Colorado Division of Water Resources

2023 Annual Report

Water Division 5 – Colorado River Basin

Crystal River looking downstream near the Town of Marble

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Division Engineer

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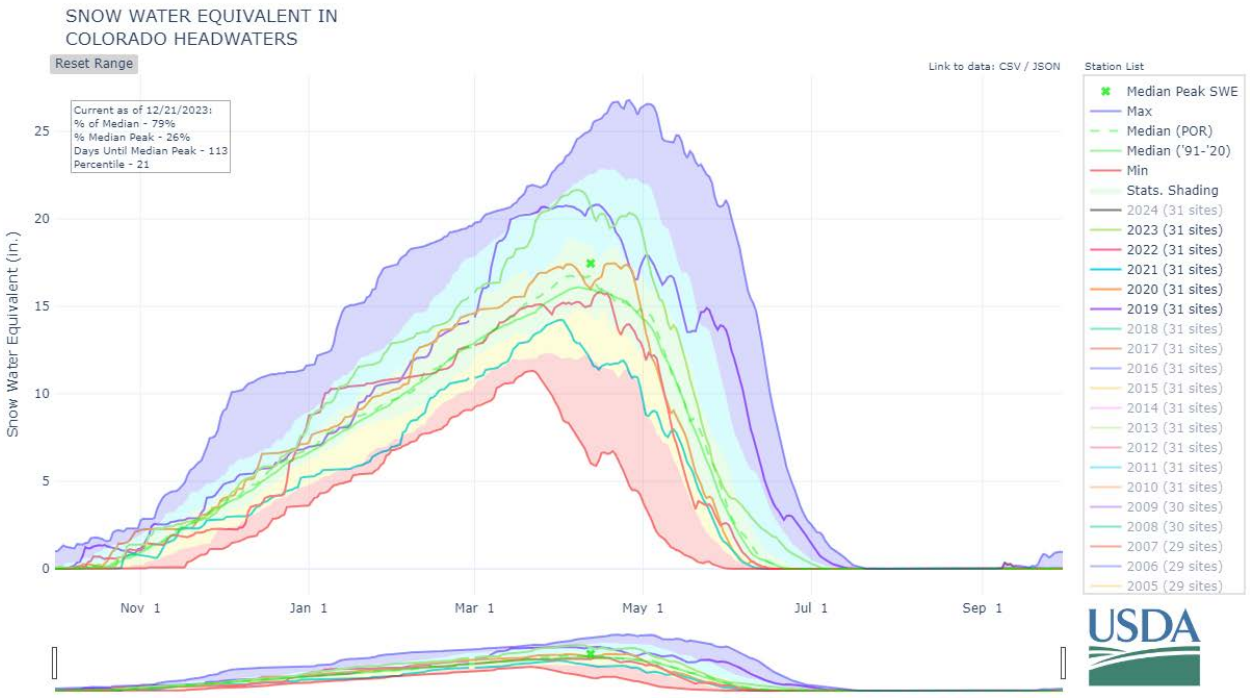
This report is submitted pursuant to C.R.S. § 37-80-105(1)(d) and is the statistical summary of the diversions and other operations of Water Division 5 of the Division of Water Resources (DWR).

Surface Water Supply

Water supply in 2023 improved significantly over 2022. Soil moisture at the beginning of the winter again improved year-over-year due to the monsoonal rains in 2022 that caused debris flows in the burn scars. Reservoir storage in the basin at the end of 2022 recovered from the lows in 2021 and remained slightly below normal. As shown in the graph immediately below, snowpack trended near the median in early winter before significantly exceeding historical median peak near the end of winter. Streamflow forecasts began the forecasting season slightly above average and increased to 110%-127% of the historical average by the June 1st forecast, see the table below. (It should be noted that the historical average calculation changed in 2022 from the 30-year averaging period of 1981-2010 to the 30-year averaging period of 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.)



2023 forecast (most probable undepleted runoff), April-July in KAF

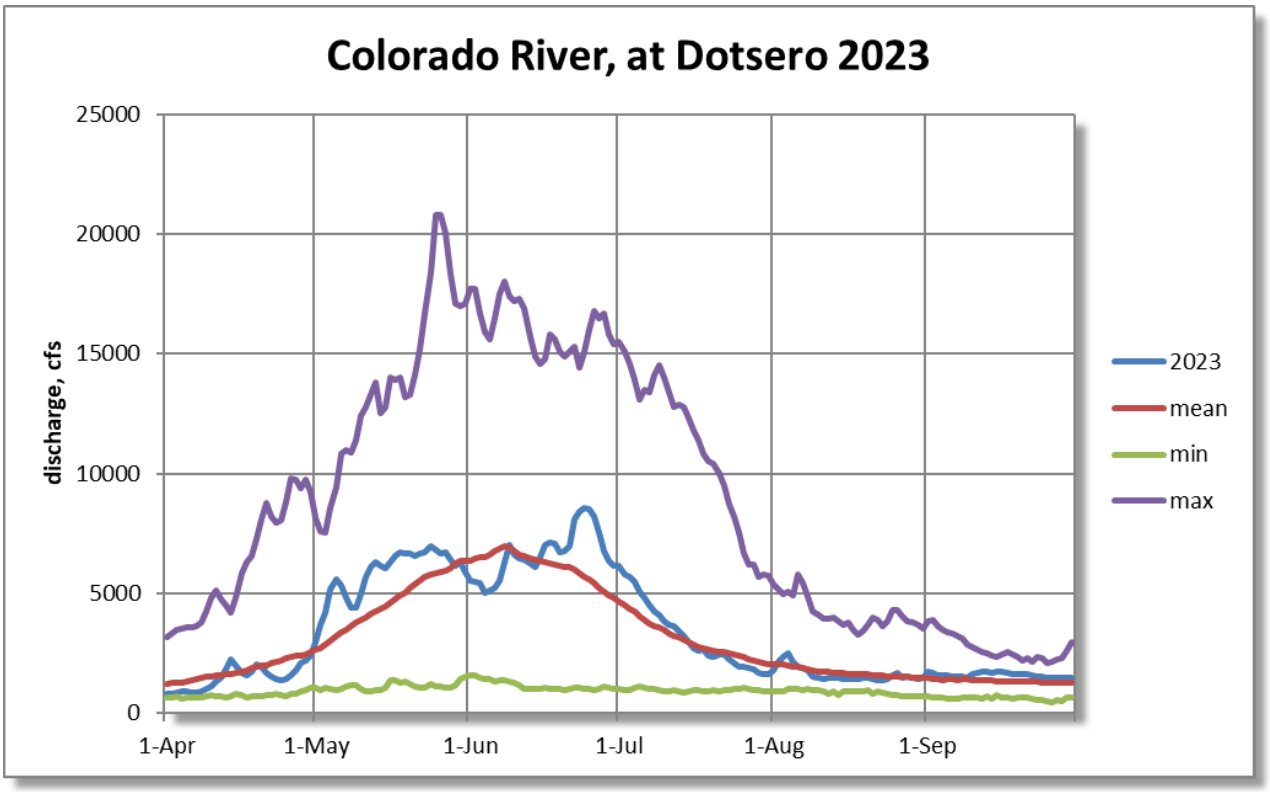
	March 1st		April 1st		May 1st		June 1st		Average Undepleted Runoff
Location	Flow	% avg	Flow	% avg	Flow	% avg	Flow	% avg	
Dotsero	1410	105%	1490	111%	1400	104%	1470	110%	1340
Cameo	2390	108%	2720	123%	2680	121%	2800	127%	2210

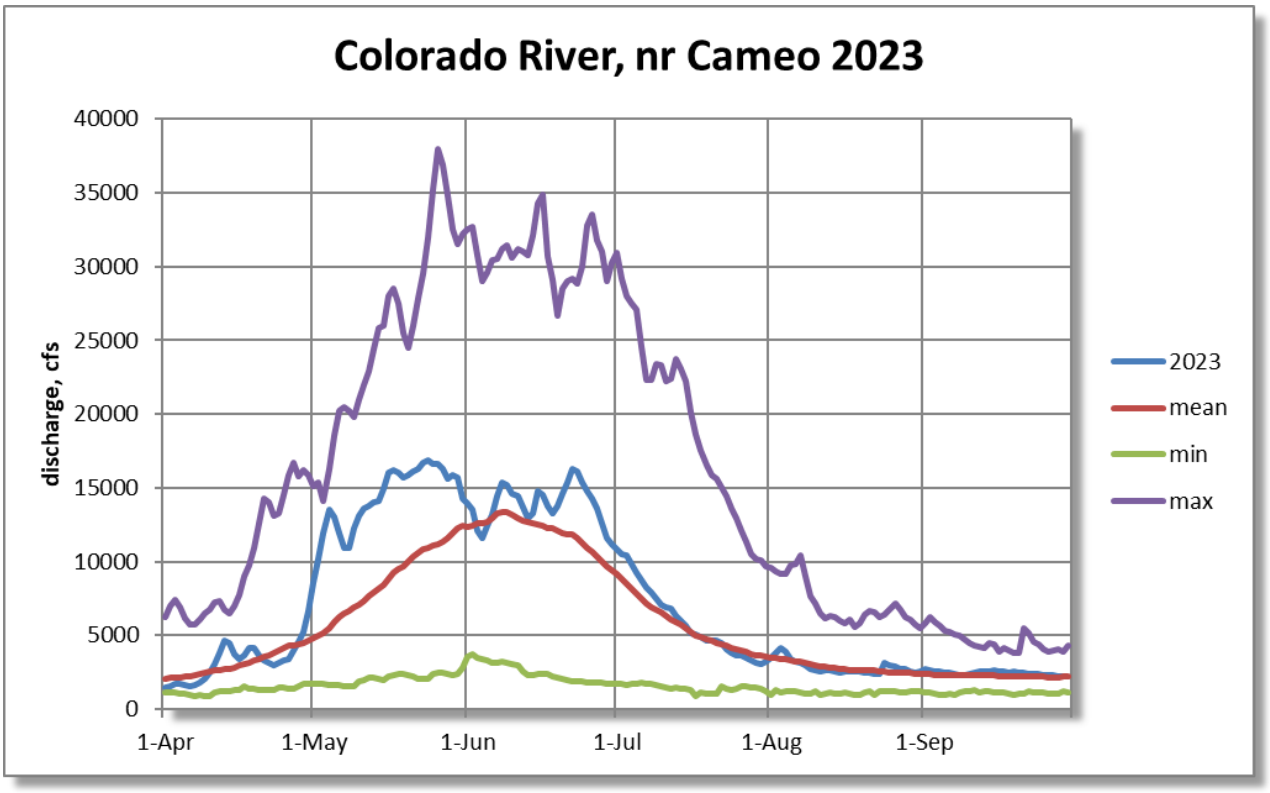
Starting the year with slightly depleted reservoir storage resulted in low streamflows through most of the runoff season. The South Platte and Arkansas river basins received significant rainfall in May and June of 2023, reducing municipal and irrigation demands, allowing reservoir storage on both sides of the divide to recover and in most cases fill and spill towards the end of June. Streamflows in the late summer were improved over the past two years due to improved soil moisture conditions. Flows did drop after snowmelt runoff concluded and were enhanced with reservoir releases for the endangered fish recovery program keeping streamflows near average for the late summer. Gaged streamflow along the mainstem of the Colorado River was slightly above average for the season. See the table below for a comparison of actual to historical average runoff.

2023 Gaged (depleted) flows, KAF

	April-July			April-September		
Location	Flow, KAF	% avg	Historic avg	Flow, KAF	% avg	Historic avg
Dotsero	1,042	110%	947	1,237	109%	1,132
Cameo	2,266	127%	1,785	2,582	123%	2,093

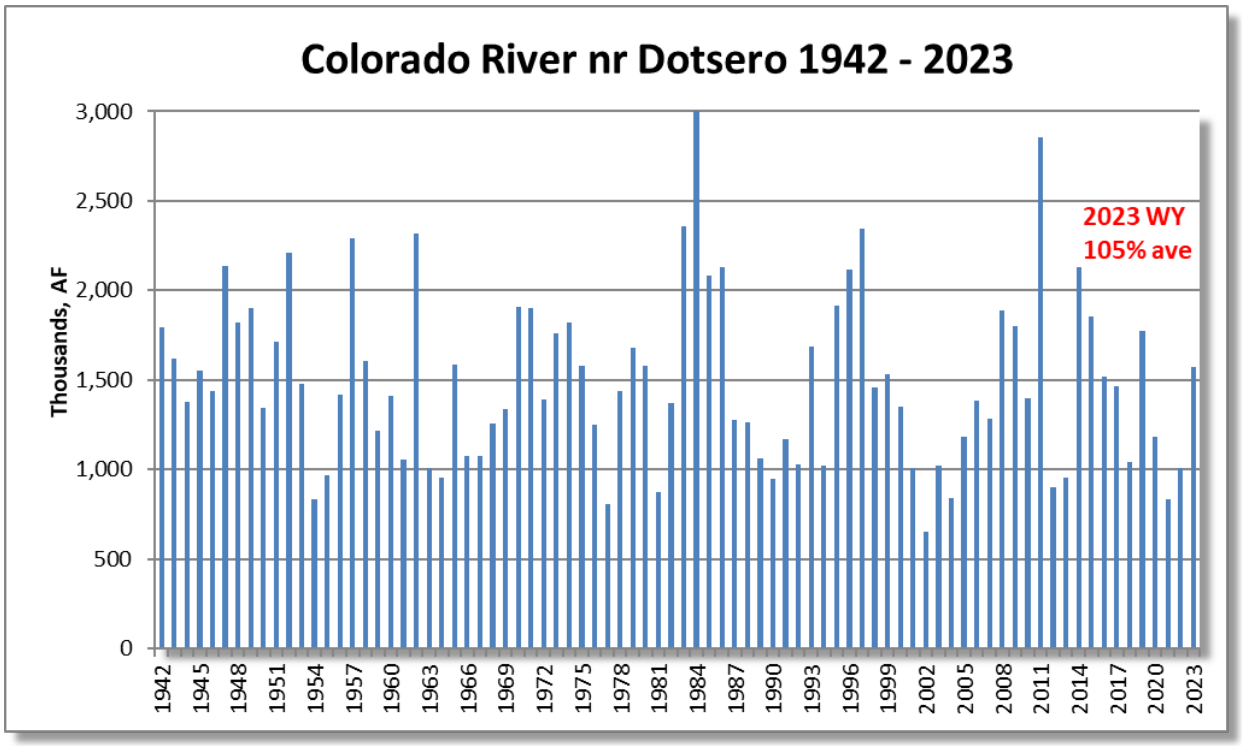
The following hydrographs of daily average flows for the Colorado River near Dotsero and the Colorado River near Cameo depict the slightly above average runoff conditions for the year.

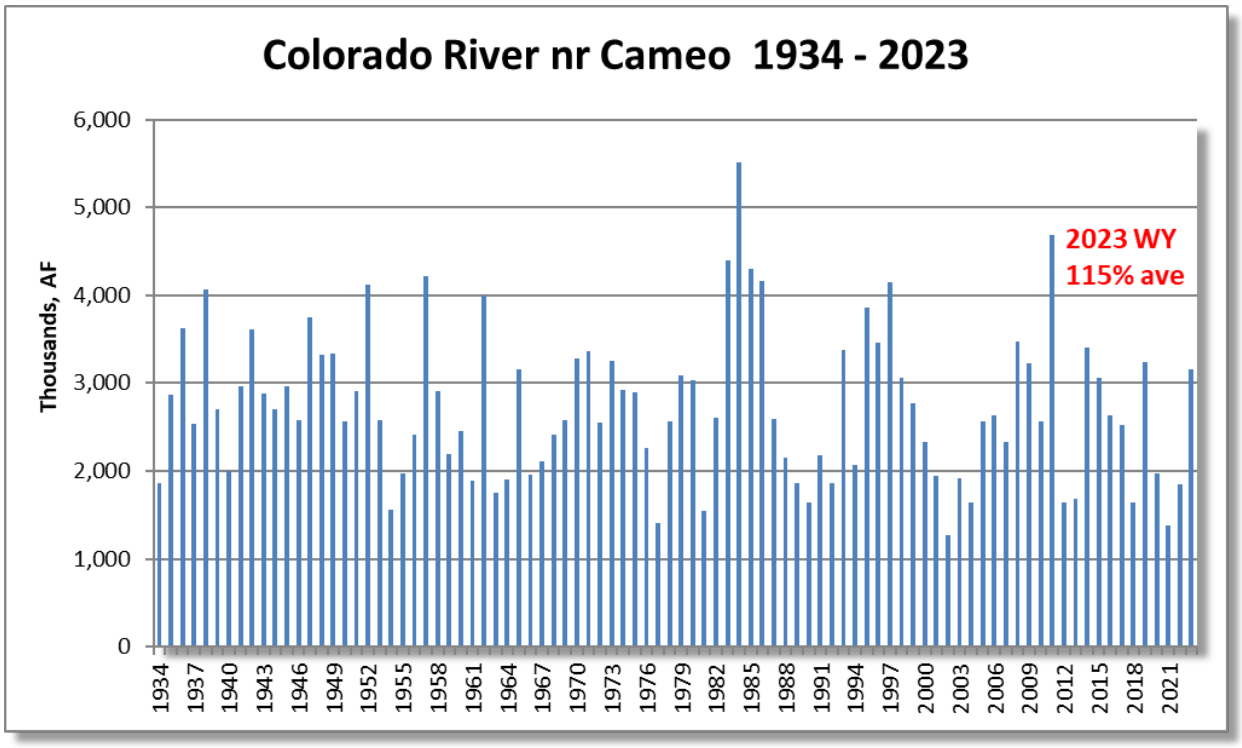




The 2023 water year ended with gaged flow for the Colorado River near Cameo ranking as the 26th wettest year in 90 years of record. The flow for the Colorado River near Dotsero ranked as the 33rd wettest in 82 years of record.

Below are the Colorado River near Dotsero and the Colorado River near Cameo gaged flow histograms for comparison of the 2023 water year with previous years of record.



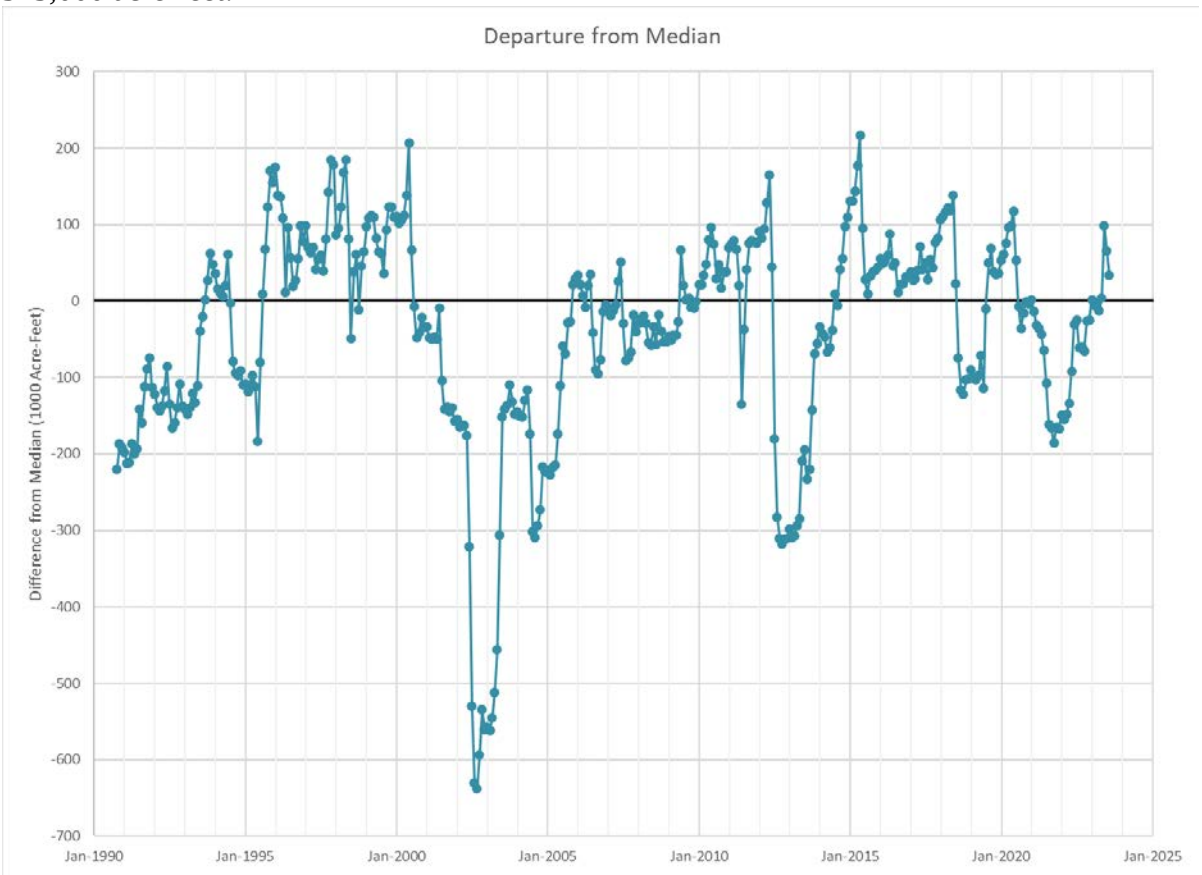


The 2023 water year began with storage in the basin's major reservoirs at about 66,000 acre-feet less than median and ended with slightly above average storage at about 23,000 acre-feet more than median. Comparison of end-of-year storage for each year, beginning with the extremely dry year of 2012, is 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	30-Sep 2023
Dillon Reservoir	198,924	245,855	247,209	251,680	249,814	245,197	199,825	244,919	235,500	212,700	214,300	228,630
Granby Reservoir	333,593	371,008	522,187	500,314	487,231	518,992	463,575	485,699	401,300	328,500	406,900	410,886
Green Mtn Res	76,719	107,058	115,215	112,410	107,507	106,317	70,430	117,751	88,200	69,400	97,900	107,740
Ruedi Reservoir	66,071	86,080	87,909	81,779	77,901	80,421	64,620	84,045	70,600	62,000	72,000	83,990
Williams Fork Res	48,379	73,041	88,275	88,530	81,544	75,384	80,870	81,938	82,100	66,600	63,100	84,075
Wolford Mtn Res	31,711	44,523	65,992	44,931	53,363	56,872	37,055	54,271	57,600	40,400	43,200	56,890
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	897,400	972,211

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 physically filled or were deemed full by their operators in 2023, except for Homestake Reservoir. 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	261,599	6/24/2023
Granby	543,758	536,060	7/21/2023
Green Mountain	154,645	152,634	7/21/2023
Homestake	43,505	34,868	8/6/2023
Rifle Gap	13,602	13,605	6/21/2023
Ruedi	102,369	102,124	8/2/2023
Williams Fork	96,822	97,304	7/2/2023
Wolford Mountain	65,993	66,684	6/17/2023
Vega	33,500	34,546	5/31/2023

In summary, the slightly above average runoff in 2023 for Water Division 5 was the result of above average snowpack, slightly depleted reservoirs needing to be filled, and significant May and June precipitation on the Front Range reducing the demand for transmountain diversions. Lower replacement obligations during the summer reduced reservoir releases resulting in slightly above average storage at the end of the irrigation season.

Surface Water Administration

Green Mountain Reservoir

During 2023, Green Mountain Reservoir was administered pursuant to the Green Mountain Reservoir Fill Protocol. As part of this administration, the Division Engineer filed a notice in Case No. 2013CW3077 and emailed the Division 5 SWSP and Colorado River Mainstem Call notification lists informing interested parties that the Green Mountain Reservoir Fill Protocol would be utilized and seeking input from them if they had concerns. This process was utilized in past years, and in 2023, the City of Golden and Snake River Water District expressed concerns. This was the first time any party had expressed concerns with administering the Green Mountain Reservoir Fill Protocol. The Division Engineer met with representatives from the City of Golden and Snake River Water District to take their concerns into consideration. The City of Golden and Snake River Water District did not provide evidence that they would be injured with their initial communication or at the meeting. The Division Engineer requested evidence to support the City of Golden's and Snake River Water District's claims of injury. No such evidence was provided; therefore, the Green Mountain Reservoir Fill Protocol was utilized in administering water rights in 2023.

A critical principle of the protocol is a "Fill Plan" prepared by the USBR, allowing the Green Mountain Reservoir Powerplant to operate where storable inflows delivered to the powerplant do not account against a paper fill of the reservoir. With average to slightly above average conditions, projections indicated that undepleted inflow to Green Mountain was sufficient to fill the reservoir with some excess to operate the powerplant during the fill season. The preliminary 2023 Fill Plan was distributed via email on April 7, 2023, and allocated 112.6 KAF of Green

Mountain's inflows to power that were projected to be in excess of the 78 KAF required to complete a fill of the reservoir anticipated on July 9th. With inflow allocated to power, Denver Water and Colorado Springs Utilities diverted pursuant to their rights as interference to the Green Mountain Reservoir Powerplant 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 2023, the start of fill was declared on May 5th. Typically, once the Shoshone Power Plant call goes off the river, Green Mountain Reservoir will exercise its refill rights to store water prior to the declaration of start of fill. This year's operations were complicated by Shoshone Power Plant operations. One of the Shoshone Power Plant units went down on February 23rd and natural flows remained below the generating capacity of the one online unit until February 28th. The call remained on through February 27th and on the 28th, Shoshone Outage Protocol (ShOP) operations began, and ShOP remained on through the remainder of the year. On April 10th flows were sufficient allowing ShOP bypass and release operations to stop through the runoff season and allowing Green Mountain Reservoir's senior refill right to begin refilling the reservoir. During April, flows were sufficient at Cameo to meet the irrigation demands of the Grand Valley Irrigators keeping the call at Cameo off. With sufficient flows in the system, the 1985 junior refill right at Green Mountain was exercised from April 29th through May 4th, the day before start of fill.

To further complicate this year's fill season, one of the powerplant units at Green Mountain Reservoir was offline for maintenance on the unit and the penstock. The maintenance limited the amount of water that could be utilized to generate power while maintaining the call on the Blue River. Had both units been available to generate power, it is unlikely that water would have been bypassed over the spillway. Runoff forecasts were sufficiently close that the rate of fill at Green Mountain Reservoir could have been managed if both hydropower units were available.

On June 12th, the one available unit was at maximum generating capacity and the reservoir's fill rate began increasing. On June 21st, Green Mountain Reservoir began bypassing water over the spillway to slow the rate of fill and the call on the Blue River was taken off. On June 25th, the Green Mountain Reservoir 154,645 acre-foot first fill storage right was declared satisfied pursuant to the Green Mountain Fill Protocol. Due to continued spill of storable inflows, the senior refill right was paper filled on July 1st. Also on July 1st, Green Mountain Reservoir achieved a physical fill ending the fill season. With the reservoir achieving a physical fill this year, Denver and Colorado Springs did not have a substitution obligation. Green Mountain Reservoir continued to bypass over the spillway until July 19th when the spill stopped and the 1985 junior refill priority was utilized to call out junior water rights on the Blue River while generating power with the one available unit. This call remained on (except for August 3rd when the spillway was utilized to pass high inflows from a rain event) until September 7th, when the Cameo call was placed, allowing for additional utilization of water by upstream water rights on the Blue River. On September 7th, the Green Mountain Reservoir Powerplant exercised the 1946 priority call to maximize power generation the remainder of the season. ShOP operations restarted on August 11th requiring bypasses and releases at Green Mountain Reservoir, which continued for the remainder of the season.

Shoshone Power Plant

The Shoshone Power Plant was offline a significant portion of the 2023 irrigation year. Inspections of the Shoshone diversion dam had the plant offline starting on October 24, 2022, through November 3rd. On February 23, 2023, one unit went offline and remained offline the remainder of the year. On May 1st, a rock fall occurred near the power plant and a mudslide occurred near the diversion dam causing the plant to be taken completely offline on May 3rd. Rock fall mitigation efforts continued for the remainder of the season and the plant remained completely offline. ShOP was implemented during the outages and parties to the protocol operated to maintain 1250 cfs at the Dotsero Gage. Due to higher flows during the runoff season, ShOP bypass and release operations were not required from April 10th through August 10th. On August 11th ShOP operations began again and continued through the remainder of the irrigation year. There was a total of 116 call days by the Shoshone Power Plant during the 2023 irrigation year.

On December 19, 2023, the Colorado River Water Conservation District entered into a purchase agreement with Xcel Energy to purchase the Shoshone Power Plant water rights.

Mainstem Administration and Operation of the OMID Check Case

Each of the past three years the Shoshone Power Plant was down in April, and ShOP was implemented. However, in 2023 the snowpack was above average, and the western part of the basin had above average snowpack providing sufficient streamflow to meet the irrigation demand in the Grand Valley as temperatures warmed in April. 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 February 23rd through the end of the year. Therefore, there was no call placed at Shoshone Power Plant during the irrigation season.

ShOP operations this year did not impact the timing of the Cameo Call. The Cameo Call was initially placed on September 7th. Cooler and wetter weather allowed the call to come back off on September 11th for a week. The call went back on September 18th and remained on through October 11th. On October 12th the first winter storm of the season rolled in bringing significant precipitation, increasing streamflow, and decreasing irrigation demands allowing for the Cameo Call to go off and remain off for the remainder of the season. With the call off, a portion of the Green Mountain Reservoir Historic Users Pool (HUP) was preserved for use in the spring of 2024.

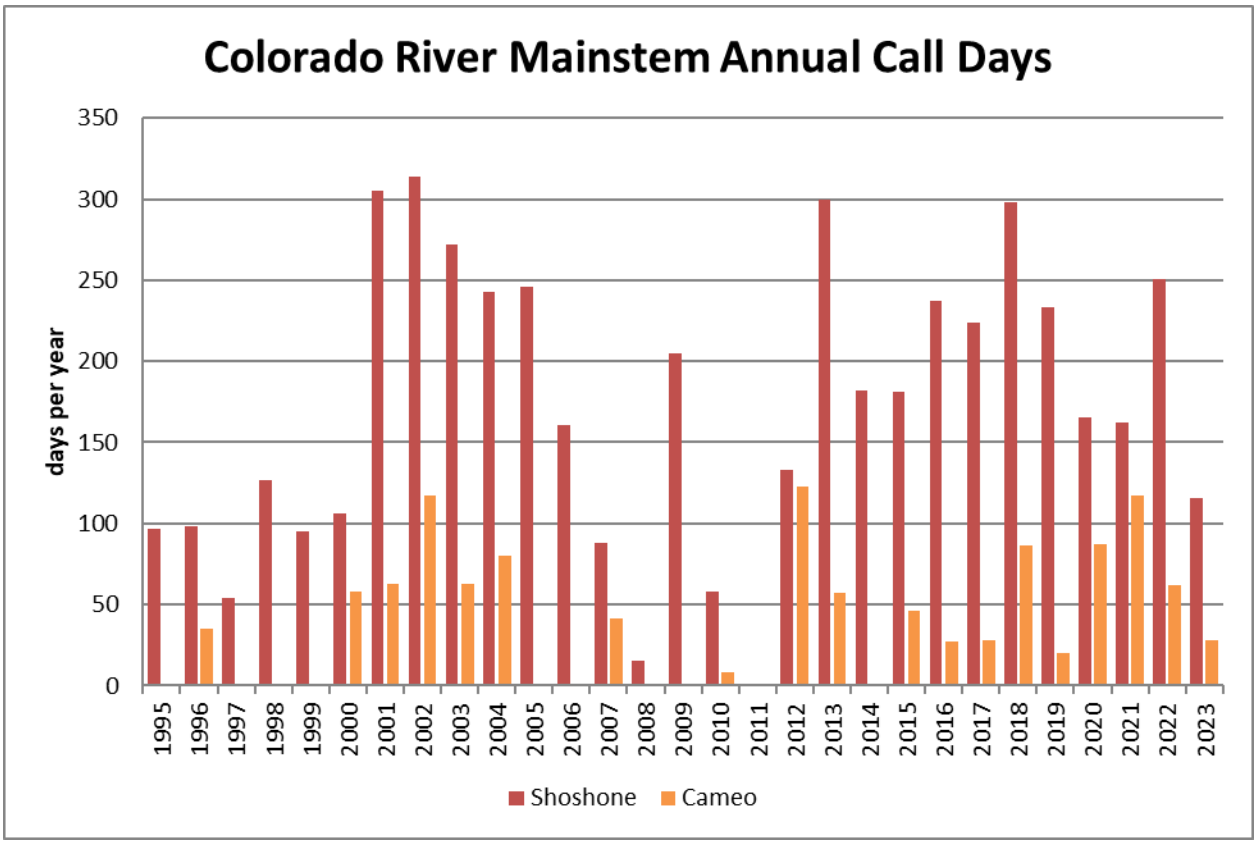
SUMMARY OF COLORADO RIVER MAINSTEM CALLS
2023 IRRIGATION YEAR

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

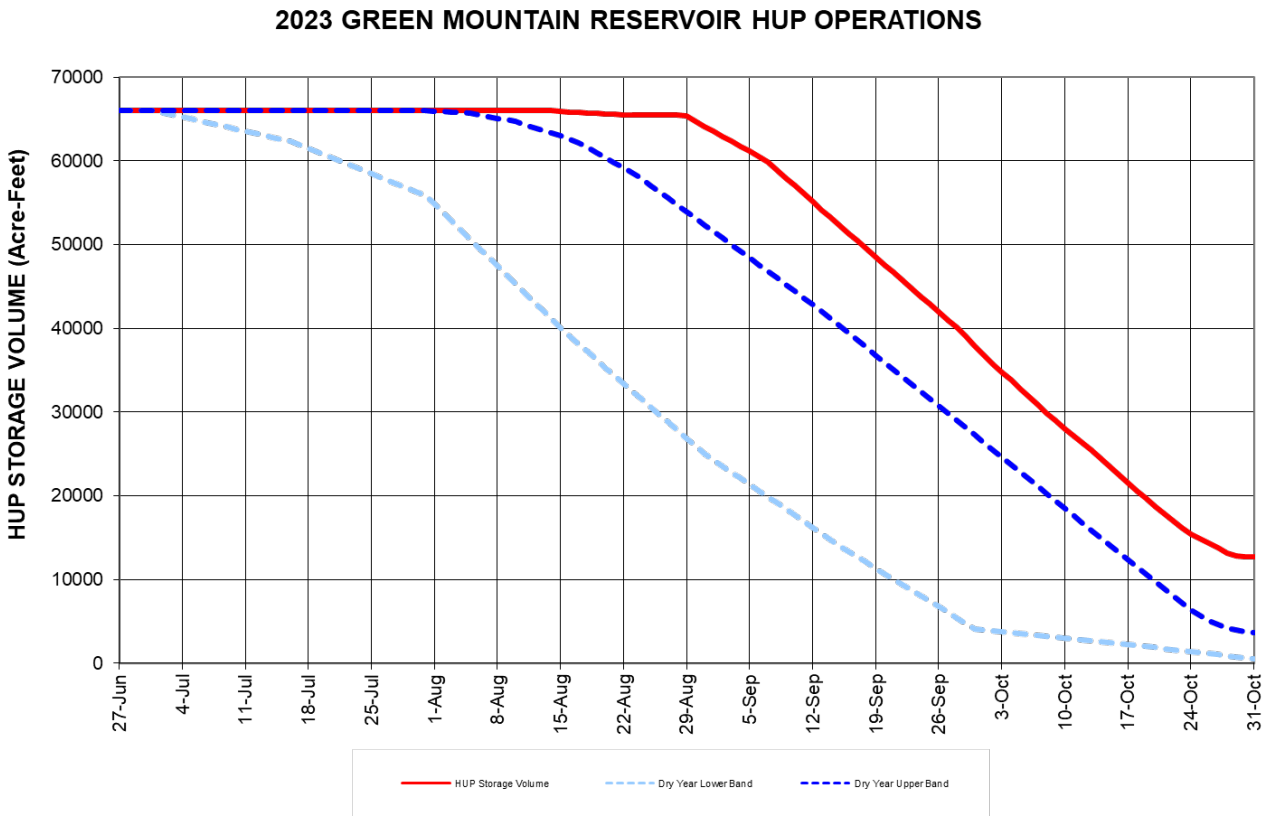
DATE ON	THROUGH	NO. DAYS CALL ON/OFF	CALLING LOCATION	SWING PRIORITY	SWING PRIORITY ADMIN. NO.	COMMENTS
11-01-22	11-03-22	3	Free River	---	---	ShOP 11-01-22 through 11-03-22
11-04-22	02-27-23	116	Shoshone Power Plant	---	20427.18999	
02-28-23	09-06-23	191	Free River	---	---	ShOP 02-28-23 through 10-31-23
09-07-23	09-10-23	4	Grand Valley Canal	Con-Hoosier Tunnel	35927.00000	ShOP 02-28-23 through 10-31-23
09-11-23	09-17-23	7	Free River	---	---	ShOP 02-28-23 through 10-31-23
09-18-23	09-21-23	4	Grand Valley Canal	Silt Pump Canal	39041.00000	ShOP 02-28-23 through 10-31-23
09-22-23	09-29-23	8	Grand Valley Canal	---	30895.23491	ShOP 02-28-23 through 10-31-23
09-30-23	10-02-23	3	Grand Valley Canal	Grand Valley Project	22729.21241	ShOP 02-28-23 through 10-31-23
10-03-23	10-11-22	9	Grand Valley Canal	---	30895.23491	ShOP 02-28-23 through 10-31-23
10-12-23	10-31-23	20	Free River	---	---	ShOP 02-28-23 through 10-31-23

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
11-01-22	09-06-23	310	Free River	---	---	
09-07-23	09-10-23	4	Grand Valley Canal	Con-Hoosier Tunnel	35927.00000	
09-11-23	09-17-23	7	Free River	---	---	
09-18-23	09-21-23	4	Grand Valley Canal	Silt Pump Canal	39041.00000	
09-22-23	09-29-23	8	Grand Valley Canal	---	30895.23491	
09-30-23	10-02-23	3	Grand Valley Canal	Grand Valley Project	22729.21241	
10-03-23	10-11-23	9	Grand Valley Canal	---	30895.23491	
10-12-23	10-31-23	20	Free River	---	---	

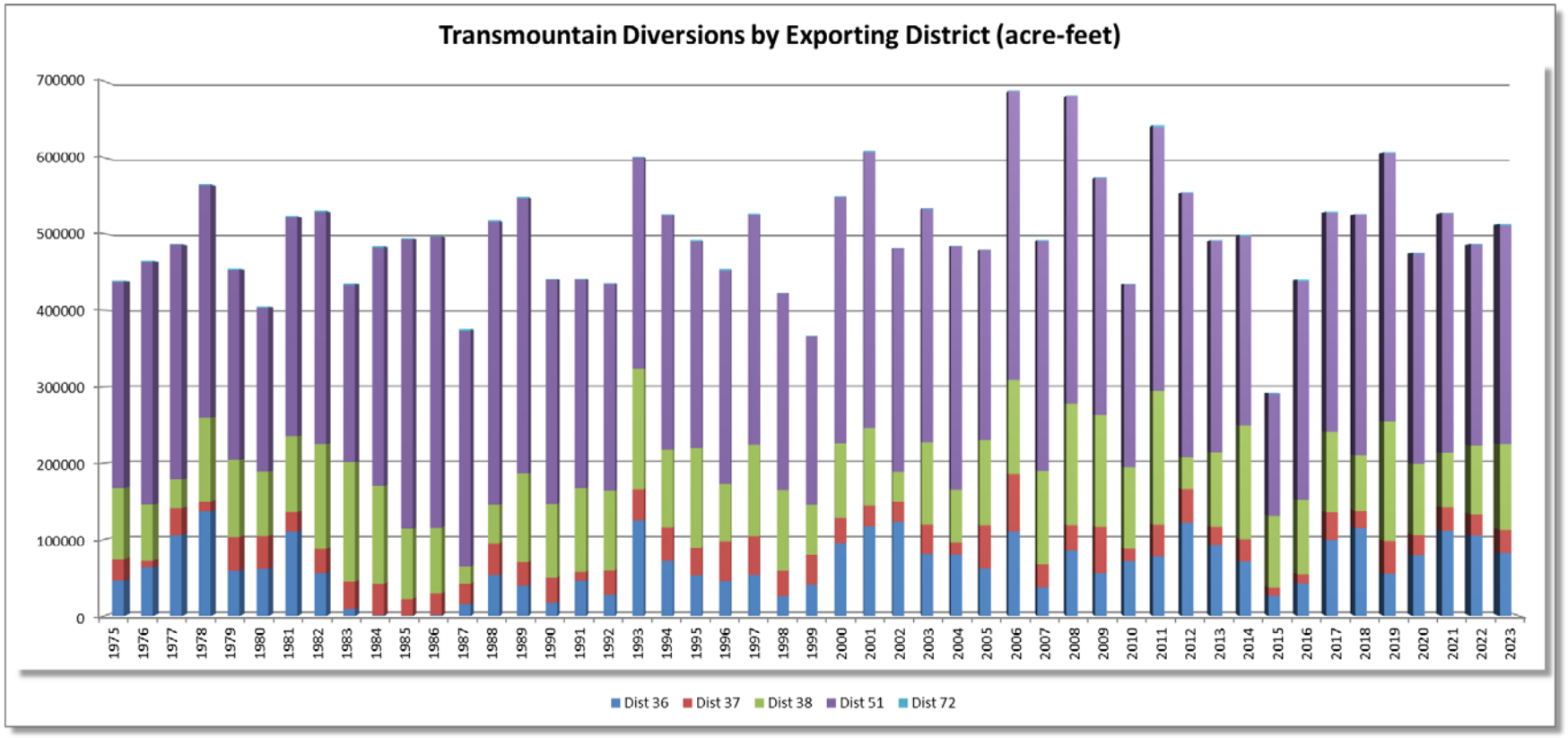


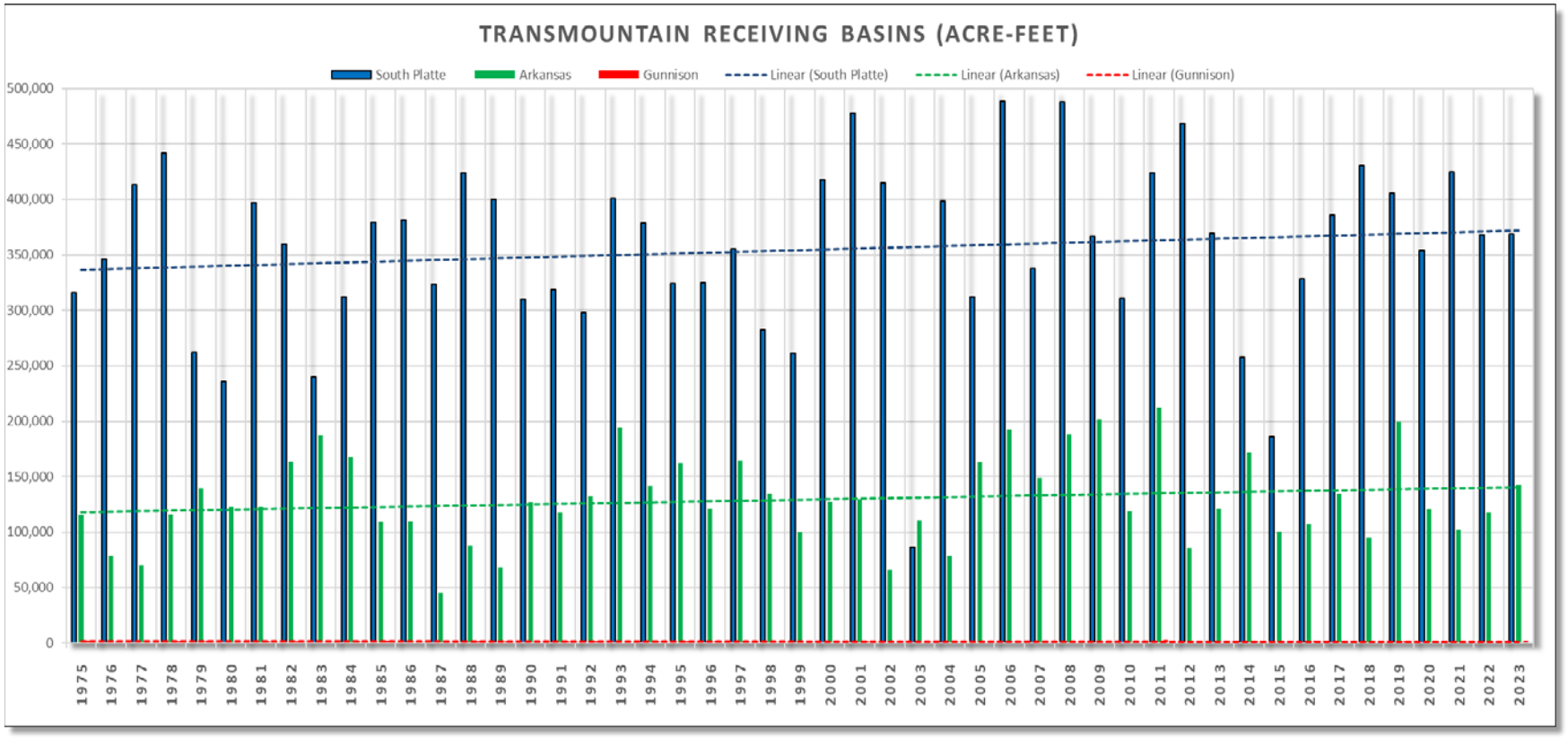
Releases from the HUP for beneficiaries were above the drawdown curves of the stipulation in the OMID "check case" the entire season. The HUP managing entities declared that there was surplus HUP water on August 30, 2023. Total HUP releases for beneficiaries was 8,483 acre-feet (including releases under ShOP). Surplus releases for the 15-Mile Reach totaled 45,557 acre-feet. The irrigation year ended with 12,197 acre-feet of HUP remaining above the 500 acre-feet minimum needed for winter replacements above Shoshone. October surplus releases continued even as streamflows increased due to the year being characterized as a wet year, which has a high streamflow target of 1,630 cfs for the endangered fish recovery program.



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 2023 were 513,229 acre-feet. The volume is 26 KAF more than what was diverted in 2022, and more than the averages for the 1975-2023 period of 484,923 acre-feet and the 30-year average of 496,469 acre-feet. Several factors lead to lower diversions for the TMDs than otherwise would have occurred. Above average runoff conditions provided available supply, however, high runoff and rains on the Front Range also kept water rights in priority in the South Platte and Arkansas river basins significantly reducing the demand for transmountain diversions during runoff. 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. With the anticipated spill of Gramby Reservoir, Windy Gap did not pump this year.


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 2023
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 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 2023

Surface Water Administration of Tributaries

The majority of Division 5's surface water administration, as measured by staff hours and operating costs, has and 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 2023 was 121. This is a decrease from the 182 in 2022, 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. Time is also allocated to administration of 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 those decreed for hydropower or instream flows.

Orders pursuant to C.R.S. § 37-92-502

No administrative orders were issued in 2023. 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 fully prosecute the order to completion through the Attorney General's Office and Water Court, as necessary.

This process has reduced the number of orders and resources spent enforcing them, while also getting water users back into compliance. We intend to continue using the process outlined above.

Augmentation Plan Administration

The Augmentation Plan Team assisted administration efforts by sending 26 written communications and attending 9 meetings/site visits. The type and severity of deficiencies that were addressed varied widely across Division 5, 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.

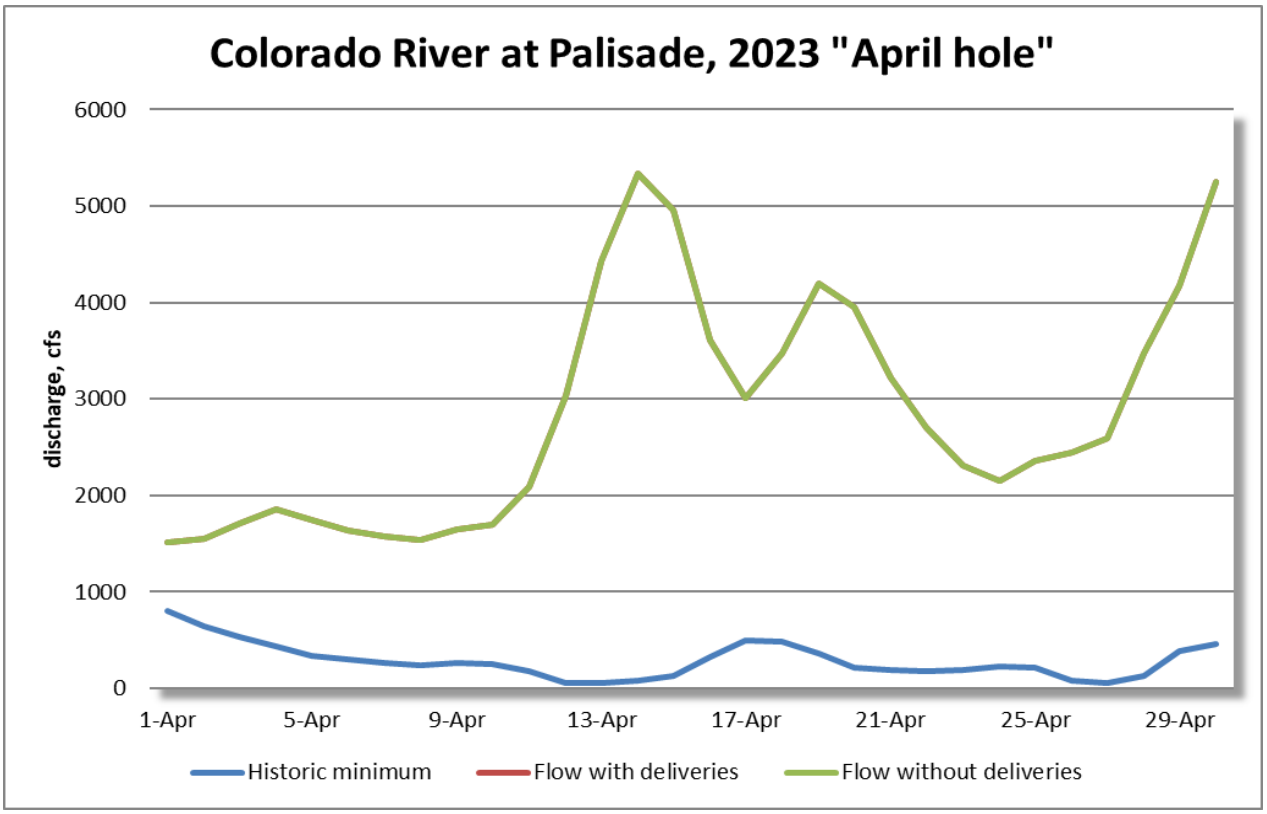
Administrative Exchanges

Ten (10) administrative exchanges were approved pursuant to C.R.S. § 37-83-104 in Division 5 for the 2023 Irrigation Year. The requested exchanges included several that have been approved in prior years for Clinton Reservoir (flood control), Grand County Road and Bridge, West Divide Water Conservancy District (West Divide), and three irrigation operations. One exchange was for pumping operations from streams for snowmaking purposes. One exchange was to move water from Granby Reservoir to Williams Fork Reservoir in August to help with water temperatures in Grand County and then release the water to the 15-Mile Reach later in the season to supplement streamflow for the endangered fish. The final two approvals were 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 has been utilized in subsequent years to help guide the use of available reservoir storage to enhance the flows in the 15-Mile Reach.

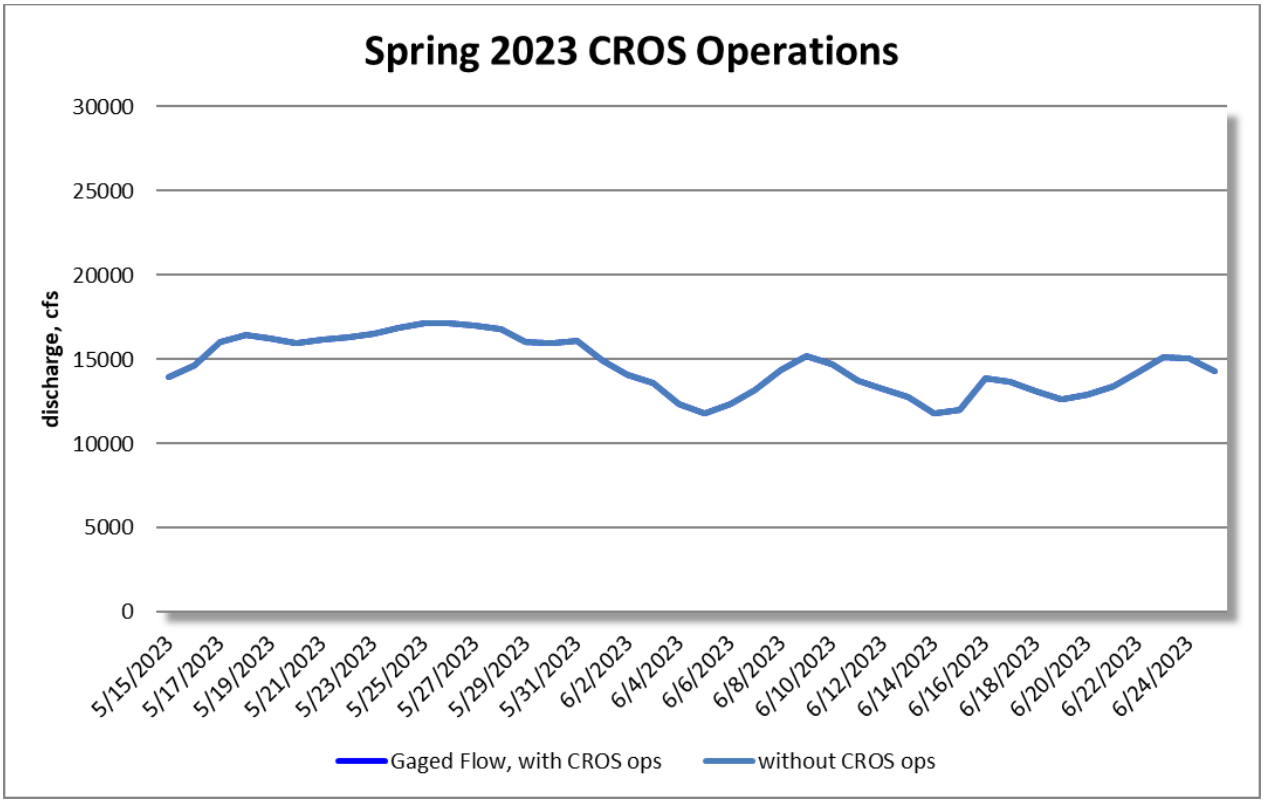
Planning of reservoir releases to enhance the flows in the 15-Mile Reach begins in March at the HUP wrap-up meeting for the prior year. The discussions at that time of the year focus on planning to mitigate April Hole conditions if they occur. The graph below depicts the April 2023 flows compared to the historic minimum. In April 2023, no HUP surplus water was released to the 15-Mile Reach due to sufficiently high flows.



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.

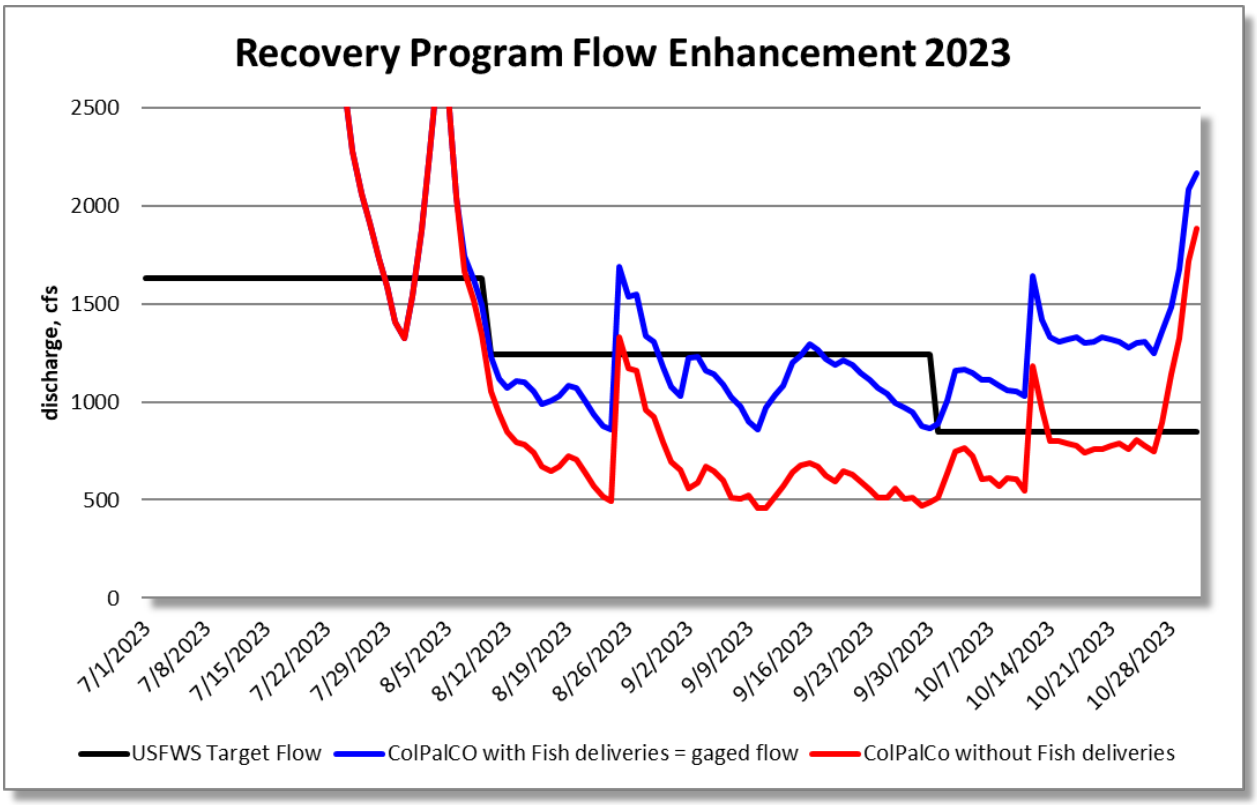
CROS operations did not occur in 2023. Early in the season, reservoir operators were not confident that they would be able to fill their reservoirs. There were also concerns about the of timing CROS to ensure that operations occurred after the Gunnison River peaked to keep flows below the confluence within the riverbanks. The May and June rains on the Front Range reduced the municipal and irrigation demands causing lower transmountain diversions, which allowed the

reservoirs to fill and spill. However, by the time there was confidence in filling the reservoirs, the hydrologic peak had already past, and a second peak was created naturally when the reservoirs spilled. The peak day for the Colorado River near Cameo was 16,900 cfs on May 24th. The operation of CROS is summarized graphically below.



With the above average snowpack and strong runoff, Ruedi Reservoir filled, therefore the 4 out of 5-year pool was available. After the fill season, it appeared likely that an HUP surplus declaration would be made. HUP surplus declaration occurred on August 30, 2023. In 2023, 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 initially set at the wet year target of 1,630 cfs. The wet year target is unattainable with the limited reservoir storage dedicated to the Recovery Program unless runoff persists followed closely by continuous above normal monsoonal precipitation in the summer, which did not occur in 2023. Having to manage a limited amount of water available to supplement flows in the 15-Mile Reach, the USF&WS adjusted the flow target twice to better represent realistically achievable targets. These adjustments occurred in early August down to 1,240 cfs and the beginning of October down to 850 cfs. With the 1,630 cfs target being set during the runoff period, for most of the days it was met. Post runoff, the target of 1,240 cfs was utilized and was rarely met as the reservoir supplies were being rationed to last the entire season. Towards the end of the season when 850 cfs was the target, it was consistently met by the reservoir releases supported by reduced diversion demands and increased flow from precipitation events. The Recovery Program received water from pools in Ruedi, Wolford Mountain, and Granby reservoirs, along with releases in August, 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 74,640 acre-feet, with a maximum daily delivery of 667 cfs on September 2nd. Without deliveries, the minimum flow would have been 457 cfs on September 11th.



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 took advantage of the SWSP, which would allow them the ability temporarily repermit their well to include 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 2023, the new normal is to have either in person or remote meetings with a few offering hybrid options. 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. The River District went back to hosting their State of the River meetings in person in the spring, which several staff members attended and some were invited to present. The River District's Annual Symposium in the fall was also attended in person by staff.

Water Court

For 2023, there were 225 new and 15 amended Water Court applications for a total of 240 applications. This is more than the 152 filed in 2022. Division 5 submitted 198 Summary of Consultation Reports to the Water Court in 2023, 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 two 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, one was filed in 2023.

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 2023, the case progressed through additional legal briefings and the Court entered an order on June 29, 2023, partially granting and partially denying our motion to dismiss. With only a partial order in our favor, the case remained active throughout 2023.

Division 5 Water Court case 2013CW3077 in the interest of the United States relating to the Green Mountain Reservoir Administrative Protocol was pending in front of the Supreme Court during 2023 in Case No. 22SA317. The case was fully briefed and oral arguments were held on September 20, 2023. By the end of 2023, the Supreme Court had not yet entered an order.

Water Judge and Chief Judge James Boyd retired on June 30, 2023, and Judge Christopher Seldin was selected as the replacement Water Judge in Division 5.

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 in 2022 to resolve the protests and enter into stipulations. In 2022, the protestant withdrew the protest in Case No. 2022CW3048. In 2023, Case Nos. 2022CW3024, 2022CW3036, 2022CW3057, and 2022CW3068 were resolved through withdrawal or stipulation. At the end of 2023, Case No. 2022CW3072 was the only outstanding case, which was in the process of finalizing stipulation language and avoiding a trial.

Shoshone Power Plant Water Rights Purchase

On December 19, 2023, after several decades of effort, the Colorado River Water Conservation District and Xcel Energy entered into a purchase agreement for the River District to purchase the Shoshone water rights. Based on our meetings with the River District in October and December, the River District is seeking to preserve the status quo in administration of the river by purchasing and changing the Shoshone water rights to also be used for instream flow purposes within the stream reach between the Shoshone Power Plant's diversion dam and tailrace. The Shoshone water rights are senior to most of the transmountain diversion projects upstream and with the power plant operations being non-consumptive, when the call is placed it brings significant flow down from the upper portion of the basin for recreational, environmental, and subsequent uses on the mainstem Colorado River below the power plant. Currently, the Shoshone Outage Protocol is utilized to maintain the status quo of streamflow when the power plant is unable to call for its water rights. However, there are opt out provisions and an end date to the Shoshone Outage Protocol. The River District is concerned with the increased prolonged outages at the power plant in recent years and that Xcel Energy may decommission the power plant. If this were to occur and the Shoshone Outage Protocol was not able to be renewed, future streamflow conditions would change dramatically. The process to achieve the River District's goal of maintaining the streamflow status quo through a water court change of the Shoshone Power Plant water rights will likely take several years to prosecute. Significant time will be spent negotiating with Front Range and West Slope entities who get into the case to ensure their operations are not injured by such a change.

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 remained steady during 2023 receiving 800 applications with 786 water well permits approved. The approvals issued in 2023 include: 562 production well permits, 152 monitoring/observation well permits, 54 monitoring hole notice of intents, 12 geothermal, 5 gravel pits, and 1 dewatering well. This compares to 751

applications received and 729 permits issued in 2022. Drilling activity remained steady with 411 Well Construction Reports received in 2023, inline with last year where 410 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 RICD,
- 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 final 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 on April 1, 2022, and is expected to be complete in 2026.

I respectfully submit the 2023 Annual Report on behalf of the Staff of Water Division 5, by

James R. Heath, Division Engineer
December 23, 2024