COLORADO
Parks and Wildlife
Department of Natural Resources

Southeast Region
4255 Sinton Road
Colorado Springs, CO 80907

July 19, 2022

Via email

Kevin Rein
State Engineer
Colorado Division of Water Resources
1313 Sherman Street, Room 718
Denver, CO 80203
DWRpermitsonline@state.co.us
Kevin.Rein@state.co.us

Bill Tyner
Division Engineer, Water Division 2
Colorado Division of Water Resources
310 E. Abriendo Ave, Suite B
Pueblo, CO 81004
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RE: Request for Approval of Expedited Loan of Water to the Colorado Water Conservation Board for Instream Flow Purposes

Dear State Engineer Rein and Division Engineer Tyner:

The following is a request for approval of a temporary, expedited loan of water from Colorado Parks and Wildlife (CPW) to the Colorado Water Conservation Board (CWCB) for instream flow purposes pursuant to § 37-83-105, C.R.S. (2020).

Overview of Proposed Loan

CPW requests approval to temporarily loan a portion of its water right decreed to the Cottonwood Irrigating Ditch No. 1 on Cottonwood Creek (the "CID Water Right") to the CWCB to benefit its decreed instream flow water right on Cottonwood Creek (the "Instream Flow Right"). The loan will provide water to CWCB for instream flow use to preserve the natural environment to a reasonable degree. *See* § 37-83-105(1)(b)(I). CPW seeks approval of this loan under the expedited loan process in § 37-83-105(2)(a)(III.7).

The Instream Flow Right is specifically described in the table below, and the decreed reach is shown on the map attached as Exhibit A.

Case No.	Stream	Amount (cfs)	Approp. Date	Upstream Terminus	Downstream Terminus
2-79CW115	Cottonwood Creek	20 cfs (1/1 – 12/31)	3/14/1979	Confluence of Middle and South Fork Cottonwood Creeks	Confluence of the Arkansas River

During a portion of the 2022 irrigation season, CPW proposes to cease diverting a portion of its CID Water Right to temporarily loan that same portion to the CWCB for instream flow use. Loaned water will be limited to the amount needed, when combined with the native flow, to meet all or part of the decreed flow rate of the Instream Flow Right within the decreed reach. CPW proposes to loan up to 0.97 cfs of its CID Water Right, which is decreed for a total of 3.8 cfs. The proposed loan would operate, in CPW's discretion, for a period of approximately 30 to 60 days sometime during August through the end of September when flows in Cottonwood Creek fall below the required instream flow rate and water temperatures are high, causing extremely stressful conditions for the fish community. In 2022 CPW will divert its full CID Water Right for irrigation except when the loan to the Instream Flow Right is occurring. Following the cessation of high stream temperatures and the critical risk period for fish, CPW will stop exercising the loan and resume irrigation.

Legal Right to Use Water

CPW's CID Water Right was decreed in C.A. 1127 and is described in more detail below. CWCB and CPW will enter into an Interagency Agreement to Loan Water for Instream Flow Use in substantially similar form to the draft Loan Agreement attached hereto as Exhibit B. As the lawful owner of its CID Water Right, CPW has the right to loan the water to CWCB. The pertinent pages from the final decrees for the CID Water Right in C.A. 1127 and the Instream Flow Right in Case No. 2-79CW115 are attached hereto as Exhibit C.

Duration of Loan

The expedited loan would have a term of up to one year. § 37-83-105(2)(a)(III.7). The loan period begins when the state engineer approves the expedited loan. *Id.* If the expedited loan is approved, CPW may not reapply for a second expedited loan of the CID Water Right. Water may be used for instream flows pursuant to this loan for up to 120 days in a calendar year. § 37-83-105(2)(a).

Description of the CID Water Right

The Cottonwood Irrigating Ditch No. 1 ("CID No. 1") is an active diversion structure located on Cottonwood Creek, approximately four miles upstream of the town of Buena Vista. *See* Exhibit A. CPW owns a total of 3.8 cfs decreed to the CID No. 1: 1.2 cfs is attributed to Priority No. 15, and 2.6 cfs is attributed to Priority No. 43. The CID Water Right is currently used to irrigate portions of CPW's Buena Vista State Wildlife Area Hay Barn Property as shown on Exhibits A and D.

Original Point of Diversion

CID No. 1's point of diversion, as originally described, is located on the south bank of Cottonwood Creek in the SW1/2 of the NE1/4 of Section 13, Township 14 S, Range 79 West, 6th Principal Meridian.

Time, Place, and Types of Use of the Loaned Water Right

CID No. 1 was originally decreed for irrigation. Subsequent decrees have changed certain portions of the water right to include alternate points of diversion, augmentation, and other uses. CPW's CID Water Right has not been changed and remains in active use for irrigation on the Hay Barn Property. The property is divided into three main sections: the Eastern, Central, and Western Meadows, as shown on Exhibit D.

The historic irrigation season on the Hay Barn Property extends from mid-April through the end of October. CPW actively flood irrigates the two areas known as the Eastern Meadow (33 acres) and the Central Meadow (26 acres). *See* Exhibit D. Pasture grass is irrigated by CPW for a grazing lease CPW operates during the month of July, as well as forage for wildlife in the late summer and fall.

The proposed loan will not impact irrigation practices on the Western Meadow portion of the Hay Barn Property. This area has been historically irrigated by a combination of mechanisms including direct flood irrigation and subsurface irrigation from the locally elevated groundwater table that is supplied by the ditch. Since the Western Meadow is irrigated, in part, by water that seeps from the ditch as water is delivered further downstream, in order to cease irrigating this area, CPW would likely need to line that portion of the ditch. Such lining is not being contemplated at this time and therefore the Western Meadow will continue to be irrigated according to historic practice with no changes to the amount or timing or return flows or the amount of consumptive use. The portion of CPW's CID Water Right associated with the Western Meadow will not be included in this expedited loan.

Return Flow Pattern

The pattern of historic return flows from the Hay Barn Property will be similar in timing and location to those from the subject property of Case Nos. 79CW0172 and 19CW3089, which is known as the Ludwig Property. CPW's Hay Barn Property is approximately one mile further down the CID No. 1 than the Ludwig Property and is also downgradient of said property with respect to both the surface runoff patterns and groundwater flow patterns. The engineering report prepared by Colorado River Engineering (CRE) in Case No. 19CW3089, dated May 29, 2020, and CRE's updated report, dated April 30, 2021, indicate that return flows associated with both surface runoff and deep percolation accrue to the mainstem Arkansas River. Previous work by Watts, et al.[1] demonstrates that both the surface runoff patterns and groundwater flow patterns accrue to the mainstem Arkansas River in the area where the Ludwig and Hay Barn Properties are situated.

The Glover Analysis performed for the Ludwig Property by CRE indicates that lagged return flows will take up to 113 months to reach the mainstem Arkansas River. The largest impacts occur in months 11 through 22 and are on the order of 2 to 3 percent of the initial volume of return flow water. CPW performed a Glover Analysis using the same aquifer properties as shown in the CRE report, namely a transmissivity of 39,900 gallons per day per foot, a specific yield of 0.2 (unitless), and an aquifer boundary of 8,310 feet; the distance from the location of irrigation to the Arkansas River was adjusted for the Hay Barn Property, which was determined to be 4,000 feet based on the approximate centroid of the Central and Eastern Meadows. The Unit Response Function associated with the deep percolation return flows is shown in Exhibit E. This demonstrates a similar pattern to that of the Ludwig Property in that the return flows take many years to accrue to the river and are significantly dampened over time. The estimated maximum volumetric impacts based on the potential maximum deep percolation obligation (associated with continuous operation at a rate of 0.88 cfs for 60 days, commensurate with a consumptive use rate of 0.59 cfs) are shown in Exhibit E. The maximum instantaneous accretion rate associated with these deep percolation return flows is 0.08 cfs.

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[1] Watts, K.R., 2005, Hydrogeology and quality of ground water in the upper Arkansas River Basin from Buena Vista to Salida, Colorado, 2000–2003: U.S. Geological Survey Scientific Investigations Report 2005–5179, 61 p.
Watts, K.R., Ivahnenko, Tamara, Stogner, R.W., and Bruce, J.F., 2014, Groundwater and surface-water interaction and potential for underground water storage in the Buena Vista-Salida Basin, Chaffee County, Colorado, 2011: U.S. Geological Survey Scientific Investigations Report 2014–5095, 63 p., http://dx.doi.org/10.3133/sir20145095.

Description of Use of Loaned Water Right: New Points of Diversion, Return Flow Pattern, Stream Reach, and Time, Place, and Types of Use of the Loaned Water Right

If approved, this expedited loan will be for a split-season operation that allows CPW to perform its typical irrigation practices from the beginning of the 2022 irrigation season through early August. By sometime in early August, CPW will cease diverting up to 0.97 cfs of its CID Water Right, and it will loan that same portion to the CWCB to be used for instream flow purposes in Cottonwood Creek. Of CPW's remaining portion of CID shares, 1.53 cfs will continue to be diverted to irrigate the Western Meadow, and 0.42 cfs will be supplied to the ditch to compensate for the historic ditch losses that occurred from delivery of water to the Eastern and Central Meadows. The duration of the loan to CWCB for instream flow purposes will be up to 60 days, sometime in the period between August 1 and September 30. The exact timing and duration of the loan will be determined at CPW's discretion based on streamflow conditions, air and water temperatures, and professional judgment regarding environmental stressors to the fishery. After the lease has been exercised, CPW will resume diversions of the loaned portion of the CID Water Right for irrigation to allow regrowth for fall wildlife forage.

By loaning the amount of water typically used on the Central and Eastern Meadows to CWCB, up to 0.59 cfs of consumptive use can be dedicated to Cottonwood Creek for instream flow purposes. The return flow obligations total 1.26 cfs of which 0.38 cfs is surface returns and the remainder, 0.88 cfs, is deep percolation. CPW is proposing the surface return flow obligations be administered via Cottonwood Creek to the point of historic accretions on the mainstem Arkansas River, potentially generating 0.38 cfs of additional flow during critical periods. CPW is proposing to make replacements for deep percolation by delivering 0.88 cfs down CID No. 1, physically ensuring the deep percolation return flows enter the groundwater table in the same vicinity as their historic point of entry. Details of the analysis and proposed operation are provided below.

CPW proposes to supply the surface return flow obligations to the mainstem Arkansas River by shepherding said flow down Cottonwood Creek to the tributary with the mainstem Arkansas River. These returns historically accrued to the mainstem almost immediately after delivery to the field for irrigation, and therefore are owed to the mainstem in the same month in which the diversions are made. Regarding return flows associated with the new use of the loaned water, such loaned water will be used for instream flows and thus remain in the stream.

CPW proposes replacing the deep percolation return flows by delivering them down the CID No. 1. We assume the additional water will be left in the ditch (not

consumed by downstream users), allowing the return flows to infiltrate in the same general vicinity as the historically irrigated lands. This method of delivery will prevent new depletions from occurring. CPW does not intend to design and construct a designated recharge structure. CPW hopes to minimize the onsite disturbance and activity required to achieve a suitable recharge zone. CPW intends to allow the deep percolation return flows to seep into the ground via the ditch. If necessary, CPW will make simple, temporary site modifications to ensure sufficient seepage occurs to meet the deep percolation return flow requirements without impacting downstream water users. Since a portion of water will not be diverted down the CID No. 1, the travel time in the ditch will increase and the loss rate per mile may increase as well. The Western Meadow is already saturated, and any additional water applied in that area will immediately co-mingle with existing waters that are in equilibrium with the local water table, resulting in a slight increase to the pressure head and thus an increase to the flowrate through the local water table to the regional aquifer/water table. The water table in the Western Meadow is artificially increased by the pipeline and embankment that divides it from the Central Meadow.

CPW will continue making deliveries to the Western Meadow as well as supplying the historic ditch loss associated with the Central and Eastern Meadows. A complete balance of the various portions of the diversion are summarized below in the Administration section.

Reasonable Estimate of Historic Consumptive Use of Loaned Water Right

To develop a reasonable estimate of historical consumptive use, CPW considered the data and information provided in Case Nos. 79CW0172 and 19CW3089 for the Ludwig Property. The Ludwig Property was historically irrigated primarily for pasture grass through flood irrigation techniques. The Central and Eastern Meadows of the Hay Barn Property are also irrigated using flood irrigation techniques to produce pasture grass to support the grazing lease and fall wildlife forage. Case No. 79CW0172 established that 1 cfs from the CID No. 1 headgate was used to irrigate 26 acres of the Ludwig Property. Ditch loss was estimated to be 8% per mile or approximately 11% of headgate diversions, irrigation application efficiency was estimated as 50% of the delivered water, and the remaining 50% was parsed between surface runoff and deep percolation return flows at 30% and 70%, respectively. The Hay Barn Property is approximately one mile further downstream on the CID No. 1; therefore, the ditch loss is estimated to be 18.4%. Irrigation efficiency and return flow distribution for the Hay Barn Property are assumed to be the same as those for the Ludwig Property.

The historical consumptive use analysis for the Ludwig Property shows the senior Priority No. 15 diversions were typically not sufficient to meet the pasture grass irrigation requirements. During the months of June, July, August, and September,

all of the irrigation water from the senior priority that was available to the crop was consumptively used, i.e., the crop consumptive use was equal to the irrigation application efficiency of 50%. In the analysis of the Ludwig Property, the junior Priority No. 43 was shown to satisfy the remaining crop consumptive use in these months. During the months of August and September, which is when this expedited loan will be exercised, the average percentage of Priority No. 43 water delivered to the field that was used consumptively by the pasture grass was approximately 23%.

As with many of the ditches decreed in C.A. 1127, the duty of water for the CID No. 1 was established based on headgate delivery rates. Variations in individual farm deliveries based on the differences in ditch losses were not explicitly addressed. CPW believes it is reasonable and conservative to apply a similar approach to the Hay Barn Property for this expedited loan request. By applying the same ratio of irrigable acreage per headgate delivery as that used in Case No. 79CW0172, namely 26 acres per cubic foot per second diverted at the headgate, this analysis will inherently result in a lower consumptive use rate compared to a more refined site-specific analysis. For instance, a site-specific analysis would show a lower volume of the senior priority is delivered per acre, and therefore less of the total consumptive use would be satisfied by the senior priority, resulting in a greater amount and higher percentage of the junior priority being used consumptively. CPW's CID Water Right is 3.8 cfs, allowing for irrigation of up to 98.8 acres. As noted above, 26 acres of the Central Meadow and 33 acres of the Eastern Meadows are flood irrigated, leaving water available for 39.8 acres of the Western Meadow to be irrigated. The Central and Eastern Meadows provide a combined 59 acres of irrigated pasture that will be taken out of service during the operating period of this expedited loan. This is associated with a diversion rate of 2.27 cfs. The remaining 1.53 cfs will remain dedicated to the Western Meadow. The following table summarizes by priority the estimated use, losses, and return flows associated with irrigation of the Central and Western Meadows of the Hay Barn Property, based on the above noted assumptions.

Consumptive Use Credits and Return Flows for the Loaned Portion of the Water Right (Central and Western Meadows)

	Headgate Diversion (cfs)	Ditch Loss (cfs)	Field Delivery (cfs)	Consumptive Use %	Potential CU Credits (cfs)	Total Returns (cfs)	Surface Runoff (cfs)	Deep Percolation (cfs)
Priority 15	0.72	0.13	0.58	50%	0.29	0.29	0.09	0.20
Priority 43	1.55	0.29	1.27	23%	0.30	0.97	0.29	0.68
Total	2.27	0.42	1.85	32%	0.59	1.26	0.38	0.88

Since the duration of this expedited loan will not exceed one year, a rigorous analysis of average, minimum, and maximum uses based on monthly, annual,

cumulative, or multi-year rolling averages is not necessary. The above-described analysis based on recent engineering at a nearby site on the same ditch provides a reasonable instantaneous (i.e., maximum) limit based on decreed rates and uses. There are multiple assumptions that ensure conservatism in the estimated consumptive use rates. Additionally, the plan will only be operated and generate consumptive use credits when one or both of CPW's priorities in its CID Water Right are in priority. Such credit will also be prorated as appropriate if and when there is not sufficient flow to fully satisfy the calling right(s).

Administration

The exercise of this expedited loan will occur in CPW's sole discretion. CPW's decision to cease diverting up to 0.97 cfs of the CID Water Right to loan that water for instream flow purposes will depend upon the timing of stream flow shortages and water temperatures, as well as operational constraints for irrigation practices at the Hay Barn Property.

If and when CPW decides to exercise the expedited loan, by ceasing diversions of up to 0.97 cfs of the CID Water Right and loaning that portion to the CWCB for instream flow purposes, CPW will cease diversions to the Central and Eastern Meadows, thus causing 59 acres to be removed from irrigation. The Central and Eastern Meadows are not supported by sub-irrigation, and all consumptive use that would have normally occurred during the operating period of the expedited loan can be shepherded down Cottonwood Creek for instream flow purposes (i.e., not available for diversion by other water users) without causing injury to downstream water users. The 59 acres removed from irrigation correspond to a 2.27 cfs diversion rate (which includes 0.42 cfs of ditch loss). The Western Meadow portion of the Hay Barn Property is assumed to use 1.53 cfs by the historical irrigation practices that rely in part on seepage from the ditch for delivery to the crop.

During the operating period of the expedited load, for the total amount of the CID Water Right (3.8 cfs) that CPW is entitled to divert in priority (i.e., both priorities are in priority), the breakout of the various credits, flows, and returns is shown in the table below. In the event only the senior Priority No. 15 is available, (1.2 cfs of the 3.8 cfs), the transferred portion will be scaled accordingly as summarized below.

	Both Priorities	Only Priority No. 15
	(cfs)	(cfs)
Total Eligible for Diversion	3.8	1.20
Diversion to Western Portion to remain in production	1.53	0.48
CU in Cottonwood Creek for ISF	0.59	0.29
Ditch loss compensation	0.42	0.13
Deep percolation returns	0.88	0.20
Surface return flows	0.38	0.09

CPW staff will coordinate with the Water Commissioner to monitor physically and legally available flow on Cottonwood Creek as well as the call status to ensure no injury to other water users. CPW will quantify the amount that is available to divert in-priority daily, including a pro rata adjustment for CPW's share of the calling priority if the full amount is not available for diversion at the CID.

This approach ensures there will be no injury because it will be implemented in real time based on operating within the priority system. Consumptive use credits will only be available and credited to instream flow uses as water is physically and legally available at the CID No. 1 headgate. CPW will physically supply the appropriate pro rata portions of ditch loss, deep percolation, and surface return flows in a manner that will not reduce the amount or materially alter the timing of return flows. The amount of credit converted to instream flow use will be that associated only with the amount of water that normally would have been applied to and consumed by the pasture grass on the Central and Eastern Meadows. Additionally, the exercise of this expedited loan for instream flow use will result in minimal consumption of the loaned water (e.g., the evaporative portion of the transit losses in Cottonwood Creek) compared to the historical consumption of the pasture grass that would have been irrigated by the loaned water; therefore, the operation of this plan will result in a net reduction to the overall amount of CPW's CID Water Right that is consumptively used.

The loaned water will only be available from the original point of diversion at the CID No. 1 headgate to the point of historic return flows obligations on the Arkansas River. Therefore, CPW requests that it be administered as such and shepherded by the water commissioner past diversion structures along the decreed instream flow reach so the entire amount, less transit losses, arrives at the mainstem Arkansas River. CPW acknowledges that a reasonable transit loss will be assessed. As necessary at the request of the water commissioner, CPW can conduct in-channel flow measurements to coordinate operation and administration of this loan.

Since the loan will result in a retiming of flows downstream of the point of historical return flow obligations, and the water will be available to downstream users for other beneficial uses, it will not adversely affect Colorado's compact entitlements.

Notices

Concurrent with this transmittal, as required under § 37-83-105(2)(b)(II), written notice has been provided to all parties on the substitute water supply plan notification list for Water Division 2 and to registered agents of any ditch company, irrigation district, water users' association, or other water supply or delivery entity

within whose system the water rights fall. In accordance with 2 CCR 408-2:6(k)(2)(f), CPW and CWCB have coordinated to provide notice to all persons on the instream flow subscription mailing list for Water Division 2.

Filing Fee

On behalf of CPW, the Colorado Office of the Attorney General will pay the $300.00 filing fee as required under § 37-83-105(2)(b)(I) via the DWR online payment system.

Should any questions arise before or during the operation of the proposed loan, please contact Katie Birch, CPW's Instream Flow Program Specialist, at Katie.Birch@state.co.us or Jon Erickson, Water Resource Engineer, at Jon.Erikson@state.co.us. Thank you for your prompt consideration of this request.

Sincerely,

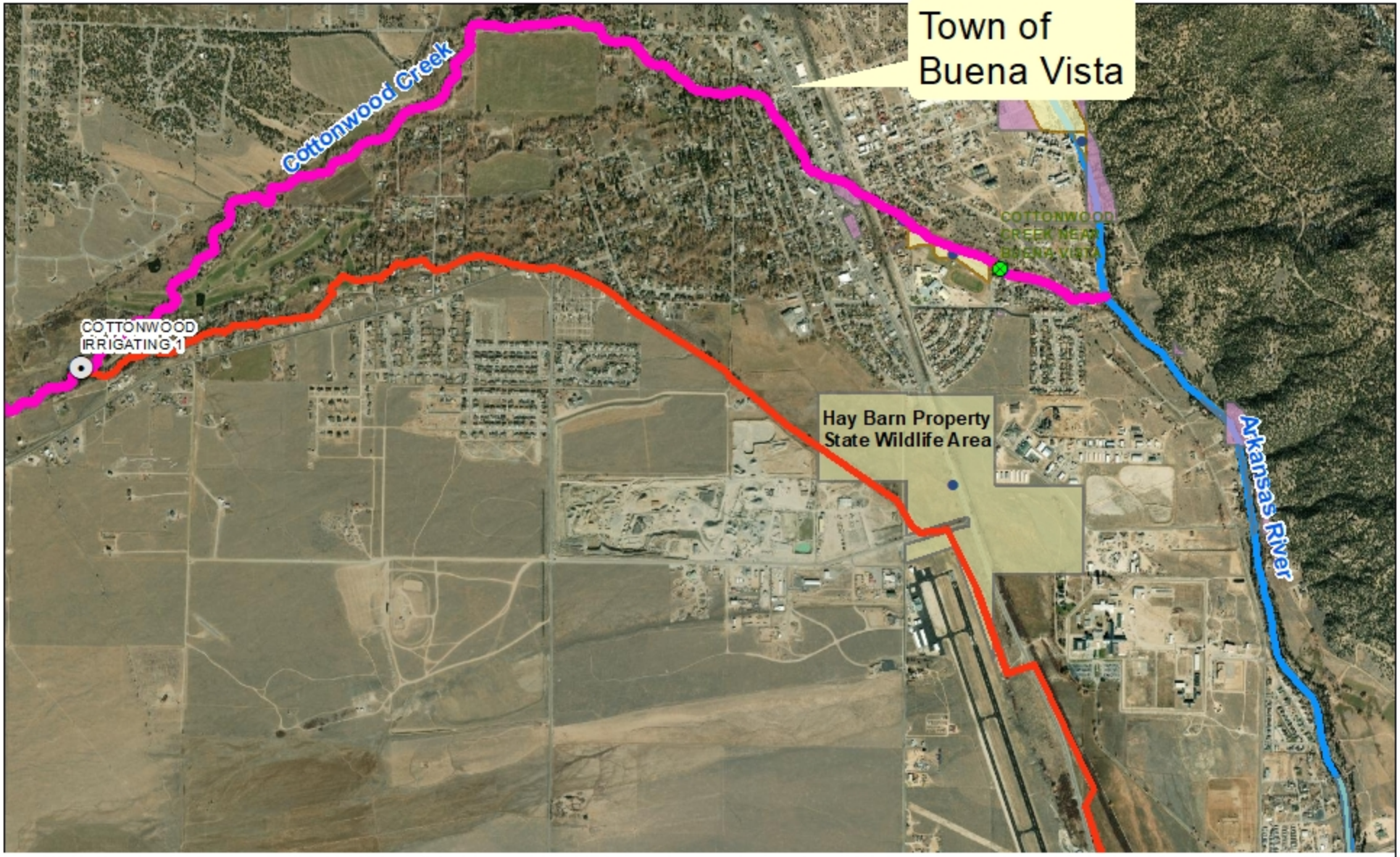
MITCHELL MARTIN Digitally signed by MITCHELL MARTIN Date: 2022.07.19 12:54:36 -06'00'

Mitch Martin
Acting Southeast Regional Manager
Colorado Parks and Wildlife

Encl.

cc *all via email*:

Rob Viehl, CWCB Stream and Lake Protection Section
Kaylea White, Stream and Lake Protection Section
Pete Conovitz, CWCB Stream and Lake Protection Section
Ed Perkins, Colorado Parks and Wildlife
Katie Birch, Colorado Parks and Wildlife
Jon Erickson, Colorado Parks and Wildlife
Rena Griggs, Colorado Parks and Wildlife
Tarn Udall, Assistant Attorney General



Cottonwood Irrigating Ditch No. 1 - Expedited ISF Loan
Vicinity Map

EXHIBIT A

COCRBVCO

Cottonwood Creek Decreed ISF Water Right (20 cfs)

Cottonwood Irrigating Ditch 1 Alignment

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1 0.5 0 1 Miles

EXHIBIT B

INTERAGENCY AGREEMENT FOR AN EXPEDITED LOAN OF WATER FOR INSTREAM FLOW USE

This Interagency Agreement for an Expedited Loan of Water for Instream Flow Use ("Agreement") is entered into by and between the State of Colorado, acting by and through the Department of Natural Resources, for the use and benefit of the Colorado Division of Parks and Wildlife ("CPW") and the State of Colorado, acting by and through the Department of Natural Resources, for the use and benefit of the Colorado Water Conservation Board ("CWCB") (individually, a "Party" and collectively, the "Parties").

RECITALS

A. CPW is a division of the Colorado Department of Natural Resources organized and existing under and pursuant to Articles 1, 9 and 10 of Title 33, C.R.S., for the purpose of protecting, preserving, enhancing and managing Colorado's natural, scenic, scientific, and outdoor recreation areas as well as its wildlife and environment for the use, benefit, and enjoyment of the people of Colorado and its visitors.

B. CWCB is a division of the Colorado Department of Natural Resources organized and existing under and pursuant to Article 60 of Title 37, C.R.S., for the purpose of aiding in the protection and development of water for the benefit of the present and future inhabitants of the State of Colorado.

C. CWCB has the exclusive authority, pursuant to § 37-92-102(3), C.R.S to appropriate and adjudicate instream flow water rights to preserve and improve the natural environment of streams and lakes in the State.

D. The Cottonwood Creek Instream Flow Right ("Instream Flow Right") was adjudicated on Cottonwood Creek in the amount of 20 cubic feet per second ("cfs") in the stream reach from the confluence of the Middle and South Forks of Cottonwood Creek to the confluence of Cottonwood Creek and the Arkansas River in Case No. 79CW115 in Division 2 Water Court. The Decree confirming the Instream Flow Right is attached hereto as **Exhibit A**.

E. In recent drought years, some CWCB decreed instream flow rates were not met due to their relatively junior priority, and, as a result, Colorado's aquatic ecosystems were negatively impacted. CWCB anticipates many decreed instream flows, including the Instream Flow Right, may not be met again this year. The fishery in the instream flow reach in Cottonwood Creek is a valuable aquatic resource, and CPW has an interest in protecting it from decline.

F. Under certain circumstances and subject to State Engineer approval, § 37-83-105(2)(a)(III.7), C.R.S. allows the owner of any decreed water right to loan water to CWCB on a temporary expedited basis to satisfy an instream flow right up to its decreed amount in order to preserve the environment to a reasonable degree.

G. CPW owns a water right decreed to the Cottonwood Irrigating Ditch No. 1 ("CID No. 1") on Cottonwood Creek ("CID Water Right"). The CID No. 1 was adjudicated in C.A. 1127, and CPW's CID Water Right is 3.8 cfs total: 1.2 cfs attributed to Priority No. 15,

and 2.6 cfs attributed to Priority No. 43. The pertinent pages of that Decree are attached hereto as **Exhibit B**.

H. If approved by the State Engineer pursuant to § 37-83-105(2), C.R.S., and subject to the terms and conditions of this Agreement, CPW is willing to temporarily loan a portion of the CID Water Right to CWCB for instream flow use to preserve the natural environment to a reasonable degree on an expedited basis for a one-year period.

I. The loan is expected to operate during the late summer and early fall when flows in Cottonwood Creek are below the decreed flow rate for the Instream Flow Right. When this occurs, water temperatures are generally high, causing stressful conditions for the fish community.

AGREEMENT

NOW THEREFORE, the Parties agree as follows:

1. Authority. This Agreement is entered into pursuant to § 37-83-105, C.R.S. for the mutual benefit of CPW and CWCB. No further payment, monetary or otherwise, is required by either Party. Section 29-1-203, C.R.S., as amended, authorizes and enables agencies and departments of the government of the State of Colorado to enter into cooperative agreements or contracts.

2. Term of Loan Agreement. This Agreement is for a term of one year, commencing on the date the State Engineer approves the proposed expedited loan and terminating one year later.

3. Restrictions on Exercise of Loan. Pursuant to § 37-83-105(2)(a), C.R.S., the loan shall not be exercised for more than 120 days during its one-year term.

4. Future Loans. This Agreement shall not be renewed as an expedited loan; however, the Parties may contract for use of the CID Water Right by CWCB under a renewable loan pursuant to § 37-83-105(2), C.R.S., subject to acceptance by the CWCB and approval by the State Engineer.

5. Agreement to Loan a Portion of the CID Water Right. Subject to the terms and conditions in this Agreement, CPW may, in its sole discretion, cease diverting up to 0.97 cfs of its CID Water Right to temporarily loan that same portion to the CWCB to satisfy part of the Instream Flow Right.

(a) Limitations on Use of Loaned Water. CWCB's use of the water loaned hereunder is limited to satisfying part of the Instream Flow Right. Such use is also subject to all conditions imposed pursuant to § 37-83-105(2), C.R.S. and any additional terms imposed by the Division or State Engineers.

(b) Process for Loan of the CID Water Right.

(i) CWCB may notify CPW when water is needed to satisfy part of the Instream Flow Right. As part of the notification, CWCB shall specifically identify the requested timing and rate of flow up to 0.97 cfs. Alternatively, CPW may notify CWCB when it determines conditions warrant CPW's ceasing to divert a portion of the CID Water Right to satisfy part of the Instream Flow Right and to benefit the fishery. As part of the CPW notification, CPW shall specifically identify the timing and rate of flow that it will cease diverting in order to exercise the loan.

(ii) CPW assumes no responsibility for delivering the loaned water to the decreed instream flow reach. CWCB may take such action as is necessary or desirable to protect the use of the loaned water for instream flow purposes once CPW elects to cease diverting a portion of the CID Water Right. Either Party may request that the Division Engineer administer the delivery of the loaned water through the instream flow reach. If CPW requests such action, CPW shall promptly notify CWCB of such request.

(iii) CPW will notify the Division Engineer, with copy to CWCB, of the anticipated timing of the exercise of this loan, including the estimated amount of the CID Water Right it anticipates loaning to the CWCB to satisfy the Instream Flow Right.

(iv) CPW may decline to loan water for CWCB's use in its sole discretion, including, but not limited to, if it does not have sufficient water available for this purpose.

(c) Accounting and Measurement.

(i) CWCB and CPW shall coordinate record keeping and accounting as required under the recording requirements provided in 2 CCR 408-2: ISF Rule 6(g) (2021) and as otherwise may be reasonably required by the State and Division Engineers to administer the CID Water Right for use in satisfying the Instream Flow Right.

(ii) CPW and CWCB are each solely responsible for flow measurements as may be required by the State and Division Engineers for administration of their respective water right(s).

(d) Preservation of CPW's Water Right. CWCB's use of CPW's CID Water Right does not transfer any legal or equitable title or interest to any part of the CID Water Right to CWCB. By permitting CWCB to use a portion of the CID Water Right, CPW is not abandoning, relinquishing, or forfeiting the CID Water Right. CWCB shall not jeopardize CPW's CID Water Right by taking any action that causes or could potentially cause the water court to reopen the adjudication of the CID Water Right decree.

6. Notices. Each individual identified below is the principal representative of the designating Party. All notices required or permitted to be given under this Agreement shall be in writing, and shall be delivered (A) by hand with receipt required, (B) by certified or registered mail to such Party's principal representative at the address set forth below, or (C) as an email to the principal representative at the email address set forth below. Either Party may change its principal representative by notice submitted in accordance with this section without a formal amendment to this Agreement. Unless otherwise provided in this Agreement, notices shall be effective upon delivery of the written notice.

CPW:

Rena Griggs
Southeast Regional Office
Colorado Parks and Wildlife
4255 Sinton Road
Colorado Springs, CO 80907
719-227-5286

CWCB:

Kaylea White
Stream and Lake Protection Section
Colorado Water Conservation Board
1313 Sherman Street, Room 718
Denver, Colorado 80203
Kaylea.White@state.co.us
303-866-3441

7. Termination. The Parties are entering into this Agreement to serve the public interest of the State of Colorado. If this Agreement ceases to further the public interest of the State, either Party, in its discretion, may terminate this Agreement.

8. Dispute Resolution. In the event of disputes concerning performance hereunder or otherwise related to this Agreement, the Parties shall attempt to resolve them at the divisional level. If this fails, disputes shall be referred to senior departmental management staff designated by each Party. If this fails, the director of each Party shall meet and attempt resolution.

9. General Provisions.

(a) Assignment. CWCB shall not assign, transfer, or sub-lease its rights or obligations under this Agreement. Any attempt at assignment or transfer without CPW's consent shall be void.

(b) Captions. The captions and headings in the Agreement are for convenience of reference only and shall not be used to interpret, define, or limit its provisions.

(c) Counterparts. This Agreement may be executed in multiple, identical, original counterparts, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same agreement.

(d) Entire Understanding. This Agreement represents the complete integration of all understandings between the Parties and all prior representations and understandings, oral or written, are merged herein. Prior or contemporaneous additions, deletions, or other changes hereto shall not have any force or effect whatsoever, unless embodied herein.

(e) Legal Counsel. Each Party to this Agreement has engaged legal counsel to negotiate, draft, and/or review this Agreement. Therefore, in the construction and interpretation of this Agreement, the Parties acknowledge and agree that it shall not be construed against any Party on the basis of authorship.

(f) Litigation Reporting. Within 10 days after being served with any pleading in a legal action filed with a court or administrative agency, related to this Agreement or which may affect CWCB or CPW's ability to comply with the terms and conditions of this Agreement, CWCB or CPW shall notify the other Party of such action and deliver copies of such pleadings to CPW's principal representative as identified herein.

(g) Modification.

(i) By the Parties. Except as specifically provided in the Agreement, modifications hereof shall not be effective unless agreed to by the Parties in writing.

(ii) By Operation of Law. This Agreement is subject to such modifications as may be required by changes in Federal or Colorado State law, or their implementing regulations. Any such required modification shall be automatically incorporated as part of the Agreement on the effective date of such changes, as if fully set forth herein.

(i) No Waiver of Immunities. No term or condition of this Agreement shall be construed or interpreted as a waiver, express or implied, or any of the immunities, rights, benefits, protections, or other provisions, of the Colorado Governmental Immunity Act, C.R.S. §24-10-101, et seq., as applicable now or hereafter amended.

(j) Third Party Beneficiaries. Except for the Parties' respective successors and assigns, this Agreement does not and is not intended to confer any rights or remedies upon any person or entity other than the Parties. Enforcement of this Agreement and all rights and obligations hereunder are reserved solely to the Parties. Any services or benefits which third parties receive as a result of this Agreement are incidental to this Agreement, and do not create any rights for such third parties.

(k) Waiver. A waiver of a breach of any provision of this Agreement shall not waive any subsequent breach of the same or different provision of this Agreement. Any Party's failure in any one or more instances to insist upon strict performance of any of the

terms and conditions of this Agreement or to exercise any right herein conferred shall not be construed as a waiver or relinquishment of that right or of that Party's right to assert or rely upon the terms and conditions of this Agreement. Any express wavier of a term of this Agreement shall not be binding and effective unless made in writing and properly executed by the waiving Party.

(l) Digital Signatures. If any signatory signs this Agreement using a digital signature in accordance with the Colorado State Controller Contract, Grant and Purchase Order Policies regarding the use of digital signatures issued under the State Fiscal Rules, then any agreement or consent to use digital signatures within the electronic system through which that signatory signed shall be incorporated into this Agreement by reference.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the date executed by both Parties.

CWCB	**CPW**
By_____	By____*DRAFT*_____
Name: Rebecca Mitchell	Name: Mitch Martin
Title: Director, Colorado Water Conservation Board	Title: Acting Southeast Regional Manager, Colorado Parks and Wildlife
Date:	Date:

EXHIBIT A

[Instream Flow Decree]

EXHIBIT B

[CID Water Right Decree]

EXHIBIT C

DITCH NUMBER FIFTEEN.

THE COTTONWOOD IRRIGATING DITCH.

That said ditch is entitled to Priorities Nos.15 and 43. It is claimed by J. M. McMichael, S.S.Wo[illegible]all, Thomas A. Gunnell, Julia Groves and Louisa C. Trolear. It is used for the irrigation of lands, and 950 acres of land proposed to be irrigated thereby. It takes its supply of water from Cottonwood Creek a tributary of the Arkansas River; the head-gate is located on the south bank of the said Creek in the S.W. 1/2 of the N.E. 1/4 of Sec.13, Tp.14, S.R.79, W., Chaffee County, Colorado.

And it is hereby adjudged and decreed that there be allowed to flow into said ditch from the said Creek, for the use aforesaid, and for the use and benefit of the party or parties lawfully entitled thereto, under and by virtue of appropriation by original construction and priority No. 15, so much water as will flow therein to the amount of Six cubic feet of water per second of time, the appropriation of which water took effect on, and said Priority No.15 dates from the Thirty-first day of July, A. D.1866.

And further, that there be allowed to flow into said ditch from said Creek, for the use and purpose aforesaid, and for the benefit aforesaid, under and by virtue of said appropriation of water by said first enlargement thereof, and Priority No.43, so much additional water as will flow therein to the amount of Thirteen cubic feet of water per second of time, the appropriation of which last mentioned water took effect on, and said Priority No.43 dates from the Thirty-first day of December, A.D.1872, making the total amount of water appropriated by said ditch No.15 from said Creek in manner as aforesaid, Nineteen cubic feet of water per second of time.

Provided, That the amount of water shall only be granted and allowed to flow into said ditch, from said Creek, for the use and benefit aforesaid, in the proportion of one cubic foot of water per second of time to 50 acres of land irrigated therefrom.

DITCH NUMBER SIXTEEN.

THE BURNETT DITCH.

That said ditch is entitled to Priority No.16. It is claimed by Allen G. Campbell, Mrs.S.M.Burnett, and the Heirs of John Burnett, deceased, It is used for the irrigation of lands, and 195 acres of land proposed to be irrigated thereby. It takes its supply of water from the South Arkansas River; by way of the " Slough " a channel leading therefrom; the head-gate is located on the bank of said River at a point from whence the S.W.Cor.of Sec.6, Tp.49, N.R.8, E. bears S.43°44'W.1347 feet, Chaffee County, Colorado.

4 2

IN THE DISTRICT COURT IN AND FOR

WATER DIVISION NO. 2

STATE OF COLORADO

Case No. 79CW115

IN THE MATTER OF THE APPLICATION FOR WATER RIGHTS OF THE COLORADO WATER CONSERVATION BOARD ON BEHALF OF THE PEOPLE OF THE STATE OF COLORADO

IN COTTONWOOD CREEK A NATURAL STREAM

IN THE WATERSHED OF THE ARKANSAS RIVER

IN CHAFFEE COUNTY.

APPLICATION FOR WATER RIGHTS TO PROTECT THE NATURAL ENVIRONMENT

1. Name of applicant: Colorado Water Conservation Board

   Address of applicant: 1313 Sherman Street, 8th Floor
   Denver, Colorado 80203

2. Name of natural stream: COTTONWOOD CREEK

3. Legal description of stream: (If unsurveyed, longitude and latitude are acceptable.)

   A. (Stream only) Legal description of beginning and end points of minimum stream flow claimed: The natural stream channel from confl M Fork and S Fork Cottonwood Creek lat 38 49 54 long 106 10 43 as the upstream terminus and confl Arkansas River lat 38 49 42 long 106 06 34 as the downstream terminus, being a distance of approximately 5 miles. This segment can be located on the Buena Vista 15' U.S.G.S. quadrangle.

   B. (Lake only) Legal description of location of outlet of natural lake: N/A

4. Date of initiation of appropriation: March 14, 1979

5. Amount of water claimed:

   A. (Lake only) Volume in acre feet and elevation of the minimum lake surface level: N/A

   B. (Stream only) Flow in C.F.S.: 20 cfs.

Exhibit D

Irrigable Acreage in Central Meadow

June 15, 2022

1:10,392

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

This map was generated by the Colorado Hunting Atlas (http://

Irrigable Acreage in Eastern Meadow

June 15, 2022

1:10,392

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

This map was generated by the Colorado Hunting Atlas (http://

Exhibit E

Central and Eastern Meadow Return Flow - Unit Response Function												
	Month											
Year	1	2	3	4	5	6	7	8	9	10	11	12
1	0.1	1.0	3.5	4.5	4.7	4.2	3.9	3.5	3.0	2.8	2.5	2.4
2	2.2	1.9	2.0	1.8	1.8	1.7	1.6	1.6	1.5	1.5	1.4	1.4
3	1.3	1.2	1.3	1.2	1.2	1.1	1.1	1.1	1.0	1.0	1.0	1.0
4	0.9	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7
5	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5
6	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
7	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
8	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
9	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1
10	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
* Raw values for cumulative return flows equal 97.2% after 120 months, the remaining 2.8% was redistributed equally across all months.												

Maximum Potential Deep Perc Returned via Cottonwood Creek (AF/mo)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	-	-	-	-	-	-	-	54	54	-	-	-

Central and Eastern Meadow Expected Potential Accretion to River (AF/mo)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.6	4.4	5.0
2023	4.8	4.0	3.9	3.4	3.2	2.8	2.7	2.5	2.2	2.2	2.0	1.9
2024	1.9	1.7	1.7	1.6	1.6	1.5	1.5	1.4	1.3	1.3	1.3	1.3
2025	1.2	1.1	1.2	1.1	1.1	1.0	1.0	1.0	0.9	0.9	0.9	0.9
2026	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7	0.6	0.6
2027	0.6	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4
2028	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3
2029	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2
2030	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
2031	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
2032	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Central and Eastern Meadow Expected Potential Accretion to River (cfs)												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2022	-	-	-	-	-	-	-	0.00	0.01	0.04	0.07	0.08
2023	0.08	0.07	0.06	0.06	0.05	0.05	0.04	0.04	0.04	0.04	0.03	0.03
2024	0.03	0.03	0.03	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02
2025	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01
2026	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
2027	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
2028	0.01	0.01	0.007	0.006	0.006	0.006	0.006	0.006	0.006	0.005	0.005	0.005
2029	0.005	0.005	0.005	0.005	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
2030	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.003
2031	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
2032	0.002	0.002	0.002	0.002	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.001