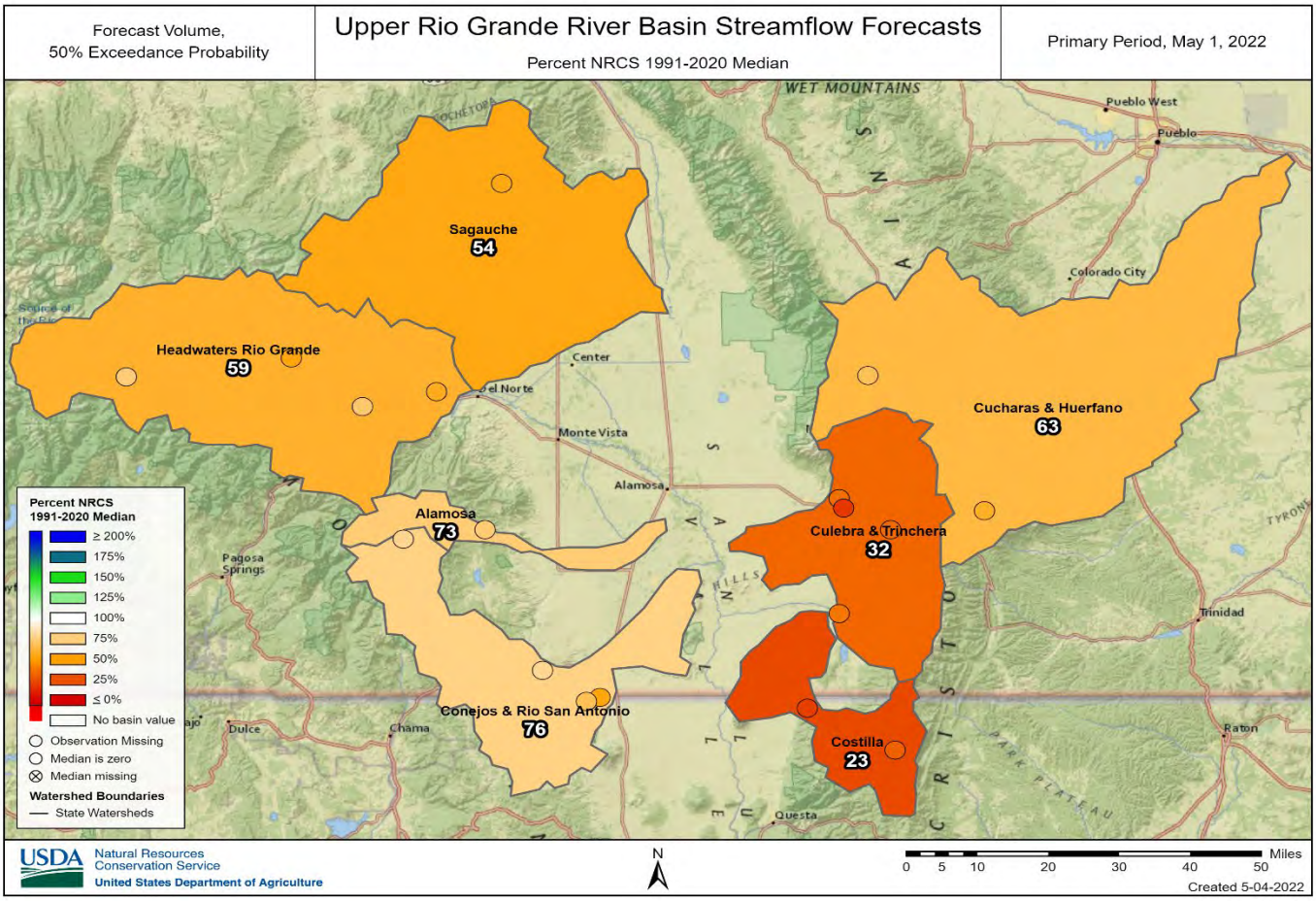
May 1st, 2022

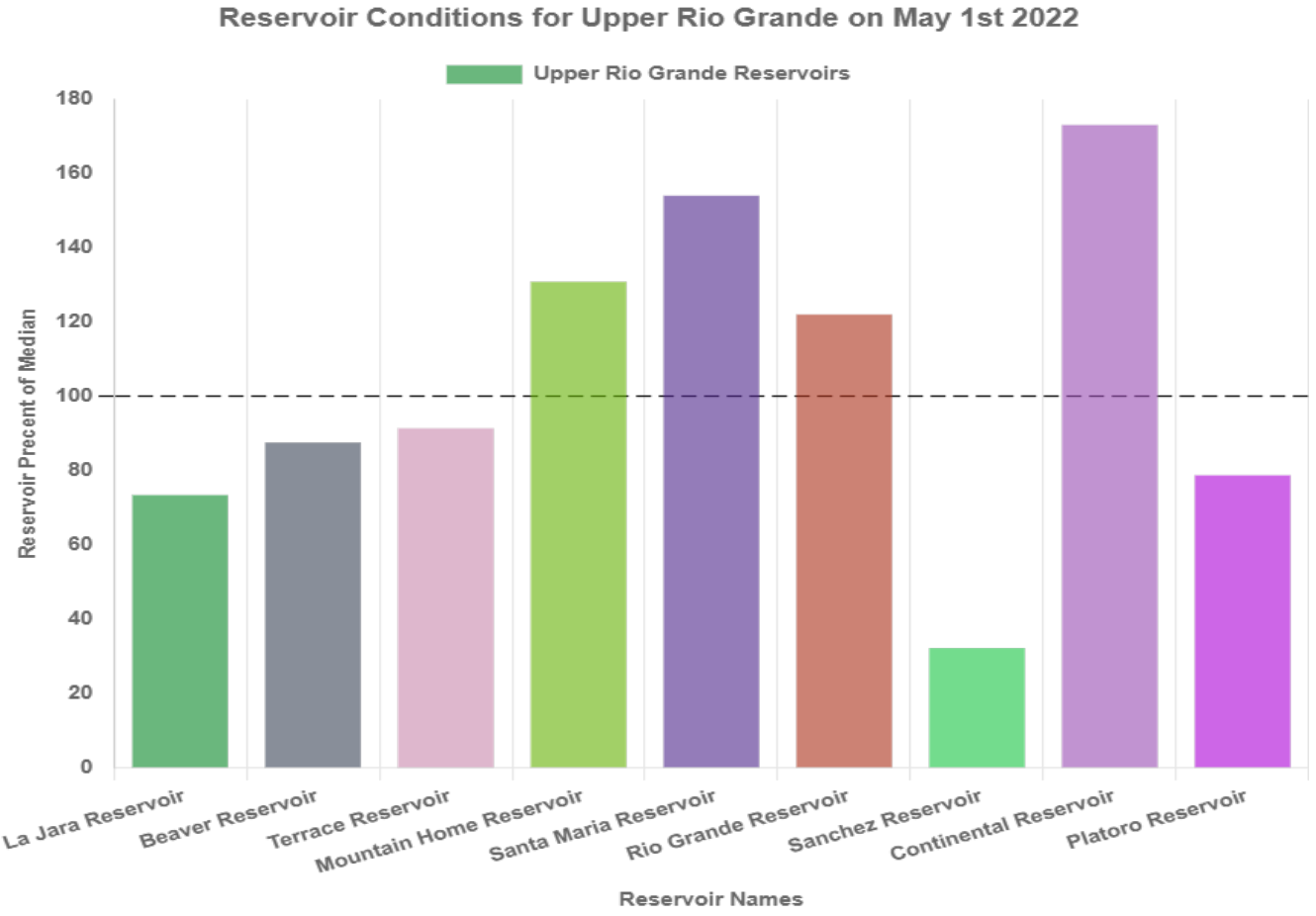
Snowpack in the Upper Rio Grande River basin is below normal at 43% of median. Precipitation for April was 48% of median which brings water year-to-date precipitation to 83% of median. Reservoir storage at the end of April was 92% of median compared to 87% last year. Current streamflow forecasts range from 44% of median at Culebra Creek at San Luis to 96% of median at Conejos River near Mogote.



*Snow water equivalent (SWE) values are calculated using daily SNOTEL data only for the above graph. In the paragraph SWE is calculated for the first of the month using both SNOTEL and Snow Course data.




Forecast Volume,
50% Exceedance Probability
Upper Rio Grande River Basin Streamflow Forecasts
Percent NRCS 1991-2020 Median
Primary Period, May 1, 2022
WET MOUNTAINS
Pueblo West
Pueblo
Colorado City
Sagauche
54
Headwaters Rio Grande
59
Center
del Norte
Monte Vista
Alamosa
Alamosa
73
Cucharas & Huerfano
63
Culebra & Trinchera
32
Pagosa Springs
Trinidad
Conejos & Rio San Antonio
76
Costilla
23
Dulce
Chama
Raton
Questa
Percent NRCS
1991-2020 Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
USDA
Natural Resources
Conservation Service
United States Department of Agriculture
N
Miles
0 5 10 20 30 40 50
Created 5-04-2022


Reservoir Conditions for Upper Rio Grande on May 1st 2022
Upper Rio Grande Reservoirs
Reservoir Precent of Median
180
160
140
120
100
80
60
40
20
0
La Jara Reservoir
Beaver Reservoir
Terrace Reservoir
Mountain Home Reservoir
Santa Maria Reservoir
Rio Grande Reservoir
Sanchez Reservoir
Continental Reservoir
Platoro Reservoir
Reservoir Names

Watershed Snowpack Analysis May 1st, 2022

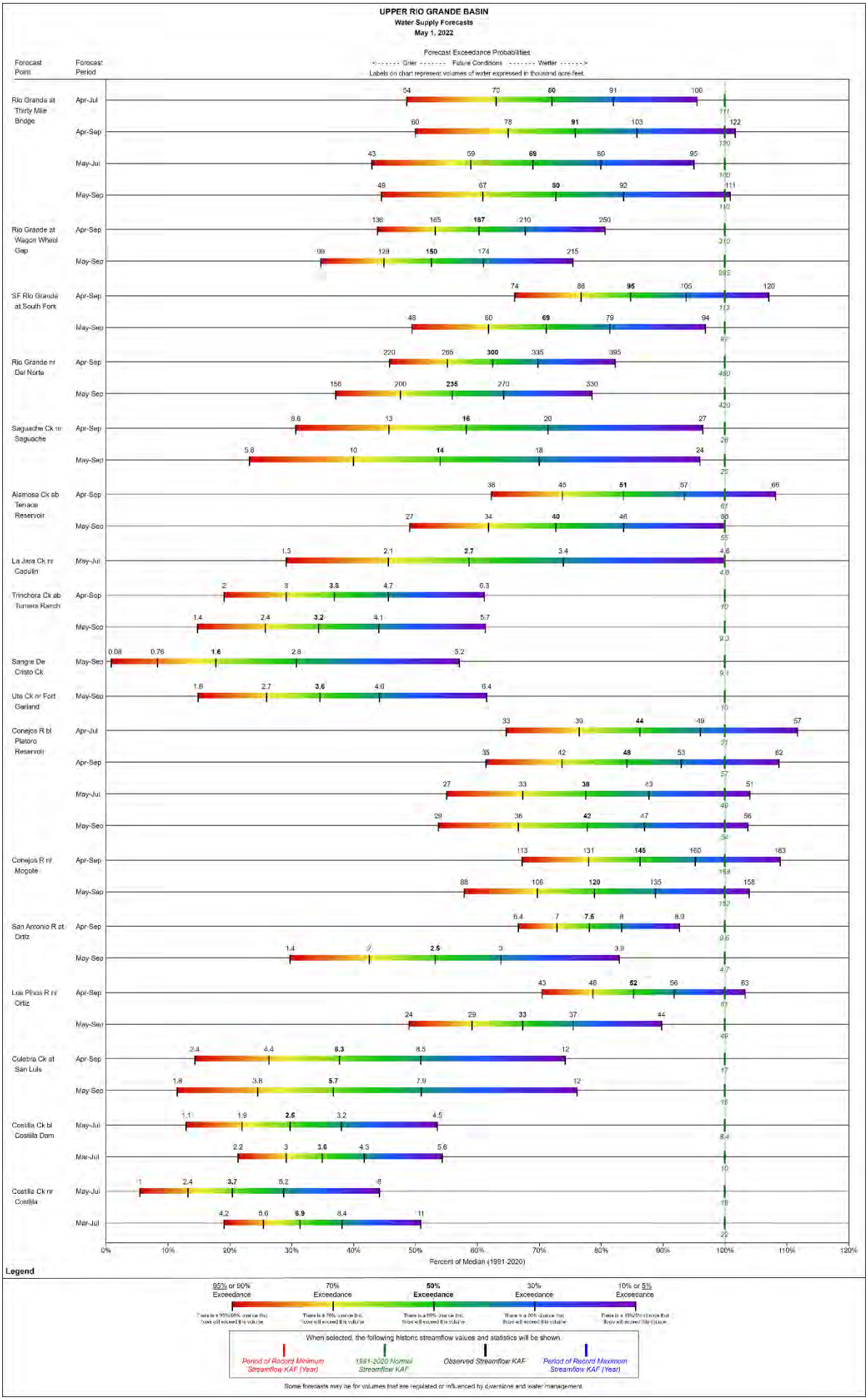
Upper Rio Grande Sub-Basin Snow Data

	# of Sites	% Median	Last Year % Median
Sagauche	4.0	5.1	111.8
Costilla	2.0	0.0	0.0
Headwaters Rio Grande	5.0	54.3	76.6
Northern San Luis Valley	2.0	12.0	81.2
Conejos & Rio San Antonio	5.0	57.4	63.5
Culebra & Trinchera	3.0	1.0	71.6
Alamosa	2.0	31.1	66.1

Reservoir Storage End of April 2022

Upper Rio Grande Reservoir Data

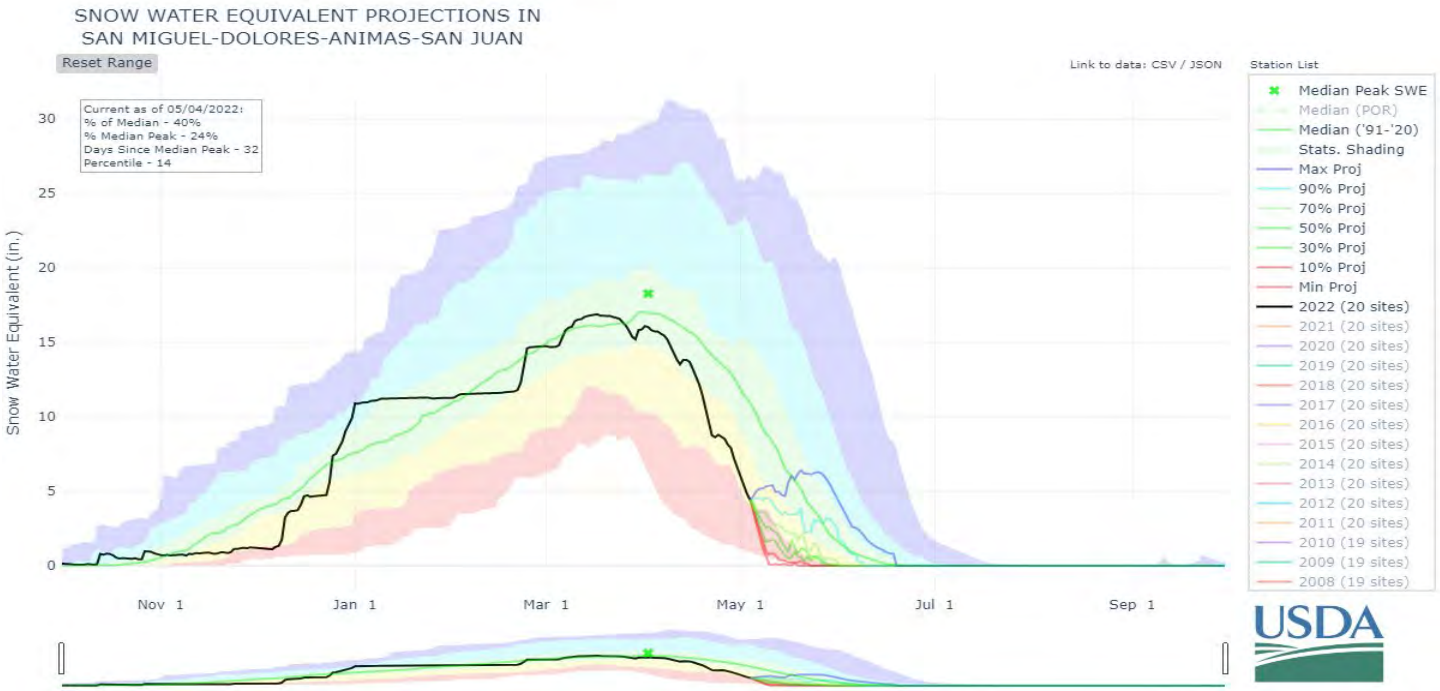
	Current Storage (KAF)	LY Storage (KAF)	Median (KAF)	Percent of Median
Rio Grande Reservoir	23.81	21.54	19.5	122.1
Continental Reservoir	12.12	11.16	7.0	173.1
La Jara Reservoir	1.69	2.21	2.3	73.5
Costilla Reservoir	5.24	4.58	8.3	63.1
Sanchez Reservoir	6.65	5.48	20.6	32.3
Platoro Reservoir	14.42	14.49	18.3	78.8
Beaver Reservoir	3.86	3.67	4.4	87.7
Terrace Reservoir	7.41	7.41	8.1	91.5
Santa Maria Reservoir	11.56	13.05	7.5	154.1
Mountain Home Reservoir	4.71	2.98	3.6	130.8


UPPER RIO GRANDE BASIN
Water Supply Forecasts
May 1, 2022
Forecast Exceedance Probabilities
<------- Drier ------- Future Conditions ------- Wetter ------>
Labels on chart represent volumes of water expressed in thousand acre-feet.
Forecast Point
Forecast Period
Rio Grande at Thirty Mile Bridge
Apr-Jul 54 70 80 91 106 111
Apr-Sep 60 78 91 103 122 120
May-Jul 43 59 69 80 95 100
May-Sep 49 67 80 92 111 110
Rio Grande at Wagon Wheel Gap
Apr-Sep 136 165 187 210 250 310
May-Sep 99 128 150 174 215 295
SF Rio Grande at South Fork
Apr-Sep 74 88 95 105 120 113
May-Sep 48 60 69 79 94 97
Rio Grande nr Del Norte
Apr-Sep 220 265 300 335 395 480
May-Sep 156 200 235 270 330 420
Saguache Ck nr Saguache
Apr-Sep 8.6 13 16 20 27 26
May-Sep 5.8 10 14 18 24 25
Alamosa Ck ab Terrace Reservoir
Apr-Sep 38 45 51 57 66 61
May-Sep 27 34 40 46 55 55
La Jara Ck nr Capulin
May-Jul 1.3 2.1 2.7 3.4 4.6 4.6
Trinchera Ck ab Turners Ranch
Apr-Sep 2 3 3.8 4.7 6.3 10
May-Sep 1.4 2.4 3.2 4.1 5.7 9.3
Sangre De Cristo Ck
May-Sep 0.08 0.76 1.6 2.8 5.2 9.1
Ute Ck nr Fort Garland
May-Sep 1.6 2.7 3.6 4.6 6.4 10
Conejos R bl Platoro Reservoir
Apr-Jul 33 39 44 49 57 51
Apr-Sep 35 42 48 53 62 57
May-Jul 27 33 38 43 51 49
May-Sep 29 36 42 47 56 54
Conejos R nr Mogote
Apr-Sep 113 131 145 160 183 168
May-Sep 88 106 120 135 158 152
San Antonio R at Ortiz
Apr-Sep 6.4 7 7.5 8 8.9 9.6
May-Sep 1.4 2 2.5 3 3.9 4.7
Los Pinos R nr Ortiz
Apr-Sep 43 48 52 56 63 61
May-Sep 24 29 33 37 44 49
Culebra Ck at San Luis
Apr-Sep 2.4 4.4 6.3 8.5 12 17
May-Sep 1.8 3.8 5.7 7.9 12 16
Costilla Ck bl Costilla Dam
May-Jul 1.1 1.9 2.5 3.2 4.5 8.4
Mar-Jul 2.2 3 3.6 4.3 5.6 10
Costilla Ck nr Costilla
May-Jul 1 2.4 3.7 5.2 8 18
Mar-Jul 4.2 5.6 6.9 8.4 11 22
0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100% 110% 120%
Percent of Median (1991-2020)
Legend
95% or 90% Exceedance
There is a 95%/90% chance this flows will exceed this volume
70% Exceedance
There is a 70% chance this flows will exceed this volume
50% Exceedance
There is a 50% chance this flows will exceed this volume
30% Exceedance
There is a 30% chance this flows will exceed this volume
10% or 5% Exceedance
There is a 10%/5% chance that flows will exceed this volume
When selected, the following historic streamflow values and statistics will be shown.
Period of Record Minimum Streamflow KAF (Year)
1991-2020 Normal Streamflow KAF
Observed Streamflow KAF
Period of Record Maximum Streamflow KAF (Year)
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

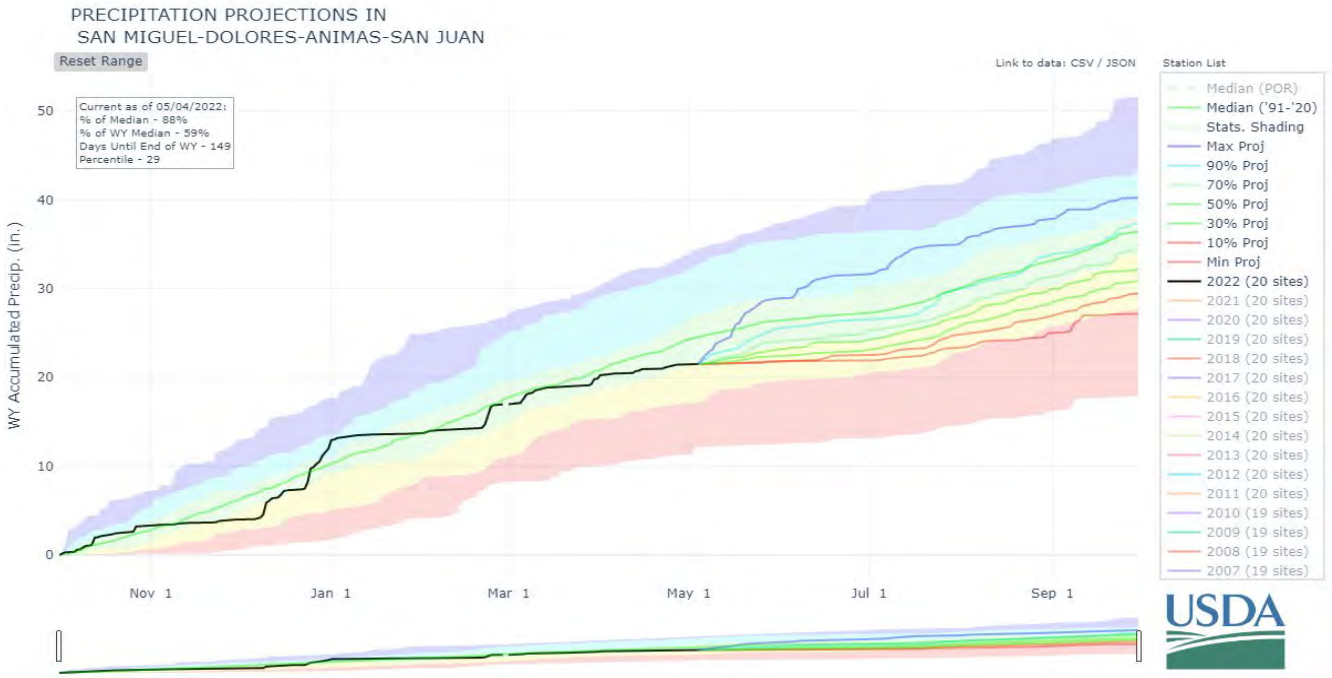
SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN COMBINED RIVER BASIN

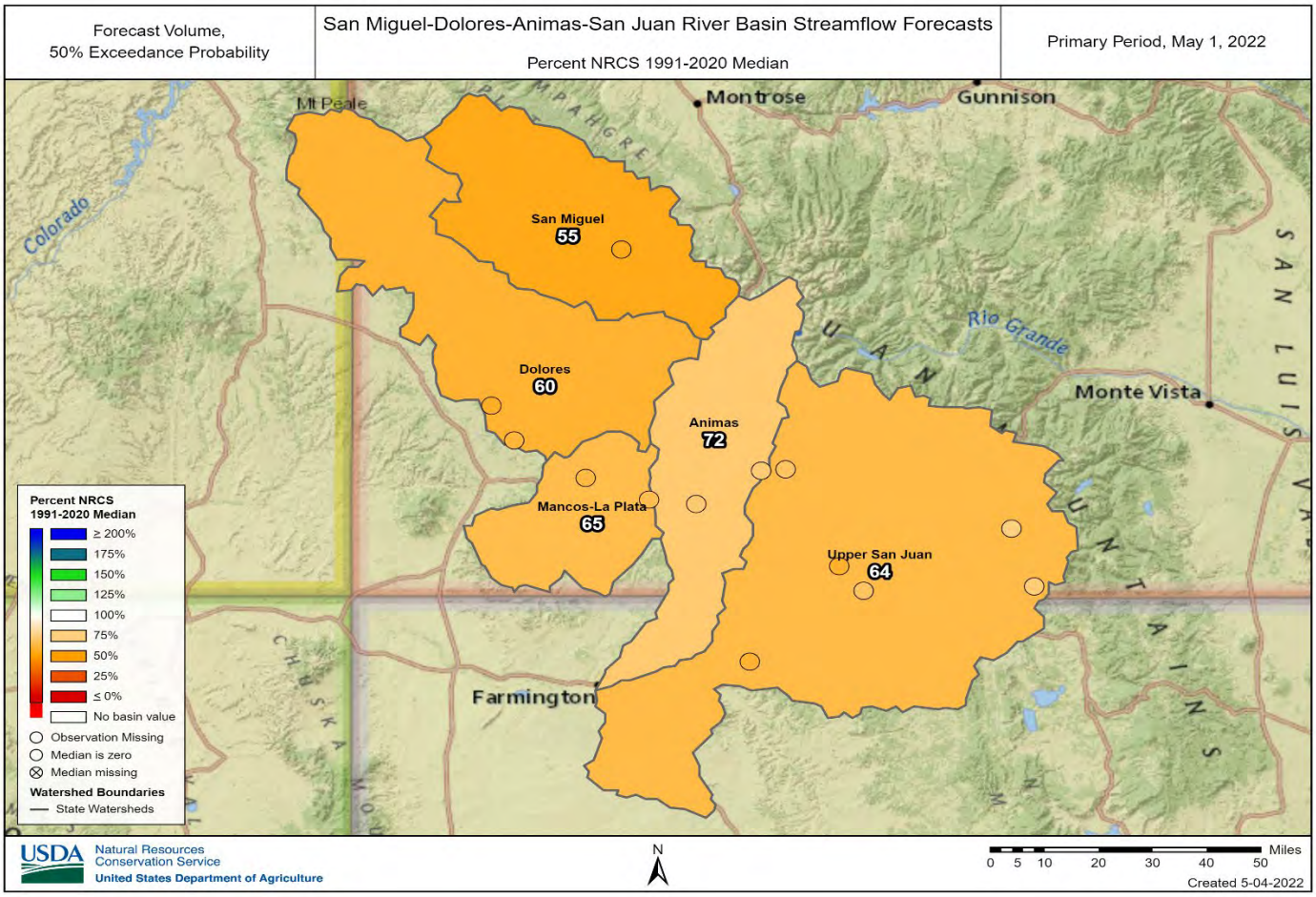
May 1st, 2022

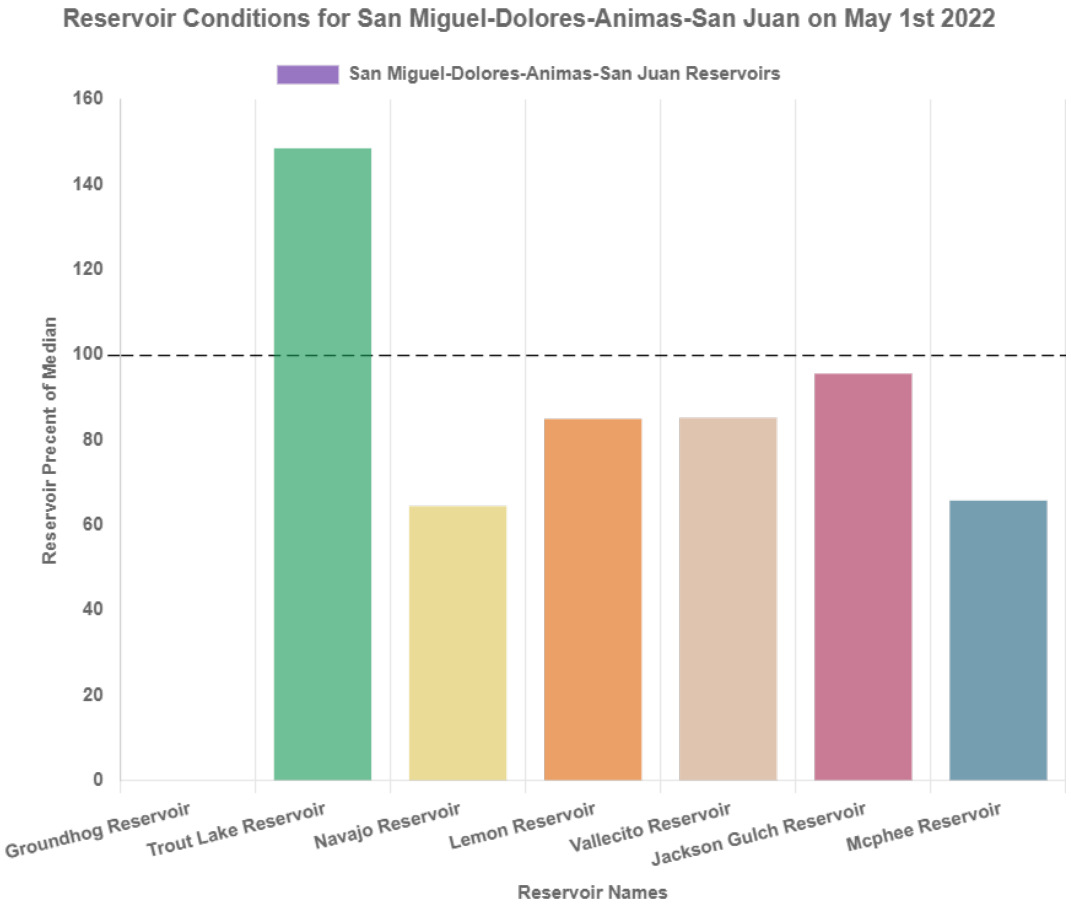
Snowpack in the combined southwest river basins is below normal at 51% of median. Precipitation for April was 47% of median which brings water year-to-date precipitation to 88% of median. Reservoir storage at the end of April was 66% of median compared to 70% last year. Current streamflow forecasts range from 67% of median at San Miguel River near Placerville to 86% of median at Navajo River below Oso Diversion Dam near Chromo.



*Snow water equivalent (SWE) values are calculated using daily SNOTEL data only for the above graph. In the paragraph SWE is calculated for the first of the month using both SNOTEL and Snow Course data.




Forecast Volume,
50% Exceedance Probability
San Miguel-Dolores-Animas-San Juan River Basin Streamflow Forecasts
Percent NRCS 1991-2020 Median
Primary Period, May 1, 2022
Mt Peale
Montrose
Gunnison
Colorado
San Miguel
55
Dolores
60
Animas
72
Mancos-La Plata
65
Upper San Juan
64
Rio Grande
Monte Vista
Farmington
Percent NRCS
1991-2020 Median
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
USDA
Natural Resources
Conservation Service
United States Department of Agriculture
N
0 5 10 20 30 40 50
Miles
Created 5-04-2022


Reservoir Conditions for San Miguel-Dolores-Animas-San Juan on May 1st 2022
San Miguel-Dolores-Animas-San Juan Reservoirs
Reservoir Precent of Median
160
140
120
100
80
60
40
20
0
Groundhog Reservoir
Trout Lake Reservoir
Navajo Reservoir
Lemon Reservoir
Vallecito Reservoir
Jackson Gulch Reservoir
Mcphee Reservoir
Reservoir Names

Watershed Snowpack Analysis May 1st, 2022

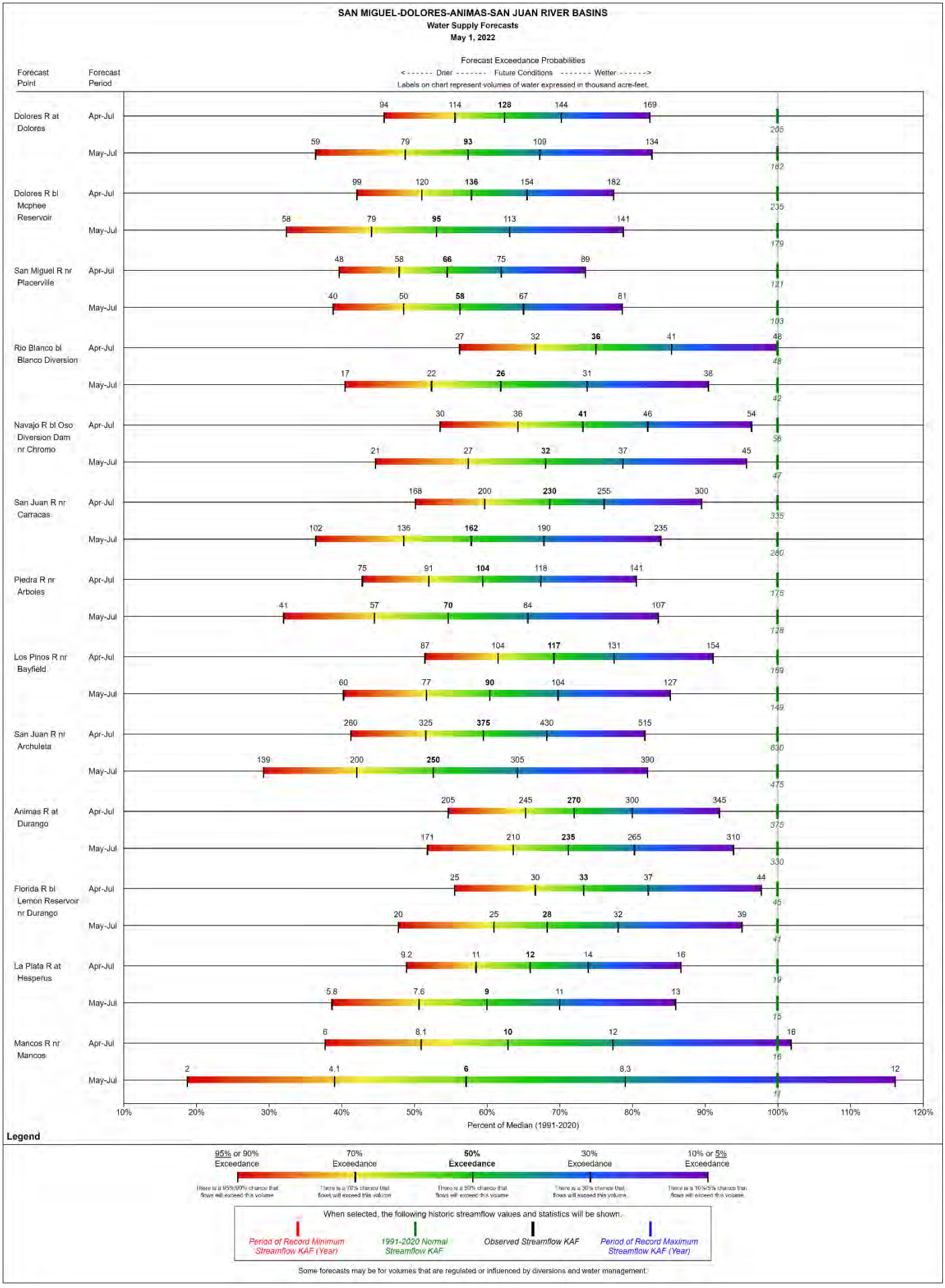
San Miguel-Dolores-Animas-San Juan Sub-Basin Snow Data

	# of Sites	% Median	Last Year % Median
Animas	10.0	55.1	63.4
Upper San Juan	7.0	49.1	73.2
San Miguel	6.0	55.5	45.1
Dolores	4.0	37.7	25.9
Mancos-La Plata	3.0	72.1	46.9

Reservoir Storage End of April 2022

San Miguel-Dolores-Animas-San Juan Reservoir Data

	Current Storage (KAF)	LY Storage (KAF)	Median (KAF)	Percent of Median
Trout Lake Reservoir	2.27	1.77	1.53	148.4
Mcphee Reservoir	213.35	176.39	324.3	65.8
Vallecito Reservoir	73.04	56.6	85.7	85.2
Groundhog Reservoir	nan	5.6	16.4	nan
Jackson Gulch Reservoir	7.26	3.7	7.6	95.5
Navajo Reservoir	898.25	1044.6	1393.0	64.5
Lemon Reservoir	19.03	13.24	22.4	85.0

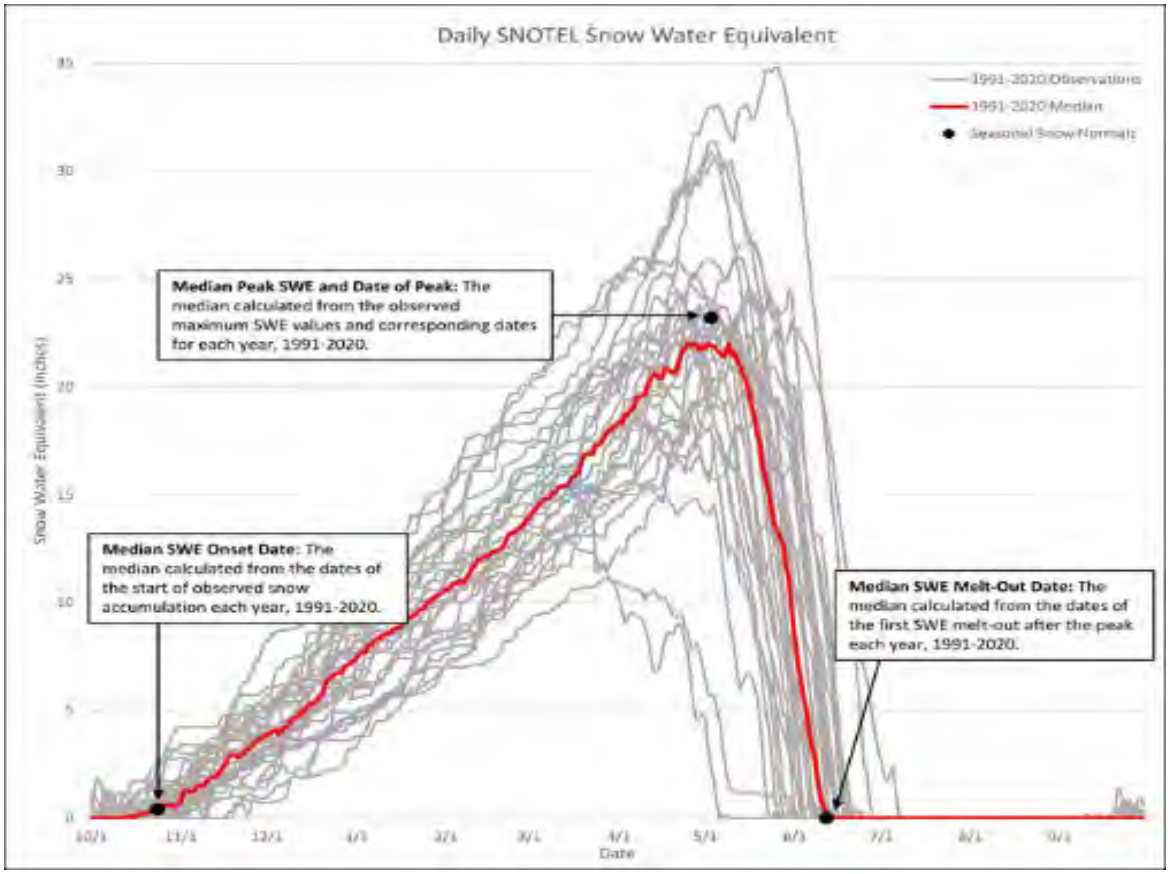

SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN RIVER BASINS
Water Supply Forecasts
May 1, 2022
Forecast Exceedance Probabilities
<------- Drier ------- Future Conditions ------- Wetter ------->
Labels on chart represent volumes of water expressed in thousand acre-feet.
Forecast Point
Forecast Period
Dolores R at Dolores
Apr-Jul 94 114 128 144 169 205
May-Jul 59 79 93 109 134 162
Dolores R bl Mcphee Reservoir
Apr-Jul 99 120 136 154 182 235
May-Jul 58 79 95 113 141 179
San Miguel R nr Placerville
Apr-Jul 48 58 66 75 89 121
May-Jul 40 50 58 67 81 103
Rio Blanco bl Blanco Diversion
Apr-Jul 27 32 36 41 48 48
May-Jul 17 22 26 31 38 42
Navajo R bl Oso Diversion Dam nr Chromo
Apr-Jul 30 36 41 46 54 56
May-Jul 21 27 32 37 45 47
San Juan R nr Carracas
Apr-Jul 168 200 230 255 300 335
May-Jul 102 136 162 190 235 280
Piedra R nr Arboles
Apr-Jul 75 91 104 118 141 175
May-Jul 41 57 70 84 107 138
Los Pinos R nr Bayfield
Apr-Jul 87 104 117 131 154 159
May-Jul 60 77 90 104 127 149
San Juan R nr Archuleta
Apr-Jul 260 325 375 430 515 630
May-Jul 139 200 250 305 390 475
Animas R at Durango
Apr-Jul 205 245 270 300 345 375
May-Jul 171 210 235 265 310 330
Florida R bl Lemon Reservoir nr Durango
Apr-Jul 25 30 33 37 44 45
May-Jul 20 25 28 32 39 41
La Plata R at Hesperus
Apr-Jul 9.2 11 12 14 16 19
May-Jul 5.8 7.6 9 11 13 15
Mancos R nr Mancos
Apr-Jul 6 8.1 10 12 16 16
May-Jul 2 4.1 6 8.3 12 11
10% 20% 30% 40% 50% 60% 70% 80% 90% 100% 110% 120%
Percent of Median (1991-2020)
Legend
95% or 90% Exceedance
70% Exceedance
50% Exceedance
30% Exceedance
10% or 5% Exceedance
There is a 95%/90% chance that flows will exceed this volume
There is a 70% chance that flows will exceed this volume
There is a 50% chance that flows will exceed this volume
There is a 30% chance that flows will exceed this volume
There is a 10%/5% chance that flows will exceed this volume
When selected, the following historic streamflow values and statistics will be shown.
Period of Record Minimum Streamflow KAF (Year)
1991-2020 Normal Streamflow KAF
Observed Streamflow KAF
Period of Record Maximum Streamflow KAF (Year)
Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

New 1991-2020 Statistical Normals

The NRCS Snow Survey and Water Supply Forecasting (SSWSF) Program recently published new statistical normals (medians or averages) to describe the central tendency of a data record over a 30-year period. Data normals are key in helping water users compare current conditions to past conditions using the metric "% of normal." Every 10 years, the SSWSF Program updates the 30-year normals reference period to stay consistent with World Meteorological Organization standards that account for changing climatic conditions over time. As such, this year the SSWSF Program transitioned from using 1981-2010 data normals to using 1991-2020 data normals.

For the 1991-2020 reference period, the median is the official NRCS normal when conveying information about current snowpack, precipitation, and water supply conditions. The median was previously used as the official 1981-2010 normal for SWE and some streamflow forecast points, but the average was used for other data types. Setting the official normal to the median provides consistency across data types and stations. Viewing the 30-year average may be preferable over the median in some instances, therefore, both the average and the median are available in most NRCS reports and products. See Median vs. Average for more information about the median.

A new suite of statistics for automated snow monitoring stations are available to provide information about normal seasonal snowpack characteristics. These new seasonal statistics include medians and averages for the SWE onset date and melt-out date, as well as the median and average maximum seasonal SWE value (Peak SWE) and date of Peak SWE. More detailed information on the updated normals can be found on the Water and Climate Center's [30-year normals page.]



How to Read Snowpack Graphs

The graphs show snow water equivalent (SWE) (in inches), using daily SNOTEL data. for the October 1 through September 30 water year. Basin "observed" SWE values are computed using SNOTEL sites which are characteristic of the snowpack of the particular basin.

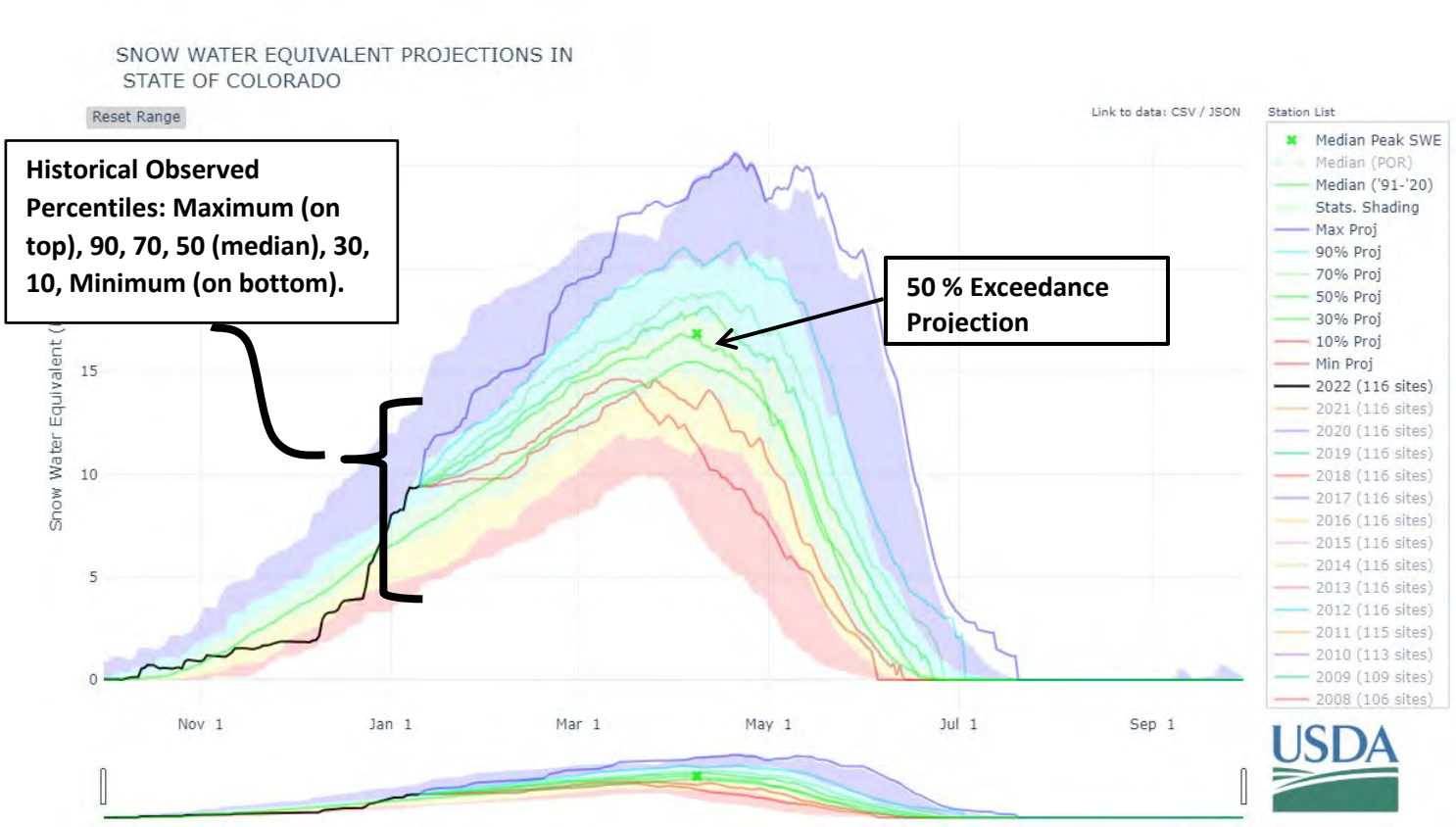
Current water year is represented by the heavy red line terminating on the last day the graphic was updated.

Historical observed percentile range is shown as a gray background area on the graph. Shades of gray indicate maximum, 90 percentile, 70 percentile, 50 percentile (solid black line), 30 percentile, 10 percentile, and minimum for the period of record.

50 % Exceedance Projection: The most probabilistic snowpack projection, based on the median snowpack is projected forward from the end of the current period to the end of the current water year.

For more detailed information on these graphs visit:

http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_062291.pdf



How Forecasts Are Made

For more water supply and resource management information, contact:

Brian Domonkos
Snow Survey Supervisor
USDA, Natural Resources Conservation Service
Denver Federal Center, Bldg 56, Rm 2604
PO Box 25426
Denver, CO 80225-0426
Phone (720) 544-2852
Website: http://www.nrcs.usda.gov/wps/portal/nrcs/main/co/snow/

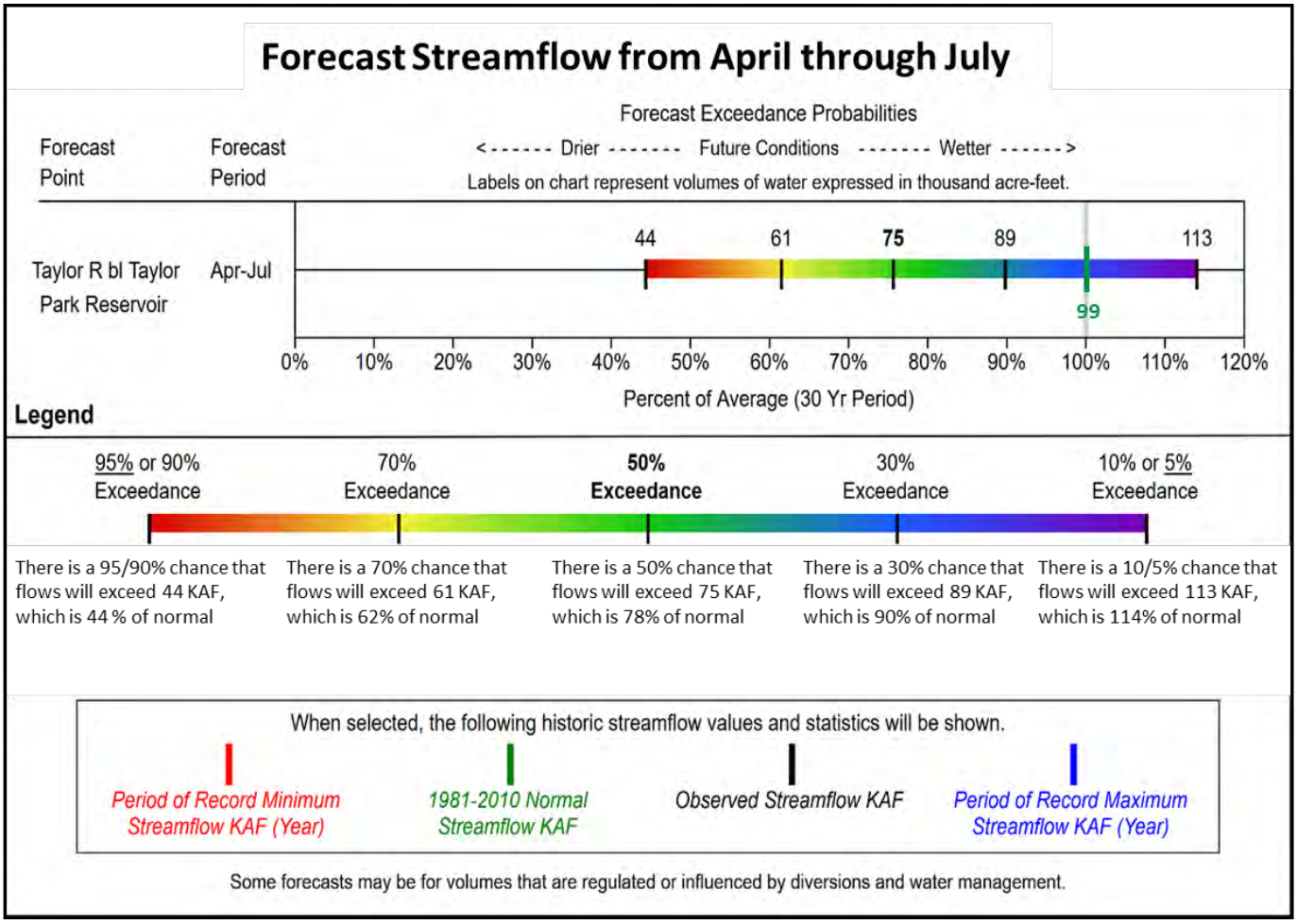
Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

Interpreting the Forecast Graphics

These graphics provide a new way to visualize the range of streamflows represented by the forecast exceedance probabilities for each forecast period. The colors in the bar for each forecast point indicate the exceedance probability of the forecasts and the vertical lines on the bar signify the five published forecast exceedance probabilities. The numbers displayed above the color scale represent the actual forecasted streamflow volume (in KAF) for the given exceedance probability. The horizontal axis provides the percent of median represented by each forecast and the gray line centered above 100% represents the 1981-2010 historical median streamflow. The position of the gray line relative to the color scale provides a benchmark for considering future streamflows. If the majority of the forecast range is to the right of the gray line, there is a higher likelihood of above median streamflow volumes during the provided forecast period. Conversely, if the majority of the color bar is to the left of the median mark, below median volumes are more likely. The horizontal span of the forecasts offers an indication of the uncertainty in a given forecast: when the bar spans a large horizontal range, the forecast skill is low and uncertainty is high; when the bar is narrow in width, the forecast skill is higher and uncertainty lower.



Denver Federal Center, Bldg 56, Rm 2604
PO Box 25426
Denver, CO 80225-0426

In addition to the water supply outlook reports, water supply forecast information for the Western United States is available from the Natural Resources Conservation Service and the National Weather Service monthly, February through June. The information may be obtained from the Natural Resources Conservation Service web page at http://www.wcc.nrcs.usda.gov/wsf/westwide.html

---

Issued by

Matthew J. Lohr
Chief, Natural Resources Conservation Service
Farm Production and Conservation Mission Area
U.S. Department of Agriculture

Released by

Clint Evans
State Conservationist
Natural Resources Conservation Service
Lakewood, Colorado

Colorado
Water Supply Outlook Report
Natural Resources Conservation Service
Lakewood, CO

UPPER YAMPA WATER
CONSERVANCY DISTRICT

BOARD COMMUNICATION FORM

From: Emily Lowell, District Engineer

Date: 5/9/2022

Item: Sickle Place Grazing Lease

_____ DIRECTION
_____ INFORMATION
__X__ MOTION
_____ RESOLUTION

I. Request/Issue and Background Information:

The Sickle Place is a 223-acre parcel located within the larger Blacktail Conservation Easement, which is on Blacktail Mountain north of Stagecoach Reservoir and Stagecoach State Park. As part of the Conservation Easement, UYWCD has the ability to permit grazing of domestic livestock on the Sickle Place. The parcel consists predominantly of a mixture of grasses, sagebrush rangeland, and mountain shrub vegetation, but also includes some aspen conifer forest. The UYWCD holds the Absolute Water Rights for Sickle Spring #1 and #3 that is decreed for Stock watering and Wildlife uses. Sickle Spring #2 is decreed in the name of other parties. The grazing of livestock is limited to 75 AUMs from June 15 to August 15 of each year.

II. Summary:

The Request for Management Proposals (RFMP) was posted from March 3 to March 16, 2022. One RFMP was received and reviewed with CPW staff and determined to meet UYWCD and CPW's objectives.

III. Staff Recommendation:

Approve the Sickles Place Grazing Lease for 2022 with Monger Cattle Company.

IV. Legal Issues:

Legal Counsel has reviewed the Grazing Lease. In 2021 UYWCD purchased the adjacent 40-acre parcel (Sickles West) including the water rights for Sickle Spring #1.

V. Consistency with Board Goals and Policies:

UYWCD Policy Statement 3

Attachments:

1. Sickle Place Grazing Lease

GRAZING LEASE

THIS LEASE, made and entered into by and between the UPPER YAMPA WATER CONSERVANCY DISTRICT ("UYWCD"), Lessor, and Monger Cattle Company ,Lessee.

WITNESSETH:

Subject to the provisions hereinafter provided, it is hereby agreed by the parties hereto that:

1. Lessor does hereby lease and demise unto Lessee the following described lands situate in the County of Routt, State of Colorado, to-wit: Blacktail Conservation Easement/Sickle Pasture containing approximately 223 acres more particularly described as the NWI/4NW1/4 of Section 28, S1/2SE1/4 of Section 20, N1/2NEI/4, N1/2SEI/4NE1/4 of section 29, T4N R84W and as illustrated in **Attachment A** (the "Leased Premises").

2. This Lease is only for the purpose of grazing livestock on the Leased Premises and performing such work and improvements on the Leased Premises as Lessor shall approve, as provided herein.

3. The term of this Lease for grazing shall be for the period commencing no earlier than June 15, 20 22 , and ending no later than August 15, 20 22 , which period and any extended term provided for herein shall be referred to as a "Term."

4. This Lease may be extended for grazing purposes by mutual agreement of the parties for up to two additional terms, the first commencing no earlier than June 15, 20 23 , and ending no later than August 15, 20 23 , and the second commencing no earlier than June 15, 20 24 , and ending no later than August 15, 20 24 , utilizing **Attachment B** as completed and modified by Agreement of the parties.

5. The use of the Leased Premises for grazing during any Term shall not exceed 75 Animal Units per Month (AUMs) or such lesser number of AUMs as Lessor shall specify prior to the commencement of any Term. The consideration payable by Lessee to Lessor for grazing during the Term shall be $ 20 per AUM, payable to Lessor no later than 45 days following the conclusion of the Term subject to adjustment as herein set forth.

   If agreed by Lessor in writing prior to the commencement of any Term (and subject to confirmation by Lessor that the agreed goods and services have been provided in a manner that Lessor in its discretion deems acceptable) Lessee may pay the consideration due hereunder for any Term by providing goods and services to Lessor including noxious weed control, water development, riparian development and improvement, purchase of capital equipment, road and parking lot construction, maintenance, and materials, equipment rental, and fence construction. These goods and/or services to be provided must be completed no later than October 1 following the end of the Term and shall be identified and approved by the Lessor using **Attachment C** of this Lease.

   Grazing will begin no sooner than June 15 as per Blacktail Conservation Easement and as agreed to by the Lessee and Lessor. Grazing will be completed by August 15 of each year or when a maximum of 75 AUMs are achieved, whichever occurs first. Lessee will submit a grazing plan each year (**Attachment D**), specifying numbers of livestock, on/off dates, and water manipulation.

6. The Lessee shall have the right of ingress and egress to the Leased Premises for the purpose of

grazing livestock and associated operations as provided herein.

7. The Lessee shall perform all operations in a manner acceptable to Lessor in its discretion. Neglect in care for the land or pasture shall constitute a default under this lease.

8. The Lessee agrees to repair or replace all fences and/or gates damaged or destroyed as a result of activities associated with this Lease. It is the Lessee's responsibility to ensure the integrity of the fence and the maintenance necessary for the duration of the agreement.

9. The Lessee shall provide to the Lessor, prior to application, the label for any fertilizers, pesticides, herbicides, or any other chemical compounds intended for application on the Leased Premises. Approval from the Colorado Parks and Wildlife ("CPW") must be obtained in writing before application of any of the above. The disposal, spillage or dumping of any refuse, waste, trash, or other material on the Leased Premises is forbidden.

10. Lessee agrees to cooperate fully with Lessor in any programs or activities conducted by Lessor on the Leased Premises.

11. Lessee agrees not to sublease any portion of the Leased Premises nor assign this Lease or any portion thereof without the express written consent of the Lessor prior to any such action, which consent may be withheld by Lessor in its sole discretion.

12. Lessor and its agents shall have access to the Leased Premises at such times and for such purposes as Lessor may deem necessary or desirable for any purpose.

13. Lessee agrees not to remove, burn, or destroy any brush or other vegetation, growth or cover without the prior written consent of the Lessor.

14. Lessee agrees that, at the expiration or termination of this Lease, and upon the conclusion of any Term, Lessee will surrender and deliver up possession of the Leased Premises in as good order and condition as when this Lease was entered into, loss by inevitable accident, act of God, and ordinary wear and tear excepted.

15. Lessee agrees that it will submit no claims to Lessor for any damage done by wildlife to the crops, pasture, or livestock on the Leased Premises and that it will prevent or suppress to the best of its ability any and all fires and will immediately report any fires to the Lessor.

16. Lessee agrees not to engage in any practice in any year which will obligate the Lessor to that practice in succeeding years without first securing, in writing, approval of Lessor, which Lessor may withhold in its discretion.

17. The Lessee shall be responsible for all indebtedness incurred by Lessee in association with this Lease and the Lessor shall not be held liable to any injury or damage caused by or inflicted upon the Lessee.

18. The Lessee shall comply with all rules and regulations of the Lessor and all other State agencies, including CPW, as well as those of all county, city or other governmental entity having jurisdiction in regard to sanitation, waste disposal, water supply and systems, fire protection and to other regulations necessary for public health, safety, and welfare.

19. THE LESSEE SHALL NOT ENROLL ANY OF THE LESSOR'S PROPERTY INTO ANY OF THE U.S. DEPRTMENT OF AGRIGULTURE PRICE SUPPORT AND PRODUCTION ADJUSTMENT PROGRAMS.

20. All notices required or provided in this Lease shall be mailed to the other party at its official address, United States mail, postage prepaid, certified, return receipt requested. For the purposes of this agreement, the official addresses of the parties shall be:

Lessor: Upper Yampa Water Conservancy District
PO Box 775529
Steamboat Springs, CO 80477

Lessee: Monger Cattle Company
_____
_____

Either party may change its official address by giving notice of such change to the other as provided above.

21. INDEMNIFICATION: Lessee shall indemnify, save, and hold harmless the Lessor, its employees and agents, against any and all claims, damages, liability and court awards including costs, expenses, and attorney fees incurred as a result of any act or omission by Lessee or its employees, agents, or assignees pursuant to the terms of this Agreement.

22. If default shall be made in any of the covenants and agreements herein contained to be kept by the said Lessee, it shall be lawful for the Lessor, at the discretion of the Lessor, to declare said Lease terminated.

23. This Lease agreement constitutes the entire understanding of the parties and there are no other provisions other than set forth above, and any changes in this Lease agreement shall be made in writing and signed by both parties before the same shall be effective. All provisions of this Lease, including the benefits and burdens, run with the land and are binding upon and extend to the heirs, legal representatives, successors and assigns of the parties hereto.

LESSOR:
UPPER YAMPA WATER CONSERVANCY DISTRICT

By: _____

Andy Rossi, General Manager
Date: _____

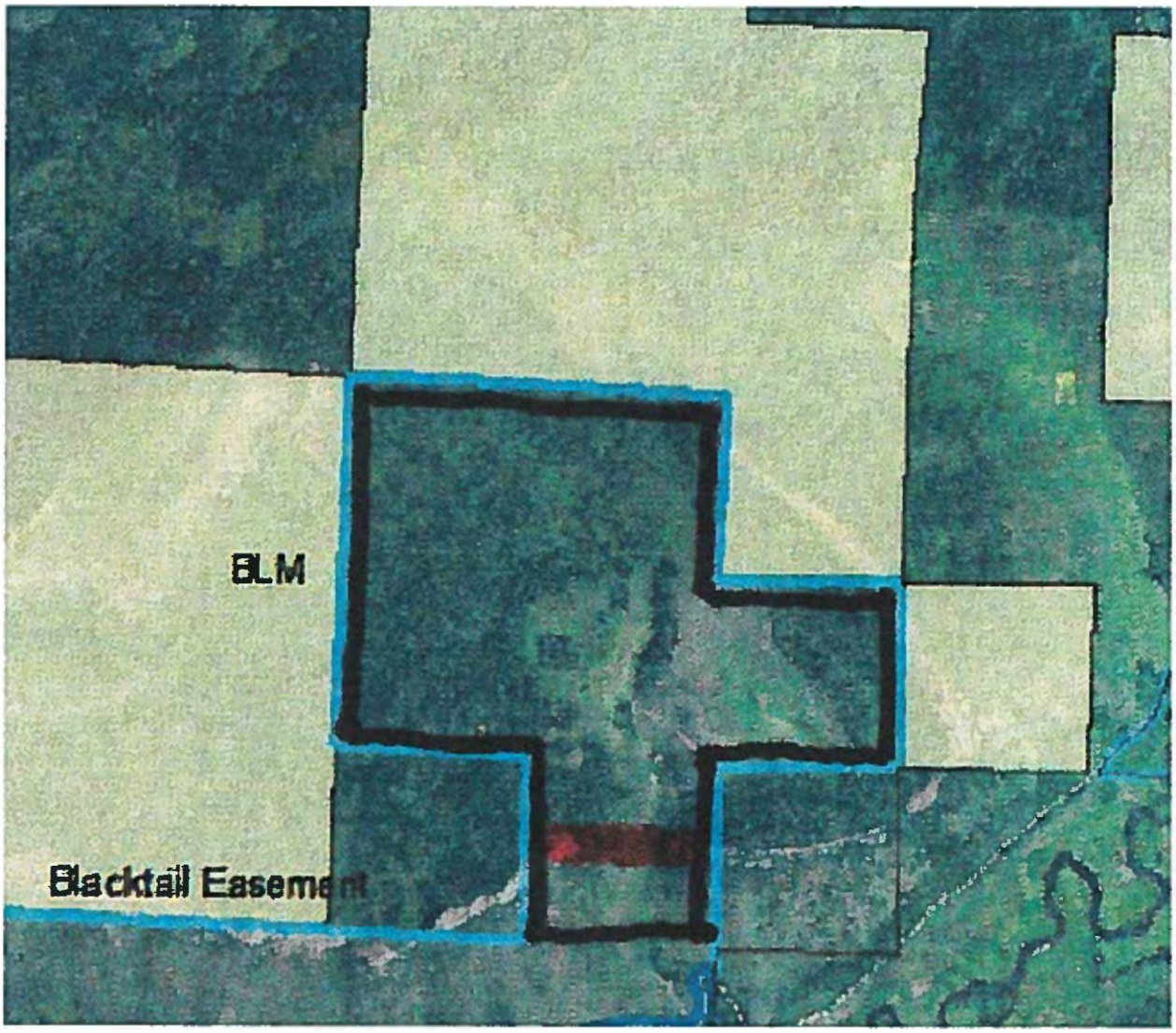
LESSEE:

Monger Cattle Company

By: _____

Doug Monger
Name & Title (if applicable)
EIN: _____
Date: _____

ATTACHMENT A



ATTACHMENT B

EXTENSION OF AGRICULTURE LEASE

EXTENSION NO.

It is hereby agreed by _____, LESSEE, and the Upper Yampa Water Conservancy District, LESSOR, to **extend** certain Lease located on the Blacktail Conservation Easement Sickle Pasture for _____ AUMs for this extension.

This Lease extension authorizes the Lessee an additional use period, as provided in the detailed Lease document, beginning _____ (month/day/year) and ending _____ (month/day/year), and is subject to those provisions, conditions and terms listed within the Lease dated _____excepted as herein modified.

LESSEE: _____

By:_____

_____

Name & Title (if applicable)

EIN: _____

Date: _____

LESSOR:
UPPER YAMPA WATER CONSERVANCY DISTRICT

By: _____

Andy Rossi_____, General Manager

Date: _____

ATTACHMENT C

In-Kind Goods or ServicesApproval

Year	**AUMs**	Payment
2022 grazing lease	75	
20___ grazing extension		
20___ grazing extension		

TOTAL

For the year of 2022 both the Lessor and Lessee agree that the work listed below, and amounts will suffice for payment by in-kind goods and services for all or some part of the consideration due under the Lease for such Term.

_____
_____
_____
_____
_____
_____

LESSEE: Monger Cattle Company

By: _____
Doug Monger
Name & Title (if applicable)
Date: _____
EIN: _____

LESSOR:
UPPER YAMPA WATER CONSERVANCY DISTRICT

By: _____
Andy Rossi, General Manager
Date: _____

ATTACHMENT D

Grazing Plan for the year of 20 22

Group A of cattle will be turned out at_____on ____/____/20___, numbering _____head of steers/yearlings/cow calf pairs.

Group B of cattle will be turned out at_____ on ____/____/20___, numbering _____head of steers/yearlings/cow calf pairs.

Group C of cattle will be turned out at_____ on ____/____/20___, numbering _____head of steers/yearlings/cow calf pairs.

Springs _____will be utilized from ____/____/20___ until ____/____/20____

Springs _____will be utilized from ____/____/20____ until ____/____/20____

Springs _____will be utilized from ____/____/20____ until ____/____/20____

Cattle will be pulled off of property on ____/____/20____

LESSEE: Monger Cattle Company

By: _____
Doug Monger
Name & Title (if applicable)
Date: _____
EIN: _____

LESSOR:
UPPER YAMPA WATER CONSERVANCY DISTRICT

By: _____
Andy Rossi, General Manager
Date: _____

UPPER YAMPA WATER
CONSERVANCY DISTRICT

BOARD COMMUNICATION FORM

From: Holly Kirkpatrick

Date: 5/5/2022

Item: UYWCD Grant Disbursements

_____ DIRECTION
x_____INFORMATION
_____ MOTION
_____ RESOLUTION

I. Request/Issue and Background Information:

The attached Diversion Infrastructure Improvement Project Grant Report and Community Grant Funding Report will be included in each board packet to provide a full background of all grant disbursements. The Diversion Infrastructure Improvement Project Report tracks all disbursements throughout the life of the project. The Community Grant Funding Report tracks disbursements on an annual basis.

II. Summary and Alternatives:

To date, there is $148,399.10 remaining of the allocated $200,000 for the Diversion Infrastructure Improvement Project. The $100,000 in funds from the Yampa/White/Green Basin Roundtable were set to expire in May 2022. A request for extending this funding availability through 2024 has been approved by the Colorado Water Conservation Board (CWCB).

The Community Grant Funding Program has disbursed $5,000 in grant funds in 2022 for the Yampatika K-12 Water Education Program approved in November of 2019.

III. Staff Recommendation: n/a

Please see the attached reports for disbursement details.

IV. Legal Issues: n/a

V. Consistency with Board Goals and Policies:

Goal 4, 7, and 8.

Attachments:

Attachment 1: Diversion Infrastructure Improvement Project Grant Report
Attachment 2: Community Grant Funding Report

Diversion Infrastructure Improvement Project Grant Funding

Structure Name	Applicant	Disbursement Date	UYWCD Funding	WSRF Funding	Total Project Cost
Boor #3	John Redmond	9/15/2020	$ 968.86	$ -	$ 1,937.72
Boor #4	John Redmond	9/15/2020	$ 968.86	$ -	$ 1,937.72
Beaver Creek Parshall Flume	John Redmond	9/15/2020	$ 446.86	$ -	$ 893.72
Creek Ranch Headquarters Pond	Creek Ranch Owners Association	11/4/2020	$ 459.20	$ 459.19	$ 1,836.77
Dry Creek Ditch	Kathleen Barnes	11/4/2020	$ 2,288.49	$ 2,288.49	$ 9,153.97
Kemmer Ditch	Riverbank Ranches LLC	11/4/2020	$ 1,233.00	$ 1,233.00	$ 4,932.00
Lucas Ditch #1	Rick Milway	11/23/2020	$ 724.40	$ -	$ 1,448.80
Lucas Ditch #2	Rick Milway	11/23/2020	$ 550.75	$ -	$ 1,101.50
Welch & Monson Ditch	Catamount Metropolitian District	3/8/2021	$ 803.01	$ 803.00	$ 3,212.03
Martin Springs Diversion	Deborah Martin	3/8/2021	$ 1,086.77	$ 1,086.77	$ 4,347.07
Duquette Ditch	Duckels Construction, Inc	3/8/2021	$ 2,131.26	$ 2,131.25	$ 8,525.02
Brinker Creek Ditch	Finger Rock Preserve, LLC	3/8/2021	$ 1,079.75	$ 1,079.75	$ 2,504.50
Hamill Ditch	Jake Hamill	3/8/2021	$ 932.70	$ -	$ 1,865.40
Utley Ditch	Jake Hamill	3/8/2021	$ 584.75	$ 584.75	$ 2,339.00
Grouse Creek Ditch	Joe Roberts	3/8/2021	$ 1,431.61	$ 1,431.61	$ 5,726.43
Morrison Creek Ditch #2	Margaret E. Hagenbuch Trust	3/8/2021	$ 1,128.61	$ 1,128.61	$ 4,514.44
Larsen Ditch	Mark Foster	3/8/2021	$ 1,442.78	$ 1,442.78	$ 5,771.12
Sage Creek Diversion	The Nature Conservancy	3/8/2021	$ 1,498.44	$ 1,498.44	$ 5,993.75
Baxter Ditch	Baxter Ditch Association	6/29/2021	$ 2,500.00	$ 2,500.00	$ 11,527.67
Dequine Ditch	Lou Dequine	9/8/2021	$ 895.32	$ 895.32	$ 3,581.28
Dequine Ditch Alternate Point #1	Lou Dequine	9/8/2021	$ 416.44	$ 416.43	$ 1,665.73
Yampa Pump#2	Julie Green	9/8/2021	$ 246.96	$ 246.96	$ 987.83
Middle Creek Ditch	Middle Creek Ranch, LLLP	9/8/2021	$ 1,652.38	-	$ 3,304.76
Steamboat Lake Golf Course Pond/Feeder Ditch	The Preserves at Pearl Lake Homeowners Association	9/8/2021	$ 2,500.00	$ 2,500.00	$ 18,338.08
Elgin Creek Ditch	Hy Cattle Corporation	10/28/2021	$ 951.68	$ 951.67	$ 3,806.70
				Total Work Completed:	**$ 111,253.01**
			$ 28,922.88	**$ 22,678.02**	**$ 51,600.90**
			$ 71,077.12	**$ 77,321.98**	**$ 148,399.10**

TOTAL DISBURSED:

DIIP FUNDS REMAINING:

2022 Community Grant Funding

Project	Applicant	Date Approved	Amount Approved
Yampatika Water Education Program	Yampatika	11/20/2019	$5,000
		TOTAL APPROVED:	$5,000.00

BOARD MEMBER REPORTS

BOARD COMMUNICATION FORM

From: Scott Grosscup, legal counsel

Date: May 10, 2022

Item: Water Resumes for March/April

_____ DIRECTION
__X__ INFORMATION
_____ MOTION
_____ RESOLUTION

I have reviewed the water resumes of water applications filed in Water Divisions 5 and 6 in the month of March and April for Division 6. April's resume is not available at the time of writing for Division 5. I did not see any water court applications filed in the month of January to be of concern to the District.

BOARD COMMUNICATION FORM

From: Scott Grosscup, legal counsel

Date: May 10, 2022

Item: Water Court Cases Update

_____ DIRECTION
__X__ INFORMATION
_____ MOTION
_____ RESOLUTION

Following is an update of the status of water court cases in which the Upper Yampa Water Conservancy District is an Applicant or Opposer and matters pending before the Utah Division of Water Resources.

Case No. 20CW3019 –Diligence application filed by Public Service Company of Colorado for 52.5 cfs decreed to the Wessels Canal. We have provided PSCo with a settlement offer that the District would stipulate to a proposed Ruling of Referee continuing the conditional water rights provided that such water rights are subordinated to the District's most junior water rights (2015 rights of exchange) and limited use in the Yampa River Valley. As of the date of this memo, we have not heard back from PSCo. The next status conference is scheduled for May 25, 2022.

Case No. 20CW3020. Diligence application filed by Public Service Company of Colorado for Hinman Park Reservoir and the Saddle Mountain Pump Station. The District entered into a stipulation that incorporates prior terms between the Applicant and District. The Applicant is negotiation with the remaining opposers.

Case No. 21CW3046. Tri-State's diligence application for the Craig Station Ditch and Pipeline in the amount of 15.07 cfs, conditional. No other statements of opposition were filed to the application, which closed at the end of January, and the matter is not before the water referee. There are currently no case management deadlines in place and we are awaiting the Division Engineer's Consultation Report. We have provided Tri-State with a settlement concept and are awaiting a response.

Case No. 21CW0023. South Routt Cemetery's application to use contract water from Yamcolo Reservoir by exchange. Staff has contacted the applicant and proposed terms and conditions for a proposed stipulated Ruling of Referee. There are currently no case management deadlines in place and we are awaiting the Division Engineer's Consultation Report.

Case No. 21CW3053. Dean and Jim Rossi's application for new junior water rights and to add an alternate point of diversion so that their water rights in the Powell Ditch and Laramore Ditch

can be used at either structure. The Applicants are to provide us with a proposed Ruling and engineering in support of the changes of water rights but are working through issues with the Division Engineer. There are currently no case management deadlines in place and we are awaiting the Division Engineer's Consultation Report.

Case No. 22CW3002 - Yamcolo Reservoir Second Filling – The District filed its application for finding of reasonable diligence or to make absolute for the Yamcolo Reservoir Second Filling water right on January 24, 2022. This water right is conditional in the amount of 7,066 acre feet. Tri State and the United States Forest Service have filed statements of opposition. We have provided Tri State with a proposed settlement concept and are awaiting a response. There are currently no case management deadlines in place and we are awaiting the Division Engineer's Consultation Report.

Case No. 22CW3018 Pleasant Valley Reservoir Rights at Yamcolo Reservoir – Application to confirm that the Pleasant Valley Reservoir Rights stored in Yamcolo Reservoir have been made absolute for all decreed uses was filed in March. Deadline for statements of opposition is end of May.

Case No. 22CW3023 - Yamcolo Reservoir Objection to Abandonment – The District submitted an objection to the Division Engineer's partial listing of the "all beneficial uses" decreed to Yamcolo Reservoir. We have a meeting scheduled to discuss with the Division Engineer on May 13.

Water Horse Resources – There has been no significant change since the last update. Applicant filed a motion for summary judgment early on that the intervenors requested responses to be stayed until discovery could occur, which was granted by the court. The parties are in the early stages of discovery and are looking to schedule depositions. Fact discovery is to be completed in July with responses to the summary judgment motion due in September. A trial date is not set, but would occur after January of 2023.

NEW BUSINESS

EXECUTIVE SESSIONS

Executive session under CRS § 24-6-402(4)(b) to discuss legal issues on Water Resumes, Water Cases, Contract Negotiations and _____. Mere presence or participation of an attorney at an executive session is not sufficient to satisfy the requirements of CRS § 24-6-402(4)(b). Executive sessions to discuss legal matters are not recorded.

Executive session under CRS § 24-6-402(4)(e)(I) for the purpose of determining positions relative to matters that may be subject to negotiations; developing strategy for negotiations; and instructing negotiators with respect to _____. This session will be recorded, and a copy of the recording maintained for not less than 90 days.

BOARD ACTIONS IN REGARD TO EXECUTIVE SESSION

DETERMINATION OF NEXT MEETING(s) AGENDA(s)

AGENDA

UPPER YAMPA WATER CONSERVANCY DISTRICT
BOARD OF DIRECTORS MEETING
WEDNESDAY, JULY 20, 2022 (12:00 PM)
MOUNTAIN VALLEY BANK COMMUNITY ROOM
2220 CURVE PLAZA, STEAMBOAT SPRINGS, CO
ONLINE MEETING:

HTTPS://US06WEB.ZOOM.US/J/84584409032?PWD=BXU3UJRSAZHXDNORU1ZWKZJBVZVJQT09

THE UPPER YAMPA WATER CONSERVANCY DISTRICT REQUESTS THAT UNVACCINATED PEOPLE ATTENDING THE BOARD OF DIRECTORS MEETING AT THE MOUNTAIN VALLEY BANK COMMUNITY ROOM WEAR A MASK.

MATERIALS FOR BOARD PACKET DUE: JULY 11TH BY 5:00 PM

INSTRUCTIONS ON HOW TO JOIN A ZOOM MEETING FOLLOW THE AGENDA

A Board of Directors meeting packet is available for public review on our website at https://upperyampawater.com/agendas-and-meeting-documents/ by the Friday before the meeting. Amendments to the Agenda and new documents that are generated or submitted after the original posting of the meeting materials will be posted under "Additional Documents" on the website for the relevant meeting.

QUESTIONS ON AGENDA AND/OR BOARD MATERIALS: Members of the public or Board of Directors with questions on the agenda or meeting materials, including the consent agenda, are welcome to contact the General Manager at the District offices prior to the meeting. You may reach the General Manager at: arossi@upperyampawater.com or (970) 871-1035 Ext. 2.

MEETING PROCEDURE: Comments from the Public are welcome at two different times during the course of the meeting: 1) Comments no longer than three (3) minutes on items **not** scheduled on the Agenda will be heard under Public Input and Comment; and 2) Comments no longer than three (3) minutes on all scheduled public hearing items will be heard following the presentation. Please wait until you are recognized by the President. With the exception of subjects brought up during Public Input and Comment, on which no action will be taken or a decision made, the Board may take action on, and may make a decision regarding, ANY item referred to in this agenda, including, without limitation, any item referenced for "review", "update", "report", or "discussion" whether or not listed as an "Action Item."

(1) **12:00 PM** Establishment of Quorum and Call to Order
(2) **12:00 PM** Approval of Agenda for Meeting **Action item**
(3) **12:05 PM** Public Input and Comment
The Board will make no decision nor take action, except to direct the General Manager. Those addressing the Board are requested to identify themselves by name, organization, if any, and address. Comments shall not exceed three (3) minutes.
a. Update from Erin Light
(4) **12:10 PM** Consent Agenda **Action item**
a. Approval of the Minutes May 18, 2022, Board of Directors Meeting Minutes

b. Financials
   i. Approval of Disbursements
   ii. Budget Comparison

(5) **XX:XX PM** Report of General Manager
   a. CWCB Update on Colorado Water Plan
   b. Budget Amendment **Action item**
   c. 6-month Review of 2022 Strategic Plan
   d. Augmentation Plan Document Updates **Action Item**

(6) **XX:XX PM** District Engineer Report
   a. Update on Reservoir Water Status
   b. Capital Projects Report

(7) **XX:XX PM** Public Information Updates
   a.

(8) **XX:XX PM** Board Member Reports
   a. **XX**

(9) **XX:XX PM** Report of General Counsel

(10) **XX:XX PM** Pending Water Cases
   a. Water Resumes
   b. Status of Other Water Cases

(11) **XX:XX PM** New Business (Limited to emergency matters that came up During the course of the meeting) **Action item**

(12) **XX:XX PM** Executive Sessions:
   a. Executive session under CRS § 24-6-402(4)(b) to discuss legal issues on Water Resumes, Water Cases, Contract Negotiations and_____(insert description) . Mere presence or participation of an attorney at an executive session is not sufficient to satisfy the requirements of CRS § 24-6-402(4)(b). Executive sessions to discuss legal matters are not recorded.
   b. Executive session under CRS § 24-6-402(4)(e)(I) for the purpose of determining positions relative to matters that may be subject to negotiations; developing strategy for negotiations; and instructing negotiators with respect to _____(insert brief description). This session will be recorded, and a copy of the recording maintained for not less than 90 days.

(13) **XX:XX PM** Board Actions in Regard to Executive Session

(14) **XX:XX PM** Determination of Next Meeting(s) Agenda(s)

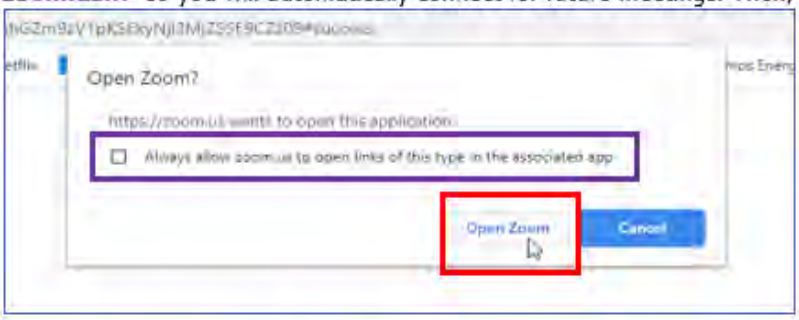
(15) **XX:XX PM** Adjournment.

How to join a Zoom meeting

Join via "Join Zoom Meeting" link:

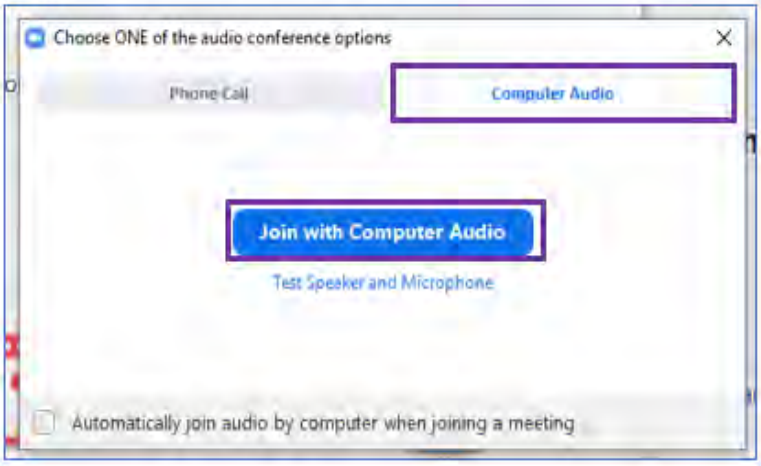
To join a Zoom meeting, click on the meeting link that has been sent to you by the host:

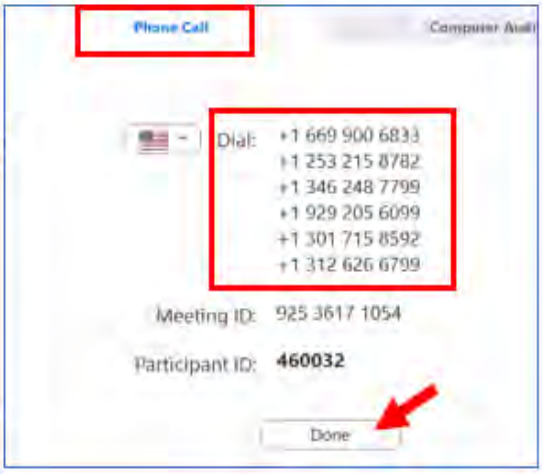
If you have not used Zoom before, you may receive this dialogue box to open Zoom. First, click on "**always allow zoom.us...**" so you will automatically connect for future meetings. Then, click on "**Open Zoom**" and follow the prompts.



Once you are connected to Zoom, you will need to choose your audio conference option. To join via your computer, click on "**Computer Audio**" and then "**Join with Computer Audio**".

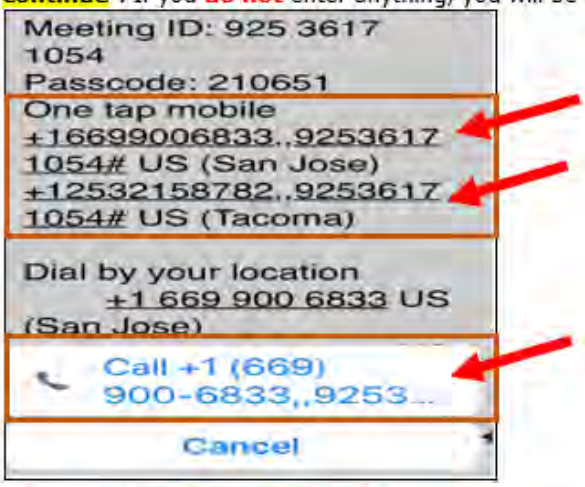
To use your cell phone or landline, click on "**Phone Call**" and then choose a number from the list. Once you dial the number, you will be asked for the Meeting ID and Participant ID to enter the meeting. Click on "**Done**" once you are connected to the Zoom meeting. Or, you can use the "**One tap mobile**" option, see below, to connect via your cell phone.



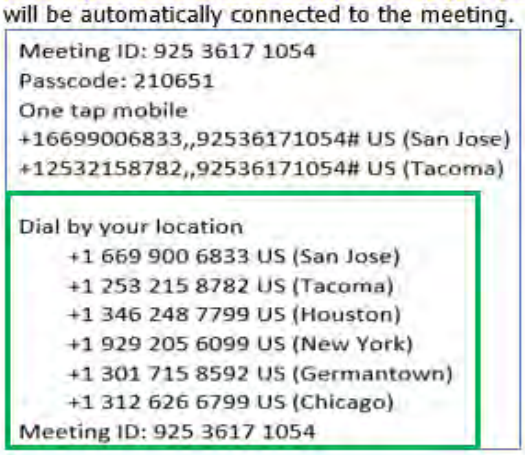


Join via cell phone with "One tap mobile":
If you will be joining a Zoom meeting via your cell phone, click one of the "**One tap mobile**" links. Then click on "**Call +1...**". You will hear a request to "**enter your Meeting ID followed by pound (#)**". You **do not** need to enter the ID as the link will do this automatically for you.

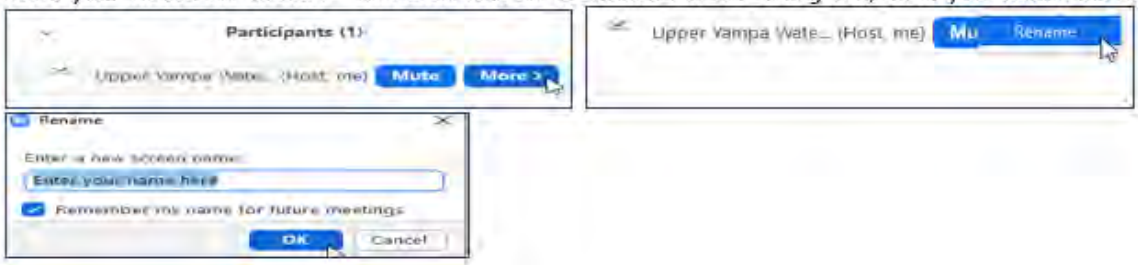
You will be asked if you are a participant and to "**Please press pound (#) to continue**". You **must** press the pound key (#). Then you will be asked to "**Enter your Participant ID followed by pound (#) or just press pound (#) to continue**". If you **do not** enter anything, you will be automatically connected to the meeting.



Join via "Dial by your location":
If you will be joining a Zoom meeting via your cell phone or landline, you can choose any of the numbers below to access the meeting. Once you dial the number you will be asked to "**Enter your Meeting ID followed by pound (#)**". Then, you will be asked to "**press pound (#) if you are a participant**". Finally, you will be asked to "**Enter your Participant ID followed by pound (#) or just press pound (#) to continue**". If you **do not** enter anything, you will be automatically connected to the meeting.



Be sure you are identified properly:
Once in Zoom, be sure that you are identified properly. If you need to change, in "**Participants**" click on your ID and hover your mouse on "**More >**" and then click on "**Rename**". In the dialog box, enter your name and click "**OK**".



Contact Deb Bastian for any questions
- Email: dbastian@upperyampawater.com
- Phone: 970-819-0189