Colorado Division of Water Resources

2022 Annual Report

Water Division 5 – Colorado River Basin

Colorado River looking upstream at the Colorado-Utah boarder

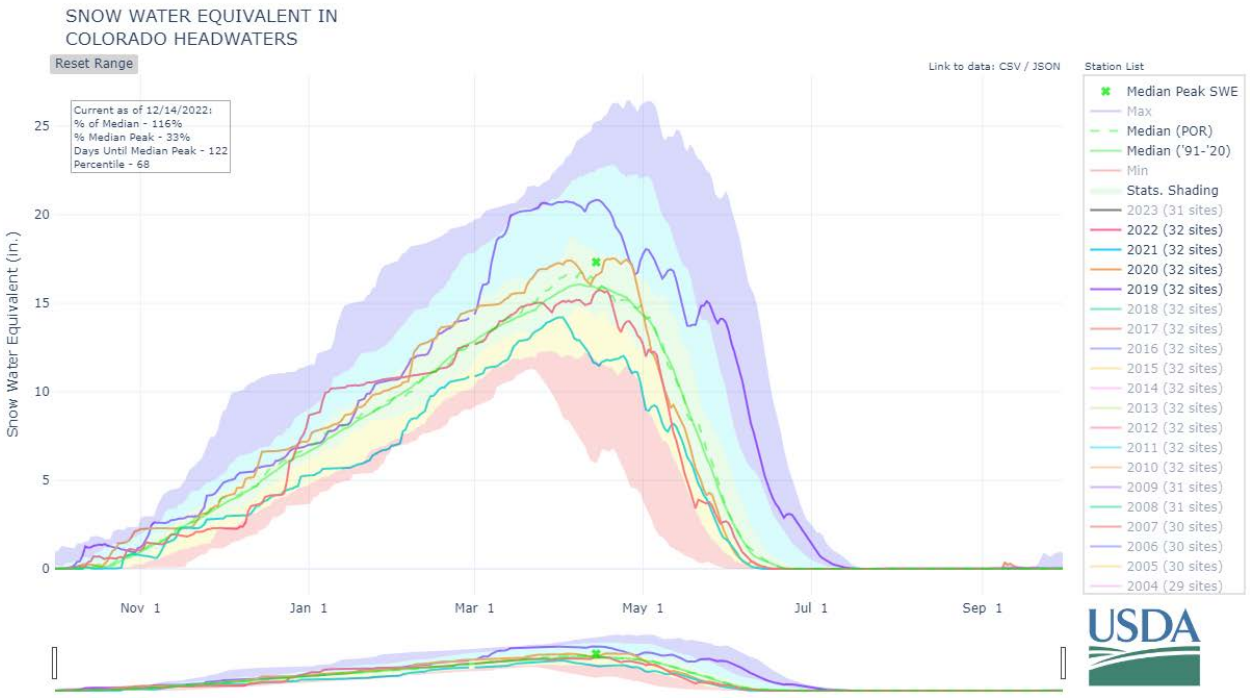
James R. Heath
Division Engineer

Table of Contents

This report is submitted pursuant to C.R.S. § 37-80-105(1)(d) and is the statistical summary of the diversions and other operations of Water Division 5 of the Division of Water Resources (DWR).

Surface Water Supply

Water supply in 2022 improved over 2021 and remained low similar to 2020. Soil moisture at the beginning of the winter improved year-over-year due to the monsoonal rains in 2021 that caused significant debris flows in Glenwood Canyon and along Roan Creek. Reservoir storage in the basin at the end of 2021 was at its lowest since 2012. As shown in the graph immediately below, snowpack trended near the median over the winter and peaked below the historical median peak. Streamflow forecasts began the forecasting season slightly below average and remained at the 85%-90% of average by the June 1st forecast, see the table below. It should be noted that this year's average is lower than recent years' average. This is due to the 30 year averaging period changing from 1981-2010 to 1991-2020. The years of the 1980s were wetter than the years of the 2010s. Resulting in the 1991-2020 average being about 95% of the 1981-2010 average.



2022 forecast (most probable undepleted runoff), April-July in KAF

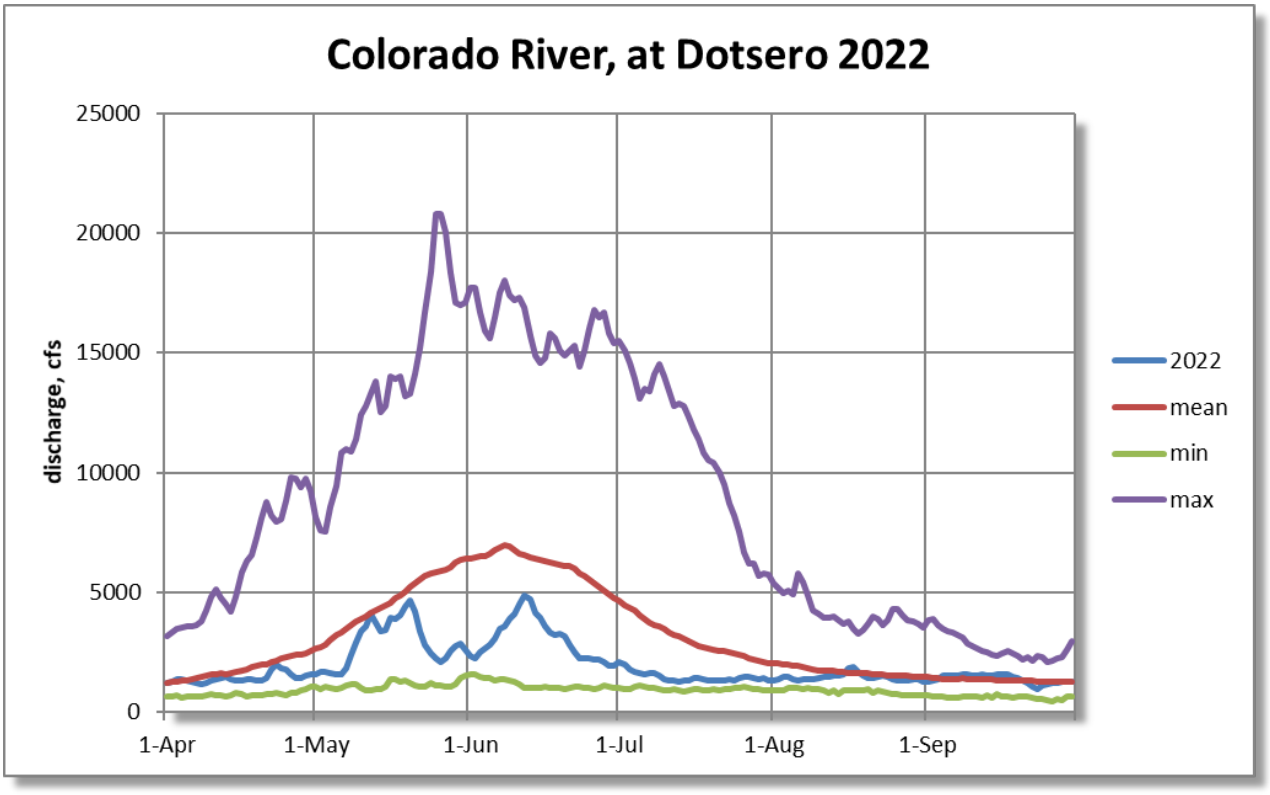
	March 1st		April 1st		May 1st		June 1st		Average Undepleted
	Flow	% avg	Flow	% avg	Flow	% avg	Flow	% avg	
Dotsero	1160	87%	1120	84%	1080	81%	1190	89%	1340
Cameo	2120	96%	1920	87%	1800	81%	1890	86%	2210

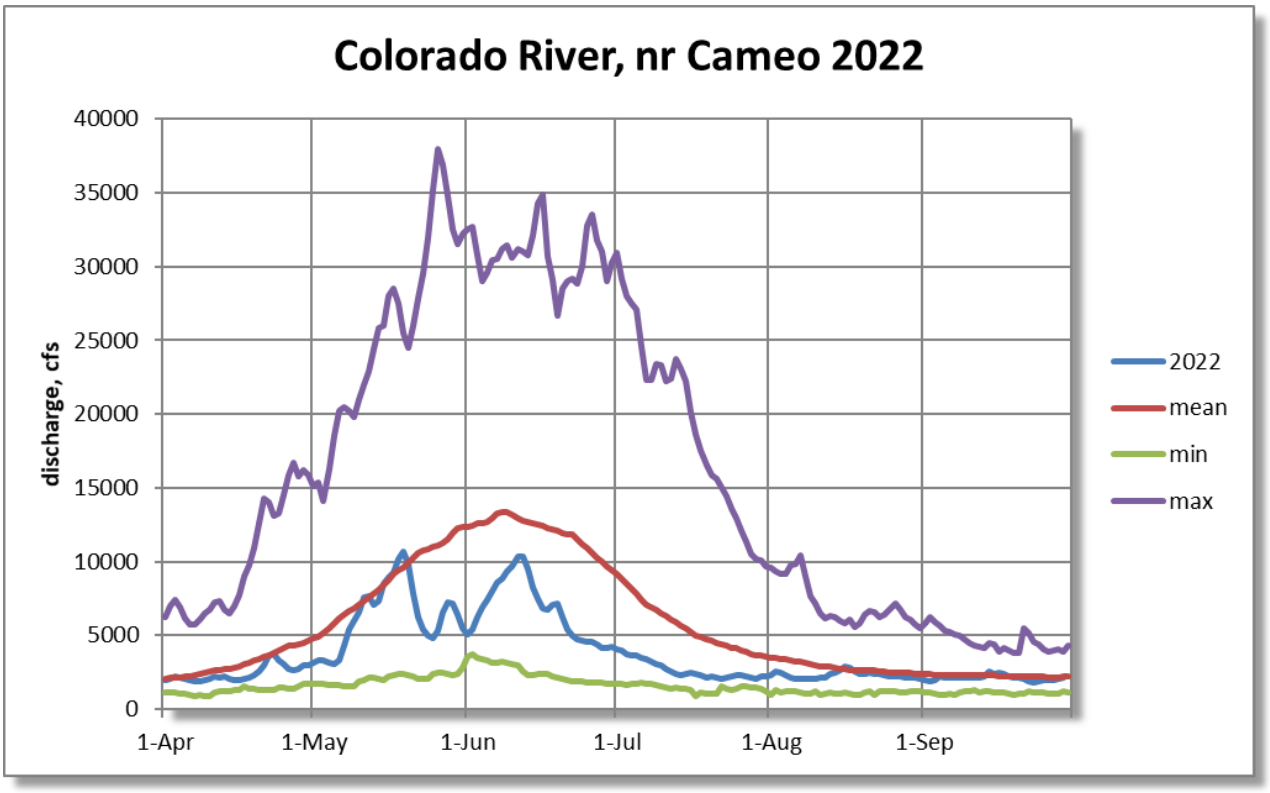
Starting the year with depleted reservoir storage along with below average snowmelt runoff resulted in low streamflows the entire summer. Once again, the low, late summer natural flows in August and September were mitigated on the mainstem of the Colorado River with releases for the endangered fish recovery program, leaving gaged flow below, but much closer to, average for those two months. See the table below for a comparison of actual to historical average runoff.

2022 Gaged (depleted) flows, KAF

	April-July			April-September		
	Flow, KAF	% avg	Historic avg	Flow, KAF	% avg	Historic avg
Dotsero	535	57%	946	708	63%	1,131
Cameo	1,096	62%	1,779	1,359	65%	2,087

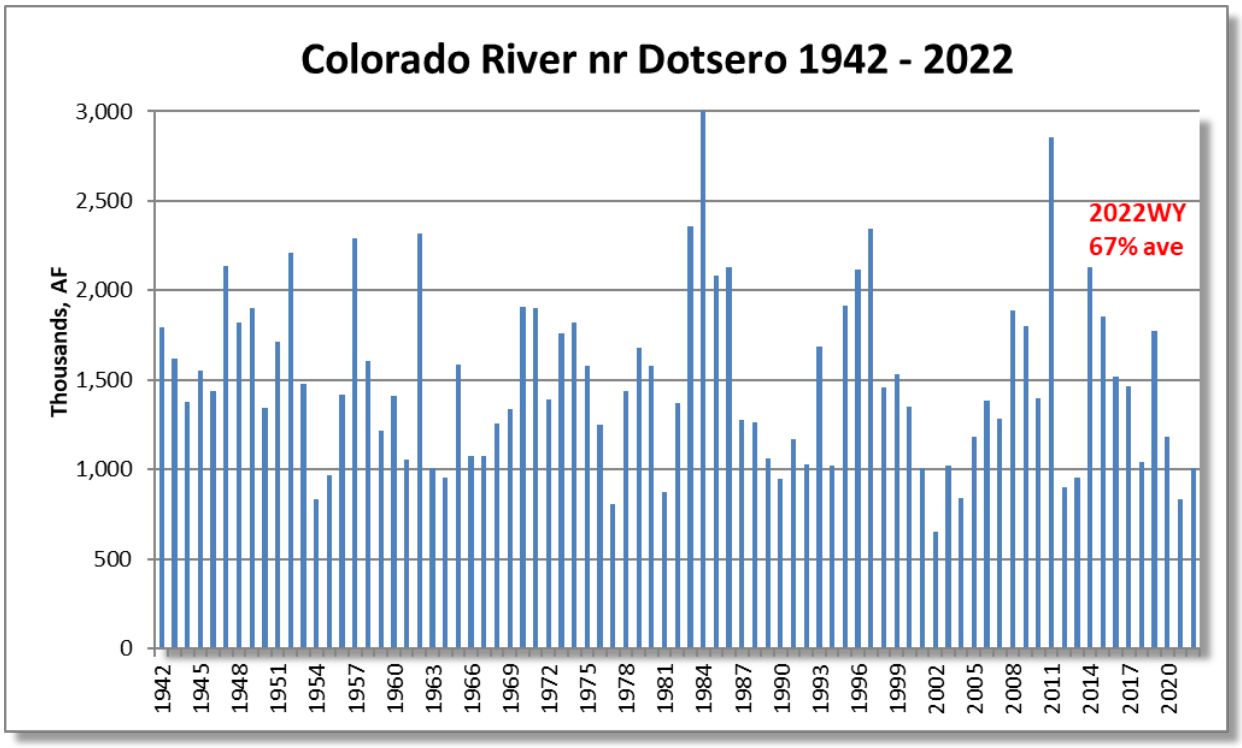
The following hydrographs of daily average flows for the Colorado River near Dotsero and the Colorado River near Cameo depict the extremely poor runoff conditions for the year.

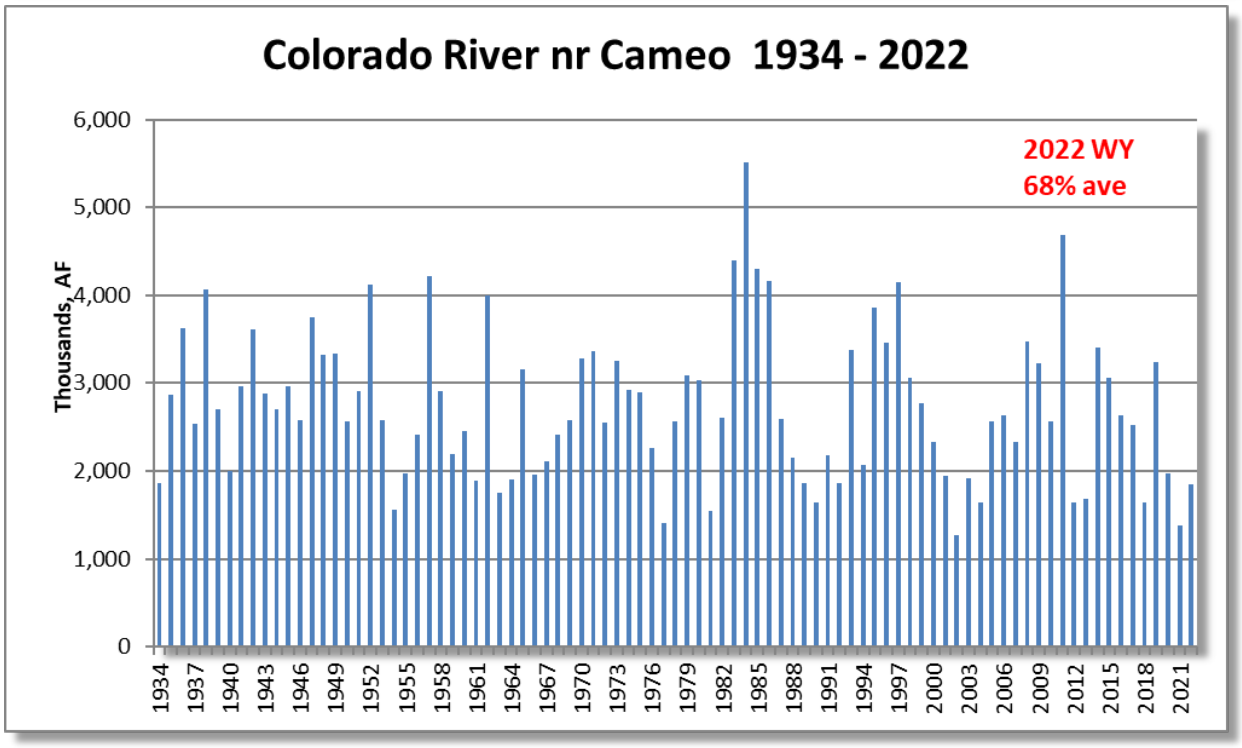




The 2022 water year ended with gaged flow for the Colorado River near Cameo ranking as the 12th driest year in 89 years of record. The flow for the Colorado River near Dotsero ranked as the 13th driest in 81 years of record.

Below are the Colorado River near Dotsero and the Colorado River near Cameo gaged flow histograms for comparison of the 2022 water year with previous years of record.



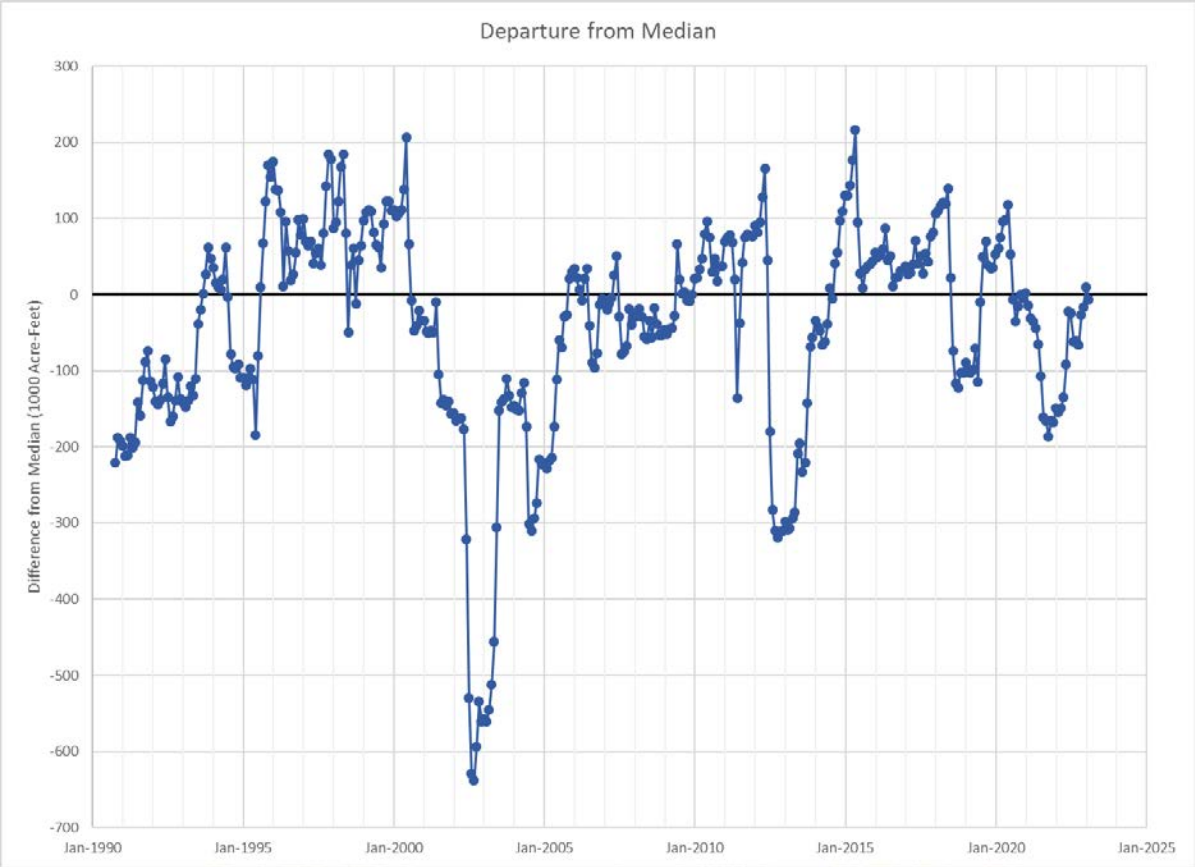


The 2022 water year began with storage in the basin's major reservoirs at about 166,000 acre-feet less than median, and ended with slightly below average storage at about 26,000 acre-feet less than median. Comparison of end-of-year storage for each year, beginning with the extremely dry year of 2012, is shown in the table below. The physical capacity of these reservoirs is 1,220,000 acre-feet.

Storage Comparison of Major Reservoirs

	30-Sep 2012	30-Sep 2013	30-Sep 2014	28-Sep 2015	30-Sep 2016	30-Sep 2017	30-Sep 2018	30-Sep 2019	30-Sep 2020	30-Sep 2021	30-Sep 2022
Dillon Reservoir	198,924	245,855	247,209	251,680	249,814	245,197	199,825	244,919	235,500	212,700	222,500
Granby Reservoir	333,593	371,008	522,187	500,314	487,231	518,992	463,575	485,699	401,300	328,500	481,000
Green Mtn Res	76,719	107,058	115,215	112,410	107,507	106,317	70,430	117,751	88,200	69,400	104,700
Ruedi Reservoir	66,071	86,080	87,909	81,779	77,901	80,421	64,620	84,045	70,600	62,000	72,300
Williams Fork Res	48,379	73,041	88,275	88,530	81,544	75,384	80,870	81,938	82,100	66,600	63,400
Wolford Mtn Res	31,711	44,523	65,992	44,931	53,363	56,872	37,055	54,271	57,600	40,400	43,300
Total	755,397	927,565	1,126,787	1,079,644	1,057,360	1,083,183	916,375	1,068,623	935,300	779,600	987,200

Reservoir storage departure from median beginning of month storage since October 1990 is graphically depicted below. Data used includes Dillon, Granby, Green Mountain, Homestake, Ruedi, Shadow Mountain, Vega, Williams Fork, Willow Creek, and Wolford Mountain reservoirs. The active capacity of these reservoirs is 1,230,000 acre-feet, and physical capacity is 1,315,000 acre-feet.



The basin's major reservoirs did not reach physical fills in 2022 with the exception of Williams Fork Reservoir. Due to upstream out of priority storage, Green Mountain Reservoir did not achieve a physical fill; however, on June 19, 2022, Green Mountain Reservoir did achieve a paper fill. The table below lists key reservoirs in the basin and their maximum storage for the year.

Reservoir Name	Capacity, AF	Max Storage, AF	Max Storage, Date
Dillon	257,304	247,373	7/1/2022
Granby	543,758	529,746	7/9/2022
Green Mountain	154,645	132,285	7/25/2022
Homestake	43,505	29,656	8/30/2022
Rifle Gap	13,602	6,159	5/2/2022
Ruedi	102,369	94,474	7/21/2022
Williams Fork	96,822	96,393	7/7/2022
Wolford Mountain	65,993	56,141	7/8/2022
Vega	33,500	27,812	6/13/2022

In summary, the below average runoff in 2022 for Water Division 5 was the result of below average snowpack and depleted reservoirs needing to be filled. Summer monsoon precipitation reduced the demand on reservoir releases resulting in near average storage at the end of the irrigation season.

Surface Water Administration

Green Mountain Reservoir

During 2022, Green Mountain Reservoir was administered pursuant to the Green Mountain Reservoir Fill Protocol. A critical principle of the protocol is a "Fill Plan" prepared by the USBR, allowing the Green Mountain Power Plant to operate where storable inflows delivered to the power plant do not account against a paper fill of the reservoir. Though conditions were below average, projections indicated undepleted inflow to Green Mountain was sufficient to fill the reservoir with some excess to operate the power plant during the fill season. The final 2022 Fill Plan was distributed via email on May 26, 2022, and allocated 25 KAF of Green Mountain's inflows to power that were projected to be in excess of the 120 KAF required to complete a fill of the reservoir anticipated on July 15th. With inflow allocated to power, Denver Water and Colorado Springs Utilities diverted pursuant to their rights as interference to the Green Mountain Power right.

By decree, the Green Mountain Reservoir start of fill is declared between April 1 and May 15 of each year by the USBR. Generally, only the driest of years have an April start of fill, while most years trend toward a May 15th start of fill. For 2022, the start of fill was declared on May 2nd. Typically, once the Shoshone Power Plant call goes off the river, Green Mountain Reservoir will exercise its refill rights to store prior to the declaration of start of fill. This year's operations were complicated by Shoshone Power Plant going offline on April 4th through the 18th requiring the operation of the Shoshone Outage Protocol (ShOP) during this time period. On April 18th flows were sufficient allowing the administration under ShOP to be junior to Green Mountain

Reservoir's senior refill right beginning the refill. During April, flows were sufficient at Cameo to meet the irrigation demands of the Grand Valley Irrigators keeping the call at Cameo off this spring. On June 19, 2022, the Green Mountain Reservoir 154,645 acre-foot storage right was declared satisfied pursuant to the Green Mountain Fill Protocol. To prevent an uncontrolled spill, Green Mountain Reservoir typically will begin passing inflows prior to reaching a physical fill – this did not occur in 2022. The maximum physical storage in the reservoir was 132,285 acre-feet on July 25, 2022. With Green Mountain Reservoir achieving a paper fill but not a physical fill, Denver and Colorado Springs owed a substitution volume of 20,269 acre-feet. The end of the fill season was declared on August 15, 2022, pursuant to paragraph II.A.3.b of the Green Mountain Reservoir Fill Protocol. Substitution releases began on September 6, 2022 from Williams Fork Reservoir and Wolford Reservoir. Substitution or replacement releases continued from one or more reservoirs through the remainder of the irrigation season.

Shoshone Power Plant

The Shoshone Power Plant was offline three separate times in 2022. On April 4th through the 18th, the power plant was taken offline and the diversion dam forebay drained to conduct inspections on the diversion dam. ShOP was implemented and parties to the protocol operated to maintain 1250 cfs at the Dotsero Gage. The second outage started on May 17th and was anticipated to last for about one month to complete transmission line repairs. This outage extended for a little over two months with the power plant coming back online on July 21st. During the downtime, dam inspections occurred again at the diversion dam. ShOP was again implemented to maintain 1250 cfs at the Dotsero Gage, which for the majority of this outage no voluntary curtailment to the parties' operations were needed during peak runoff. Had the power plant been online, the Shoshone Power Plant junior priority would have called starting on July 7th to meet the 1408 cfs total of the senior and junior priorities. On July 10th, the ShOP parties had to voluntarily curtail their operations to ensure the flows at Dotsero were at least 1250 cfs. When the power plant came back online on July 21st, a call was placed and remained on until the final outage of the season. On October 24th, the power plant went offline, the forebay drained, and another dam inspection occurred until the power plant came back online on November 4th. The total call days by the Shoshone Power Plant during the 2022 irrigation year was 251 days.

The Shoshone Diversion Dam was built in 1909 and is showing its age. Construction has been ongoing to complete maintenance projects to keep the dam in good working order. The dam inspections were required for these construction projects and to complete investigations for planning of future projects. In 2022, no restrictions were in place and the dam could store to full capacity.

Mainstem Administration and Operation of the OMID Check Case

Similar to 2021, Shoshone Power Plant was down for part of the month of April, and ShOP was implemented. However, in 2022 the snowpack was evenly distributed throughout the Colorado River basin and as temperatures warmed in April and irrigation demand picked up in the Grand Valley, there was sufficient water from lower elevation snowmelt and ShOP operations to meet the demand without the need for a call.

As discussed above, the Shoshone Power Plant was down from May 17th through July 20th. The Shoshone Power Plant requested administration to ensure 1408 cfs under its senior and junior rights on July 21st when the plant resumed operations. The call was placed on July 21st at

Shoshone Power Plant under the Con-Hoosier Tunnel 1948 priority. The Shoshone call remained on through October 23rd when the plant was taken down at the end of the irrigation season for an inspection of the diversion dam.

Unlike in 2021, the Shoshone Power Plant outage at the tail end of peak runoff did not cause the Cameo Call to be placed earlier than if the plant were online. The Cameo Call was initially placed on July 30th. With the strong monsoonal precipitation after runoff, the Cameo Call was on and off throughout the remainder of the irrigation seasons. Periods of no Cameo Call included, August 4th, August 17th – 26th, September 21st, and October 1st – 12th. The Cameo Call went off for the season on October 24th. The Grand Valley Entities managed their end of season demand on the Green Mountain Reservoir Historic Users Pool (HUP) by reducing the rate of water they called for, allowing them to preserve a portion of the HUP for use in the spring of 2023.

SUMMARY OF COLORADO RIVER MAINSTEM CALLS
2022 IRRIGATION YEAR

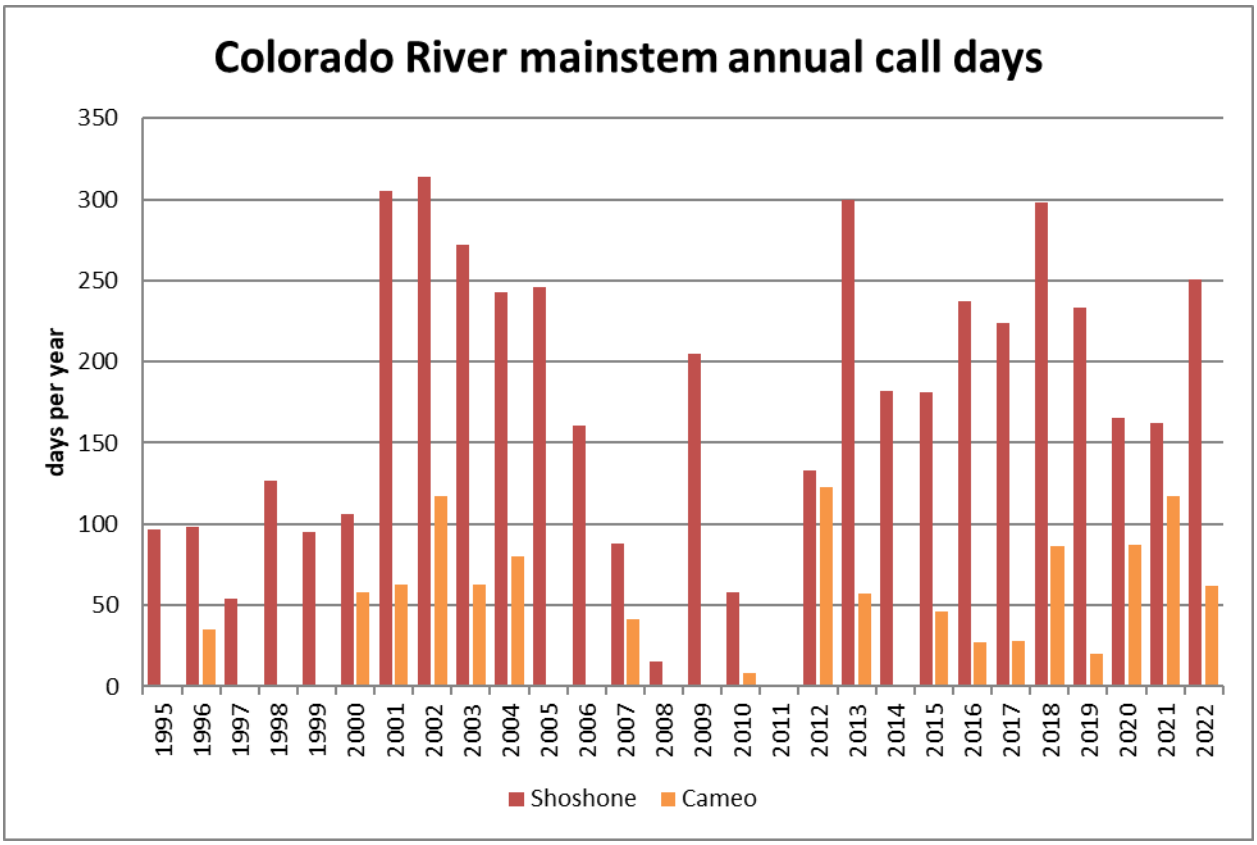
STATUS OF CALL AT THE SHOSHONE POWER PLANT
(As determined using the Colorado River near Dotsero gage)

DATE ON	THROUGH	NO. DAYS CALL ON/OFF	CALLING LOCATION	SWING PRIORITY	SWING PRIORITY ADMIN. NO.	COMMENTS
11-01-21	04-03-22	154	Shoshone Power Plant	---	20427.18999	
04-04-22	04-22-22	19	Free River	---	---	ShOP 04-04-22 through 04-18-22
04-23-22	04-24-22	2	Shoshone Power Plant	Wolford Mountain Reservoir	50386.00000	
04-25-22	07-20-22	87	Free River	---	---	ShOP 05-17-22 through 07-20-22
07-21-22	07-23-22	3	Shoshone Power Plant	Con-Hoosier Tunnel	35927.00000	
07-24-22	07-29-22	6	Shoshone Power Plant	---	33023.28989	
07-30-22	07-30-22	1	Grand Valley Canal	Shoshone Power Plant	33023.28989	
07-31-22	07-31-22	1	Shoshone Power Plant	CBT Alva B Adams Tunnel	31258.00000	
08-01-22	08-02-22	2	Grand Valley Canal	CBT Alva B Adams Tunnel	31258.00000	
08-03-22	08-04-22	2	Grand Valley Canal	Williams Fork Reservoir	31359.00000	
08-05-22	08-06-22	2	Shoshone Power Plant	CBT Alva B Adams Tunnel	31258.00000	
08-07-22	08-08-22	2	Grand Valley Canal	CBT Alva B Adams Tunnel	31258.00000	
08-09-22	08-10-22	2	Shoshone Power Plant	Moffat Tunnel	30870.26117	
08-11-22	08-12-22	2	Shoshone Power Plant	---	20427.18999	
08-13-22	08-14-22	2	Shoshone Power Plant	Moffat Tunnel	30870.26117	
08-15-22	08-15-22	1	Grand Valley Canal	---	30895.23491	
08-16-22	08-16-22	1	Grand Valley Canal	Shoshone Power Plant	33023.28989	
08-17-22	08-22-22	6	Shoshone Power Plant	---	33023.28989	
08-23-22	08-24-22	2	Shoshone Power Plant	Williams Fork Reservoir	31359.00000	
08-25-22	08-30-22	6	Shoshone Power Plant	CBT Alva B Adams Tunnel	31258.00000	
08-31-22	09-20-22	21	Shoshone Power Plant	---	20427.18999	
09-21-22	09-21-22	1	Shoshone Power Plant	Moffat Tunnel	30870.26117	
09-22-22	10-23-22	32	Shoshone Power Plant	---	20427.18999	
10-24-22	10-31-22	8	Free River	---	---	ShOP 10-24-22 through 10-31-22

STATUS OF CALL IN THE GRAND VALLEY
(As determined using the Colorado River near Cameo gage)

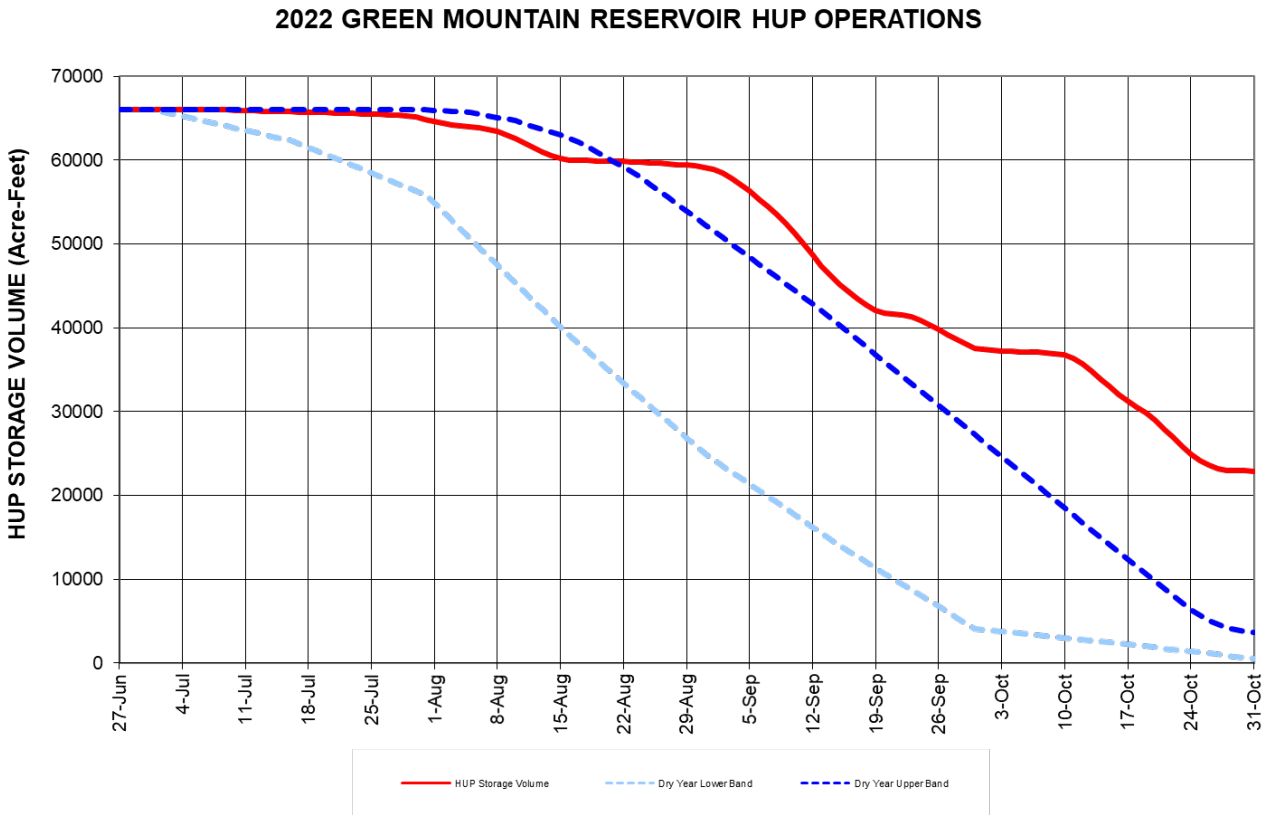
DATE ON	THROUGH	NO. DAYS CALL ON/OFF	CALLING LOCATION	SWING PRIORITY	SWING PRIORITY ADMIN. NO.	COMMENTS
11-01-21	07-29-22	271	Free River	---	---	
07-30-22	07-31-22	2	Grand Valley Canal	Shoshone Power Plant	33023.28989	
08-01-22	08-02-22	2	Grand Valley Canal	CBT Alva B Adams Tunnel	31258.00000	
08-03-22	08-03-22	1	Grand Valley Canal	Williams Fork Reservoir	31359.00000	
08-04-22	08-04-22	1	Free River	---	---	
08-05-22	08-06-22	2	Grand Valley Canal	Silt Pump Canal	39041.00000	
08-07-22	08-08-22	2	Grand Valley Canal	CBT Alva B Adams Tunnel	31258.00000	
08-09-22	08-15-22	7	Grand Valley Canal	---	30895.23491	
08-16-22	08-16-22	1	Grand Valley Canal	Shoshone Power Plant	33023.28989	
08-17-22	08-26-22	10	Free River	---	---	
08-27-22	08-31-22	5	Grand Valley Canal	Silt Pump Canal	39041.00000	
09-01-22	09-03-22	3	Grand Valley Canal	---	30895.23491	
09-04-22	09-20-22	17	Grand Valley Canal	Grand Valley Project	22729.21241	
09-21-22	09-21-22	1	Free River	---	---	
09-22-22	09-23-22	2	Grand Valley Canal	---	30895.23491	
09-24-22	09-28-22	5	Grand Valley Canal	Grand Valley Project	22729.21241	
09-29-22	09-30-22	2	Grand Valley Canal	---	30895.23491	
10-01-22	10-12-22	12	Free River	---	---	
10-13-22	10-17-22	5	Grand Valley Canal	---	30895.23491	
10-18-22	10-23-22	6	Grand Valley Canal	Rifle Gap Reservoir	37503.36899	
10-24-22	10-31-22	8	Free River	---	---	

SWING PRIORITY = MOST JUNIOR WATER RIGHT, EITHER TOTALLY OR PARTIALLY IN PRIORITY, U/S OF THE CALLING STRUCTURE



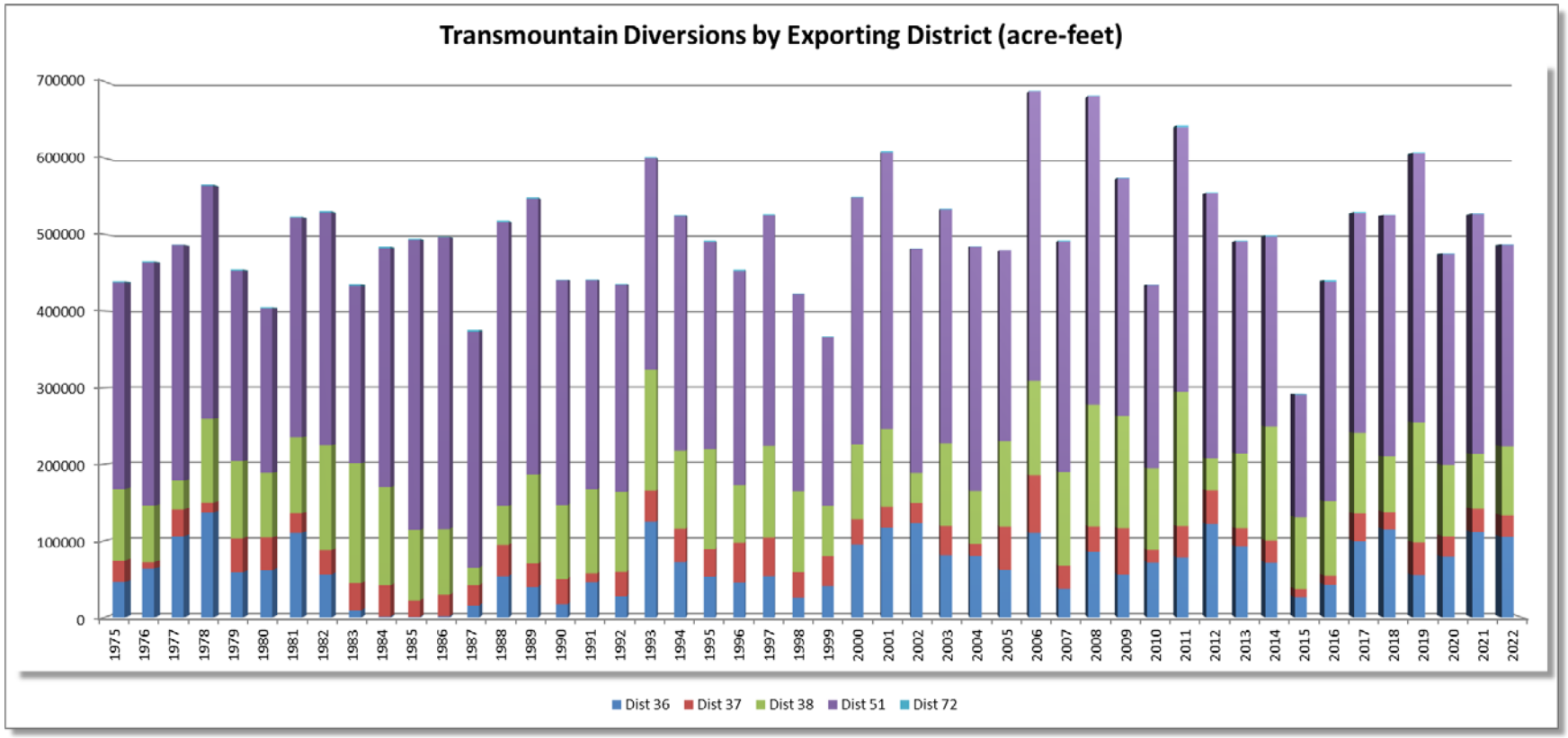
Releases from the HUP for beneficiaries were maintained within the drawdown curves of the stipulation in the OMID "check case" until August 21, 2022, which allowed the HUP managing entities to declare that there was surplus HUP water on September 2, 2022. Total HUP releases

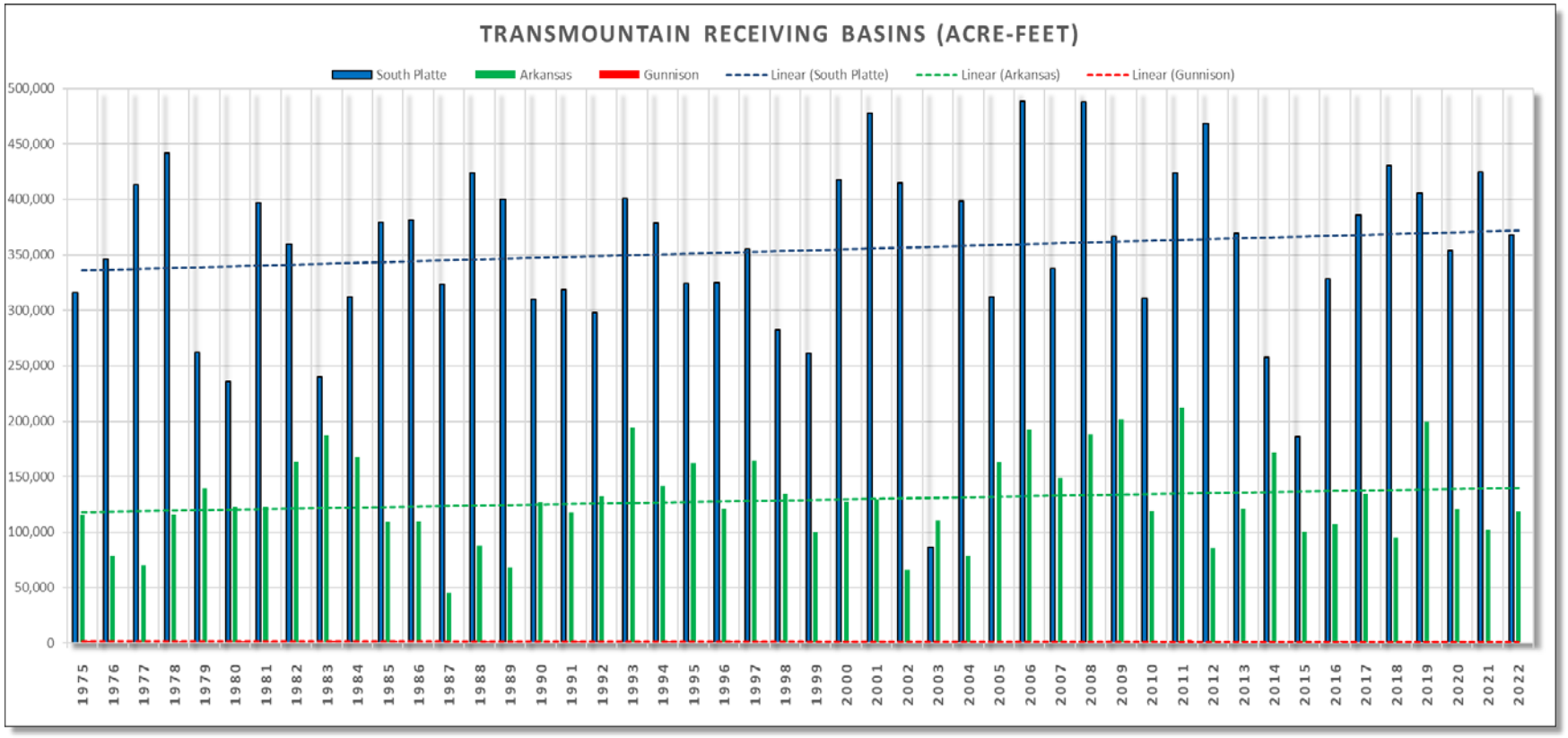
for beneficiaries was 28,286 acre-feet. Surplus releases for the 15-Mile Reach totaled 16,617 acre-feet. The irrigation year ended with 22,408 acre-feet of HUP remaining above the 500 acre-feet minimum needed for winter replacements. Late October surplus releases were limited due to October precipitation increasing streamflow and not needing all of the surplus to meet the streamflow targets for endangered fish habitat protection.



Transmountain Diversions

Transmountain Diversions (TMDs) from Division 5 are primarily delivered to the South Platte and Arkansas Rivers with a minor diversion to the Gunnison River. Total exports from Division 5 for 2022 were 487,013 acre-feet. The volume is 40 KAF less than what was diverted in 2021, and near the averages for the 1975-2022 period of 484,339 acre-feet and the 30 year average of 499,259 acre-feet. Several factors lead to lower diversions for the TMDs than otherwise would have occurred. Below average runoff conditions were one factor. Another factor was the start of the Gross Reservoir expansion project limiting the storage in the reservoir causing reduced diversions through the Moffat Tunnel during runoff. The final factor was maintenance operations that reduced diversions at both the Adams Tunnel and Roberts Tunnel.


Transmountain Diversions by Exporting District (acre-feet)
700000
600000
500000
400000
300000
200000
100000
0
1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 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 2022
Dist 36
Dist 37
Dist 38
Dist 51
Dist 72


TRANSMOUNTAIN RECEIVING BASINS (ACRE-FEET)
South Platte
Arkansas
Gunnison
Linear (South Platte)
Linear (Arkansas)
Linear (Gunnison)
500,000
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
1975
1976
1977
1978
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Surface Water Administration of Tributaries

The majority of Division 5's surface water administration, as measured by staff hours and operating costs, will always be the curtailment of water rights to satisfy local calls on the many tributaries with rights senior to those on the mainstem. The call chronology, stored in CDSS records, documents the administration of these tributaries. The total number of call changes recorded in CDSS on Division 5 tributaries (excluding the Colorado River mainstem calls) for irrigation year 2022 were 182. This is a decrease from the 206 in 2021, and significantly less than the 2018 dry year call changes of 288. The number in all years does not fully represent the workload, as calls that are changed more than once a day during the tail end of snowmelt runoff are not recorded in the call chronology data. Further, shepherding storage releases is a major workload on these tributaries that are subject to calls, as many adjustments are made during a call with no call change. Calls for junior rights upstream of a senior call, often deemed a "call within a call," or in the CDSS terminology "non-consumptive calls," which are generally for exchanges and non-consumptive rights such as hydropower or instream flows.

In September and October 2021, Eagle Park Reservoir Company completed field work for the Homestake Creek Transit Loss Study, while augmentation releases were made from Homestake Reservoir. The data collected in this study is presented and analyzed in their report dated July 12, 2022 (Revised September 27, 2022).

Orders pursuant to C.R.S. § 37-92-502

No administrative orders were issued in 2022. Efforts have been made to work with water users that have administrative issues prior to issuing orders. The process that staff have been instructed to utilize is:

1. Water Commissioner / Aug Team inform water user of administrative issue, allowing flexibility to work with the user to come up with best solution.
2. Send a firm letter to the water user providing details about the administrative issue, continues to allow flexibility to work with the user to come up with best solution.
3. Send formal order from Division Engineer to water user prescribing solution to administrative issue, flexibility is no longer available as the solution is being prescribed. In order to implement this step, we must be willing to prosecute the order through the Attorney General's Office and Water Court.

Augmentation Plan Administration

The Augmentation Plan Team assisted administration efforts by sending 45 written communications and attending 6 meetings/site visits. The type and severity of deficiencies that were addressed varied widely across the Division, but included both operational deficiencies (i.e. lack of adequate measurement devices, excess diversions, inadequate replacement sources, expired and/or canceled contracts for replacement water, etc.) and accounting deficiencies (i.e. lack of user-supplied data, inadequate accounting, calculation errors, etc.). The approach used by the Augmentation Plan Team to bring a water user into compliance with the terms and conditions of their respective decree(s) varies depending on the type, severity, and frequency of the deficiency, but generally begins with a less formal email correspondence to the water user to notify them of the first-time and/or minor deficiency. If the deficiency cannot be adequately resolved through informal communication, a formal Notice of Deficiencies is sent to the water user with a deadline to provide a response to the Division Engineer that includes a plan to

address and resolve the deficiency moving forward. An administrative order is issued to the water user for those deficiencies where compliance cannot be achieved through a formal Notice of Deficiencies.

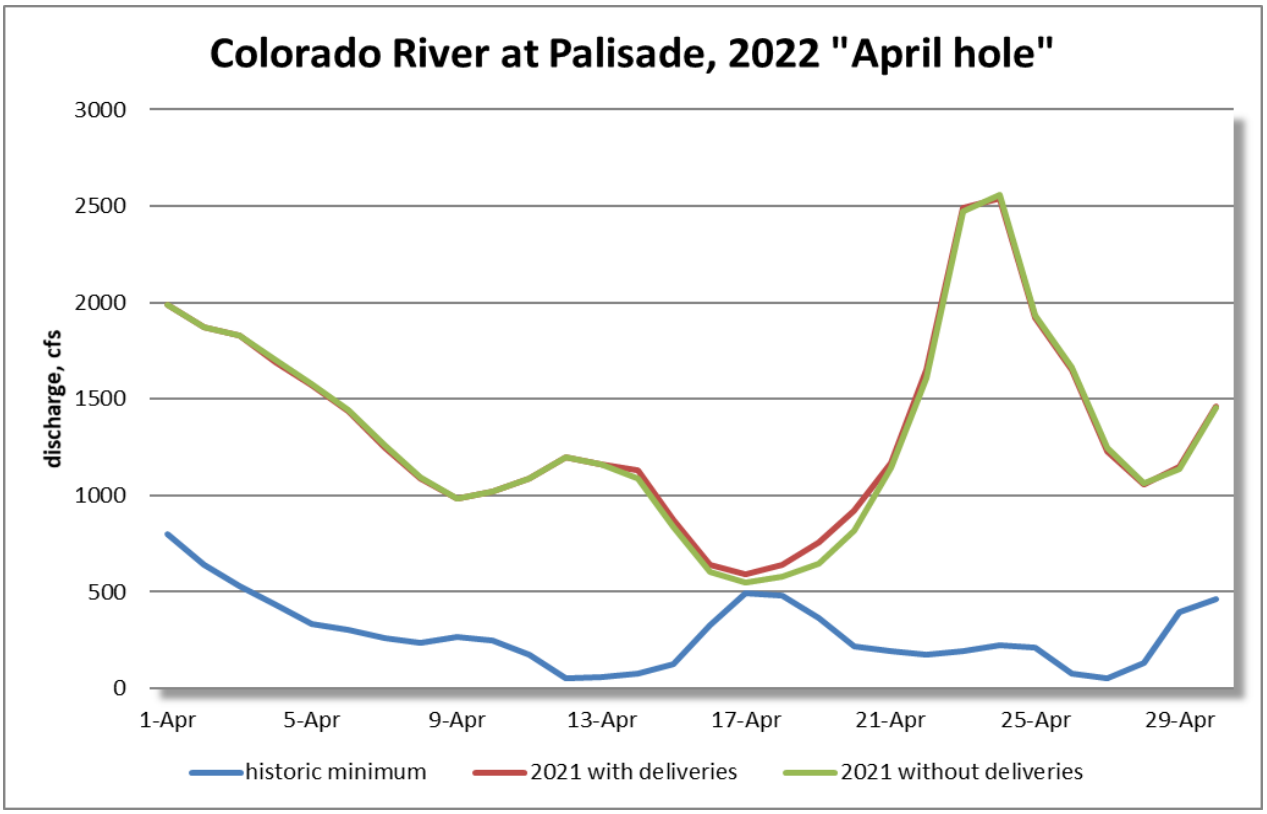
Administrative Exchanges

Ten (10) administrative exchanges were approved pursuant to C.R.S. § 37-83-104 in Division 5 for the 2022 Irrigation Year. The requested exchanges included several that have been approved in prior years for Clinton Reservoir (flood control), Grand County Road and Bridge, and three irrigation operations. Two approvals were to exchange water to fill and/or replace evaporation from ponds. Two exchanges were for pumping operations from streams for industrial and snowmaking purposes. The final approval was for a dam construction project.

Endangered Fish Recovery Program

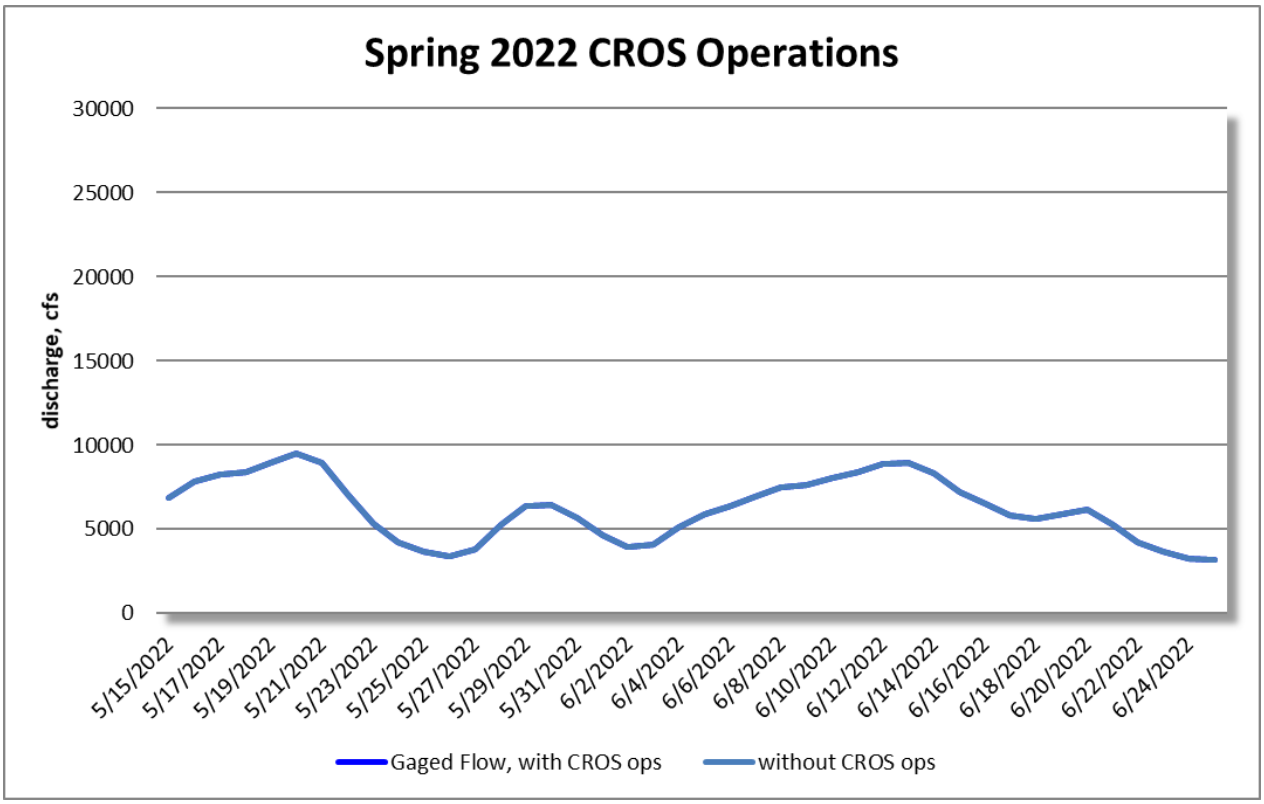
In April 2013, flows measured at the Colorado River near Palisade gage dropped as low as 55 cfs. The gage is at the head of the 15-Mile Reach, considered critical to the recovery program. The minimum flow target initially was 400 cfs for 2014. The United States Fish and Wildlife Service (USF&WS) changed the absolute minimum flow to 500 cfs, which then was set as the new benchmark for the “April Hole.” In 2019, the USF&WS requested the minimum flow be set at 810 cfs. In 2020, the USF&WS provided a technical basis for the beneficial use of an absolute minimum at 810 cfs. The 2020 guidance document was utilized in 2021 and again in 2022 to help guide the use of available reservoir storage to enhance the flows in the 15-Mile Reach.

Planning of reservoir releases to enhance the flows in the 15-Mile Reach begins in March at the HUP wrap-up meeting for the prior year. The discussions at that time of the year focus on planning to mitigate April Hole conditions if they occur. The graph below depicts the April 2022 flows compared to the historic minimum. In April 2022, there was 1,010 acre-feet of HUP surplus water released to the 15-Mile Reach.

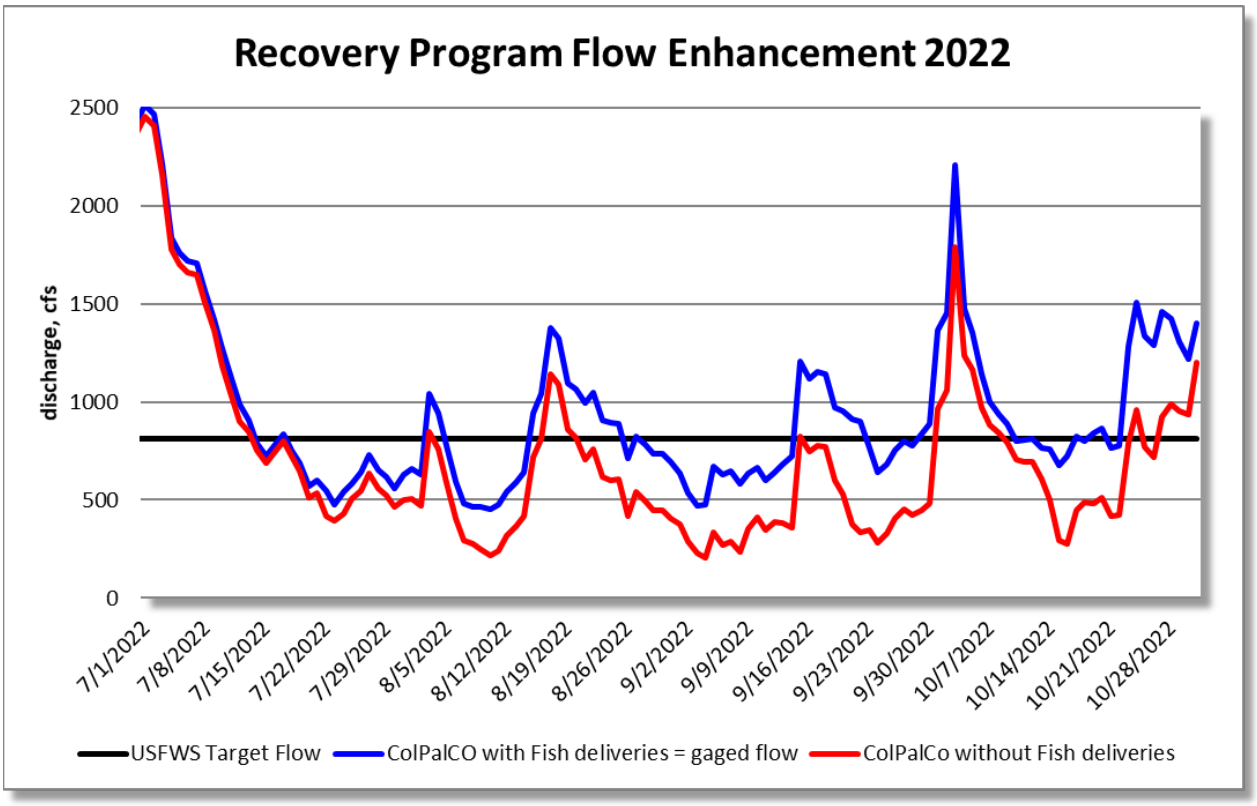


The Coordinated Reservoir Operations (CROS) program was established in 1995 as part of the Upper Colorado River Endangered Fish Recovery Program and patterned after less formal operations that Water Users and Division 5 began in the early 1990's. Preparation for CROS generally begins in March and is refined until triggered in May or June. The primary purpose of CROS is to enhance spring peak flows for a 10-day period in the 15-Mile Reach. The 15-Mile Reach is critical habitat for three endangered fish species: Razorback Sucker, Bonytail Chub, and the Colorado Pikeminnow, and one threatened fish species the Humpback Chub. In years with sufficient snowpack, storage of inflows to the reservoirs can be re-timed to pass water downstream to benefit these fish without affecting reservoir yield. The goal of CROS is to time the bypass of storable inflows, release of storage, or other divertible flows at participating reservoirs and operators to enhance the peak at the Colorado River near Cameo gage, such that enhancement will result in flows that exceed 12,900 cfs, the minimum deemed to benefit the habitat, and flows that will not exceed 25,000 cfs, the maximum that can be contained within the banks (bank full flow) of the Colorado River in the Palisade-Grand Junction area. The decision to trigger CROS operations is made after managers of participating reservoirs are confident that bypasses at their individual reservoirs could be made prior to filling without impacting the yield of their storage rights, and the group determines CROS operations will fall within the acceptable range. Meetings usually become weekly as peak snowmelt runoff approaches.

CROS operations did not occur in 2022. The peak day for the Colorado River near Cameo was 10,400 cfs on May 20th. The operation of CROS is summarized graphically below.



With poor streamflow, Ruedi Reservoir did not fill, therefore the 4 out of 5 year pool was not available. After the fill season, it appeared unlikely that an HUP surplus declaration would be made. However, the consistent precipitation from the summer monsoon allowed for an HUP surplus declaration on September 2, 2022. In 2022, limited reservoir water was available to the USF&WS to meet the Endangered Fish Recovery Program target flow for the Colorado River at Palisade gage set at the dry year minimum of 810 cfs. As with the previous four years, the intent was to set the target at one level for the entire late summer base flow augmentation period. Though set at the dry year target, lack of snowmelt runoff and persistent drought conditions prevented the 810 cfs target from being met most days throughout the augmentation period. Monsoonal rains from the end of July through October increased augmented flows above the 810 cfs target for extended periods of time. The Recovery Program received water from pools in Ruedi, Wolford Mountain, and Granby reservoirs, along with releases in September and October via HUP surplus declaration from Green Mountain Reservoir. Management of the Government Highline Canal by the Grand Valley Water Users Association provided returns to the river above the 15-Mile Reach via the Palisade Pipeline. Considering transit losses, the total of augmented deliveries to the 15-Mile Reach was 59,712 acre-feet, with a maximum daily delivery of 570 cfs on October 26th. Without deliveries, the minimum flow would have been 206 cfs on September 4th.



East Troublesome Fire Burn Area Water Supply

The East Troublesome Fire began on October 14, 2020 and was fully contained on November 30, 2020. The fire is the second largest in Colorado history, burning 193,812 acres. A total of 366 residences and 214 outbuildings and commercial structures were destroyed or damaged. Recovery efforts to prevent debris flow and flash flooding, and to re-establish vegetation will require construction of detention ponds, re-drilling of water wells, and diversion of water in areas where wells are permitted for household use only. Further, most properties do not have surface water rights for irrigation. Our research found 605 wells in the burn area, of which 395 were household use only. We also identified structures downstream of the burn area that would be impacted by potential debris flows. Solutions were needed to assist landowners in the recovery process without using wells for unpermitted purposes and/or diverting surface water out-of-priority.

In 2021, Middle Park Water Conservancy District (MPWCD) submitted their substitute water supply plan (SWSP) request to assist up to 263 household use only well owners revegetate their properties through an umbrella SWSP pursuant to C.R.S. § 37-92-308(5). The SWSP was not approved because it included wells in Area B (above a historical local call) and MPWCD was unable to come up with local sources of replacement water or no call agreements on the tributaries with historical calls. In 2022, MPWCD submitted a revised SWSP request to assist up to 37 household use only well owners revegetate their properties through an umbrella SWSP approved pursuant to C.R.S. § 37-92-308(5). The revised SWSP included wells only in Area A (subject to mainstem Colorado River calls only), which significantly limited the impact the SWSP would have for the community. On July 13, 2022, an SWSP was approved for the period

July 13, 2022 through June 30, 2023. Through the end of 2022, no well owners have taken advantage of the SWSP, which would allow them the ability temporarily repermit their well for outdoor irrigation use for revegetation of their property. By letter dated March 21, 2023, MPWCD Board communicated to DWR its intent to not renew the SWSP in future years given the lack of interest and participation in the SWSP in its first year of approval.

Community Involvement

In 2022, many of our meetings with water users groups were in person and others were offered in a hybrid approach with people in person and a web broadcast. Staff attended regularly scheduled board meetings for Basalt Water Conservancy District, Collbran Water Conservancy District, Colorado River Water Conservation District (River District), Middle Park Water Conservancy District, and West Divide Water Conservancy District (West Divide). The River District hosted their State of the River meetings virtually in the spring and several staff members attended and/or presented at. The River District's Annual Symposium in the fall was also attended in person by staff.

Water Court

For 2022, there were 142 new and 10 amended Water Court applications for a total of 152 applications. This is less than the 195 filed in 2021. The number of Water Court applications in 2022 were below average and partially resulted from no applications being filed in the month of October. Division 5 submitted 202 Summary of Consultation Reports to the Water Court in 2022, including those that were amended or supplemental. In our continued effort to help expedite court cases, nearly all consultations were filed within one week of the consultation meeting (well within the 35 day deadline), and none were filed beyond 35 days.

General water court activities in Division 5 followed our plan to stay in our role as a technical advisor to the court and not prematurely enter cases as an opposer. The goal is to file very few Statements of Opposition, none were filed in 2022.

Case No. 2022CW3074 was filed on behalf of Snake River Water District as a Verified Complaint against DWR for the final administrative actions outlined in the February 2, 2021 administrative order requiring amendment to the District's accounting to exclude releases from Green Mountain Reservoir's HUP as a replacement supply. In 2022, the case progressed through some legal briefings and no orders were issued by the Water Judge.

Division 5 Water Court case 2013CW3077 in the interest of the United States relating to the Green Mountain Reservoir Administrative Protocol is pending in front of the Supreme Court during 2022 in Case No. 22SA317. The City of Golden (Golden) appealed the Water Court's decree on the principal issues of whether the Water Court erred in ruling:

1) that injury to Golden's water rights was not a proper inquiry in this case,
2) that the State Engineer shall administer water rights in accordance with the Green Mountain Reservoir Administrative Protocol (Protocol), even though the Protocol is inconsistent with the prior appropriation doctrine,
3) that the Protocol is "consistent" with the Blue River Decree, and
4) that Golden should be precluded from presenting evidence at trial about injury and other issues that are inherently factual in nature, including newly discovered evidence

Golden obtained through ongoing and timely discovery completed after the briefing on summary judgment and before the scheduled trial date.

Abandonment List

The result of 2018-19 work in preparation for the 2020 Abandonment List left 243 water rights to be reviewed by the Division Engineer in the spring of 2020. The list was ultimately published on July 1, 2020, with 158 water rights in 154 structures proposed to be abandoned or partially abandoned. The period for filing objections to the 2020 Abandonment List ran through June 30, 2021. Objections were received for 41 water rights and resulted in 23 water rights being removed. The Revised Abandonment List was prepared for publication by December 31, 2021, and included 135 water rights associated with 131 structures. Water right owners had until June 30, 2022, to file protests to the inclusion of their water rights on the abandonment list with the Water Court. Six protests were filed with the Water Court in Case Nos. 2022CW3024, 2022CW3036, 2022CW3048, 2022CW3057, 2022CW3068, and 2022CW3072. Efforts began to work with the Protestants in these bifurcated cases to resolve the issues and enter into a stipulation. Resolution to Case No. 2022CW3048 occurred in 2022 when the Protestant withdrew the protest. It is anticipated that the five remaining cases will reach resolution in 2023.

Groundwater

Division 5 groundwater permit applications for exempt and non-exempt wells are reviewed and approved by staff in both the Division 5 Office and the State Engineer's Office. The following reflects the efforts of both offices. Well permitting activity was steady during 2022 receiving 751 applications with 729 water well permits approved. The approvals issued in 2022 include: 472 production well permits, 169 monitoring/observation well permits, 85 monitoring hole notice of intents, and 3 gravel pits. This compares to 792 applications received and 717 permits issued in 2021. Drilling activity remained steady with 410 Well Construction Reports received in 2022, a slight decrease over last year where 421 Well Construction Reports were received.

Colorado River Cooperative Agreement

Major negotiation of the Colorado River Cooperative Agreement (CRCA) concluded in 2013 with the signing of the Green Mountain Reservoir Protocol and Protocol Agreement, leaving full implementation conditioned on resolution of several agreements and water rights applications, and a federal court decree. The completed pieces to the CRCA include:

- The main CRCA agreement signed in 2011,
- Green Mountain Fill Protocol, and Protocol Agreement signed in 2013,
- Water Court Case No. 10CW298 for Grand County's RCID,
- Water Court Case No. 11CW152 by Denver Water, Grand County, and the CWCB for a right of substitution using Fraser River diversions and Gross Reservoir in Water Division 1,
- Denver's "reverse exchange" decreed in Case No. 11CW21 allowing Dillon storage to be exchanged to the Moffat Tunnel and Williams Fork Reservoir,
- Shoshone Outage Protocol Agreement signed June 2016,
- Water Court Case No. 06CW255, a diligence decree that also provides use of Dillon Reservoir for West Slope purposes and anywhere in the Denver Metro Area as defined in the CRCA,

- FERC approval of the enlargement of Gross Reservoir on July 17, 2020,
- The Federal Court effectively closed the case (regarding retained jurisdiction in the Consolidated Cases of the Blue River Decree) without any findings filed to recognize the Green Mountain Protocol as within the scope of the Blue River Decrees,
- Approval of Plans and Specifications for Construction of the enlarged Gross Reservoir on January 18, 2022.

Remaining CRCA items:

- A ruling in Water Court Case No. 13CW3077 requesting the Water Court recognize the Green Mountain Fill Protocol is within the scope of the Blue River Decree, and
- The final piece to the CRCA will be the construction of the enlargement of Gross Reservoir, which began at the beginning of 2022 and is expected to take four years.

Regarding Water Court Case No. 13CW3077, two objectors entered the case when the Amended Application was filed – City of Golden and Snake River Water District. Trial was set in the case for May 31 through June 3, 2022. However, on May 26, 2022, the Judge entered motions for summary judgement in the applicants' favor effectively ending the case in front of the Water Court and the trial was cancelled. On September 28, 2022, the City of Golden filed an appeal to the Supreme Court, which is pending in Case No. 2022SA317.

I respectfully submit the 2022 Annual Report on behalf of the Staff of Water Division 5, by

James R. Heath, Division Engineer
April 14, 2023