Joint Report
Review of Offset Account Operations
2017-2021

Submitted to the
Arkansas River Compact Administration

2023 ARCA Annual Meeting

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La Junta, Colorado

Co-Authors: **Rachel Duran, KDWR**
Bethany Arnold, CDWR
Bill Tyner, CDWR

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Definitions

1980 Operating Plan – what the Resolution Concerning an Operating Plan for John Martin Reservoir (as amended) is often referred to as.

acre foot (AF) – the volume of water required to cover one acre of land to a depth of one foot, which is equal to 325,851 gallons.

Appendix A.4 – the original version of Appendix A.4 to the *Decree* was entered by the States in 1997 and titled "Agreement Not to Terminate the Offset Account Resolution for a Specified Period and Related Matters." That agreement appendix was amended and replaced in June 2009 and now is titled "Amended Agreement Regarding the Colorado Use Rules, PDF Evaluation, Implementation Processes, and Related Matters, and Not to Terminate the Offset Account Resolution." It is available on the Supreme Court website for Special Master Reports, at: https://www.supremecourt.gov/SpecMastRpt/SpecMastRpt.aspx

Arkansas River Compact Administration ("ARCA" or "Administration") – the entity created by Article VIII of the Arkansas River Compact ("Compact").

Arkansas Groundwater and Reservoir Association (AGRA) – is a non-profit organization formed in 2021 from the merging of two previous well augmentation associations, Colorado Water Protective & Development Association (CWPDA) and Arkansas Groundwater User's Association (AGUA). AGRA's purpose is to provide augmentation water to the Arkansas River to replace out-of-priority depletions caused by groundwater well pumping. Source: https://www.agraco.net/

Article II – see definition of Section II below.

Article III – see definition of Section III below.

cubic feet per second (cfs) – volumetric flow measurement of one cubic foot of flow per second

Colorado Water Conservation Board (CWCB) – is a State agency which is governed by a 15-member Board. The CWCB's responsibilities range from protecting Colorado's streams and lakes to water conservation, flood mitigation, watershed protection, stream restoration, drought planning, water supply planning and water project financing. The CWCB also works to protect the state's water apportionments in collaboration with other western states and federal agencies. Source: http://cwcb.state.co.us/about-us/about-the-cwcb/Pages/main.aspx

Colorado Water Protective & Development Association (CWPDA) – is a non-profit organization, incorporated in the State of Colorado in 1965. The stated primary purpose of the association is to protect and develop underground and surface waters of the Arkansas River Basin. See AGRA definition.

Compact – the Arkansas River Compact between the States of Colorado and Kansas adopted by the federal government and the States (63 Stat. 145 (1949); Kan. Stat. Ann. § 82a-520; Colo. Rev. Stat. § 37-69-101)

Compact year – the water accounting year of the Administration; it commences on November 1 of each year and extends to and includes the next succeeding October 31. Source: *1980 Operating Plan*.

conservation pool – that portion of the total storage space in John Martin reservoir lying below the flood control storage. Source: *Compact*.

consumable water – as defined in Appendix B.1 of *Kansas v. Colorado* (No. 105, Original), this is "water brought into the Arkansas River Basin from other river basins or water that may be consumed to extinction" or is water quantified as historical consumptive use in a change decree entered by the Colorado water court. Consumable water is also sometimes referred to as "consumptive use water" or "consumptive water."

Decree – the final judgment and decree entered in March 2009 in *Kansas v. Colorado* (No. 105, Original). *See* 556 U.S. 98 (2009), or links under "No. 105, Original" on the Supreme Court website for Special Master Reports, at: https://www.supremecourt.gov/SpecMastRpt/SpecMastRpt.aspx

H-I Model – The Hydrologic-Institutional Model as described and documented in Appendix C.1 of the *Decree*.

Lower Arkansas Water Management Association (LAWMA) – is a non-profit, member-owned corporation that makes replacements to the Arkansas River for the depletions caused by membership's groundwater use. Source: http://www.lawma.net/

non-consumable water – water which cannot legally be consumed because it is to be made available to downstream users, usually representing historical return flows owed under a change decree entered by the Colorado water court. Non-consumable water is sometimes referred to as "non-consumptive water."

Plan year – the Augmentation/Replacement Plan year that commences on April 1 of each year and extends to and includes the next succeeding March 31. Source: Appendix J.1 Amended Rules and Regulations Governing the Diversion and Use of Tributary Ground Water in the Arkansas River Basin, Colorado

Replacement – Delivery of water from Acceptable Sources of Water to prevent depletions caused by Groundwater Pumping. Source: *Decree* in *Volume II of the Fifth and Final Report*.

Section II – accounts created under Section II of the 1980 Operating Plan, sometimes referred to as Article II.

Section III – accounts created under Section III of the 1980 Operating Plan, sometimes referred to as Article III.

Stateline – means the geographical boundary line between Colorado and Kansas. Source: *Compact*.

useable Stateline flow – Stateline flow as simulated by the H-I Model and determined to be usable pursuant to the Durbin usable flow method with the Larson coefficients, as set out in Appendix C.2 of *Decree*.

Section I. Introduction

This joint report is a result of agreements documented within the *Offset Account Crediting Agreement* and in Appendix A.4. The States have agreed to review the following documents once every five years:

- Resolution Concerning An Offset Account In John Martin Reservoir For Colorado Pumping as Amended March 30, 1998
- Agreement Concerning The Offset Account In John Martin Reservoir For Colorado Pumping, Determination Of Credits For Delivery Of Water Released For Colorado Pumping, And Related Matters (September 29, 2005)

This is the third review conducted under this provision. The purpose of this review is "to determine whether the provisions can be improved in the interest of continuing interstate comity and effective water management." This review has focused on the operations which have occurred. This report includes sections on governing documents (Section II), historical Offset Account operations (Section III), related operations (Section IV), and recommendations (Section V).

From 2017 through 2021, the States negotiated no new agreements related to the Offset Account in John Martin Reservoir. Those operations under the previously approved agreements for the most recent five-year period are described in the sections below.

Period of Review: The agreements between the States call for a five-year review of the Offset Account operations. At the 2012 ARCA annual meeting, the States presented the initial Offset Account Review Report for Compact years 1997 through 2011 (fifteen years). The second five-year review period was for Compact years 2012-2016 and was presented at the 2020 ARCA annual meeting. This third five-year review period is for Compact years 2017-2021.

For clarification purposes, the various "years" being used related to activities in the Arkansas River basin are described below:

- Calendar year – from January 1 to December 31;
- Compact year – the Compact year commences on November 1 of each year and extends to and includes the next succeeding October 31; and
- Augmentation/Replacement Plan year (referred to as "Plan year" in this report) – the Plan year commences on April 1 of each year and extends to and includes the next succeeding March 31.

Each of these years has certain activities associated, for example:

- the H-I Model is updated based on the calendar year,
- the Colorado State Engineer provides a report on the Offset Account based on the Compact year, and
- the major augmentation plans are approved based on the Plan year.

Section II. Description of Offset Account Resolution, Offset Account Stipulation, Offset Account Crediting Agreement & Appendix A.4

This section is intended to provide an overview of these documents, which are attached to this joint report. If there is any conflict between this section and the attached documents, then the provisions in the documents would prevail.

Offset Account Resolution

Colorado and Kansas (States) negotiated an account, which would allow the storage of replacement water in John Martin Reservoir (JMR). This account was created by the Arkansas River Compact Administration (Administration or ARCA) with the adoption of the *Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping (Offset Account Resolution)*. See Attachment 1. This was included in the *Decree* as Appendix L.

Versions: The Administration adopted the *Offset Account Resolution* on March 11, 1997. This resolution was signed by the ARCA representatives and was submitted to the U.S. Army Corps of Engineers (Corps), which subsequently approved this resolution on March 17, 1997.

The Offset Account Resolution was subsequently amended on March 25, 1998 by the Administration. The amended resolution addressed Paragraphs 5.B and 9. For Paragraph 5.B the language was modified to conform to the usable flow analysis being used in the H-I Model as approved in *Kansas v. Colorado*. For Paragraph 9 the provision for 500 acre feet (AF) storage charge to use the Offset Account was modified to allow the States the option to choose a later delivery date. The amended resolution was submitted to the U.S. Army Corps of Engineers (Corps), which subsequently approved this resolution on March, 30, 1998. No change occurred to this resolution during this five-year review period.

Overview: The Offset Account is one of several accounts residing within the John Martin Reservoir conservation pool. The Offset Account is included in the spill order provided for in the *Resolution Concerning an Operating Plan for John Martin Reservoir* (often referred to as the *1980 Operating Plan*) and the Offset Account is charged its pro rata share of the daily reservoir evaporation.

The Offset Account can store up to 20,000 AF, provided that an annual storage charge is paid. The Offset Account is composed of several subaccounts, which are described in the *Offset Account Crediting Agreement*. These subaccounts along with the referenced *Offset Account Resolution* paragraphs are:

A. Colorado Consumable Subaccounts – Paragraphs 3 & 4
    i. Colorado Upstream Consumable Subaccount
    ii. Colorado Downstream Consumable Subaccount
B. Colorado Upstream – Paragraph 6
C. Instate Return Flow to Colorado Ditches – Paragraph 4
    i. Keesee Winter Return Flows
D. Kansas Consumable – Paragraph 5.B
E. Kansas Storage Charge – Paragraph 9
F. Kansas Stateline Return Flow – Paragraph 4 & 5
G. Stateline Return Flow – Paragraph 4
H. Stateline Return Flow Transit Loss – Paragraph 8

In November of 2019, two new accounts were added under the Colorado Upstream Consumable Subaccount. One for the Lower Arkansas Water Management Association (LAWMA) and one for the Colorado Water Protective and Development Association (CWPDA) to make accounting of which entity had water in the Upstream subaccount easier to track and more transparent. In December of 2021 a third account was added under the Colorado Upstream Consumable Subaccount for the Catlin Augmentation Association. These accounts are related to Paragraph 6 of the Offset Account Resolution (Colorado Upstream Consumable subaccount).

To utilize the first 10,000 AF, a 500 AF storage charge is to be delivered to the Offset Account by April 1st of each year, or at a later date if agreed to by the Colorado State Engineer and the Kansas Chief Engineer. If more than 10,000 AF is stored in any Plan year period, then an additional 5% storage charge is assessed to water delivered in excess of the 10,000 AF as it is delivered into the Offset Account.

The water that is allowed to be stored in the Offset Account is authorized by the Colorado State Engineer. Prior to any delivery to the Offset Account, the Kansas Chief Engineer is provided with a notice that includes: source, quantity, reason, time of delivery, rate, extent to which the water is fully consumable, and return flow quantity, timing, and location.

The crediting for Offset Account releases was not included in the Offset Account Resolution but was addressed in the *Stipulation RE Offset Account in John Martin Reservoir*. The delivery crediting was further clarified in the *Offset Account Crediting Agreement*. Both of these documents are described below.

The *Offset Account Resolution* specified both monthly and annual reporting requirements. On a monthly basis, the Colorado State Engineer is to report on the timing and amount of deliveries made to the Offset Account, the monthly pumping amount by which Colorado has exceeded its

pre-Compact entitlement, and Colorado's monthly accounting of estimated depletions and replacement requirements. An accounting of Offset Account operations for the previous Compact year is made to the Operations Committee & interested parties by December 1st of each year. This annual report is made to the Operations Committee and to the Administration at its annual meeting.

The Offset Account is an annual agreement, in the sense that it allows either State to provide notice of intent to terminate the Offset Account in any year. That termination provision in the *Offset Account Resolution* has been modified by Appendix A.4 of the *Decree* which is described below.

Offset Account Stipulation

In conjunction with the *Offset Account Resolution* approval by the Administration, the States agreed to a *Stipulation RE Offset Account in John Martin Reservoir (Offset Account Stipulation)* on March 17, 1997. This Stipulation provided for additional terms related to the Offset Account that were not included in the *Offset Account Resolution*. For instance, how the delivery was to be credited at the Stateline. See Attachment 2. This was included in the *Decree* as Appendix F.1.

Version: Kansas and Colorado negotiated the stipulation related to the Offset Account, which was filed with the Special Master in *Kansas v. Colorado*. This stipulation was entered into by the States on March 17, 1997 and was filed on April 3, 1997. No change occurred to this stipulation during this five-year review period.

Overview: The stipulation provided for how releases from the Offset Account would be credited at the Stateline: (1) the Offset Account release would be reduced by the transit losses incurred between John Martin Reservoir and the Stateline, and (2) the Offset Account release would be delivered on top of antecedent Stateline flows.

As Offset Account deliveries were made to the Stateline, a conflict arose with regard to the Offset Account Stateline delivery credit. Under the stipulation, Colorado calculated the Stateline delivery credit based on a calculated transit loss between John Martin Reservoir and the Stateline. This calculated credit did not match the actual Offset Account delivery performance based on Stateline flows. This, along with the extremely dry river conditions, led Kansas not to call for any water stored in John Martin Reservoir in 2003.

The Offset Account deliveries are to be made on top of the antecedent Stateline flows. However, a specific methodology for how to separate the Offset Account delivery from the antecedent Stateline flows was not included in this stipulation.

Offset Account Crediting Agreement

The States determined it was necessary to have a well-defined method to measure Offset Account deliveries at the Stateline that included a way to separate out the antecedent Stateline flows to resolve disagreements that arose. In order to resolve this and other concerns, the States negotiated the *Agreement Concerning The Offset Account In John Martin Reservoir For Colorado Pumping,*

Determination Of Credits For Delivery Of Water Released For Colorado Pumping, And Related Matters (*Offset Account Crediting Agreement)*. See Attachment 3. This was included in the *Decree* as Appendix F.2.

Version: The States negotiated an *Offset Account Crediting Agreement* that was signed on September 29, 2005. No change occurred to this agreement during this five-year review period.

Overview: The States negotiated a method to determine Offset Account delivery credits at the Stateline. This agreement also defined terms, identified subaccounts, determined evaporation credit, assigned delivery transit losses, and disposition of Section II Account transfers, among other things.

As negotiated in the Offset Account Stipulation, the Offset Account release is to be delivered to the Stateline suffering transit losses incurred and accounted for on top of Stateline antecedent flows. The *Offset Account Crediting Agreement* recognized these aspects of Offset Account delivery and provided for a delivery envelope at the Stateline based on release rate and duration. Further refinement of the transit loss methodology was contemplated as part of the *Offset Account Crediting Agreement*. As a result of the *Offset Account Crediting Agreement*, the Offset Account delivery credits were recalculated for the years 1997 through 2004. The *Offset Account Crediting Agreement* has been used since 2005 to calculate Offset Account delivery credit at the Stateline. The specifics of this Stateline crediting of Offset Account deliveries are best described in that document.

As part of this agreement, the States' staff developed a delivery spreadsheet that determines the Stateline delivery credit for Offset Account and/or Kansas Section II releases. The inputs include specifics on the release (e.g., account, rate, start date & time) and flow information below John Martin Reservoir. The spreadsheet that calculates the transit loss, Granada target flow, antecedent flow, delivery envelope, and the Stateline delivery credits. Example pages are included as Attachment 4.

Another undefined aspect was the meaning of charging evaporation to Kansas under Paragraph 5.B of the *Offset Account Resolution*. The *Offset Account Crediting Agreement* explains the conditions used to determine if and when Colorado is eligible for credit against depletions to usable Stateline flows for evaporation on Kansas Consumable subaccount water. Paragraph 4 of the *Offset Account Crediting Agreement* should be referred to for the specific details on the evaporation credit quantification.

Colorado is also provided a credit for a portion of the transit loss occurring on Offset Account deliveries. The credited portion of the transit loss is assigned to specific reaches below John Martin Reservoir. This provision also set a target flow at Granada that if not met would reduce the transit loss credit provided for the reach below Granada. This is further discussed in Section IV below.

Additionally, the *Offset Account Crediting Agreement* provides for: procedure for determining the timing and quantity of return flows from the Keesee Ditch, X-Y Graham Canal, and Stubbs Ditch and how those return flows are to be simulated in the H-I Model, resetting the monthly Colorado Compact compliance accounting based on the H-I Model ten-year compliance results, and operational guidelines, among other things.

Appendix A.4 -- Agreement Regarding the Colorado Use Rules, PDF Evaluation, Implementation Processes, and Related Matters, and Not to Terminate the Offset Account Resolution (as amended)

The *Agreement Regarding the Colorado Use Rules, PDF Evaluation, Implementation Processes, and Related Matters, and Not to Terminate the Offset Account Resolution* (Appendix A.4) addresses issues related to the Offset Account including its termination, use, five year review, and negotiations on replacement operations if it is terminated. The termination of the *Offset Account Resolution* is a concern to both States since the *Offset Account Resolution* is an annual agreement. As the title to Appendix A.4 indicates, this appendix also addressed other issues. See Attachment 5.

Versions: The original agreement was entered into on October 31, 2007 and was included as a *Decree* appendix. This Appendix was subsequently amended by the States on June 26, 2009. The amended Appendix A.4 has been posted on the Supreme Court website under Special Master Reports (https://www.supremecourt.gov/SpecMastRpt/SpecMastRpt.aspx). The June 2009 amendment added further clarity to several sections and included new sections on related issues. The relevant sections of Appendix A.4 will be described below.

Termination: The *Offset Account Resolution* is an annual agreement that can be terminated by either State with notice. This was modified by the original Appendix A.4, which provided that neither State would terminate the *Offset Account Resolution* prior to December 31, 2012, or a later date if extended by the States. That arrangement was further amended in 2009 to provide a five-year period before the *Offset Account Resolution* could be terminated after notice to terminate Appendix A.4 is provided by either State. See Appendix A.4 Paragraphs 1 and 14. Such termination notice under Appendix A.4 would start a process to develop procedures to credit direct deliveries of replacement water to offset depletions to usable Stateline flows. See Appendix A.4 Paragraph 8. If the States have not developed such procedures within three years from the termination notice, then the procedures to determine such credits shall be resolved under the Dispute Resolution Procedure as provided for in Appendix H of the *Decree* as a Non-Fast Track Issue.

Offset Account Use: Appendix A.4 provides that the Offset Account will be used for deliveries of replacement water to offset depletions to usable Stateline flow. This provision does allow for two exceptions: if the Offset Account is full or if the replacement source is not approved by a Colorado water court decree for storage in the Offset Account. Although the Keesee and Highland

water rights are primarily used by the Lower Arkansas Water Management Association (LAWMA) to replace Stateline depletions, these sources can also be used pursuant to Paragraph 2.c of Appendix A.4 to replace depletions to senior surface rights in Colorado.

Disputes: Appendix A.4 provides that any disputes related to water stored in the Offset Account or Offset Account credits will be resolved under the Dispute Resolution Procedure as provided for in Appendix H of the *Decree* as a Fast Track Issue.

Five-Year Review: The timelines for this joint review and future reviews of the *Offset Account Resolution* and the *Offset Account Crediting Agreement* were provided. The first joint review was presented to the Administration during their 2012 annual meeting. The second joint review was presented to the Administration during their 2020 annual meeting. The next five-year review will be started no later than September 30, 2025 with the joint report to be presented at the 2027 annual meeting of the Administration. Subsequent reviews will occur every five (5) years thereafter on a similar schedule

Section III. Historical Operations

This section will discuss the Offset Account operations during the Compact years 2017 through 2021. As discussed above, the Offset Account was established early in 1997 and has been operated every year since.

Specific Offset Account operations which will be described in this section include: Implementation of new Elevation-Area Capacity (EAC) table, Storage Charge for Offset Account Operations; Consumable Water Sources; Delivery Operations; Offset Account Spills; and Notices, Monthly Reports and Annual Reports.

The table below shows the Compact year operations including the daily maximum content for the Offset Account for Compact years 1997 thru 2021.

Compact Year	Inflows (AF)	Transfers In (AF)	Transfers Out (AF)	Releases (AF)	Evaporation (AF)	October 31st End of Day Content (AF)	Maximum End of Day Content (AF)
1997	3,844	4,513	0	2,713	287	5,357	6,389
1998	5,065	0	5,316	0	257	4,849	5,356
1999	5,736	977	7,905	1,357	301	1,998	5,990
2000	3,076	760	1,977	2,581	217	1,059	2,563
2001	1,970	5,052	2,263	2,660	471	2,687	3,225
2002	1,191	15,848	4,448	5,489	1,473	8,318	8,522
2003	6,235	8,704	6,258	99	6,028	10,882	11,958
2004	7,710	4,524	2,698	10,979	2,950	6,489	10,875
2005	11,290	7,100	830	16,941	2,255	4,857	9,727
2006	10,460	985	476	10,304	2,723	2,805	10,303
2007	8,407	2,408	0	9,208	1,246	3,165	8,917
2008	16,186	2,863	230	14,555	1,678	5,752	8,711
2009	9,617	1,850	6	8,685	2,345	6,186	12,913
2010	14,013	2,390	8	12,482	2,190	7,913	12,188
2011	5,284	1,435	0	8,741	2,807	3,092	8,987
2012	2,161	595	0	0	2,156	3,693	3,770

Compact Year	Inflows (AF)	Transfers In (AF)	Transfers Out (AF)	Releases (AF)	Evaporation (AF)	October 31st End of Day Content (AF)	Maximum End of Day Content (AF)
2013	142	848	7	0	2,036	2,640	3,685
2014	3,794	382	0	4,342	1,371	1,103	4,160
2015	11,557	19	0	4,959	1,027	6,683	7,493
2016	5,114	575	807	5,414	1,721	4,431	10,648
2017	14,202	2,001	292	10,533	1,269	8,518	9,856
2018	8,982	1,885	977	8,318	2,410	7,680	14,191
2019	11,619	794	93	9,666	2,626	7,708	15,532
2020	10,765	8,793	501	18,320	2,916	5,530	16,792
2021	6,342	3,419	1,544	10,354	1,135	2,257	6,688

Implementation of Elevation-Area Capacity (EAC) table

On November 1, 2019 a new John Martin Reservoir EAC table was implemented. The adjustment to the reservoir capacity was based on a December 2017 resurvey of the reservoir. The 2017 survey method was different from the previous method of using cross-sectional areas and instead provided a 3D rendering of JMR using multi-beam sonar for below water and LiDAR for above water surface which provided for a more comprehensive survey of the reservoir. Due to the improved survey method there was a gain in storage at every elevation within the reservoir. The states worked through a new method to adjust the reservoir content for the 2019 implementation using the actual storage under each account for the year prior to the date of implementation to prorate the distribution of content change among the accounts in JMR in a more equitable manner. Previously, accounts with storage on the implementation date were assessed the change in storage. The Offset Account's pro-rata share of the total content gain was 186.06 ac/ft. The actual inflow into the Offset Account on November 1, 2019 was 188.43 ac/ft. The additional 2.37 ac/ft was inflow related to the Fort Lyon water right.

Storage Charge for Offset Account Operations

The *Offset Account Resolution* was described in Section II above, including the annual storage charge requirements for operation of the Offset Account. The historical storage charge operations are provided below for the period 2017-2021. The annual storage charge is paid using fully consumable water, however the storage charge water is not counted as part of the Stateline consumable water delivery credit or as part of the unconsumed transit loss on a delivery from John Martin Reservoir to Kansas.

The States have administered and accounted for the storage charge provisions on an April 1st through March 31st basis. That is, Colorado must provide to the Offset Account by March 31st an amount equal to at least 500 acre-feet as a pre-funded storage charge for the first 10,000 acre-feet of inflow or transfers to the Offset Account (the charge is counted as a part of the 10,000 acre-feet) that occur between April 1st and the following March 31st. If deliveries to the Offset Account exceed 10,000 acre-feet during that Plan year, then 5% is to be charged on inflows and/or transfers that are made to the account at the time the inflows and/or transfers occur. This causes some degree of confusion between other provisions of the Offset Account Resolution that are intended to be applied on a Compact year basis.

During this review period, the spreadsheet previously developed to determine the utilization level of the Offset Account continued to be used. This spreadsheet documents the point at which the initial 500 acre-foot storage charge for the first 10,000 acre-feet of storage is exceeded, triggering the 5% storage charge applied to all subsequent deliveries. In 2019 the states reviewed and edited this spreadsheet as they became aware that only the inflows into the Offset Account were being accounted for and not the transfers into the account. Further review of prior years found that the formula had been inadvertently changed in 2017. There was about 7.66 AF of storage charge that was not delivered during the 2017-2018 Plan year as a result of this error and no effect to the 2018-2019 Plan year since the 10,000 acre-feet of storage was not exceeded. The states agreed on an updated formula that would capture the total storage under the Plan year. The updated spreadsheet has been used since the 2019-2020 Plan year. Even with the updated spreadsheet there were additional deficits in the storage charge for the 2019-2020 Plan year in the amount of 31.28 AF and for the 2021-2022 Plan year in the amount of 3.52 AF. An example spreadsheet for the Plan year 2019-2020 is provided in Attachment 6 to illustrate the storage charge accounting for utilization above 10,000 acre-feet.

2017: For the Plan year 2017-2018 (April 1, 2017 to March 31, 2018) LAWMA provided the prefunded storage charge by transferring 500 AF of fully consumable water from their Keesee Article II account to the Kansas Charge subaccount in the Offset Account on March 31, 2017. LAWMA also transferred approximately 75 AF to the Stateline return flow/return flow transit loss subaccounts as part of the overall transfer representing the historic return flows to the Stateline from the water rights involved and transferred approximately 202 AF representing historic return flows to the Fort Bent, Amity and Lamar Article II accounts. Total deliveries of water to the Offset

Account for Plan year 2017-2018, including the prefunded 500 AF storage charge, were 20,104 AF. The prefunded 10,000 AF was exceeded in August 2017, additional storage charge was assessed as inflows occurred and are summarized in the table below. There were two incidents where water was delivered to the Offset Account after the prefunded 10,000 AF had been exceeded and the storage charge was not assessed. The first occurred on September 12, 2017 and the second was for the period of March 17, 2018 through March 31, 2018. Those two incidents resulted in a total of 7.66 AF of storage charge water that was not delivered to the Kansas Charge account. The States found the error during this review and it was not reconciled.

Plan Year 2017-2018 Storage Charge Account Operations					
Delivery Month	Source	Inflow	Trans-In	Net Delivery	Month End Balance
Prefunded Charge for first 10,000 AF					
3/2017	Keesee Article II	0.00	500.00	500.00	0.00
Additional Charge for over 10,000 AF					
8/2017	CWPDA/Highland/Keesee/Ft. Lyon	0.00	149.97	149.97	16.67
9/2017	Highland/Keesee/Ft. Lyon	0.00	68.65	68.65	54.35
10/2017	Highland/Keesee/Ft. Lyon	0.00	71.99	71.99	27.90
11/2017	CSU release from Meredith	0.00	206.94	206.94	0.00
Totals		**0.00**	**997.55**	**997.55**	
Total deliveries to Offset Account (including 500 AF storage charge)					**20,104.16**
5% of Total Deliveries to Offset Account					**1,005.21**

2018: For the Plan year 2018-2019 (April 1, 2018 to March 31, 2019) LAWMA provided the prefunded storage charge by transferring 500 AF of fully consumable water from their Keesee Article II account to the Kansas Charge subaccount in the Offset Account on March 31, 2018. LAWMA also transferred approximately 75 AF to the Stateline return flow/return flow transit loss subaccounts as part of the overall transfer representing the historic return flows to the Stateline from the water rights involved and transferred approximately 202 AF representing historic return flows to the Fort Bent, Amity and Lamar Article II accounts. Total deliveries of water to the Offset Account for Plan year 2018-2019, including the prefunded 500 AF storage charge, were 9,252 AF which did not exceed 10,000 AF, so no additional storage charge water was provided.

Plan Year 2018-2019 Storage Charge Account Operations					
Delivery Month	Source	Inflow	Trans-In	Net Delivery	Month End Balance
Prefunded Charge for first 10,000 AF					
3/2018	Keesee Article II	0.00	500.00	500.00	0.00
Totals		**0.00**	**500.00**	**500.00**	
Total deliveries to Offset Account (including 500 AF storage charge)					**9,251.73**

2019: For the Plan year 2019-2020 (April 1, 2019 to March 31, 2020) LAWMA provided the prefunded storage charge by delivering 500 AF of fully consumable water from the Colorado Springs Utilities (CSU) wastewater treatment plant via an agreement with CSU to the Kansas Charge subaccount in the Offset Account in January and February of 2019. On March 31, 2019 LAWMA provided an additional 11.94 AF to the Kansas Charge subaccount from their Keesee Article II account to make up for the evaporation that had occurred on the previously delivered water. LAWMA also transferred approximately 1.8 AF to the Stateline return flow/return flow transit loss subaccounts as part of the storage charge transfer representing the historic return flows to the Stateline from the Keesee water right and transferred approximately 4.83 AF representing historic return flows to the Fort Bent, Amity and Lamar Article II accounts. Total deliveries of water to the Offset Account for Plan year 2019-2020, including the prefunded 500 AF storage charge, were 10,626 AF. The prefunded 10,000 AF was exceeded in October 2019; however, the additional storage charge was not provided. This resulted in 31.28 AF of storage charge water that was not delivered to the Kansas Charge account. The States found the error during this review and it was not reconciled.

Plan Year 2019-2020 Storage Charge Account Operations					
Delivery Month	Source	Inflow	Trans-In	Net Delivery	Month End Balance
Prefunded Charge for first 10,000 AF					
1/2019	CSU WWTP	321.96	0.00	321.96	0.00
2/2019	CSU WWTP	178.04	0.00	178.04	53.10
3/2019	Keesee Article II	0.00	11.94	11.94	3.88
Totals		**500.00**	**11.94**	**511.94**	
Total deliveries to Offset Account (including 500 AF storage charge)					**11,122.54**
5% of Total Deliveries to Offset Account					**531.28**

2020: For the Plan year 2020-2021 (April 1, 2020 to March 31, 2021) LAWMA provided the prefunded storage charge by transferring 500 AF of fully consumable water from their Sisson Article II account to the Kansas Charge subaccount in the Offset Account on March 31, 2020. LAWMA also transferred approximately 280 AF to the Stateline return flow/return flow transit loss subaccounts as part of the overall transfer representing the historic return flows to the Stateline from the water rights. Total deliveries of water to the Offset Account for Plan year 2020-2021, including the prefunded 500 AF storage charge, were 18,640 AF. The prefunded 10,000 AF was exceeded in June 2020, additional storage charge was assessed as inflows occurred and are summarized in the table below. From the final utilization accounting that was used for this period, there was a positive balance of 27.08 AF that was available on March 31, 2021 that was utilized to prefund the next Plan year 2021-2022.

Plan Year 2020-2021 Storage Charge Account Operations					
Delivery Month	Source	Inflow	Trans-In	Net Delivery	Month End Balance
Prefunded Charge for first 10,000 AF					
3/2020	Sisson Article II	0.00	500.00	500.00	0.00
Additional Charge for over 10,000 AF					
6/2020	Keesee, X-Y, Sisson, Stubs Article II	0.00	233.01	233.01	26.05
7/2020	CSU/Highland/Keesee/Ft. Lyon	0.00	81.87	81.87	247.56
8/2020	CSU/Highland/Keesee/Ft. Lyon	0.00	92.38	92.38	0.00
9/2020	Highland/Keesee/Ft. Lyon	37.22	8.99	46.21	0.00
10/2020	Highland/Keesee/Ft. Lyon	0.00	6.03	6.03	0.00
Totals		**37.22**	**922.28**	**959.50**	
Total deliveries to Offset Account (including 500 AF storage charge)					**18,640.32**
5% of Total Deliveries to Offset Account					**932.02**

2021: For the Plan year 2021-2022 (April 1, 2021 to March 31, 2022) LAWMA provided the prefunded storage charge by transferring 472.92 AF of fully consumable water from their Keesee Article II account to the Kansas Charge subaccount in the Offset Account on March 31, 2021. With the remaining balance of 27.08 AF from the previous Plan year the 500 AF prefunded charge was met. LAWMA also transferred approximately 71 AF to the Stateline return flow/return flow transit loss subaccounts as part of the overall transfer representing the historic return flows to the Stateline from the water rights and transferred approximately 192 AF representing historic return flows to the Fort Bent, Amity and Lamar Article II accounts. Total deliveries of water to the Offset Account for Plan year 2021-2022, including the prefunded 500 AF storage charge, were 10,070 AF. The prefunded 10,000 AF was exceeded on March 31, 2022; however, the additional storage charge was not provided. This resulted in 3.52 AF of storage charge water that was not delivered to the Kansas Charge account. This error was caught by the states in June 2022 and reconciled by delivering the 3.52 AF on September 2, 2022.

Plan Year 2021-2022 Storage Charge Account Operations					
Delivery Month	Source	Inflow	Trans-In	Net Delivery	Month End Balance
Prefunded Charge for first 10,000 AF					
3/2021	Keesee Article II	0.00	472.92	472.92	0.00
Totals		**0.00**	**472.92**	**472.92**	
Total deliveries to Offset Account (including 500 AF storage charge)					**10,070.47**
5% of Total Deliveries to Offset Account					**503.52**

Consumable Water Sources

The following tables list the source, delivery month, amount, consumable amount and overall percent of consumable supply to the Offset Account by Compact year following approval of the *Offset Account Resolution* in 1997. The "amount" column includes all associated water delivered to the Offset Account; this can be fully consumable water or may have both consumable and non-consumable waters. Non-consumable water represents return flow components. Such non-consumable water may stay in the Offset Account or may be transferred to other accounts in John Martin Reservoir.

As discussed above, a portion of the consumable water is used to pay the storage charge for use of the Offset Account. The storage charge component of consumable water is not credited as a part of the Stateline consumable delivery and is also not credited for its portion of the unconsumed transit loss for replacement of depletions.

Starting in April 2017, 4,520 Fort Lyon shares were added under LAWMA's Rule 14 plan approval. In the 2019 Rule 14 approval for LAWMA, additional Fort Lyon shares were added as a source of consumable water. In June 2019, LAWMA applied in Water Court to change these shares for augmentation in case number 19CW3036. A substitute water supply plan (SWSP) application associated with this case was submitted in July 2019 and approved in April 2020. There was a subsequent SWSP approval in March 2021. The shares delivered to the Offset Account are diverted at the historic Fort Lyon Canal headgates and sent through augmentation stations and delivered back to the river. An example of the Fort Lyon accounting is included in Attachment 7.

2017: The following sources of water were provided to the Offset Account:

Source	Delivery Month	Total Amount (AF)	Consumable Amount (AF)	Percent of Total Consumable
LAWMA Article II	Mar/2017	575.43	500.00	3.2%
LAWMA Article II	Jul/2017	0.11	0.00	0.0%
LAWMA Article II	Jul/2017	1,133.44	700.00	4.5%
CWPDA (Pueblo Reservoir)	Aug/2017	1,200.00	1,200.00	7.8%
Fort Lyon Canal Consumable	Apr-Oct/2017	5,267.49	5,267.49	34.2%
Highland Canal Consumable	Apr-Oct/2017	6,867.34	6,867.34	44.6%
Keesee Ditch Consumable	Apr-Oct/2017	855.90	855.90	5.6%
Totals		**15,899.71**	**15,390.73**	

2018: The following sources of water were provided to the Offset Account:

Source	Delivery Month	Total Amount (AF)	Consumable Amount (AF)	Percent of Total Consumable
CSU (Lake Meredith)	Nov 2017	3,640.00	3,640.00	34.4%
LAWMA Article II	Mar 2018	575.43	500.00	4.7%
LAWMA Article II	Apr 2018	0.63	0.00	0.0%
CWPDA (Pueblo Reservoir)	Apr 2018	1,102.16	1,102.16	10.4%
CSU WWTP	Oct 2018	395.66	395.66	3.7%
Fort Lyon Canal Consumable	Nov 2017-Oct 2018	1,729.96	1,729.96	16.3%
Highland Canal Consumable	Apr-Oct 2018	1,599.34	1,599.34	15.1%
Keesee Ditch Consumable	May-Oct 2018	1,617.52	1,617.52	15.3%
Totals		**10,660.70**	**10,584.64**	

2019: The following sources of water were provided to the Offset Account:

Source	Delivery Month	Total Amount (AF)	Consumable Amount (AF)	Percent of Total Consumable
CSU WWTP	Jan-Mar 2019	2,739.67	2,739.67	22.6%
LAWMA Article II	Mar 2019	13.74	11.94	0.1%
LAWMA Article II	June 2019	780.03	500.00	4.1%
CWPDA	July 2019	1,156.26	1,156.26	9.5%
Fort Lyon Canal Consumable	Nov 2018-Oct 2019	3,406.73	3,406.73	28.1%
Highland Canal Consumable	Apr-Oct 2019	2,502.81	2,502.81	20.6%
Keesee Ditch Consumable	Apr-Oct 2019	1,813.60	1,813.60	15.0%
Totals		**12,412.84**	**12,131.01**	

2020: The following sources of water were provided to the Offset Account:

Source	Delivery Month	Total Amount (AF)	Consumable Amount (AF)	Percent of Total Consumable
East Slope (Pueblo Reservoir)	Mar-Apr 2020	818.04	818.04	5.1%
LAWMA Article II	Apr 2020	780.03	500.00	3.1%
Colo. Canal (Lake Meredith)	Apr 2020	1,200.00	1,200.00	7.5%
CSU (Pueblo Reservoir)	Jun 2020	2,742.05	2,742.05	17.0%
LAWMA Article II	Jun 2020	7,556.28	5,000.01	31.1%
CSU (Pueblo Reservoir)	Jul-Aug 2020	2,271.52	2271.52	14.1%
LAWMA Article II	Oct 2020	33.94	0.00	0.0%
Fort Lyon Canal Consumable	Nov 2019-Oct 2020	1,624.36	1,624.36	10.1%
Highland Canal Consumable	Apr-Oct 2020	567.88	567.88	3.5%
Keesee Ditch Consumable	Mar-Oct 2020	1,363.92	1,363.92	8.5%
Totals		**18, 958.02**	**16, 087.78**	

2021: The following sources of water were provided to the Offset Account:

Source	Delivery Month	Total Amount (AF)	Consumable Amount (AF)	Percent of Total Consumable
LAWMA Article II	Mar 2021	544.26	472.92	5.5%
LAWMA Article II	Jun 2021	309.52	0.00	0.0%
LAWMA Article II	Jun 2021	2,224.10	1,741.04	20.2%
LAWMA Article II	Jun 2021	124.04	76.61	0.9%
LAWMA Article II	Sept 2021	216.60	0.00	0.0%
Fort Lyon Canal Consumable	Nov 2020-Oct 2021	3,087.22	3,087.22	35.8%
Highland Canal Consumable	Apr-Oct 2021	1,826.20	1,826.20	21.2%
Keesee Ditch Consumable	Mar-Oct 2021	1,428.40	1,428.40	16.5%
Totals		**9,760.34**	**8,632.39**	

2017-2021: For 2017-2021 a summary of the sources of water that were provided to the Offset Account is shown below:

Source	Amount	Consumable Amount	Percent of Total Consumable
Fort Lyon Canal Consumable	13,854.74	13,854.74	22.1%
Highland Canal Consumable	14,624.59	14,624.59	23.3%
Keesee Ditch Consumable	7,079.34	7,079.34	11.3%
Colorado Springs Utilities Consumable	11,788.90	11,788.90	18.8%
East Slope Consumable	818.04	818.04	1.3%
LAWMA Article II	14,867.58	10,002.52	15.9%
Colorado Canal Company Consumable	1,200.00	1,200.00	1.9%
CWPDA Consumable	3,458.42	3,458.42	5.5%
Totals	**67,691.61**	**62,826.55**	

Use of Keesee and Highland for Instate Replacement

Appendix A.4 provides that "The Keesee and Highland water rights will be used primarily to replace depletions to usable Stateline flow, but may be used to replace depletions to senior surface water rights in Colorado…." (Appendix A.4, Section 2. c.) The following table provides the use of the Keesee and Highland water rights for replacement of such instate depletions by Compact year.

	Highland		Keesee	
Year	Instate (AF)	% of Total	Instate (AF)	% of Total
2017	0.00	0.00	836.94	49%
2018	0.00	0.00	1,682.61	51%
2019	0.00	0.00	1,813.11	50%
2020	0.00	0.00	1,369.73	50%
2021	0.00	0.00	1,361.68	49%
Total	0.00	0.00	7,064.07	

Use of Highland for Permanent Pool

Colorado Parks and Wildlife approached the Administration at their 2014 annual meeting with their need to obtain a reliable source for the Permanent Pool in John Martin Reservoir. They had

been in discussions with LAWMA on using the Highland Canal. This led to discussions between the States and LAWMA as the Highland Canal is a dedicated source of supply for the Offset Account. In 2017 an annual agreement was entered into by the States and approved through resolution by the Administration to use the Highland Canal as a source for the Permanent Pool. This annual agreement was again done in 2018 and a permanent resolution and agreement were adopted in 2019 and have been utilized since then. The 2017 and 2018 annual resolutions and agreements as well as the 2019 permanent resolution and agreement are included in Attachment 8. The following table provides the use of the Highland Canal water right for delivery to the Permanent Pool during this review period.

	Highland		
Year	Permanent Pool (AF)	Offset Account (AF)	% of Total to Permanent Pool
2017	1,320.35	6,867.34	16%
2018	1,477.09	1,599.34	48%
2019	1,335.18	2,502.81	35%
2020	152.75	567.88	21%
2021	782.58	3,087.22	20%
Total	5,067.95	14,624.59	

Delivery Operations

As described above, the *Offset Account Crediting Agreement* established a methodology for computing credits for Offset Account deliveries during the Compact year. The delivery statistics for this review period that are presented below are based on this methodology.

2017: Kansas called for one release of water from the Offset Account during Compact year 2017, which was combined with a release from the Kansas Section II Account. The Offset Account portion of this release is summarized in the table below:

Start Date	End Date	Average Release Rate (cfs)	Released Amount (AF)	Offset Delivery Efficiency	Delivery Credit of Consumable Water (AF)
June 26	Jul 22	197	10,533	88.5%	8,847

2018: Kansas called for two releases of water from the Offset Account during Compact year 2018, the first release was combined with a release from the Kansas Section II Account while the second

release was solely from the Offset Account. Both releases from the Offset Account are summarized in the table below:

Start Date	End Date	Average Release Rate (cfs)	Released Amount (AF)	Offset Delivery Efficiency	Delivery Credit of Consumable Water (AF)
Jul 6	Jul 26	113	4,690	81.1%	2,756
Aug 18	Sept 4	102	3,628	49.3%	1,787

2019: Kansas called for one release of water from the Offset Account during Compact year 2019, which was combined with a release from the Kansas Section II Account. The Offset Account portion of this release is summarized in the table below:

Start Date	End Date	Average Release Rate (cfs)	Released Amount (AF)	Offset Delivery Efficiency	Delivery Credit of Consumable Water (AF)
July 9	Sept 9	77	9,666	89.7%	8,045

2020: Kansas called for one release of water from the Offset Account during Compact year 2020, which was combined with a release from the Kansas Section II Account. The Offset Account portion of this release is summarized in the table below:

Start Date	End Date	Average Release Rate (cfs)	Released Amount (AF)	Offset Delivery Efficiency	Delivery Credit of Consumable Water (AF)
Jun 8	Jul 21	210	18,320	76.4%	11,278

2021: Kansas called for two releases of water from the Offset Account during Compact year 2021, which were combined with a release from the Kansas Section II Account. The Offset Account portion of the releases are summarized in the table below:

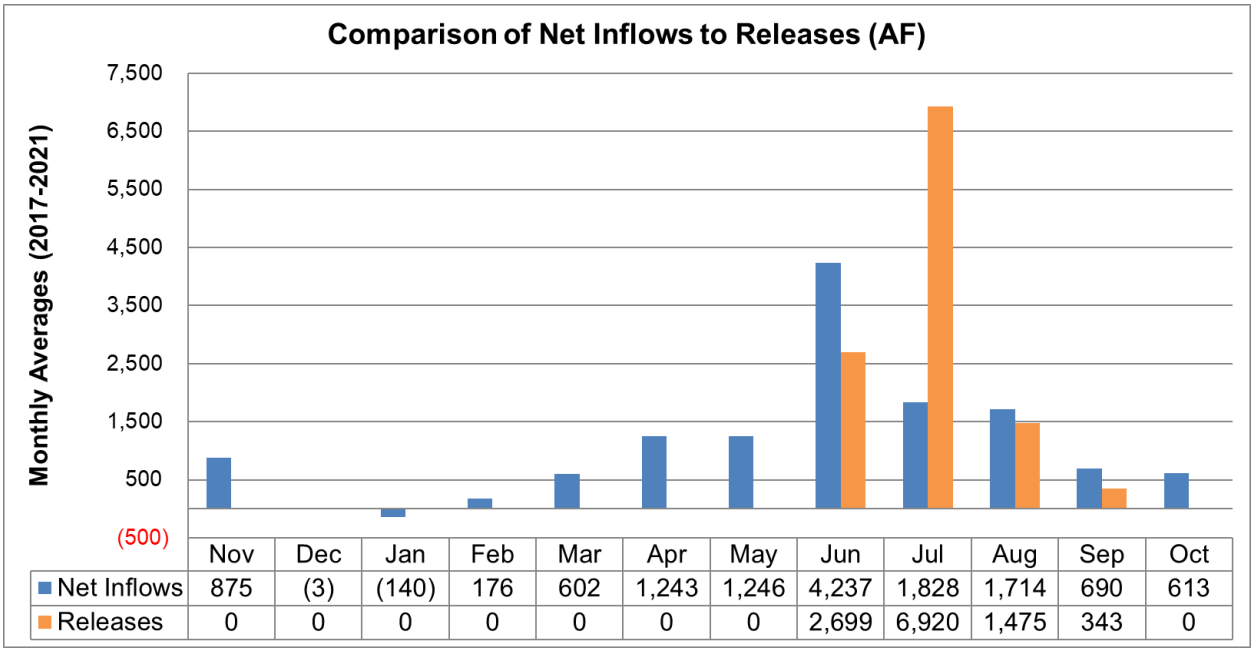
Start Date	End Date	Average Release Rate (cfs)	Released Amount (AF)	Offset Delivery Efficiency	Delivery Credit of Consumable Water (AF)
Jun 18	Jul 7	245	9,232	79.7%	6,146
Jul 9	Aug 7	19	1,122	88.4%	993

2017-2021 Statistics

The table below summarizes the average start date, end date, release rate, released amount, delivery efficiency and total consumable water delivered over the period.

Average Start Date	Averaged End Date	Average Release Rate (cfs)	Average Released Amount (AF)	Average Offset Delivery Efficiency	Total Delivery Credit of Consumable Water (AF)
Jul 4	Aug 4	157	9,345	77.4%	39,852

The figure below compares the monthly average net inflows to the monthly releases from the Offset Account. The net inflows are the inflows plus transfers in minus the transfers out of the Offset Account. This figure graphically shows the difference between when water is put into the Offset Account compared to when Kansas has called for its release.



	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct
Net Inflows	875	(3)	(140)	176	602	1,243	1,246	4,237	1,828	1,714	690	613
Releases	0	0	0	0	0	0	0	2,699	6,920	1,475	343	0

Offset Account Spills

No spill events occurred at John Martin Reservoir during this review period.

Notices, Monthly Reports and Annual Reports

The Offset Account Resolution describes several types of notices and reports required to be prepared by the Colorado State Engineer or his delegate. Paragraph 3 states that "…the Colorado State Engineer or his delegate…may deliver or permit the delivery by Colorado water users of water to the Offset Account upon timely notice to the Kansas Chief Engineer or his delegate… Such notice shall specify and document the following: the source of the water delivered, the amount of water, the purpose for which the water is delivered, the time of delivery, the rate of delivery, the extent to which the water is fully consumable, and the quantity, timing and location of any associated return flows."

Colorado provides both an initial notice of delivery or transfer and a final notice of delivery to the Kansas Chief Engineer or delegated person. An example of an initial notice letter and a final delivery letter is included in Attachment 9.

The Colorado State Engineer is also required to provide monthly notice to the Kansas Chief Engineer of the estimated monthly net depletion to usable Stateline flows caused by post-Compact diversions of tributary groundwater from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo Dam and the Stateline pursuant to Paragraph 5. Monthly letters have been prepared and sent to Kansas for each month since the beginning of Offset Account operations. An example of the monthly letter is included in Attachment 10.

Not later than December 1 of each year, the Colorado State Engineer shall make an accounting of the operation under this Resolution for the previous Compact year available to the Operations Committee of the Administration and to interested parties. Reports for 2017 through 2021 have been prepared and delivered by December 1st of each year. These annual reports contain a report that describes operations, daily and monthly accountings, and all correspondence that occurred during the Compact year. Copies of the Offset Account annual reports can be found at:

https://www.co-ks-arkansasrivercompactadmin.org/offset-account-reports/

Section IV. Related Operations

Interaction between Offset Account, Colorado monthly accounting and H-I Model annual updates

Monthly Accounting

Colorado uses an array of engineering models, spreadsheets and databases to track groundwater well pumping on a monthly basis and to determine estimated stream flow depletions that are required to be replaced. In a similar fashion, Colorado tracks the supply of replacement water delivered or released to replace the predicted stream flow depletions. This includes the calculation of consumable return flows from transmountain and fully consumable water delivered to ditches below Pueblo Reservoir. It also records the amount of water measured back to the river from replacement sources derived by removing surface water from formerly surface water irrigated lands and delivering the associated consumable portion to replace stream depletions while also maintaining historical return flows. These tasks are performed in an effort to achieve monthly stream flow depletion replacement to protect senior surface water rights in Colorado and usable Stateline flow. This monthly accounting is also used to determine how much water should be delivered to the Offset Account to replace depletions to usable Stateline flow or how much Stateline credit can be accounted against depletions to usable Stateline flow. This monthly accounting is needed to assure near real-time replacement of stream flow depletions within the calendar year.

Colorado records operations and computations in a monthly accounting spreadsheet that is reviewed by the well associations and Kansas. An example of a monthly accounting spreadsheet is included in Attachment 11. The detailed backup data supporting the monthly accounting is provided to Kansas as required by Appendix B.1 of the Decree.

Utilizing the monthly updates of pumping and the corresponding pumping by pre-Compact wells in conjunction with other data reported in the monthly accounting, Colorado prepares monthly letter reports to Kansas as described above in Section II under the Offset Account Resolution and as shown in Attachment 10. These monthly letters serve as a guide to replacement operations and also help document data necessary to prepare the input for the annual H-I Model update.

H-I Model annual updates: The H-I Model is updated annually; adding data for the just concluded calendar year. Colorado compiles the update input data and runs the H-I Model providing the H-I Model results and associated backup data to Kansas by March 31st of each year. Kansas then reviews this information and recommends changes or revisions, if needed, by May 15th of each year. The States are to agree on the H-I Model annual update by June 1st or the Decree Dispute Resolution Procedure (Appendix H) is initiated.

The results from the H-I Model update are then included in a ten-year Compact compliance table that also includes annual information about Offset Account operations and post-1985 depletions.

An example of the ten-year Compact compliance table is included in Attachment 12. The results for the current update and the previous nine years are used to determine if Colorado is in compliance. The ten-year sum of annual depletions and/or accretions, column 9 of Attachment 12, is for the purpose of this report the "status" of the Stateline discussed below.

In Colorado's monthly accounting for the Lower Arkansas Water Management Association, (LAWMA) there is a line item for the status of Offset Account Release Credits. This is also referred to as Stateline Credit in some cases. As the H-I Model annual update results for the preceding Calendar year are typically agreed to by both states in June of the current Calendar year, Colorado will then take the agreed to H-I Model annual update results found in column 9 of the ten-year Compact compliance table and correct the status of Offset Account Release Credits in their monthly accounting. The monthly accounting status is changed for the end of December of the last H-I Model update year. For example, the H-I Model annual update results agreed to in June of Calendar year 2022 would have been for Calendar year 2021. In the Colorado monthly accounting, the status for the end of December 2021 would be updated to the agreed upon accretion or depletion value.

For the H-I Model update done through Calendar year 2020, the resulting ten-year status resulted in a shortfall of 62 AF, see ten-year accounting table below. This was the first occurrence of a shortfall since the Offset Account was established. There can be annual accretions or depletions; however, a shortfall occurs when the ten-year sum in Column 9 results in a depletion. Colorado remained in compliance by providing the shortfall to the Stateline during the 2021 Kansas release.

Ten-year Accounting of Depletions and Accretions to Usable Stateline Flow
2011 - 2020

1	2	3	4	5	6	7	8	9
Year of Ten-year Cycle	Model Year	H-I Model Usable Depletion/ Accretion[1]	Offset Account Credits[2]					Remaining Usable Depletion/ Accretion[6]
			Stateline Delivery to Kansas	Evaporation Credit	Gross Credit[3]	Applied to Post-1985 Depletions[4]	Net Credit[5]	
1	2011	1,841	6,436	0	6,436	1,717	4,719	-2,878
2	2012	4,044	0	0	0	1,479	-1,479	5,523
3	2013	2,594	0	0	0	1,505	-1,505	4,099
4	2014	4,332	2,728	0	2,728	1,635	1,093	3,239
5	2015	2,779	2,695	0	2,695	2,337	358	2,421
6	2016	4,328	4,044	0	4,044	3,043	1,001	3,327
7	2017	-1,916	8,847	0	8,847	3,300	5,547	-7,463
8	2018	-9,062	4,543	0	4,543	3,346	1,197	-10,259
9	2019	11,807	8,045	0	8,045	3,756	4,289	7,518
10	2020	2,096	11,278	0	11,278	3,717	7,561	-5,465
Total		22,843	48,616	0	48,616	25,835	22,781	**62**
	Shortfall for 2021							**62**

Water Quantities are in acre-feet.

For the H-I Model update done through Calendar year 2021, the resulting ten-year status resulted in a shortfall of 3,323 AF, see ten-year accounting table below. As that shortfall was delivered after this review period it will be reported in more detail in the next review.

Ten-year Accounting of Depletions and Accretions to Usable Stateline Flow
2012 - 2021

1	2	3	4	5	6	7	8	9
			Offset Account Credits[2]					
Year of Ten-year Cycle	Model Year	H-I Model Usable Depletion/ Accretion[1]	Stateline Delivery to Kansas	Evaporation Credit	Gross Credit[3]	Applied to Post-1985 Depletions[4]	Net Credit[5]	Remaining Usable Depletion/ Accretion[6]
1	2012	4,044	0	0	0	1,479	-1,479	5,523
2	2013	2,594	0	0	0	1,505	-1,505	4,099
3	2014	4,332	2,728	0	2,728	1,635	1,093	3,239
4	2015	2,779	2,695	0	2,695	2,337	358	2,421
5	2016	4,328	4,044	0	4,044	3,043	1,001	3,327
6	2017	-1,916	8,847	0	8,847	3,300	5,547	-7,463
7	2018	-9,062	4,543	0	4,543	3,346	1,197	-10,259
8	2019	11,807	8,045	0	8,045	3,756	4,289	7,518
9	2020	2,096	11,278	0	11,278	3,717	7,561	-5,465
10	2021	4,493	7,139	0	7,139	3,029	4,110	383
Total		25,495	49,319	0	49,319	27,147	22,172	**3,323**
	Shortfall for 2022							**3,323**

Water Quantities are in acre-feet.

Offset Account: After the Colorado Monthly accounting is updated with the H-I Model results, a further check involves the status of water in the Kansas Consumable Subaccount (Offset Account). It is possible after the H-I Model update is agreed to that the Kansas Consumable Subaccount balance should be adjusted.

Operations when the Offset Account is Full

The Offset Account never reached the maximum capacity of 20,000 AF during the review period. The maximum daily content was 16,792 AF on June 30, 2020 during Compact year 2020.

No specified procedure has been agreed upon by Colorado and Kansas for delivering water that has not been stored in the Offset Account to replace depletions to usable Stateline flow in the event that the Offset Account is full.

Operations if the Offset Account is Terminated

Neither State provided notice to terminate the Offset Account during the review period. Appendix A.4 provides a process that would be initiated if either State provides notice to terminate the Offset Account Resolution. Although there is a process provided for that would allow for replacement

operations absent an Offset Account, there may be some incentive to the States to agree on replacement operations should the Offset Account Resolution be terminated.

Section V. Recommendations

This is the third joint report reviewing the Offset Account operations. The format developed for the first reporting period was used for the second period as well as this third period as it appears to provide the information needed. This and subsequent reviews should provide a review of operations such that the States can look for improvements and better water management of the Offset Account.

Unresolved Recommendations from the 1997-2011 review:

Our third recommendation is that consideration be given to developing process for operations when the Offset Account is full.

> No consideration of operations when the Offset Account is full was done during this review period. It is the States' intent to work on this for the fourth review period (2022-2026).

Finally, Colorado has begun work in conjunction with the Southeastern Colorado Water Conservancy District (SECWCD) and the Colorado Water Conservation Board (CWCB), to fully implement and enhance the Transit Loss Application Program (TLAP) model prepared by Russ Livingston for ARCA to better estimate transit losses below John Martin Reservoir (including deliveries to Kansas). Additionally, a companion transit loss model developed by Russ Livingston to improve estimates of transit loss for deliveries from Pueblo Reservoir to downstream ditches and to John Martin Reservoir is being implemented and enhanced as part of this project anticipated to be complete in 2013. We recommend that Kansas and Colorado work cooperatively to review the work on this project and to determine whether improvements to the transit loss calculations could be made in accordance with Section 8 of the Offset Account Crediting Agreement.

> The Pueblo to John Martin TLAP model was fully implemented in 2014 and has been performing as expected. The TLAP model below John Martin Reservoir was completed in 2014 and used in 2015, but due to apparent calibration issues with transit loss calculations the model has not been utilized since 2015. We would note there is an ongoing effort to improve this model through the Arkansas River Decision Support System (Ark DSS) funding.

Unresolved Recommendations from the 2012-2016 review:

As a result of this review, the States found that in 2015 the storage in the Offset Account for the Plan Year exceeded 10,000 AF and no additional charge was delivered for the overage. For Plan Year 2019-2020 the States made modifications to the Offset Account utilization tracking spreadsheet with the intent that this would eliminate errors in the future. The States recommend paying closer attention to this utilization accounting to ensure the modifications are working as expected.

While putting together this third review it became apparent that this is still an issue that needs resolved. See recommendations for the 2017-2021 review.

Recommendations from this 2017-2021 review:

1. The Offset Account utilization tracking spreadsheet was updated for the Plan year 2019-2020 and appears to be working as intended. Although the tracking spreadsheet is working, it is apparent that a process of review and confirmation of agreement on the tracking accounting would be beneficial in helping the States stay on top of this accounting. A suggested process would be for Colorado to provide the final utilization tracking spreadsheet on or before April 5th following the conclusion of a Plan year. Kansas should review and respond by April 15th.

2. Update version of the Report of the Colorado State Engineer Concerning Accounting of the Operations of an Offset Account in John Martin Reservoir for Colorado Pumping 2019 to correct the summary of Offset Account release on Page 3. The existing version located on the ARCA website will be replaced for completeness.

3. Update version of the Report of the Colorado State Engineer Concerning Accounting of the Operations of an Offset Account in John Martin Reservoir for Colorado Pumping 2020 to include the Kansas Offset Account release letter and crediting spreadsheet. The existing version located on the ARCA website will be replaced for completeness.

4. For the benefit of both states, create a process to review operations that occur during the year more frequently to increase coordination between the states in an effort to catch errors in a more timely fashion.

5. Populate the next 5-year review on an annual basis as the data becomes available.

Attachment 1 - *Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping (Offset Account Resolution)*.

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Appendix L

RESOLUTION CONCERNING AN OFFSET ACCOUNT IN JOHN MARTIN RESERVOIR FOR COLORADO PUMPING AS AMENDED MARCH 30, 1998

WHEREAS, ARTICLE IV-D of the Arkansas River Compact provides as follows:

> This Compact is not intended to impede or prevent future beneficial development of the Arkansas River basin in Colorado and Kansas by Federal or State agencies, by private enterprise, or by combination thereof, which may involve construction of dams, reservoirs and other works for the purposes of water utilization and control, as well as the improved or prolonged functioning of existing works: Provided, that the waters of the Arkansas River, as defined in Article III, shall not be materially depleted in usable quantity or availability for use to the water users in Colorado and Kansas under this Compact by such future development or construction;

and

WHEREAS, the United States Supreme Court has determined that post-Compact well pumping in the State of Colorado has caused material depletions of usable Stateline flows of the Arkansas River in violation of the Arkansas River Compact [hereinafter the "Compact"], Kansas v. Colorado, 115 S.Ct 1733 (1995); and

WHEREAS, the State of Colorado [hereinafter "Colorado"] desires to continue to allow ground water pumping by its water users in excess of the pre-Compact pumping entitlement of 15,000 acre-feet per year determined by the United States Supreme Court as long as any depletions to usable Stateline flows caused by such pumping are replaced; and

WHEREAS, Section 2 of the Act of Congress approving the Compact provides in relevant part as follows:

> [T]he Chief of Engineers is hereby authorized to operate the conservation features of the John Martin Reservoir Project in a manner conforming to such Compact with such exceptions as he and the Administration created pursuant to the Compact may jointly approve[;]

and

WHEREAS, the issue of Compact compliance by Colorado is presently pending before the Special Master appointed by the United States Supreme Court; and

WHEREAS, an account in John Martin Reservoir [hereinafter the Reservoir"] is not necessary for Colorado's compliance with the Compact, but an account would of benefit to Colorado by facilitating compliance with the Compact by Colorado and its water users to the extent that Colorado allows post-Compact well pumping by its water users in excess of the pre-Compact entitlement of 15,000 acre-feet per year, and Colorado has requested such an account; and

WHEREAS, the Offset Account [as hereinafter defined] would create benefits for water users in Kansas but also monitoring and accounting burdens for the State of Kansas [hereinafter "Kansas"]; and

WHEREAS, the existence of an account in the Reservoir does not, in and of itself, assure compliance with the Compact by Colorado and its water users; and

WHEREAS, the Arkansas River Compact Administration [hereinafter the "Administration"] recognizes that it has the authority to create the Offset Account as provided for herein, but that neither the Administration nor either of its member states has any obligation to create the account provided for in this Resolution; and

WHEREAS, concurrently with the adoption of the original form of this Resolution, Colorado and Kansas entered into a Stipulation Re Offset Account in John Martin Reservoir [hereinafter the "Stipulation"]; and

WHEREAS, this Resolution is being readopted as amended;

NOW THEREFORE, BE IT RESOVLED that, pursuant to Section 2 of the Act of Congress approving the Compact, the Administration and the Chief of Engineers of the Corps of Engineers or his duly authorized representative, jointly approve a storage account in the Reservoir to be established and operated as follows:

1. There is hereby established a new storage account in the Reservoir to be known as the "Offset Account in John Martin Reservoir for Colorado Pumping" [hereinafter the "Offset Account"]. The size of the Offset Account shall be 20,000 acre-feet. Deliveries of water to the Offset Account shall be stored in the conservation pool but shall not be inflows into the Reservoir which accrue to conservation storage, and water in the Offset Account shall reside below elevation 3,851 feet above mean sea level (bottom of flood control storage). The establishment of the Offset Account is for the primary purpose of facilitating Compact compliance by Colorado and its water users after the effective date of this Resolution and is not for the purpose of repayment for violations of the Compact by Colorado prior to the effective date of this Resolution or replacement to Colorado ditches except as authorized herein. The intent of this Resolution is that, to the extent that Colorado allows post-Compact well pumping in Colorado in excess of the pre-Compact entitlement of 15,000 acre-feet per year, any depletions to usable Stateline flows caused by such pumping by contemporaneously offset by delivering replacement water to the

Stateline or by making replacement water available in the Offset Account where it can be called for by Kansas in accordance with this Resolution.

2. The Offset Account shall be separate from and in addition to the accounts established by the Administration's Resolution Concerning an Operating Plan for John Martin Reservoir as revised through December 11, 1984 [hereinafter the "1980 Operating Plan"] and the John Martin Reservoir Permanent Pool authorized by the Administration Resolution of August 14, 1976 [hereinafter the "Permanent Pool"].

3. The Colorado State Engineer or his delegate [hereinafter the "Colorado State Engineer"] may deliver or permit the delivery by Colorado water users of water to the Offset Account upon timely notice to the Kansas Chief Engineer or his delegate [hereinafter the "Kansas Chief Engineer"]. Such notice shall specify and document the following: the source of the water delivered, the amount of water, the purpose for which the water is delivered, the time of delivery, the rate of delivery, the extent to which the water is fully consumable, and the quantity, timing, and location of any associated return flows.

4. Only water approved for storage in the Offset Account by the Colorado State Engineer may be delivered to the Offset Account, provided that adequate transit losses shall be charged during delivery of water to the Offset Account, which losses shall be determined by the Colorado State Engineer using the method set out in U.S. Geological Survey Water Resources Investigations 78-75 (Sept. 1978) [hereinafter the "Livingston Formula"]. At the time of delivery of water to the Offset Account, the Colorado State Engineer shall determine the extent to which water delivered to the Offset Account is fully consumable and shall thereafter demand the release of any water necessary to maintain historical return flows to Colorado ditches and the Stateline from deliveries of

water historically used for agricultural irrigation; provided however, that the Kansas Chief Engineer may, at his option, direct that water necessary to maintain historical return flows to the Stateline [hereinafter "Stateline Return Flow"] remain in the Offset Account or be transferred to the Kansas account provided for in Section II of the 1980 Operating Plan [hereinafter "Kansas Section II Account"] for later release, and provided further, that the Colorado State Engineer's determination of the extent to which water delivered to the Offset Account is fully consumable shall not be binding on the Administration or Kansas. Once the Colorado State Engineer has determined the extent to which the water delivered to the Offset Account is fully consumable or is Stateline Return Flow, and has notified the Kansas Chief Engineer in accordance with paragraph 3 above, the Kansas Chief Engineer may demand the release of the water in the Offset Account which is fully consumable at any time and at any rate and may demand the release or direct the transfer of water in the Offset Account which is Stateline Return Flow at any time and at any rate.

5. Evaporation charges shall be made against water stored in the Offset Account in the manner set forth in Subsection II F of the 1980 Operating Plan. The evaporation charges shall be prorated amongst conservation storage and the accounts, including the Offset Account, according to the amounts in them. Evaporation from water in the Offset Account shall be charged against Colorado until:

    A. The water is released or transferred in accordance with this Resolution, or

    B. Thirty days after the Colorado State Engineer has determined and notified the Kansas Chief Engineer of the estimated monthly net depletion to usable Stateline flows caused by post-Compact diversions of tributary

ground water from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo Dam and Stateline ("the estimated monthly net depletion of usable Stateline flows"), to the extent the Kansas Chief Engineer has not previously demanded the release of water available for replacement in the Offset Account in an amount equal to or greater than the estimated monthly net depletion to usable Stateline flows, the evaporation loss on that amount of water or portion thereof shall thereafter be charged to Kansas. In order to determine the estimated monthly net depletion to usable Stateline flows for purposes of this paragraph only, the Colorado State Engineer shall use the following procedure unless he and the Kansas Chief Engineer agree otherwise: the Colorado State Engineer shall use the presumptive stream depletions established in Rule 4.2 of the Amended Rules and Regulations Governing the Diversion and Use of Tributary Ground Water in the Arkansas River Basin, Colorado, effective June 1, 1996 [hereinafter "Amended Rules"] and unit response functions presently utilized in accordance with the Amended Rules to determine stream depletions at the Stateline caused by post-Compact diversions of tributary ground water from the Valley Fill Aquifer and surficial aquifers along the Arkansas River Between Pueblo Dam and the Stateline. Further, the Colorado State Engineer shall use the same procedures currently used under the Amended Rules to determine the timing and location of return flows from diversions of imported waters and other augmentation water in determining net stream depletions at the Stateline. For the summer storage

season in the Reservoir (April 1 – October 31), the Colorado State Engineer shall assume that net depletions to usable Stateline flows are 81.9 percent of the net stream depletions at the Stateline, and for the winter storage season (November 1 – March 31), the Colorado State Engineer shall assume that net depletions to usable Stateline flows are 34.9 percent of the net stream depletions at the Stateline; provided that during the summer storage season, if 72 percent of the measured monthly Stateline flow exceeds 30,000 acre-feet, or during the winter storage season, 25 percent of the measured monthly Stateline flows exceeds 7,500 acre-feet, the Colorado State Engineer shall assume that net depletions to usable Stateline flows are 9.9% of the net stream depletions at the Stateline for such months. In addition, if, during the summer storage season, 72% of the measured Stateline flow, limited to 30,000 acre-feet per month, exceeds 140,000 acre-feet, then the Colorado State Engineer shall assume that net depletions to usable Stateline flows thereafter within that summer storage season shall be 9.9% of the net stream depletions at the Stateline. The computation of depletions to usable Stateline flows described in this paragraph shall only be for the purpose of assigning the evaporation charge for water stored in the Offset Account.

Notwithstanding paragraph B above, until thirty days after the Colorado State Engineer has determined and notified the Kansas Chief Engineer of the quantity and timing of any estimated Stateline Return Flow in the Offset Account, and the time for release of such water

to the Stateline has passed, the evaporation loss on that amount of Stateline Return Flow shall be charged to Colorado, but shall thereafter be charged to Kansas.

6. In accordance with the provisions of paragraphs 3 and 4 above, the Colorado State Engineer may deliver or permit the delivery of water by Colorado water users to the Offset Account, in an amount not to exceed 1,500 acre-feet per Compact year, for the purpose of replacing depletions to the inflows to conservation storage caused by post-Compact well pumping in Colorado and may (1) direct the transfer of such water from the Offset Account to conservation storage to replace depletions to the inflows to conservation storage, or (2) to the extent such that water is not needed to replace depletions to the inflows to conservation storage, may change the prior designation of water previously designated for the purpose of transfer to conservation storage. Once the Colorado State Engineer has notified the Kansas Chief Engineer of the change of designation, such water be released or transferred in accordance with this Resolution.
7. Releases from the Offset Account may be made simultaneously with deliveries into the Offset Account. However, such simultaneous releases and deliveries cannot create a deficit in the Offset Account.
8. Transit losses for releases from the Offset Account shall not be replenished from the Kansas transit loss account. Transit losses associated with the release of Stateline Return Flow from the Offset Account shall be replaced by the entity which delivered such Stateline Return flow to the Offset Account, provided that any increase in transit losses which results if the Kansas State Engineer directs that Stateline Return Flow in the Offset Account and calls for the release such Stateline Return Flow at a later time shall be borne by Kansas. Such transit losses on releases of Stateline Return Flow shall be determined

using the Livingston Formula for Subreach 6, removing bank and channel storage from the calculation, unless the Colorado State Engineer and the Kansas Chief Engineer agree otherwise. In order to ensure the arrival of releases of Stateline Return Flow at the Stateline if the Kansas Chief Engineer calls for the release of such Stateline Return Flow during the summer storage season in the Reservoir (April 1- October 31), an amount of water equal to the transit losses determined using the Livingston Formula for Subreach 6, including bank and channel storage, shall be released with the Stateline Return Flow and shall be charged to the entity which delivered the Stateline Return Flow, except that Kansas shall bear any increase in evaporation resulting from the summer storage release.

9. Notwithstanding other provisions of this Resolution, 500 acre-feet of fully consumable water shall be delivered by Colorado or Colorado water users to the Offset Account by April 1 of each year, or at a later time in any one year if agreed to by the Colorado State Engineer and the Kansas Chief Engineer, which delivery shall be a prerequisite for Colorado's right to deliver or permit the delivery by Colorado water users of up to 10,000 acre-feet of water (including the said 500 acre-feet) to the Offset Account pursuant to this Resolution during the period until the next succeeding April 1. For delivery of water to the Offset Account in excess of 10,000 acre-feet during each period, five percent of the amount delivered shall be allocated to Kansas. The said 500 acre-feet and five percent of any water delivered in excess of 10,000 acre-feet during each period [hereinafter "Storage Charge Water"] shall be allocated to Kansas, not for offset of depletions of usable flow at the Stateline but as part of Kansas' equitable share of the benefits arising from the creation of the Offset Account in the Reservoir. The Kansas Chief Engineer may direct the Storage Charge Water be transferred to the Kansas Section II Account or may

demand the release of Storage Charge Water at any time and at any rate. If Storage Charge Water is retained in the Offset Account, Kansas shall bear the evaporation after April 1. Colorado water users shall bear the evaporation prior to April 1. Any shortfall due to evaporation in the 500 acre-foot April 1 delivery requirement shall be made up out of the next delivery of water after April 1 by Colorado water users. Kansas shall bear the transit losses associated with the release of Storage Charge Water. Such transit losses shall be calculated using the Livingston Formula for Subreach 6, unless the Colorado State Engineer and the Kansas Chief Engineer agree otherwise.

10. No transfers, releases or exchanges shall be made of water in the Offset Account except releases and transfers authorized by this Resolution or approved by the Administration.

11. Not later than December 1 of each year, the Colorado State Engineer shall make an accounting of the operation under this Resolution for the previous Compact year available to the Operations Committee of the Administration and to interested parties.

12. In recognition of the fact that the operation of the Offset Account is for the primary purpose of facilitation Compact compliance by Colorado in connection with increased post-Compact pumping by Colorado water users, the Colorado State Engineer shall report to the Administration and the Kansas Chief Engineer on a monthly basis the timing and amount of deliveries to the Offset Account, the monthly pumping in location and amount in excess of Colorado's pre-Compact entitlement, and Colorado's monthly accounting of Compact compliance, including documentation not already provided and a report of the status of water delivered to the Offset Account, within two months of the end of the month reported. The Administration recognizes that use of this Offset Account to facilitate Compact compliance by Colorado after the effective date of this Resolution may

result in additional monitoring costs to Kansas. The Administration recognizes that Kansas is not waiving its right to claim reasonable compensation from Colorado for such additional monitoring expenses incurred by Kansas after the effective date of this Resolution. The Colorado State Engineer shall timely share relevant information with the Kansas Chief Engineer concerning use of the Offset Account in a manner the will minimize Kansas' monitoring costs. Each year the Colorado State Engineer and the Kansas Chief Engineer shall discuss further ways to minimize such costs.

13. In the event the runoff conditions occur in the Arkansas River basin upstream from the Reservoir that cause water to spill from the Reservoir, then water stored in the Permanent Pool in excess of 10,000 acre-feet shall spill before water stored in the accounts granted in Subsections III A, B, and C of the 1980 Operating Plan, which shall spill before the water stored in the Offset Account, which shall spill before the accounts granted in Section II of the Operating Plan, which shall spill before the Kansas Transit Loss Account, all of which shall spill before conservation storage.

14. Water available under priority rights decreed to the ditches of Colorado Water District 67 [hereinafter "District 67"] may be stored in the Offset Account only when no water in accruing to conservation storage, provided that return flows shall be maintained and accounted for in accordance with paragraphs 3 and 4 above; and water may be transferred into the Offset Account from accounts of the ditches of District 67 in the Reservoir provided for in Section II of the 1980 Operating Plan in accordance with this Resolution; provided that such storage or transfers are in accordance with the Amended Rules adopted by the Colorado State Engineer and, with respect to transfers from District 67 accounts, shall include both the consumable and return flow portions of such water.

15. Neither the adoption of this Resolution nor the establishment or operation of the Offset Account shall constitute a waiver of either State's rights under the Compact (if such a waiver is possible as a matter of law) or prejudice the ability of either State to represent its interests in present or future cases or controversies before the Administration or any court of competent jurisdiction, except as provided in the Stipulation.

16. All terms employed in this Resolution which are defined in the Compact or the 1980 Operating Plan shall have the same meaning as set out in the Compact or the 1980 Operating Plan, as the case may be.

17. The effective date of this Resolution shall be the date on which the Chief of Engineers of the Corps of Engineers, or his duly authorized representative, gives his approval by signing and dating below in the space provided. This Resolution shall not be affected by the termination of the 1980 Operating Plan, except that operations contemplated in this Resolution which rely on the existence of the 1980 Operating Plan shall no longer occur if the 1980 Operating Plan is terminated. This Resolution shall be in full force and effect until March 31, 1998, and year-to-year thereafter subject to the following provisions:

    A. Either Colorado or Kansas, through its Compact delegation, may terminate this Resolution effective March 31 by giving written notice to the Administration by February 1 of the same Compact year.

    B. In the event that this Resolution is terminated, water in the Offset Account at that time may remain in storage in the Offset Account and be released or transferred as provided above until no water remains in the Offset Account, at which time the Offset Account shall be terminated.

18. Colorado may, as it sees fit, fulfill or, as a condition to delivery of water to the Offset Account by Colorado water users, require its water users to fulfill the delivery requirements and be responsible for evaporation and transit loss charges imposed on Colorado by this Resolution, provided that Colorado shall require Colorado water users who wish to deliver water to the Offset Account to comply with this Resolution in all respects and shall require immediate cessation of the use of the Offset Account by any Colorado water user or users in the event of any substantial failure by such Colorado water user or users to comply with this Resolution.

19. Any releases of water from the Offset Account shall not exceed the channel capacity as determined by the Corps of Engineers.

JOINTLY APPROVED:

/s/ Larry E. Trujillo, Sr.
Chairman
Arkansas River Compact
Administration

/s/ Mary Louise Clay
Recording Secretary
Arkansas River Compact
Administration

/s/ Lloyd S. Wagner
District Engineer, Albuquerque District,
Duly Authorized Representative of the
Chief of Engineers
U.S. Army Corps of Engineers

30 March 1998
Date

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Attachment 2 - *Stipulation RE Offset Account in John Martin Reservoir (Offset Account Stipulation)*

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APPENDIX F.1

IN THE SUPREME COURT
OF THE UNITED STATES

STATE OF KANSAS, Plaintiff, v. STATE OF COLORADO, Defendant, and UNITED STATES OF AMERICA, Defendant-Intervenor.	)	No. 105, Original October Term 1996

STIPULATION
RE OFFSET ACCOUNT IN
JOHN MARTIN RESERVOIR

(Filed Apr. 03, 1997)

This Stipulation is entered into this 17th day of March, 1997, by the State of Kansas [hereinafter "Kansas"] and the State of Colorado [hereinafter "Colorado"], subject to approval by the Special Master of the United States Supreme Court.

RECITALS:

WHEREAS, Article IV-D of the Arkansas River Compact provides as follows:

> This Compact is not intended to impede or prevent future beneficial development of the Arkansas River basin in Colorado and Kansas by Federal or State agencies, by private enterprise, or by combinations thereof, which may involve construction of dams, reservoirs and other works for the purposes of water utilization and control, as well as the improved or prolonged functioning of existing works: Provided, that the waters of the Arkansas River, as defined in Article III, shall not be materially depleted in usable quantity or availability for use to the water users in Colorado and Kansas under this Compact by such future development or construction;

and

WHEREAS, the United States Supreme Court has determined that post-Compact well pumping in Colorado has caused material depletion of the usable Stateline flows of the Arkansas River in violation of the Arkansas River Compact [hereinafter the "Compact"], *Kansas v. Colorado*, 115 S.Ct. 1733 (1995); and

WHEREAS, Colorado desires to continue to allow ground water pumping by its water users in excess of the pre-Compact entitlement of 15,000 acre-feet per year determined by the United States Supreme Court as long as any depletions to usable Stateline flows caused by such pumping are replaced; and

WHEREAS, the issue of Compact compliance by Colorado is presently pending before the Special

Master appointed by the United States Supreme Court; and

WHEREAS, an account in John Martin Reservoir [hereinafter the "Reservoir"] is not necessary for Colorado's compliance with the Compact, but an account would be of benefit to Colorado by facilitating compliance with the Compact by Colorado and its water users to the extent that Colorado allows post-Compact well pumping by its water users in excess of the pre-Compact pumping entitlement of 15,000 acre-feet per year, and Colorado has requested such an account; and

WHEREAS, the Arkansas River Compact Administration [hereinafter the "Administration"] has the authority to create the Offset Account as Provided for in the Resolution Concerning as Offset Account in John Martin Reservoir for Colorado Pumping [hereinafter the "Resolution"], but neither the Administration nor either of its member states has any obligation to create the Offset Account; and

WHEREAS, the Offset Account will create benefits for water users in Kansas but also monitoring and accounting burdens for Kansas; and

WHEREAS, the existence of an account in the Reservoir does not, in and of itself, assure Colorado's compliance with the Compact; and

WHEREAS, the Administration and the Chief of Engineers of the Army Corps of Engineers are jointly approving concurrently herewith the Resolution

Establishing a new storage account in the Reservoir known as the "Offset Account in John Martin Reservoir for Colorado Pumping" [hereinafter the "Offset Account"]; and

WHEREAS, Kansas and Colorado desire to reach an agreement of the credit which Colorado shall receive for the delivery of water released from the Offset Account upon demand by Kansas, subject to approval by the Special Master of the United States Supreme Court;

NOW, THEREFORE, Kansas and Colorado stipulate and agree as follows:

1. In accordance with the Resolution, the Colorado State Engineer shall determine the extent to which water delivered to the Offset Account is fully consumable. Colorado understands that Kansas may not agree with the Colorado State Engineer's determination and agrees that the Colorado State Engineer's determination shall not be binding on Kansas in the event of a disagreement. However, both States recognize that it is useful to have the Colorado State Engineer make the determination in the first instance. In the event that Kansas disagrees with the Colorado State Engineer's determination of the extent to which water is fully consumable, Kansas shall notify Colorado within a reasonable period of time and the States shall make a good-faith attempt to resolve the disagreement. In the event the disagreement cannot be resolved by the States, Colorado agrees that it shall have the burden to establish the

extent to which water delivered to the Offset Account is fully consumable.

2. With regard to water delivered to the Offset Account for the purpose of offsetting depletions to usable Stateline flows, which is released at the demand of Kansas pursuant to the Resolution, Colorado shall receive credit for the delivery of such water at the Stateline (less transit losses determined in accordance with paragraph 3 below) as a replacement of depletions to usable Stateline flows which occur after the effective date of the Resolution to the extent such water is fully consumable; provided, however, that a demand for a release of water from the Offset Account by Kansas shall not constitute and [an] admission by Kansas that the water released from the Offset Account and delivered to the Stateline was in fact full[y] consumable. Antecedent flows at the Stateline shall not be included in the calculated delivery. To the extent the credit for the delivery of water at the Stateline to offset depletions to usable Stateline flows exceeds calculated depletions to usable Stateline flows which occurred after the date of the Resolution, the credit shall be applied to reduce future depletions to usable Stateline flows. Colorado shall receive no credit, however, of Storage Charge Water (as defined in the Resolution) or Stateline Return Flow (as defined in the Resolution) as a replacement of depletions to usable Stateline flows.

3. Transit losses on releases of water from the Offset Account for delivery to the Stateline for the purposes of offsetting depletions to usable Stateline

flows shall be determined using the transit losses for Subreach 6, including bank and channel storage, as set forth in the U.S. Geological Survey Water Resources Investigations 78-75, unless the States agree to use a different method or the United States Supreme Court directs otherwise. The States agree to cooperate with each other, the Administration, and the U.S. Geological Survey to improve the method of determining transit losses between John Martin Dam and the Stateline. Transit losses on releases from the Offset Account for delivery to the Stateline for the purpose of offsetting depletions to usable Stateline flow shall be borne by such releases.

4. Colorado acknowledges that use of the Offset Account may result in additional monitoring costs to Kansas. Colorado agrees that Kansas is not waiving its right to claim reasonable compensation from Colorado for such additional monitoring expenses incurred by Kansas after effective date of the Resolution. Colorado shall timely share relevant information with Kansas concerning use of the Offset Account in a manner that will minimize Kansas' monitoring costs. Each year, the States shall discuss further ways to minimize such costs.

5. Neither the adoption of the Resolution nor the establishment or operation of the Offset Account shall constitute a wavier of either State's rights under the Compact (if such a waiver is possible as a matter of law) interests in present or future cases or controversies before the Administration or any court of competent jurisdiction; except that actual storage of

water in the Offset credits for deliveries of water to the Stateline in accordance with this Stipulation shall be considered in determining Colorado's Compact compliance; and provided further that Colorado shall receive credit for the delivery of water to the Stateline as a replacement of depletions to usable Stateline flows in accordance with this Stipulation.

DATED, this 17 day of March, 1997.

STATE OF KANSAS

/s/ John B. Draper
JOHN B. DRAPER
Counsel of Record
Special Assistant Attorney General

MONTGOMERY & ANDREWS, P.A.
P.O. Box 2307
Santa Fe, NM 87504-2307
Telephone: 505-986-2525

Attorneys for the State of Kansas

STATE OF COLORADO

/s/ David W. Robbins
DAVID W. ROBBINS
Special Assistant Attorney General
Counsel of Record

DENNIS M. MONTGOMERY
Special Assistant Attorney General

HILL & ROBBINS, P.C.
1441 – 18th Street, #100
Denver, Colorado 80202
Telephone: 303-296-8100

Attorneys for the State of Colorado

APPROVED:
/s/ Arthur L. Littleworth
Arthur L. Littleworth
Special Master

Attachment 3 - *Agreement Concerning The Offset Account In John Martin Reservoir For Colorado Pumping, Determination Of Credits For Delivery Of Water Released For Colorado Pumping, And Related Matters* (*Offset Account Crediting Agreement)*

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Appendix F.2

AGREEMENT CONCERNING THE OFFSET ACCOUNT IN JOHN MARTIN RESERVOIR FOR COLORADO PUMPING, DETERMINATION OF CREDTIS FOR DELIVERY OF WATER RELEASED FOR COLORADO PUMPING, AND RELATED MATTERS

September 29, 2005

This Agreement is entered into by the State of Colorado and the State of Kansas (hereinafter referred to as "Colorado" and "Kansas") in the interests of interstate comity to resolve accounting issues relating to the Offset Account in John Martin Reservoir for Colorado Pumping (hereinafter "Offset Account"). The crediting and implementation principles described herein will be applied to Offset Account deliveries and H-I Model input sets for the years 1997 through 2004 as well as future years.

Acceptance of this Agreement by Colorado and Kansas does not prejudice or constitute a waiver of their respective rights under the Arkansas River Compact, the April 24, 1980 Resolution Concerning an Operating Plan for John Martin Reservoir (as revised on May 10, 1984, and December 11, 1984), the March 17, 1997 Stipulation Re Offset Account in John Martin Reservoir in *Kansas v. Colorado*, No. 105 Original, or the Amended March 30, 1998 Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping.

Colorado and Kansas agree as follows:

1. Definitions: The following terms will be defined in this agreement as follows:

A. **Colorado Consumable Subaccount** – a subaccount of the Offset Account into which fully consumable water, as determined by the Colorado State Engineer pursuant to Paragraphs 3 and 4 of the Offset Account Resolution, is delivered or transferred. This subaccount is further segmented into:
   i. Colorado Upstream Consumable Subaccount
   ii. Colorado Downstream Consumable Subaccount.

B. **Colorado Upstream Subaccount** – a subaccount of the Offset Account for the storage of water with the purpose of replacing depletions to conservation storage inflows pursuant to Paragraph 6 of the Offset Account Resolution.

C. **Consumable Portion of the Release** – the water released from the Kansas Consumable and Colorado Consumable subaccounts of the Offset Account. This would not include waters released from any other subaccounts of the Offset Account.

D. **H-I Model** – the Hydrologic-Institutional Model developed jointly by the States to assist in the determination of Stateline depletions to usable streamflows.

E. **Instate Return Flow to Colorado Ditches Subaccount** – a subaccount of the Offset Account where the water necessary to maintain historical return flows to Colorado ditches from deliveries of water historically used for agricultural irrigation is deposited.
    i. Keesee Winter Return Flows
F. **Kansas Consumable Subaccount (KCS)** – a subaccount of the Offset Account for the storage of that part of the total account for which evaporation is charged to Kansas, pursuant to Paragraph 5B of the Offset Account resolution.
G. **Kansas Storage Charge Subaccount** – a subaccount of the Offset Account for the storage of fully consumable water which is a prerequisite for Colorado or its water users to store water in the Offset Account as provided for in Paragraph 9 of the Offset Account Resolution.
H. **Kansas Stateline Return Flow Subaccount** – a subaccount of the Offset Account for those Stateline return flows which, based on historic patterns, would have been delivered to the Stateline, but which are held in the Offset Account pursuant to Paragraph 4 of the Offset Account Resolution.
I. **Muskingum method** – a routing method as described in the following reference: McCarthy, G.T., 1938: 'The Unit Hydrograph and Flood Routing', presented at conference of North Atlantic Division, U.S. Corps of Engineering, June 1938 (see also 'Engineering Construction - Flood Control', pp. 147-156, the Engineer School, Ft. Belvoir, VA, 1940).
J. **Offset Account Resolution (OAR)** – the "Resolution concerning an Offset Account in John Martin Reservoir for Colorado Pumping as amended March 30, 1998," or as it is subsequently amended.
K. **Provisional data** -- streamflow and ditch diversion data collected on the day the administrative action is taken.
L. **Reasonable Opportunity** – is the first day during the period of April 1st to June 30th when the mean Stateline daily flow is 100 cfs or greater for at least 15 days in the previous 30-day period, even if the 30 days precede April 1.
M. **Stateline flow** – the flow of the waters of the Arkansas River as determined by gaging stations located at or near the Stateline, more specifically the combined flow as measured by USGS gaging stations: Frontier Ditch near Coolidge and the Arkansas River near Coolidge.
N. **Stateline Return Flow Subaccount** – a subaccount of the Offset Account for water that will be required to maintain historical Stateline return flows pursuant to Paragraph 4 of the Offset Account resolution.
O. **Stateline Return Flow Transit Loss Subaccount** – a subaccount of the Offset Account for the associated transit loss water needed to deliver historical Stateline return flows to the Stateline Pursuant to Paragraph 8 of the Offset Account Resolution.

2. Subaccounts currently approved for the Offset Account.

The Offset Account, as provided for by the **Offset Account Resolution (OAR)**, shall consist of the following subaccounts:

A. Colorado Consumable Subaccounts (OAR Paragraphs 3 & 4)
    i. Colorado Upstream Consumable Subaccount
    ii. Colorado Downstream Consumable Subaccount
B. Colorado Upstream (OAR Paragraph 6)
C. Instate Return Flow to Colorado Ditches (OAR Paragraph 4)
    i. Keesee Winter Return Flows
D. Kansas Consumable (OAR Paragraph 5.B.)
E. Kansas Storage Charge (OAR Paragraph 9)
F. Kansas Stateline Return Flow (OAR Paragraph 4 & 5, 5 deals with the evaporation on Stateline Return Flows after Kansas has been noticed)
G. Stateline Return Flow (OAR Paragraph 4)
H. Stateline Return Flow Transit Loss (OAR Paragraph 8)

Additional subaccounts may be approved only by mutual agreement by both States. Notice of a proposed subaccount (including a detailed written description of the need and justification for the subaccount) must be given from one state to the other; and the response is due from the notified State within two weeks upon receipt.

3. Determination of Credits for the Delivery of Water Released from the Offset Account

The States agree to determine credits for the delivery of water released from the Offset Account on Kansas' demand based on measured **Stateline flow** in accordance with the criteria described below.

A. Release accounting and stream flow data used in the evaluation of all deliveries will be as follows:

    i. Accounting records of the Operations Secretary for Offset Account releases, including hourly records of gate changes identifying the beginning and end of releases.

    ii. Provisional, hourly, and daily satellite data from pertinent gaging stations between John Martin Reservoir and the Stateline. Stateline deliveries for which Colorado will receive credit will be based on the mean daily **Stateline flow**.

    iii. The United States Geological Survey (USGS) provides the State of Colorado with a data feed of shift-corrected discharge values on an hourly basis. The data provided is in a non-aggregated time step, typically 15-minute measurement intervals. Once data is loaded into the Colorado Division of Water Resources database, it is not updated with subsequent data from the USGS. Therefore, data used for water administration remains the same as during the time the water was administered. Colorado will daily extract 15 minute discharge data for the Arkansas River at Granada, the Frontier Ditch, and the Arkansas at Coolidge gages for the previous 24-hour period to update previously transmitted data and export this and previous data for the most

recent 7-day period as a delimited text file to an ftp directory accessible by persons designated by the Colorado State Engineer or Kansas Chief Engineer. **Provisional data** shall be used for all the calculations described in this agreement. Colorado will provide and maintain the auto-executable program to periodically update databases maintained in their respective offices with this data to ensure identical stream flow data sets to be used to evaluate deliveries of water from John Martin Reservoir to Kansas.

B. The antecedent flow during the Offset Account delivery will be determined as follows:

i. Use the mean daily **Stateline flow** for the 10 full days preceding the date of delivery arrival, provided that the variability within the period does not depart from the 10-day average by more than 10%. The date of delivery arrival for the purpose of this Paragraph shall be two days after the initiation of the release with the first day of release being day zero. Days of **Stateline flow** which exceed 110% of the initial average will be removed until an average base flow with less than +/- 10% variability is achieved to remove interference caused by precipitation or the effect of Colorado ditch operations during the 10-day period. No more than two iterations of antecedent flow calculation will be performed and no fewer than 6 days out of the preceding 10-day period will be used in determining the antecedent flow except as provided in the following two paragraphs.

ii. If an Offset Account release follows within 10 days of any other release from a Kansas account (including the Offset Account), the antecedent flow for the current Offset Account release shall be the same as the antecedent flow determined for the previous release using the same procedures as described above in Paragraph 3.B.i.

iii. If the average flow for the 10-day period preceding the 10 days (i.e. days 11 through 20 prior to arrival of the release) used to determine antecedent flow is more than twice the computed antecedent flow computed above in Paragraph 3.B.i., the antecedent flow will be adjusted to be the average of: a) the antecedent flow as described above in Paragraph 3.B.i. and b) the hydrograph flow value using the **Muskingum method** described below in Paragraph 3.C. on the sixth day following the end of the release from John Martin Reservoir with the last day of the release being day zero.

C. For Offset Account releases occurring without consecutive Kansas Section II Account releases, the credit component of the Offset Account release at the Stateline for which Colorado will receive 100% credit as a replacement of depletions to usable Stateline flow will be determined as follows:

i. The mean daily release from the Offset Account will be multiplied by 1.05.

ii. These adjusted mean daily values will be routed to the Stateline using the **Muskingum method** with the following parameters: K = 60 hours, x = 0.15 and t=24 hours.

iii. The resulting Muskingum hydrograph will be lagged one day, in addition to the lag included within the Muskingum routing.

iv. The Stateline delivery for the purpose of determining Offset credit will be determined as the lesser of: a) the **Stateline flow** less antecedent flow or b) the lagged Muskingum hydrograph.

v. The Stateline delivery determination will end the sixth day following the end of the release from John Martin Reservoir with the last day of the release being day zero and with the delivery for the sixth day being prorated by the ratio of the number of hours of release in day zero divided by 24.

vi. The Offset Account delivery efficiency will be the Stateline delivery determined in the manner described above divided by the total Offset Account release.

vii. Under no circumstances shall more than 100% of the total volume released from the Offset Account over the entire period of the release be determined to be delivered under these procedures.

viii. The credit for the **Consumable Portion of the Release** will be determined as the Offset Account delivery efficiency multiplied by the **Consumable Portion of the Release**.

D. For combined releases of Offset Account and Kansas Section II Account water, the credit component for the Offset Account release at the Stateline for which Colorado will receive 100% credit as a replacement of depletions to usable **Stateline flow** and the Equivalent Stateline Flow (ESF) volume for determining transit losses associated with Kansas Section II Account release will be determined as follows:

i. The mean daily release from the sum of the Offset Account and the Kansas Section II Account releases will be multiplied by 1.05.

ii. These adjusted mean daily values will be routed to the Stateline using the **Muskingum method** with the following parameters: K = 60 hours, x = 0.15 and t=24 hours.

iii. The resulting Muskingum hydrograph will be lagged one day, in addition to the lag included within the Muskingum routing.

iv. The Stateline delivery, for the purpose of determining Offset credit, will be determined as the lesser of: a) the **Stateline flow** less antecedent flow or b) the lagged Muskingum hydrograph.

v. The Stateline delivery determination will end the sixth day following the end of the release from John Martin Reservoir with the last day of the release being day zero and with the delivery for the sixth day being prorated by the ratio of the number of hours of release in day zero divided by 24.

vi. The Offset Account delivery efficiency will be the Stateline delivery determined in the manner described above divided by the total of Offset Account and Kansas Section II Account releases.

vii. The credit for the **Consumable Portion of the Release** will be determined as the Offset Account delivery efficiency multiplied by the **Consumable Portion of the Release**.

viii. The ESF delivery will be determined as the lesser of: a) the **Stateline flow** or b) the lagged Muskingum hydrograph.

ix. The ESF delivery determination will end the sixth day following the end of the release from John Martin Reservoir with the last day of the release being day zero and with the delivery for the sixth day being prorated by the ratio of the number of hours of release in day zero divided by 24.

x. The ESF percentage will be calculated as the ESF delivery (determined using Sub-paragraphs 3.D.i through 3.D.iii and 3.D.viii through 3.D.ix) divided by the total of the releases from the Offset Account and Kansas Section II Account.

xi. The volume of the Kansas Section II ESF is the total of the Kansas Section II releases multiplied by the ESF percentage.

xii. If the ESF volume for the Kansas Section II Account delivery is less than the Kansas Section II Account volume released, the resulting transit loss will be replenished to the Kansas Section II Account.

xiii. Under no circumstances shall more than 100% of the total of either the release from the Offset Account or the Kansas Section II Account over the entire period of the release be determined to be delivered for that account under these procedures.

xiv. For the purposes of these determinations, the volume of multiple releases from the same account during the combined releases will be summed and treated as a single value.

4. Credit for evaporation from water stored in the "Kansas Consumable Subaccount" (KCS).

As provided in the **Offset Account Resolution (OAR)**, once Kansas has received a 30-day notice and evaporation is now being assigned to the KCS, Colorado may accumulate the

evaporation for later credit as determined below in this Paragraph. Commencing April 1 of each year, the content of the KCS will be subject to the following accounting procedures and shall be used to establish evaporation eligible for credit from the KCS:

A. During the period of April 1 through June 30, if Kansas does not call for water from the KCS, evaporation eligible for credit as a replacement of depletions to usable Stateline flows for water stored in the KCS will begin the day following a **Reasonable Opportunity** for Kansas to call for water. If a **Reasonable Opportunity** has occurred and Kansas has chosen not to call for water from the KCS, evaporation eligible for credit as a replacement of depletions to usable Stateline flows for all water stored in the KCS will continue until either Kansas calls for a release of water and exhausts the KCS, or until the succeeding April 1, whichever comes first. However, if Kansas chooses to call for water from the KCS, evaporation eligible for credit will commence on the date of release and will continue until either the KCS is exhausted, or until the succeeding April 1, whichever comes first.

B. During the period of April 1 through June 30, if Kansas does not call for water from the KCS and there is no **Reasonable Opportunity** for Kansas to call for water, the evaporation eligible for credit as a replacement of depletions to usable Stateline flows for all water stored in the KCS will begin on July 1 and will continue until either Kansas calls for a release of water and exhausts the KCS, or until the succeeding April 1, whichever comes first.

C. During the period of April 1 through June 30, if Kansas does call for water from the KCS, evaporation eligible for credit from additional water delivered to and stored in the KCS that is less than 3,500 acre-feet will be deferred until July 1 but will then continue until either Kansas calls for a release of water and exhausts the KCS, or until the succeeding April 1, whichever comes first.

D. During the period of April 1 through June 30, if Kansas does call for water from the KCS, evaporation eligible for credit from additional water delivered to and stored in the KCS that is equal to or greater than 3,500 acre-feet will begin on the date the 3,500 acre-feet for the total volume was achieved and will continue until either Kansas calls for a release of water and exhausts the KCS, or until the succeeding April 1, whichever comes first.

E. During the period of July 1 through September 30 evaporation eligible for credit for additional water delivered to and stored in the KCS from July 1 through September 30 will begin on the day water is delivered and stored in the KCS and will continue until either Kansas calls for a release of water and exhausts the KCS, or until the succeeding April 1, whichever comes first.

F. Colorado shall receive no credit as a replacement of depletions to usable Stateline flows for evaporation from additional water delivered to and stored in the KCS during the period October 1 through March 31.

G. Commencing April 1 of each succeeding year, the accounting and procedures as described in this Paragraph 4 shall be used to establish initial conditions for assigning evaporation eligible for credits from the KCS for that year.

H. The evaporation credit component for offsetting usable depletions to Stateline flows will be computed by applying the Offset Account delivery efficiency for the next Offset Account release, as set forth in Paragraph 3 above, to the quantity of KCS evaporation eligible for credit. Colorado will not seek credit for the computed transit loss component of this water. Kansas Storage Charge water and the Kansas Stateline Return Flow water shall not be placed into the KCS, nor shall evaporation from these subaccounts be eligible for credit.

5. Assignment of Transit Losses

The **Consumable Portion of the Release** from the Offset Account that is not credited as a delivery at the Stateline, as determined in Paragraph 3 above, will be considered to be transit loss and a portion of that amount, as determined below, will be input into the **H-I Model** as a special water and assigned to reaches between John Martin Reservoir and the Stateline. The transit loss to the three reaches between stream gages below John Martin Reservoir (JMR to Lamar, Lamar to Granada, Granada to Stateline) will be determined in proportion to the percentages of transit loss determined using the Livingston Reach 6 factors with the antecedent flows at the stream gages at JMR, Lamar and Granada. However, if through the cooperative efforts of the States, an improved method of determining transit losses between John Martin Reservoir and the Stateline is devised, that method may be utilized through amendment of this agreement pursuant to Paragraph 11. In determining the portion of the transit loss that will be included in the **H-I Model**, the flows through the Granada gage will be used to assess Colorado's efforts to administer the released water past Colorado ditch headgates. The procedure to determine the amount of transit loss to be input into the **H-I Model** as a special water will be as follows:

A. Upon a call for an Offset Account release from John Martin Reservoir, the flows will be evaluated for the prior ten-day period in a manner consistent with Sub-paragraph 3.B above for the Arkansas River below John Martin Reservoir, the Arkansas River at Lamar and the Arkansas River near Granada river gages to compute a target flow rate at the Granada gage computed as the Granada antecedent flow plus the Offset Account release rate less the transit loss based on Livingston Reach 6 factors. During the Offset Account release, Colorado will administer the release to attempt to maintain the target flow rate at the Granada gage. Changes in the Offset Account release rate will cause a change in the Granada gage target rate (based on the original calculation using the Livingston Reach 6 factors), computed by the new release rate multiplied by the original transit loss percentage plus the antecedent flow.

B. At the conclusion of the release, the actual volume delivered through the Granada gage will be determined using mean daily flows from the **Provisional Data** for the Granada gage for the target evaluation period, which is from the date of the first day of release arrival at the Stateline through the day following the last full day of release at John

Martin Reservoir. This value will be compared to the volume calculated using the delivery target flow rate at Granada multiplied by the number of days between release arrival at the Stateline and one day following the last full day of release at John Martin Reservoir. If the volume of actual delivery through the Granada gage for this period is greater than or equal to the target volume delivery, 75% of the transit losses determined for the delivery will be input into the **H-I Model** as special water. See Table A below for a sample computation.

C. If the volume of actual delivery through the Granada gage for the target evaluation period is less than the target volume delivery, the amount of the transit loss in the JMR to Lamar reach that is eligible for use as a transit loss input for the **H-I Model** is reduced by the ratio of the target transit loss in that reach derived using the Livingston Reach 6 factors to the actual transit loss in that reach calculated from the difference between the target flow rate at Granada and the actual delivery flow rate at Granada. The portion of the total delivery transit loss attributed to that reach is multiplied by this ratio to obtain the amount of the transit loss in the JMR to Lamar reach that is eligible for use as a transit loss input. The same computation is performed to determine the amount of the transit loss in the Lamar to Granada reach that is eligible for use as a transit loss input for the **H-I Model**. The transit loss eligible for input into the **H-I Model** in the Granada to Stateline reach is unchanged. Seventy-five percent of the transit loss determined for each of the three reaches will be input into the **H-I Model** as a special water. See Table A below for a sample computation for this case.

Table A: Sample computation for assignment of Transit Loss

Delivery Target Met							
	JMR	JMR to Lamar Reach	Lamar	Lamar to Granada Reach	Granada (Delivery Target)	Granada to Stateline Reach	Stateline
Flow Rates	250 cfs		237.5 cfs		225 cfs		200 cfs
Transit Losses		12.5 cfs		12.5 cfs		25 cfs	
% of total TL		25%		25%		50%	
CU Delivery Transit Loss							1000 ac-ft
Transit Loss by Reach		250 ac-ft		250 ac-ft		500 ac-ft	
75% of TL input as Special Water		187.5 ac-ft		187.5 ac-ft		375 ac-ft	750 ac-ft
Delivery Target Not Met							
	JMR	JMR to Lamar Reach	Lamar	Lamar to Granada Reach	Granada (Delivery Target)	Granada to Stateline Reach	Stateline
Flow Rates	250 cfs		237.5 cfs		225 cfs		200 cfs
Transit Losses		12.5 cfs		12.5 cfs		25 cfs	
% of total TL		25%		25%		50%	
CU Delivery Transit Loss							1000 ac-ft
Transit Loss by Reach		250 ac-ft		250 ac-ft		500 ac-ft	
Actual Delivery Rate					200 cfs		
Actual Transit Loss		25 cfs		25 cfs			
Adjusted Transit Loss		125 ac-ft		125 ac-ft		500 ac-ft	750 ac-ft
75% of Adjusted TL input as Special Water		93.75 ac-ft		93.75 ac-ft		375 ac-ft	562.5 ac-ft

6. Disposition of return flow water from Keesee Ditch, XY-Graham Canal, and Stubbs Ditch Section II accounts that is transferred into the Offset Account.

The procedure used to determine the timing and quantity of return flows is described herein. When Colorado transfers water from one of the subject Section II accounts to the Offset Account under the provisions of paragraph 4 of the **Offset Account Resolution**, the water transferred from the Section II account will be split into its consumptive use, in-state return flow and Stateline return flow components as described in Attachment A.

In-state return flows and the associated transit loss will be simulated in the **H-I Model** as a special water input, either as an input to the river in Reach 11 if return flows are actually released to the river, or as an input to individual Section II accounts of Colorado ditches, as actually occurs.

The consumptive use water, Stateline return flows and the associated transit loss and evaporation that is transferred to the Offset Account will be disposed of in accordance with the provisions of paragraphs 4, 5, and 8 of the **Offset Account Resolution**. The Stateline return flow will be simulated in the **H-I Model** as follows: (1) For return flows that remain in the Offset Account at the direction of the Kansas Chief Engineer, Stateline return flows will be simulated in the **H-I Model** by adding a special water equal to the return flow according to the schedules in Attachment A. Seventy-five percent of the transit loss water will be added to Reach 11. (2) For water transferred into the Kansas Section II account at the direction of the Kansas Chief Engineer, a special water input equal to the amount of the transfer will be made. (3) For Stateline return flows delivered to the river, a special water input equal to the amount of the release will be made to Reach 11, unless this water is delivered past the headgates of canals in Colorado, in which case it will be added to the reach to which it was delivered. In either case, seventy-five percent of the transit loss release will be input to Reach 11. Nothing in this subsection relating to the distribution of Stateline return flow or simulation of Stateline return flow in the **H-I Model** will affect the assignment of evaporation charges as set out in the **Offset Account Resolution**, paragraph 5.B.

7. Using H-I Model 10-year compliance results to determine additional amounts of water for delivery to the Offset Account by Colorado and to reset the status of Colorado's monthly accounting for the purpose of evaporation accounting under the provisions of the Offset Account Resolution.

To use the **H-I Model** to determine Compact compliance in accordance with the Special Master's recommendations in the Fourth Report, two steps are required. The first step is to run the **H-I Model** in both the historic and Compact modes to determine the accretions or depletions to usable Stateline flows for the previous 10-year period resulting from post-Compact well pumping and replacement sources represented in the **H-I Model**. The second step is to sum Colorado's Stateline delivery credits for fully consumable water delivered from the Offset Account to the Stateline for the previous 10-year period including any credits for evaporation from water stored in the KCS that Colorado is entitled to. The resulting quantities from these two steps are then used to calculate the final determination of accretions or depletions to usable

Stateline flows for the previous 10-year period. This final quantity is shown as Accretion A or Depletion A in Table B below.

In the monthly accounting performed by Colorado to replace well pumping depletions using the methods used to implement the Amended Use Rules, the credits that Colorado is entitled to as a result of deliveries from the **Colorado Consumable Subaccounts** to the Stateline are used to balance stream depletions that are calculated each month until these delivery credits are exhausted. These credits are shown as Accretion B in Table B below.

Analysis of the **H-I Model** runs used to determine Accretion A or Depletion A should be completed by mid-March of the year following the 10 calendar year period for which Compact compliance is being determined. Prior to the first full 10-year period, this accounting will be performed using years 1997 through 2005. When this analysis is completed, the actions summarized in the table below should be taken to reset the credit/depletion status of Colorado's monthly accounting.

Table B: Actions to reset the credit/depletion status of Colorado's monthly accounting

Results of the **H-I Model** analysis for the most current 10 year compliance period	Monthly Accounting Status at the end of December of the last year of the 10 year compliance period	Reset Action for Accretion B (Monthly Accounting Status for the beginning of the current calendar year)
IF	**AND IF**	**THEN**
Accretion A	Accretion B > 0 (Credits are used in monthly accounting before any further water is transferred to the KCS)	Reset to Accretion A (Credits are used in monthly accounting before any further water is transferred to the KCS)
Accretion A	Accretion B = 0 (Water is transferred to the KCS after monthly accounting)	Reset to Accretion A (Move KCS back to Colorado CU sub account for Jan-Mar of current year. Credits are used in monthly accounting before any further water is transferred to the KCS)
Depletion A	Accretion B = 0 (Water is transferred to the KCS after monthly accounting)	Place CU water = Depletion A into the Offset Account (Water is transferred to the KCS after monthly accounting)
Depletion A	Accretion B > 0 (Credits are used in monthly accounting before any further water is transferred to the KCS)	Reset Accretion B = 0 Place CU water = Depletion A into the Offset Account (Water is transferred to the KCS after monthly accounting)

8. New accounting procedures or calculations developed through collaborative efforts, including improved methodology to determine transit losses between John Martin Reservoir and the Colorado-Kansas Stateline, may be implemented or substituted with existing procedures or calculations upon modification of this agreement pursuant to Paragraph 11.

9. Colorado will employ best water administrative practices and enforcement activities to assure the timely delivery of Offset Account releases from John Martin Reservoir to the Colorado-Kansas Stateline in order to maximize delivery of such water to the Stateline.

10. If Kansas calls for more than 10,000 AF from the **Colorado Consumable** and/or **Kansas Consumable Subaccounts** during the period of November 1 to March 31 in any consecutive three years period, the transit losses on that part of the releases exceeding 10,000 AF, will be input into the **H-I Model** as special waters in the following April using the procedures provided for in Paragraph 5.

11. The States may agree to modify this Agreement, or any portion thereof, provided any amendment is not inconsistent with the Compact and the decisions of the Court in this case. Either State may seek modification of this Agreement by giving notice to the other State's Chief or State Engineer in writing. The States will cooperate in a good-faith effort to resolve issues raised by the proposed modification. The States may modify this Agreement only by mutual agreement or, if the States are unable to agree on a proposed modification to this Agreement, a State may submit the matter to the dispute resolution process included in the final decree in this case, including binding arbitration.

The States also agree to review this Agreement and the **Offset Account Resolution** every five years to determine whether the provisions can be improved in the interest of continuing interstate comity and effective water management. The first review shall occur five years from the effective date of this Agreement.

OPERATIONAL GUIDELINES

Although not mandatory, to enhance the efficient and timely delivery of water released from the Offset Account, the States also agree to the following guidelines:

1. Kansas should avoid calling for releases from the Offset Account during the period November 1 through March 31. Exceptions may be made whenever stream conditions are favorable for a release and the water is needed in Kansas, or when a spill is expected.

2. When antecedent flow is 100 cfs, or less, Kansas will call for releases from the Offset Account at a flow rate of at least 250 cfs and for a minimum of 7 days, although Kansas may reduce or terminate a release from the Offset Account if a precipitation event diminishes the demand for water in Kansas. Further, Kansas may request a release from

the Offset Account of shorter duration than 7 days if it is made in conjunction with a consecutive release from the Kansas Section II Account.

3. Unless Kansas specifies otherwise, releases from Offset subaccounts will be made in the following order:

    A. Kansas Consumable Subaccount
    B. Kansas Storage Charge Subaccount
    C. Kansas Stateline Return Flows Subaccount
    D. Colorado Consumable Subaccount
    E. Stateline Return Flow Subaccount and Stateline Return Flow Transit Loss Subaccount

4. Kansas will use its best efforts to maximize the efficiency of Offset Account deliveries, including but not limited to, the release of Kansas Storage Charge water in conjunction with water released from other subaccounts.

JOINTLY APPROVED: 9-30-2005

/s/ Hal D. Simpson_

Hal D. Simpson

Colorado State Engineer

/s/ David L. Pope

David L. Pope

Kansas Chief Engineer

/s/ David W. Robbins

David W. Robbins

Special Assistant to the Colorado Attorney General

/s/ John B. Draper

John B. Draper

Special Assistant to the Kansas Attorney General

Attachment 4 – Example of Stateline delivery credit spreadsheet (2018)

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Data Input Sheet for Section II/Offset Account Delivery June-July 2018

Type of Release	C	Start Time	2:00 PM	Rate	404.44	Did any other release occur within						
Release Start Date	6/11/2018	Offset Release Start Date	7/6/2018			ten days prior to this release?	No					
Release End Date	7/27/2018	Offset Release End Date	7/26/2018			If yes, enter Antecedent Flow from Prior Release >						
Ending Hour	2:30 PM	Enter Cumulative Evap Credit AF			0.00	If yes, enter Granada Antecedent Flow from Prior Release >						

	Gage Data					Release Amounts					
	Stateline Flow Data		Intermediate Gage Data			Offset Account		Total Offset Account	Kansas Section II	Transit Loss	Total
Date	Coolidge (cfs)	Frontier (cfs)	Below JMR (cfs)	Lamar (cfs)	Granada (cfs)	Consumable (af)	All Other (af)		(af)	(af)	(af)
5/23/2018	167.5	0.0	377.1	21.8	44.2			0.0			0.0
5/24/2018	165.8	0.0	376.8	18.3	38.4			0.0			0.0
5/25/2018	155.5	0.0	410.7	16.9	34.5			0.0			0.0
5/26/2018	141.0	0.0	438.7	39.8	30.4			0.0			0.0
5/27/2018	131.3	0.0	440.3	17.3	36.6			0.0			0.0
5/28/2018	123.4	0.0	399.6	16.0	33.6			0.0			0.0
5/29/2018	125.9	0.0	368.1	15.5	30.7			0.0			0.0
5/30/2018	119.0	0.0	421.0	15.1	25.5			0.0			0.0
5/31/2018	109.2	0.0	488.0	15.3	25.0			0.0			0.0
6/1/2018	96.3	0.0	502.2	15.4	31.7			0.0			0.0
6/2/2018	90.4	0.0	503.0	15.5	36.4			0.0			0.0
6/3/2018	85.2	6.0	502.3	17.3	39.0			0.0			0.0
6/4/2018	70.8	30.2	499.3	17.6	41.4			0.0			0.0
6/5/2018	68.7	31.1	498.7	17.1	43.1			0.0			0.0
6/6/2018	62.1	30.1	504.9	16.9	44.4			0.0			0.0
6/7/2018	64.1	30.5	514.2	17.5	45.1			0.0			0.0
6/8/2018	65.1	31.1	529.0	18.0	47.1			0.0			0.0
6/9/2018	61.3	31.3	540.0	35.0	49.9			0.0			0.0
6/10/2018	65.6	32.7	540.2	42.0	51.6			0.0			0.0
6/11/2018	**71.0**	32.8	733.0	49.7	60.3			0.0	247.9	41.33	289.3
6/12/2018	62.6	31.7	909.2	314.8	59.0			0.0	595.05	99.18	694.2
6/13/2018	79.4	36.2	937.9	402.1	175.7			0.0	595.05	99.18	694.2
6/14/2018	159.8	17.6	1090.8	417.4	242.1			0.0	892.58	148.77	1041.4
6/15/2018	179.4	32.8	1295.3	636.9	328.3			0.0	1190.10	256.21	1446.3
6/16/2018	254.5	28.7	1299.9	715.3	489.7			0.0	1190.10	297.53	1487.6
6/17/2018	339.7	32.6	1298.3	726.5	566.2			0.0	1190.10	297.53	1487.6
6/18/2018	398.7	33.9	1294.3	736.2	601.9			0.0	1190.10	297.53	1487.6
6/19/2018	428.6	35.6	1214.3	699.8	624.8			0.0	1190.10	50.80	1240.9
6/20/2018	463.3	34.3	1165.9	595.7	612.7			0.0	1190.10		1190.1
6/21/2018	441.4	32.7	1236.1	594.6	556.5			0.0	1421.51		1421.5
6/22/2018	439.7	38.6	1300.7	734.7	609.6			0.0	1586.80		1586.8
6/23/2018	533.0	37.8	1294.6	747.2	685.3			0.0	1586.80		1586.8
6/24/2018	663.0	31.3	1300.8	752.2	718.1			0.0	1586.80		1586.8
6/25/2018	1100.0	27.0	1196.4	749.2	842.0			0.0	1462.83		1462.8
6/26/2018	809.3	0.5	1072.4	655.1	802.2			0.0	1272.56		1272.6
6/27/2018	**727.0**	0.3	1034.5	586.8	728.3			0.0	1190.10		1190.1
6/28/2018	640.7	0.7	1032.8	572.3	677.0			0.0	1190.10		1190.1
6/29/2018	607.5	0.8	1015.9	576.4	673.3			0.0	1190.10		1190.1
6/30/2018	601.4	0.4	1003.3	556.1	632.3			0.0	1190.10		1190.1
7/1/2018	556.2	12.6	1005.8	552.9	593.0			0.0	1190.10		1190.1
7/2/2018	508.1	34.8	1001.8	556.8	569.6			0.0	1190.10		1190.1
7/3/2018	496.1	34.8	1002.8	561.6	561.0			0.0	1190.10		1190.1
7/4/2018	485.6	34.8	1005.1	557.5	559.6			0.0	1190.1		1190.1
7/5/2018	487.1	34.9	1006.0	563.7	564.1			0.0	1190.1		1190.1
7/6/2018	494.1	35.9	1029.6	573.3	580.6		115.70	115.7	1132.3		1248.0
7/7/2018	500.4	36.1	1048.0	597.0	586.8		198.35	198.4	1090.9		1289.3
7/8/2018	506.1	38.3	1044.6	593.9	590.9		198.35	198.4	1090.9		1289.3
7/9/2018	498.1	37.7	1051.3	586.0	580.4		198.35	198.4	1090.9		1289.3
7/10/2018	503.9	37.7	1086.3	597.3	577.3		219.01	219.0	1132.3		1351.3
7/11/2018	524.6	37.5	1116.6	673.0	593.0		225.21	225.2	1144.7		1369.9

Data Input Sheet for Section II/Offset Account Delivery June-July 2018

	Gage Data					Release Amounts					
	Stateline Flow Data		Intermediate Gage Data			Offset Account		Total Offset Account	Kansas Section II	Transit Loss	Total
Date	Coolidge (cfs)	Frontier (cfs)	Below JMR (cfs)	Lamar (cfs)	Granada (cfs)	Consumable (af)	All Other (af)		(af)	(af)	(af)
7/12/2018	553.0	37.7	1103.4	652.6	627.4	83.35	135.66	219.0	1132.3		1351.3
7/13/2018	559.1	34.0	1142.1	686.9	615.7	247.94		247.9	1190.1		1438.0
7/14/2018	567.0	35.2	1149.5	705.4	652.4	247.94		247.9	1190.1		1438.0
7/15/2018	689.0	36.3	1148.0	710.6	677.5	247.94		247.9	1190.1		1438.0
7/16/2018	752.0	37.1	1147.3	714.3	682.9	247.94		247.9	1190.1		1438.0
7/17/2018	628.8	38.0	1160.8	718.0	685.3	247.94		247.9	1190.1		1438.0
7/18/2018	648.8	36.6	1173.3	733.5	706.6	247.94		247.9	1190.1		1438.0
7/19/2018	654.9	37.0	1174.6	724.5	705.3	247.94		247.9	1190.1		1438.0
7/20/2018	657.3	36.7	1171.0	725.4	702.4	247.94		247.9	1190.1		1438.0
7/21/2018	655.3	37.2	1168.6	719.4	700.2	247.94		247.9	1190.1		1438.0
7/22/2018	649.4	36.4	1168.0	715.8	694.1	247.94		247.9	1190.1		1438.0
7/23/2018	658.2	34.1	1171.4	741.2	703.1	247.94		247.9	1190.1		1438.0
7/24/2018	713.9	33.8	1134.2	969.3	943.2	247.94		247.9	1130.2		1378.1
7/25/2018	837.7	33.2	1109.9	830.8	1061.8	247.94		247.9	1090.9		1338.9
7/26/2018	914.9	29.1	836.9	1081.9	1578.4	92.98		93.0	626.0		719.0
7/27/2018	1293.6	28.2	445.2	752.3	2579.5	0.00		0.0	216.9		216.9
7/28/2018	1502.0	15.2	455.0	378.8	801.7	0.00		0.0	0.0		0.0
7/29/2018	821.3	0.7	460.7	162.0	409.7			0.0			0.0
7/30/2018	716.3	0.6	450.7	128.4	371.9			0.0			0.0
7/31/2018	586.6	0.1	418.1	96.2	282.6			0.0			0.0
8/1/2018	474.3	0.0	357.6	55.7	226.0			0.0			0.0
8/2/2018	383.9	7.2	329.2	37.4	187.8			0.0			0.0
8/3/2018	277.5	37.7	326.3	36.3	163.6			0.0			0.0
8/4/2018	242.2	36.5	325.0	34.8	174.8			0.0			0.0
8/5/2018	226.6	36.3	324.4	34.8	153.2			0.0			0.0

Granada Transit Loss Check Worksheet

Date	Mean Daily Flow below JMR	Mean Daily Flow at Lamar	Mean Daily Flow at Granada	Antecedent Flow Calculations												Target Flow at Granada	Shortage or Excess at Granada
				Below JMR				Lamar				Granada					
	CFS	CFS	CFS	Initial Average=	513.38			Initial Average=	21.24			Initial Average=	45.83			CFS	CFS
5/23/2018	377	22	44													0	0
5/24/2018	377	18	38													0	0
5/25/2018	411	17	35													0	0
5/26/2018	439	40	30													0	0
5/27/2018	440	17	37													0	0
5/28/2018	400	16	34													0	0
5/29/2018	368	15	31													0	0
5/30/2018	421	15	26													0	0
5/31/2018	488	15	25													0	0
6/1/2018	502	15	32	YES	8			YES	10			YES	10			0	0
6/2/2018	503	16	36	YES	6			YES	9			YES	9			0	0
6/3/2018	502	17	39	YES	7			YES	6			YES	8			0	0
6/4/2018	499	18	41	YES	9			YES	4			YES	7			0	0
6/5/2018	499	17	43	YES	10			YES	7			YES	6			0	0
6/6/2018	505	17	44	YES	5			YES	8			YES	5			0	0
6/7/2018	514	18	45	YES	4			YES	5			YES	4			0	0
6/8/2018	529	18	47	YES	3			YES	3			YES	3			0	0
6/9/2018	540	35	50	YES	2			NO	2			NO	2			0	0
6/10/2018	540	42	52	YES	1			NO	1			NO	1			0	0
6/11/2018	733	50	60	Adjusted Average		513.38	5133.76	Adjusted Average		16.93	135.41	Adjusted Average		43.30	346.40	0	0
6/12/2018	909	315	59	YES			10.00	YES			8.00	YES			8.00	0	0
6/13/2018	938	402	176	YES				YES				YES				0	0
6/14/2018	1091	417	242	YES				YES				YES				0	0
6/15/2018	1295	637	328	YES				YES				YES				0	0
6/16/2018	1300	715	490	YES				YES				YES				0	0
6/17/2018	1298	727	566	YES				YES				YES				0	0
6/18/2018	1294	736	602	YES				YES				YES				0	0
6/19/2018	1214	700	625	YES				YES				YES				0	0
6/20/2018	1166	596	613	YES				NO				NO				0	0
6/21/2018	1236	595	557	YES				NO				NO				0	0
6/22/2018	1301	735	610	Adjusted Average		513.38	5133.76	Adjusted Average		16.93	135.41	Adjusted Average		43.30	346.40	0	0
6/23/2018	1295	747	685				10.00				8.00				8.00	0	0
6/24/2018	1301	752	718	Computations for < 6 days				Computations for < 6 days				Computations for < 6 days				0	0
6/25/2018	1196	749	842	Enter date of 6th day			0.00	Enter date of 6th day			0.00	Enter date of 6th day			0.00	0	0
6/26/2018	1072	655	802	Enter date of 5th day			0.00	Enter date of 5th day			0.00	Enter date of 5th day			0.00	0	0
6/27/2018	1034	587	728	Enter date of 4th day			0.00	Enter date of 4th day			0.00	Enter date of 4th day			0.00	0	0
6/28/2018	1033	572	677	Enter date of 3rd day			0.00	Enter date of 3rd day			0.00	Enter date of 3rd day			0.00	0	0
6/29/2018	1016	576	673	Average with 6th day		513.38		Average with 6th day		16.93		Average with 6th day		43.30		0	0
6/30/2018	1003	556	632													0	0
7/1/2018	1006	553	593													0	0
7/2/2018	1002	557	570													0	0
7/3/2018	1003	562	561													0	0
7/4/2018	1005	557	560													0	0
7/5/2018	1006	564	564													0	0
7/6/2018	1030	573	581													0	0
7/7/2018	1048	597	587													0	0
7/8/2018	1045	594	591													420	171
7/9/2018	1051	586	580													420	160
7/10/2018	1086	597	577													420	157
7/11/2018	1117	673	593													420	173
7/12/2018	1103	653	627													420	207
7/13/2018	1142	687	616													420	196
7/14/2018	1149	705	652													420	232
7/15/2018	1148	711	678													420	258
																8399	8258 cfs
																Number of Target Days = 20	16380 af
																Expected T-Loss = 1026	
																Actual T-Loss= 0	
																T - Loss Ratio = 100.0%	

Summary of Key Information for Section II - Offset Delivery June-July 2018

10/31/2022

Date	Flow Data: Mean Daily Stateline (SL) Flow	Mean Daily Stateline (SL) Flow	SL flow less antecedent flow	Release Data: Offset Consumable Release	Offset Non-Consumable Release	Section 2 Release	Transit Loss Release	Muskingum routing: Total Release	Total Release Times 1.05	Routed release	Routed release, lagged one day
			190.4								
	CFS	AF	AF	AF	AF	AF	AF	AF	AF	AF	AF
5/23/2018	168	332	142	0	0	0	0	0	0	0	0
5/24/2018	166	329	138	0	0	0	0	0	0	0	0
5/25/2018	156	308	118	0	0	0	0	0	0	0	0
5/26/2018	141	280	89	0	0	0	0	0	0	0	0
5/27/2018	131	260	70	0	0	0	0	0	0	0	0
5/28/2018	123	245	54	0	0	0	0	0	0	0	0
5/29/2018	126	250	59	0	0	0	0	0	0	0	0
5/30/2018	119	236	46	0	0	0	0	0	0	0	0
5/31/2018	109	217	26	0	0	0	0	0	0	0	0
6/1/2018	96	191	1	0	0	0	0	0	0	0	0
6/2/2018	90	179	0	0	0	0	0	0	0	0	0
6/3/2018	91	181	0	0	0	0	0	0	0	0	0
6/4/2018	101	200	10	0	0	0	0	0	0	0	0
6/5/2018	100	198	8	0	0	0	0	0	0	0	0
6/6/2018	92	183	0	0	0	0	0	0	0	0	0
6/7/2018	95	188	0	0	0	0	0	0	0	0	0
6/8/2018	96	191	0	0	0	0	0	0	0	0	0
6/9/2018	93	184	0	0	0	0	0	0	0	0	0
6/10/2018	98	195	4	0	0	0	0	0	0	0	0
6/11/2018	104	206	15	0	0	248	41	248	260	12	0
6/12/2018	94	187	0	0	0	595	99	595	625	124	12
6/13/2018	116	229	39	0	0	595	99	595	625	315	124
6/14/2018	177	352	161	0	0	893	149	893	937	448	315
6/15/2018	212	421	230	0	0	1190	256	1190	1250	649	448
6/16/2018	283	562	371	0	0	1190	298	1190	1250	878	649
6/17/2018	372	738	548	0	0	1190	298	1190	1250	1019	878
6/18/2018	433	858	668	0	0	1190	298	1190	1250	1107	1019
6/19/2018	464	921	730	0	0	1190	51	1190	1250	1161	1107
6/20/2018	498	987	796	0	0	1190	0	1190	1250	1195	1161
6/21/2018	474	940	750	0	0	1422	0	1422	1493	1227	1195
6/22/2018	478	949	758	0	0	1587	0	1587	1666	1337	1227
6/23/2018	571	1132	942	0	0	1587	0	1587	1666	1462	1337
6/24/2018	694	1377	1187	0	0	1587	0	1587	1666	1540	1462
6/25/2018	1127	2235	2045	0	0	1463	0	1463	1536	1582	1540
6/26/2018	810	1606	1416	0	0	1273	0	1273	1336	1555	1582
6/27/2018	727	1443	1252	0	0	1190	0	1190	1250	1467	1555
6/28/2018	641	1272	1082	0	0	1190	0	1190	1250	1384	1467
6/29/2018	608	1207	1016	0	0	1190	0	1190	1250	1333	1384
6/30/2018	602	1194	1003	0	0	1190	0	1190	1250	1301	1333
7/1/2018	569	1128	938	0	0	1190	0	1190	1250	1282	1301
7/2/2018	543	1077	886	0	0	1190	0	1190	1250	1269	1282
7/3/2018	531	1053	863	0	0	1190	0	1190	1250	1262	1269
7/4/2018	520	1032	842	0	0	1190	0	1190	1250	1257	1262
7/5/2018	522	1035	845	0	0	1190	0	1190	1250	1254	1257
7/6/2018	530	1051	861	0	116	1132	0	1248	1310	1255	1254
7/7/2018	537	1064	874	0	198	1091	0	1289	1354	1278	1255
7/8/2018	544	1080	889	0	198	1091	0	1289	1354	1307	1278
7/9/2018	536	1063	872	0	198	1091	0	1289	1354	1325	1307
7/10/2018	542	1074	884	0	219	1132	0	1351	1419	1339	1325
7/11/2018	562	1115	924	0	225	1145	0	1370	1438	1370	1339
7/12/2018	591	1172	981	83	136	1132	0	1351	1419	1395	1370
7/13/2018	593	1176	986	248	0	1190	0	1438	1510	1409	1395
7/14/2018	602	1194	1004	248	0	1190	0	1438	1510	1447	1409
7/15/2018	725	1439	1248	248	0	1190	0	1438	1510	1471	1447
7/16/2018	789	1565	1375	248	0	1190	0	1438	1510	1486	1471
7/17/2018	667	1323	1132	248	0	1190	0	1438	1510	1495	1486
7/18/2018	685	1360	1169	248	0	1190	0	1438	1510	1501	1495
7/19/2018	692	1372	1182	248	0	1190	0	1438	1510	1504	1501
7/20/2018	694	1377	1186	248	0	1190	0	1438	1510	1506	1504
7/21/2018	693	1374	1183	248	0	1190	0	1438	1510	1508	1506
7/22/2018	686	1360	1170	248	0	1190	0	1438	1510	1509	1508
7/23/2018	692	1373	1183	248	0	1190	0	1438	1510	1509	1509
7/24/2018	748	1483	1293	248	0	1130	0	1378	1447	1506	1509
7/25/2018	871	1727	1537	248	0	1091	0	1339	1406	1482	1506
7/26/2018	944	1872	1682	93	0	626	0	719	755	1422	1482
7/27/2018	1322	2622	2431	0	0	217	0	217	228	1143	1422
7/28/2018	1517	3009	2819	0	0	0	0	0	0	783	1143
7/29/2018	822	1630	1440	0	0	0	0	0	0	485	783
7/30/2018	717	1422	1232	0	0	0	0	0	0	300	485
7/31/2018	587	1164	973	0	0	0	0	0	0	186	300
8/1/2018	474	941	750	0	0	0	0	0	0	115	186
8/2/2018	391	776	585	0	0	0	0	0	0	0	67
8/3/2018	315	625	435	0	0	0	0	0	0	0	0
8/4/2018	279	553	362	0	0	0	0	0	0	0	0
8/5/2018	263	521	331	0	0	0	0	0	0	0	0
8/6/2018	242	480	290	0	0	0	0	0	0	0	0
1/13/2019	0	0	0	0	0	0	0	0	0	0	0
1/14/2019	0	0	0	0	0	0	0	0	0	0	0
1/15/2019	0	0	0	0	0	0	0	0	0	0	0
			Totals	3400	1291	53069	1588	57759	60647	60460	60412

Antecedent Flow Calculations

			Delivery Calculations: Stateline Delivery Hydrograph	Equivalent Stateline Flow Hydrograph
Initial Average=	191.20		AF	AF
			0	0
			0	0
			0	0
			0	0
			0	0
			0	0
			0	0
			0	0
			0	0
			0	0
YES	10		0	0
YES	2		0	0
YES	3		0	0
YES	9		0	0
YES	6		0	0
YES	5		0	0
YES	8		0	0
YES	4		0	0
YES	1		0	0
YES	7		0	0
Adjusted Average	190.44	1904.37	0	12
YES		10.00	39	124
YES			161	315
YES			230	421
YES			371	562
YES			548	738
YES			668	858
YES			730	921
YES			796	987
YES			750	940
YES			758	949
Adjusted Average	190.44	1904.37	942	1132
Final Baseflow	96.01	10.00	1187	1377
Computations for < 6 days			1540	1540
Enter date of 6th day		0.00	1416	1582
Enter date of 5th day		0.00	1252	1443
Enter date of 4th day		0.00	1082	1272
Average with 6 days	190.44		1016	1207
			1003	1194
			938	1128
			886	1077
			863	1053
			842	1032
			845	1035
			861	1051
			874	1064
			889	1080
			872	1063
			884	1074
			924	1115
			981	1172
			986	1176
			1004	1194
			1248	1439
			1375	1471
			1132	1323
			1169	1360
			1182	1372
			1186	1377
			1183	1374
			1170	1360
			1183	1373
			1293	1483
			1506	1506
			1482	1482
			1422	1422
			1143	1143
			783	783
			485	485
			300	300
			186	186
			67	67
			0	0
			0	0
			0	0
			0	0
			0	0
			0	0
			46634	54194

Paragraph 3.b.iii check	
Average for prior days 11-20	249.48
Is value twice the computed Antecedent Flow Value?	No
Muskingum Day 6 =	#N/A
Para. 3.b.iii AF Value	#N/A

Total Offset =	4690
Transit Loss on Consumable =	655
Granada Transit Loss Credit Percentage =	100.0%
Transit Loss Model Input JMR to Lamar =	54
Transit Loss Model Input Lamar to Granada =	291
Transit Loss Model Input Granada to Stateline =	146
Total Transit Loss Model Input =	491

Muskingum
Derivation of factors

K (hr)=	60	cO=	0.048
x =	0.15	c1 =	0.333
t (hr) =	24	c2 =	0.619
		c0+c1+c2 =	1.00

K t ratio check

2Kx <	t	< 2K(1-x)
18	24	102

Offset Delivery Efficiency =	80.74%
Offset Net Delivery =	3787
Offset Consumable Delivery =	2745
ESF Delivery Efficiency =	93.8%
Section II Delivery =	49793
Section II Delivery Transit Loss =	3276
Evaporation Delivery Credit	0

Attachment 5 – *Agreement Regarding the Colorado Use Rules, PDF Evaluation, Implementation Processes, and Related Matters, and Not to Terminate the Offset Account Resolution* (Appendix A.4)

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APPENDIX A.4

AMENDED AGREEMENT REGARDING THE COLORADO USE RULES, PDF EVALUATION, IMPLEMENTATION PROCESSES, AND RELATED MATTERS, AND NOT TO TERMINATE THE OFFSET ACCOUNT RESOLUTION

As amended June 2009

This amended agreement ("Agreement") is entered into by the State of Colorado and the State of Kansas (referred to herein individually as "State" and collectively as "States").

Recitals

WHEREAS, in 1995, the Colorado State Engineer adopted Amended Rules and Regulations Governing the Diversion and Use of Tributary Ground Water in the Arkansas River Basin, Colorado ("Use Rules") to prohibit diversions of tributary ground water for irrigation use within the Hydrologic Institutional (H-I) Model domain (with the exception of the 15,000 acre-feet precompact allowance) unless replacement water is provided to offset depletions to usable Stateline flows, which were approved by the Colorado Water Judge effective on June 1, 1996; and

WHEREAS, Rule 4.2 of the Use Rules also establishes presumptive stream depletion percentages to determine stream depletions for certain irrigation uses of ground water to be used by the Colorado State Engineer and Division Engineer for Water Division No. 2 ("State and Division Engineers") in approving and administering plans to replace out-of-priority depletions to senior surface water rights in Colorado; and

WHEREAS, Section IV.A of the Judgment and Decree in *Kansas v. Colorado*, No. 105, Original, U.S. Supreme Court ("Decree"), provides that the Court retains jurisdiction for a limited period of time after the end of the initial ten-year startup period (which ended in 2006) for the purpose of evaluating the sufficiency of the Use Rules and their administration and

whether changes to the Decree are needed to ensure Compact compliance ("Retained Jurisdiction"); and

WHEREAS, in accordance with procedures set out in Part VII of Appendix B.1 to the Decree, the States exchanged reports on their evaluations of the sufficiency of the Use Rules and their administration on October 3, 2008, and November 7, 2008; and

WHEREAS, experts for the States met on October 21, 2008, and conducted a telephone conference on December 15, 2008, to discuss their respective reports and to work together informally to try to resolve the differences regarding the evaluations; and

WHEREAS, Kansas gave notice to Colorado and the Special Master on December 16, 2008, that there was a dispute concerning the sufficiency and the administration of the Use Rules that was being submitted to the Dispute Resolution Procedure in the Decree as a Non-Fast Track Issue and designated the Kansas experts; and

WHEREAS, the Colorado State Engineer designated the Colorado experts to participate in discussions to attempt to resolve the disputed issues in accordance with the Dispute Resolution Procedure; and

WHEREAS, the States and their experts have reached an agreement to resolve the differences regarding the sufficiency of the Use Rules and their administration; and

WHEREAS, the Arkansas River Compact Administration ("Administration") adopted a *Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping* dated March 17, 1997, as amended twice on March 30, 1998 ("Offset Account Resolution") (Appendix L to the Decree), establishing an Offset Account in John Martin Reservoir for Colorado Pumping ("Offset Account"); and

WHEREAS, paragraph 17.A of the Offset Account Resolution provides that either State, through its Compact delegation, may terminate the Offset Account Resolution effective March 31 by giving written notice to the Administration by February 1 of the same Compact year; and

WHEREAS, the States have entered into a *Stipulation Re Offset Account in John Martin Reservoir* filed April 3, 1997, and approved by Special Master Arthur L. Littleworth (Appendix F.1 to the Decree) and have entered into agreements concerning the determination of credits, transit losses, and evaporation credits for water stored and released from the Offset Account; and

WHEREAS, both States derive benefits from the Offset Account; and

WHEREAS, the States entered an *Agreement Not To Terminate The Offset Account Resolution For A Specified Period And Related Matters* jointly approved on October 31, 2007, which is included as Appendix A.4 to the Decree; and

WHEREAS, the States have agreed that this Agreement shall replace the October 31, 2007 version of Appendix A.4 to the Decree.

Agreement

NOW, THEREFORE, during the term of this Agreement, the States agree as follows:

1. Right to Terminate the Offset Account Resolution.

Neither State will exercise its right to terminate the Offset Account Resolution pursuant to paragraph 17.A of the Offset Account Resolution unless this Agreement has terminated in accordance with paragraph 14 of this Agreement.

2. Use of the Offset Account.

The State and Division Engineers will require well users subject to Rules 3 and 4 of the Use Rules, except for well users subject to Rule 4.1.b, and ground water users with post-

1985 structures or uses located downstream of John Martin Reservoir that are included in the Lower Arkansas Water Management Association ("LAWMA") plan for augmentation decreed in Case No. 02CW181 ("LAWMA Decree") to deliver replacement water to the Offset Account to replace their depletions to usable Stateline flow, to the extent LAWMA can do so legally and physically, as a condition of approval of the annual replacement plans in accordance with the Use Rules; provided, however, that:

a. Delivery of replacement water to the Offset Account shall not be required if the Offset Account is full;

b. If the Offset Account is full, Colorado will be given credit for the consumptive portion of the direct-flow yield of the Highland Canal water rights as input to the H-I Model as a special water at John Martin Reservoir; and

c. Delivery of replacement water to the Offset Account shall not be required for sources that are not approved to be delivered to the Offset Account pursuant to the terms and conditions of a Water Court decree or when downstream sources cannot be stored by exchange in the Offset Account because no exchange potential exists to allow upstream storage. The Keesee and Highland water rights will be used primarily to replace depletions to usable Stateline flow, but may be used to replace depletions to senior surface water rights in Colorado and shall not be used to make physical deliveries to Kansas outside of the Offset Account except as provided in subparagraphs (a) and (b) of this paragraph. Accordingly, to the extent Keesee and/or Highland water rights are not needed to replace

depletions to usable Stateline flow, LAWMA shall not be required to deliver these water rights to the Offset Account. Should LAWMA receive Administration approval to allow water available under the Keesee water rights to be delivered to the John Martin Reservoir Permanent Pool ("Permanent Pool"), that portion of the Keesee water rights used to deliver water to the Permanent Pool would be exempt from this Agreement during times when such water is being delivered to the Permanent Pool under the Keesee water rights.

Replacement for depletions below the Buffalo Canal headgate during the months of April through October and replacement for depletions downstream of John Martin Reservoir during the months of November through March, to the extent not generated by direct-flow sources, or portions of direct-flow sources, specifically approved by the LAWMA Decree or replacements generated by the Sisson water right operated in a manner consistent with the Stubbs portion of the LAWMA Decree, shall be delivered to the Offset Account, subject to the conditions stated above.

3. Presumptive Stream Depletion Percentage to be Used through December 31, 2012.

The State and Division Engineers will determine stream depletions for plans required by Rules 3 and 4 of the Use Rules, except for diversions subject to Rule 4.1.b, using a presumptive stream depletion percentage ("PDF value") of thirty-nine percent (39%) of the amount diverted for supplemental flood and furrow irrigation ("supplemental irrigation") unless the use of a PDF value of 39% is prohibited by a final Water Court order. If the use of a PDF value of 39% for supplemental irrigation for such plans is prohibited by a final Water Court

order, (a) stream depletions shall be determined using the PDF value specified in the Use Rules for supplemental irrigation and (b) well users shall be required to deliver an additional amount of water to the Offset Account equal to the difference between a PDF value of 39% for supplemental irrigation and the PDF value specified in the Use Rules for supplemental irrigation. In addition, if a final Water Court order requires the use of a PDF value of more than 39% for diversions of ground water used for supplemental irrigation for some, but not all, diversions of ground water used for supplemental irrigation by users in any such plan, then the State and Division Engineers shall determine the PDF value for supplemental irrigation for all users in the plan using a weighted average and shall then require well users in the plan to deliver an additional amount of water to the Offset Account equal to the difference between a PDF value of 39% and the weighted average, if the weighted average for the PDF value is less than 39%.

4. Presumptive Stream Depletion Percentages to be Used after December 31, 2012.

Beginning in 2012, Colorado will conduct an annual evaluation ("Evaluation" and collectively "Evaluations") of the PDF values to be used to determine stream depletions for plans required by Rules 3 and 4 of the Use Rules, except for diversions subject to Rule 4.1.b. The Evaluations will be conducted according to the process described below. The annual Evaluations will occur after June 1, 2012, and after June 1st of each year thereafter. Colorado shall provide a written report and supporting documentation of the annual Evaluation to Kansas by September 1, 2012, and by September 1st of each year thereafter.

a. Evaluation Review Period: For Evaluations conducted before 2017, the Evaluation Review Period will be from 1997 through the year for which the H-I Model has most

recently been updated. For example, the Evaluation Review Period for the Evaluation in 2012 will be from 1997 through 2011.

For Evaluations conducted in 2017 and in years thereafter, the Evaluation Review Period will include the previous 20 years, consisting of the year for which the H-I Model has most recently been updated and the previous nineteen years. For example, the Evaluation Review Period for the Evaluation conducted in 2017 will be from 1997 through 2016. This will result in the evaluation of eleven ten-year Compact compliance periods.

b. Coordination between the States: Experts for the States will coordinate their review of the Colorado Evaluation and attempt to agree on the PDF values by December 1, 2012, and by December 1st of subsequent years for implementation in the next replacement plan year in the manner described in paragraph 5 below. If the experts are unable to agree on the PDF values, the interim PDF values will be the average of both States' PDF values as determined by the process provided for herein. Disagreement on the PDF values may be submitted to the Dispute Resolution Procedure as set out in Appendix H to the Decree.

c. Determination of PDF value(s) by Colorado Water Court: If a final Water Court order requires the use of a PDF value less than the PDF value determined in accordance with the Evaluation ("Evaluation PDF") to determine stream depletions for plans required by Rules 3 and 4 of the Use Rules, except for diversions subject to Rule 4.1.b., then the State and Division Engineers shall require well users subject to that order to deliver an additional amount of water to the Offset Account equal to the difference between the amount of replacement water required using the PDF value ordered by the Water Court and the amount required using the Evaluation PDF. If a final Water Court order requires the use of a PDF value greater than the

Evaluation PDF value to determine stream depletions for plans required by Rules 3 and 4 of the Use Rules, except for diversions subject to Rule 4.1.b., then no further adjustments will be made.

d. Use of Ground Water Accounting Model (GWAM): Unless the States agree otherwise, the Evaluations will be based on the replacement requirements that are determined by Colorado using the Ground Water Accounting Model (GWAM) that is used by the State and Division Engineers in their monthly administration of replacement plans. The GWAM is included as Exhibit 1 on the attached compact disk. The same monthly historical supplemental and sole source pumping that was used as an input for the H-I Model will be used as an input for the GWAM in order to determine the replacement requirements. The GWAM will use the same unit response functions for each ditch service area that are used in the H-I Model, including any subsequent changes to the unit response functions agreed to by the States or implemented pursuant to the procedures in Appendix B to the Decree.

A Replacement Input File for the H-I Model will be created using the monthly depletions determined using the GWAM for supplemental and sole source pumping using the various PDF values being examined. The replacement requirements determined using the GWAM will be modified for appropriate reaches and months using the Durbin usable flow method with the Larson coefficients for reaches below John Martin Reservoir.

e. Use of the H-I Model: A "no replacement" version of the update.dat file will be used. In the "no replacement" version of update.dat, all special waters will be removed, dried-up acreage will be redistributed to surface water only and supplemental acreage, all spill factors will be set to zero, transmountain deliveries will be removed, any unexchanged transmountain return flows from Fountain Creek will be removed, and fractions of consumable water placed in the Winter Water undistributed pool will be set to zero. The Evaluation is

intended to determine the sufficiency of replacement water required by the PDF values by substituting the Replacement Input File for actual replacement operations and transmountain return flows.

Using the Replacement Input File and the "no replacement" version of the update.dat file, runs of the H-I Model (including any changes to the H-I Model agreed to by the States or implemented pursuant to the procedures in Appendix B to the Decree) will be made for both the Historical run and the Compact run. Depletions or accretions to usable Stateline flows will be determined for each year in the Evaluation Review Period. Using these annual depletions or accretions to usable Stateline flows, a ten-year Compact compliance accounting will be computed for each ten-year period in the Evaluation Review Period. The ten-year accounting for each ten-year period in the Evaluation Review Period will not include any separate delivery credits from the Offset Account. This process will be repeated, adjusting only the supplement PDF value, unless otherwise agreed to by the States, until PDF values are determined that result in Compact compliance (i.e., no Shortfall) for each of the ten-year Compact compliance periods in the Evaluation Review Period. See Exhibit 2 attached hereto as hardcopy and included in the attached compact disk. Colorado will report these PDF values to Kansas in accordance with the first paragraph of this paragraph 4, together with the annual results for each year in the Evaluation Review Period.

5. Implementation of PDF values.

For the replacement plan year beginning in April 2013 and for each replacement plan year thereafter, the State and the Division Engineers will determine stream depletions for plans required by Rules 3 and 4 of the Use Rules, except for diversions subject to Rule 4.1.b,

using the PDF values determined by the Evaluation in the previous year as provided in this Agreement.

a. The State and Division Engineers will not use new PDF values lower than the PDF values provided in Rule 4.2 of the Use Rules (supplemental = 30%; sole source = 50%; sprinkler = 75%) to determine stream depletions .

b. Nothing in this Agreement prevents the State and Division Engineers from increasing the PDF values or requiring additional replacement water in excess of the amount necessary to replace stream depletions pursuant to this Agreement if the State and Division Engineers determine that such increases are required to prevent a Shortfall.

6. Dispute Resolution regarding Inflows or Credits to the Offset Account.

Unless the States agree otherwise, disputes between the States regarding inflows or credits to the Offset Account delivered pursuant to paragraph 4 of the Offset Account Resolution will be resolved in accordance with the Fast Track Issue Resolution Procedure in the Dispute Resolution Procedure set forth in Appendix H of the Decree.

7. Five-Year Review.

The review of the operations of the Offset Account Resolution and the Agreement Concerning the Offset Account in John Martin Reservoir for Colorado Pumping, Determination of Credits for Delivery of Water Released for Colorado Pumping, and Related Matters dated September 29, 2005, ("Offset Account Crediting Agreement") (Appendix F.2 to the Decree), as well as the provisions of the October 31, 2007 version of Appendix A.4, required by paragraph 5 of the October 31, 2007 version of Appendix A.4 and paragraph 11 of the Offset Account Crediting Agreement is hereby modified and replaced as follows: The States will conduct a review of the operations of the: (a) Offset Account Resolution; and (b) the Offset Account

Crediting Agreement beginning no later than September 30, 2010. The review by the States shall be completed and a joint report presented to the Administration at its December 2012 annual meeting. Notwithstanding anything in the Offset Account Crediting Agreement to the contrary, this review shall satisfy the requirements for the first five-year review required by paragraph 11 of the Offset Account Crediting Agreement. Thereafter, the five-year review required by paragraph 11 of the Offset Account Crediting Agreement shall be presented to the Administration every five years starting in 2017.

8. Negotiations on Procedures if the Offset Account does not Exist.

Not later than ninety days after the written notice of intent to terminate this Agreement is provided by either State, the States will commence work on an agreement as to how credit for direct deliveries of water to the Stateline for replacement of depletions to usable Stateline flow and credit to make up a Shortfall shall be determined if the Offset Account does not exist. If such an agreement is not completed within the three years of the notice of intent to terminate this Agreement, then each State shall submit a proposal to the other State as to how credit for such deliveries shall be determined if the Offset Account does not exist, and the procedures to determine such credits shall be resolved under the Dispute Resolution Procedure set forth in Appendix H of the Decree as a Non-Fast Track Issue. Nothing in this agreement prevents the States from reaching agreement on how to credit for direct deliveries of water to the Stateline for replacement of depletions to usable Stateline flow and credit to make up a Shortfall if the Offset Account does not exist.

9. Annual Reports to Kansas.

Colorado will prepare an annual calendar-year report summarizing the operation of replacement plans approved under Rule 14 of the Use Rules using the format of the draft

report included as Exhibit 3 on the attached compact disc, with any modifications agreed to by the States ("Annual Report"). Colorado will provide the Annual Report to Kansas by March 31st of the following year, beginning in 2010 for the 2009 calendar year.

10. Implementation of Rule 4.2 of the Use Rules.

The State and Division Engineers will implement procedures to increase the PDF value for diversions of ground water used as a supplemental supply for flood and furrow irrigation by well users who do not have a reasonably adequate surface supply for the acreage irrigated in accordance with Rule 4.2 of the Use Rules based on farm-unit interviews to determine if an adjustment of the PDF values for such diversions above the Evaluation PDF determined pursuant to this Agreement is indicated.

11. Implementation of Rule 6 of the Use Rules.

Rule 6 of the Use Rules limits the number of years that certain water rights which have not been decreed for augmentation use can be used as a source of augmentation water in a plan approved by the State and Division Engineers pursuant to the Use Rules. For such water rights, the State and Division Engineers will require that the well user or plan proponent file an application for a change of water right(s) approving the use of the water right for augmentation use if the water right has been included as a source of augmentation water in any plan approved pursuant to the Use Rules ("Rule 14 Plan") for a total of three years. For such water rights that have been included as a source of augmentation water in a Rule 14 Plan approved prior to the date of this Agreement, this requirement will be implemented as provided below in this paragraph. Thereafter, the State and Division Engineers will not approve such sources as augmentation water in a Rule 14 Plan where no decree has been obtained, except that, for a reasonable time after an application for a change of water right has been filed, the State and

Division Engineers may approve such sources as augmentation water in a Rule 14 Plan while such filed application is pending, provided that a reasonable time shall not exceed five years after the filing of such application unless the well user or plan proponent has demonstrated to the State and Division Engineers that the delay in obtaining a decree has been justifiable and that not being able to continue operating under a Rule 14 Plan until a decree is entered will cause undue hardship to the well user or plan proponent; and provided, further, that in no case shall such approval be for more than seven years after the filing of the application.

A well user or plan proponent may not avoid the above requirements and deadlines by substituting mutual ditch company shares used for augmentation in a prior Rule 14 plan with: (1) other shares in the same mutual ditch company that were used as part of the same farm unit, (2) other shares used to irrigate the same acres identified for dry-up or (3) other shares, in the same mutual ditch company, owned or controlled by the same owner or entity of the shares being substituted for, or shares that have been used to augment depletions from other wells in a Rule 14 Plan in three prior years.

To implement the provisions of this paragraph, the State and Division Engineers will notify well associations, either through the Plan Expectations Letter sent to the well associations in January each year or through other correspondence, that certain sources of augmentation water meeting the above criteria will be subject to this requirement and that an application for a change of water right must be filed with the Water Court no later than January 31, 2011, in order to be used in the 2011-2012 Rule 14 Plans or in any subsequent plan. Approval letters for 2010-2011 plans will also include a similar term and condition to enforce the requirement to apply to Water Court.

12. Implementation of Rule 12 of the Use Rules.

When a report of monthly ground water use is not received or is incorrectly or falsely reported by a well user or entity acting on behalf of well users, the Division Engineer will estimate or adjust the pumping amount and then update the pumping data when the correct meter reading is received. The State and Division Engineers will use their enforcement authority pursuant to Rule 12 of the Use Rules or section 37-92-503(6)(b), Colo.Rev.Stat., to minimize the need for such changes to the monthly pumping data supplied to Kansas.

13. Deadline for Nomination of Dry-Up Parcels.

The State and Division Engineers will implement procedures to require replacement plan proponents to select and nominate parcels for dry-up credit and provide other information required to comply with deadlines for nomination of dry-up parcels in accordance with Exhibit A to Appendix B.3 to the Decree to provide notice to Kansas of parcels that will be dried up and any parcels that will be irrigated by a sole source well, and will enforce those deadlines.

14. Termination of this Agreement.

After December 31, 2012, either State may terminate this Agreement by giving notice in writing to the other State of its intent to terminate this Agreement. Such notice shall be sent by registered mail addressed to the chief official of the other State charged with the administration of water rights, with a copy to the Attorney General of that State and a copy to the Administration. Such notice shall be effective on the date of mailing. In the event that either State provides such notice, this Agreement shall terminate five years after December 31 of the year such notice was given, unless the notice is rescinded. If this Agreement has terminated in

accordance with the preceding sentence, then either State may thereafter exercise its right to terminate the Offset Account Resolution in accordance with paragraph 17.A of the Offset Account Resolution, and the provisions of this Agreement shall be of no further force and effect.

15. By entering into this Agreement the States have accomplished the purpose of the Retained Jurisdiction. The States will take such further actions, if any, as may be necessary for the U.S. Supreme Court to relinquish the Retained Jurisdiction.

16. This Agreement replaces the October 31, 2007 version of Appendix A.4 to the Decree.

JOINTLY APPROVED AS OF June 26, 2009.

STATE OF COLORADO

David W. Robbins
Special Assistant Attorney General

Dick Wolfe
Colorado State Engineer

STATE OF KANSAS

John B. Draper
Special Assistant Attorney General

David W. Barfield
Kansas Chief Engineer

EXHIBITS

TO

AMENDED AGREEMENT REGARDING THE COLORADO USE RULES, PDF EVALUATION, IMPLEMENTATION PROCESSES, AND RELATED MATTERS, AND NOT TO TERMINATE THE OFFSET ACCOUNT RESOLUTION

As amended June 2009

1. Electronic version of the Ground Water Accounting Model (GWAM) (on attached compact disk).

2. Results of Evaluation of PDF Values, as Described in Paragraph 4.e (attached as hard copy and included on attached compact disk).

3. Draft Annual Report as Described in Paragraph 9 (on attached compact disk).

Exhibit 2
To Amended Appendix A.4

Dated June, 2009

Results of Evaluation of PDF Values, as Described in Paragraph 4.e.

A. Example of Insufficient PDF (i.e., Shortfall)

PDF = 38% supplemental / 50% sole source / 75% sole source sprinkler fails to produce results without depletions in one 10-year total in Evaluation Review Period

Year of Evaluation Review Period	Calendar Year	Usable Stateline Depletions (+) / Accretions (-) (acre-feet)	10-Year Period	10-year Sum of Usable Stateline Depletions (+) / Accretions (-) (accretions required) (acre-feet)
1	1997	-4,551		
2	1998	-269		
3	1999	-467		
4	2000	-189		
5	2001	163		
6	2002	32		
7	2003	1,868		
8	2004	276		
9	2005	-171		
10	2006	-331	1997 - 2006	-3,639
11	2007	-708	1998 - 2007	204
12	2008	____	1999 - 2008	____
13	2009	____	2000 - 2009	____
14	2010	____	2001 - 2010	____
15	2011	____	2002 - 2011	____
16	2012	____	2003 - 2012	____
17	2013	____	2004 - 2013	____
18	2014	____	2005 - 2014	____
19	2015	____	2006 - 2015	____
20	2016	____	2007 - 2016	____

Exhibit 2
To Amended Appendix A.4
Dated June, 2009

Results of Evaluation of PDF Values, as Described in Paragraph 4.e.

B. Example of Sufficient PDF (i.e., no Shortfall)

PDF = 39% supplemental / 50% sole source / 75% sole source sprinkler produces results without depletions in any 10-year total in Evaluation Review Period

Year of Review Period	Calendar Year	Usable Stateline Depletions (+) / Accretions (-)	10-Year Period	10-year Sum of Usable Stateline * Depletions (+) / Accretions (-) (accretions required)
1	1997	-4,743		
2	1998	-380		
3	1999	-549		
4	2000	-265		
5	2001	7		
6	2002	-189		
7	2003	1,735		
8	2004	-128		
9	2005	-289		
10	2006	-466	1997 - 2006	-5,268
11	2007	-791	1998 - 2007	-1,316
12	2008	____	1999 - 2008	____
13	2009	____	2000 - 2009	____
14	2010	____	2001 - 2010	____
15	2011	____	2002 - 2011	____
16	2012	____	2003 - 2012	____
17	2013	____	2004 - 2013	____
18	2014	____	2005 - 2014	____
19	2015	____	2006 - 2015	____
20	2016	____	2007 - 2016	____

Attachment 6 - Example storage charge accounting table (Plan year 2019-2020)

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Offset Account Storage Charge Accounting (Plan year 2019-2020)

	Utilization			Storage Charge		Prefunded Storage Charge				
Date	inflows	Total		Inflows/Transfers	charge	Inflows	Storage total	Evap total	Evap prefund	Balance
4/1/2019	3.15	503.15		0.00	0.00	0.00	499.97	0.03		
4/2/2019	20.66	523.81		0.00	0.00	0.00	499.57	0.40	0.00	0.00
4/3/2019	22.50	546.31		0.00	0.00	0.00	499.40	0.17	0.00	0.00
4/4/2019	26.57	572.88		0.00	0.00	0.00	499.03	0.37	0.00	0.00
4/5/2019	24.31	597.19		0.00	0.00	0.00	498.67	0.36	0.00	0.00
4/6/2019	23.17	620.36		0.00	0.00	0.00	498.31	0.36	0.00	0.00
4/7/2019	23.97	644.33		0.00	0.00	0.00	497.95	0.36	0.00	0.00
4/8/2019	23.97	668.30		0.00	0.00	0.00	497.63	0.32	0.00	0.00
4/9/2019	22.27	690.57		0.00	0.00	0.00	497.30	0.33	0.00	0.00
4/10/2019	20.80	711.37		0.00	0.00	0.00	496.96	0.34	0.00	0.00
4/11/2019	30.75	742.12		0.00	0.00	0.00	496.62	0.34	0.00	0.00
4/12/2019	52.43	794.55		0.00	0.00	0.00	496.28	0.34	0.00	0.00
4/13/2019	39.67	834.22		0.00	0.00	0.00	495.94	0.34	0.00	0.00
4/14/2019	19.12	853.34		0.00	0.00	0.00	495.60	0.34	0.00	0.00
4/15/2019	14.70	868.04		0.00	0.00	0.00	495.36	0.24	0.00	0.00
4/16/2019	13.51	881.55		0.00	0.00	0.00	494.99	0.37	0.00	0.00
4/17/2019	13.40	894.95		0.00	0.00	0.00	494.49	0.50	0.00	0.00
4/18/2019	12.61	907.56		0.00	0.00	0.00	494.11	0.38	0.00	0.00
4/19/2019	12.06	919.62		0.00	0.00	0.00	493.65	0.46	0.00	0.00
4/20/2019	12.61	932.23		0.00	0.00	0.00	493.19	0.46	0.00	0.00
4/21/2019	12.39	944.62		0.00	0.00	0.00	492.75	0.44	0.00	0.00
4/22/2019	11.50	956.12		0.00	0.00	0.00	492.46	0.29	0.00	0.00
4/23/2019	10.55	966.67		0.00	0.00	0.00	492.38	0.08	0.00	0.00
4/24/2019	10.59	977.26		0.00	0.00	0.00	492.02	0.36	0.00	0.00
4/25/2019	10.93	988.19		0.00	0.00	0.00	491.46	0.56	0.00	0.00
4/26/2019	20.60	1,008.79		0.00	0.00	0.00	490.96	0.50	0.00	0.00
4/27/2019	23.21	1,032.00		0.00	0.00	0.00	490.45	0.51	0.00	0.00
4/28/2019	29.06	1,061.06		0.00	0.00	0.00	489.95	0.50	0.00	0.00
4/29/2019	30.47	1,091.53		0.00	0.00	0.00	489.55	0.40	0.00	0.00
4/30/2019	46.67	1,138.20		0.00	0.00	0.00	489.33	0.22	0.00	0.00
5/1/2019	46.05	1,184.25		0.00	0.00	0.00	489.20	0.13	0.00	0.00
5/2/2019	46.18	1,230.43		0.00	0.00	0.00	488.92	0.28	0.00	0.00
5/3/2019	59.20	1,289.63		0.00	0.00	0.00	488.50	0.42	0.00	0.00
5/4/2019	38.07	1,327.70		0.00	0.00	0.00	488.08	0.42	0.00	0.00
5/5/2019	30.25	1,357.95		0.00	0.00	0.00	487.70	0.38	0.00	0.00
5/6/2019	32.22	1,390.17		0.00	0.00	0.00	487.28	0.42	0.00	0.00
5/7/2019	31.40	1,421.57		0.00	0.00	0.00	487.22	0.06	0.00	0.00
5/8/2019	29.87	1,451.44		0.00	0.00	0.00	487.08	0.14	0.00	0.00
5/9/2019	31.85	1,483.29		0.00	0.00	0.00	486.69	0.39	0.00	0.00
5/10/2019	34.63	1,517.92		0.00	0.00	0.00	486.47	0.22	0.00	0.00
5/11/2019	34.79	1,552.71		0.00	0.00	0.00	486.25	0.22	0.00	0.00
5/12/2019	35.61	1,588.32		0.00	0.00	0.00	486.03	0.22	0.00	0.00
5/13/2019	36.78	1,625.10		0.00	0.00	0.00	485.63	0.40	0.00	0.00
5/14/2019	37.21	1,662.31		0.00	0.00	0.00	485.03	0.60	0.00	0.00
5/15/2019	60.22	1,722.53		0.00	0.00	0.00	484.60	0.43	0.00	0.00
5/16/2019	71.71	1,794.24		0.00	0.00	0.00	483.77	0.83	0.00	0.00
5/17/2019	65.70	1,859.94		0.00	0.00	0.00	483.26	0.51	0.00	0.00
5/18/2019	55.86	1,915.80		0.00	0.00	0.00	482.74	0.52	0.00	0.00
5/19/2019	41.14	1,956.94		0.00	0.00	0.00	482.22	0.52	0.00	0.00
5/20/2019	35.04	1,991.98		0.00	0.00	0.00	482.16	0.06	0.00	0.00
5/21/2019	50.95	2,042.93		0.00	0.00	0.00	482.13	0.03	0.00	0.00
5/22/2019	58.00	2,100.93		0.00	0.00	0.00	481.64	0.49	0.00	0.00
5/23/2019	65.70	2,166.63		0.00	0.00	0.00	481.60	0.04	0.00	0.00
5/24/2019	55.70	2,222.33		0.00	0.00	0.00	481.14	0.46	0.00	0.00
5/25/2019	49.11	2,271.44		0.00	0.00	0.00	480.68	0.46	0.00	0.00
5/26/2019	64.98	2,336.42		0.00	0.00	0.00	480.23	0.45	0.00	0.00
5/27/2019	55.07	2,391.49		0.00	0.00	0.00	479.78	0.45	0.00	0.00
5/28/2019	38.43	2,429.92		0.00	0.00	0.00	479.27	0.51	0.00	0.00
5/29/2019	37.65	2,467.57		0.00	0.00	0.00	478.91	0.36	0.00	0.00
5/30/2019	40.94	2,508.51		0.00	0.00	0.00	478.64	0.27	0.00	0.00
5/31/2019	46.10	2,554.61		0.00	0.00	0.00	478.16	0.48	0.00	0.00
6/1/2019	72.73	2,627.34		0.00	0.00	0.00	477.67	0.49	0.00	0.00
6/2/2019	61.94	2,689.28		0.00	0.00	0.00	477.18	0.49	0.00	0.00
6/3/2019	46.23	2,735.51		0.00	0.00	0.00	476.91	0.27	0.00	0.00
6/4/2019	60.69	2,796.20		0.00	0.00	0.00	476.54	0.37	0.00	0.00
6/5/2019	48.87	2,845.07		0.00	0.00	0.00	476.16	0.38	0.00	0.00
6/6/2019	42.81	2,887.88		0.00	0.00	0.00	475.58	0.58	0.00	0.00
6/7/2019	52.67	2,940.55		0.00	0.00	0.00	475.09	0.49	0.00	0.00

Offset Account Storage Charge Accounting (Plan year 2019-2020)

	Utilization		Storage Charge		Prefunded Storage Charge				
Date	inflows	Total	Inflows/Transfers	charge	Inflows	Storage total	Evap total	Evap prefund	Balance
6/8/2019	47.97	2,988.52	0.00	0.00	0.00	474.60	0.49	0.00	0.00
6/9/2019	47.13	3,035.65	0.00	0.00	0.00	474.11	0.49	0.00	0.00
6/10/2019	70.94	3,106.59	0.00	0.00	0.00	473.51	0.60	0.00	0.00
6/11/2019	74.09	3,180.68	0.00	0.00	0.00	473.04	0.47	0.00	0.00
6/12/2019	62.01	3,242.69	0.00	0.00	0.00	472.33	0.71	0.00	0.00
6/13/2019	91.15	3,333.84	0.00	0.00	0.00	471.88	0.45	0.00	0.00
6/14/2019	96.47	3,430.31	0.00	0.00	0.00	471.35	0.53	0.00	0.00
6/15/2019	62.66	3,492.97	0.00	0.00	0.00	470.83	0.52	0.00	0.00
6/16/2019	59.64	3,552.61	0.00	0.00	0.00	470.31	0.52	0.00	0.00
6/17/2019	85.99	3,638.60	0.00	0.00	0.00	469.82	0.49	0.00	0.00
6/18/2019	98.41	3,737.01	0.00	0.00	0.00	469.48	0.34	0.00	0.00
6/19/2019	75.83	3,812.84	0.00	0.00	0.00	469.06	0.42	0.00	0.00
6/20/2019	39.33	3,852.17	0.00	0.00	0.00	468.46	0.60	0.00	0.00
6/21/2019	52.38	3,904.55	0.00	0.00	0.00	467.95	0.51	0.00	0.00
6/22/2019	90.82	3,995.37	0.00	0.00	0.00	467.44	0.51	0.00	0.00
6/23/2019	76.01	4,071.38	0.00	0.00	0.00	466.92	0.52	0.00	0.00
6/24/2019	83.97	4,155.35	0.00	0.00	0.00	466.45	0.47	0.00	0.00
6/25/2019	82.24	4,237.59	0.00	0.00	0.00	465.85	0.60	0.00	0.00
6/26/2019	56.71	4,294.30	0.00	0.00	0.00	465.39	0.46	0.00	0.00
6/27/2019	63.59	4,357.89	0.00	0.00	0.00	464.61	0.78	0.00	0.00
6/28/2019	77.53	4,435.42	0.00	0.00	0.00	463.92	0.69	0.00	0.00
6/29/2019	53.51	4,488.93	0.00	0.00	0.00	463.22	0.70	0.00	0.00
6/30/2019	809.89	5,298.82	0.00	0.00	0.00	462.53	0.69	0.00	0.00
7/1/2019	54.00	5,352.82	0.00	0.00	0.00	462.41	0.12	0.00	0.00
7/2/2019	55.51	5,408.33	0.00	0.00	0.00	462.02	0.39	0.00	0.00
7/3/2019	75.94	5,484.27	0.00	0.00	0.00	461.38	0.64	0.00	0.00
7/4/2019	649.33	6,133.60	0.00	0.00	0.00	460.74	0.64	0.00	0.00
7/5/2019	646.26	6,779.86	0.00	0.00	0.00	460.35	0.39	0.00	0.00
7/6/2019	82.68	6,862.54	0.00	0.00	0.00	459.96	0.39	0.00	0.00
7/7/2019	55.65	6,918.19	0.00	0.00	0.00	459.57	0.39	0.00	0.00
7/8/2019	56.35	6,974.54	0.00	0.00	0.00	459.10	0.47	0.00	0.00
7/9/2019	74.50	7,049.04	0.00	0.00	0.00	260.22	0.53	0.00	0.00
7/10/2019	67.46	7,116.50	0.00	0.00	0.00	61.55	0.32	0.00	0.00
7/11/2019	44.10	7,160.60	0.00	0.00	0.00	0.00	0.07	0.00	0.00
7/12/2019	59.45	7,220.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/13/2019	63.09	7,283.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/14/2019	63.49	7,346.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/15/2019	46.72	7,393.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/16/2019	46.06	7,439.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/17/2019	54.03	7,493.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/18/2019	31.44	7,524.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/19/2019	17.77	7,542.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/20/2019	20.53	7,563.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/21/2019	35.71	7,598.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/22/2019	47.43	7,646.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/23/2019	46.74	7,693.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/24/2019	34.69	7,727.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/25/2019	26.39	7,754.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/26/2019	37.64	7,791.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/27/2019	41.81	7,833.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/28/2019	64.81	7,898.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/29/2019	43.95	7,942.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/30/2019	28.11	7,970.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7/31/2019	40.55	8,011.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/1/2019	66.30	8,077.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/2/2019	54.07	8,131.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/3/2019	35.35	8,166.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/4/2019	22.26	8,188.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/5/2019	22.70	8,211.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/6/2019	45.32	8,257.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/7/2019	35.72	8,292.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/8/2019	61.47	8,354.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/9/2019	62.02	8,416.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/10/2019	38.69	8,454.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/11/2019	36.22	8,491.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/12/2019	37.16	8,528.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/13/2019	44.85	8,573.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/14/2019	63.65	8,636.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offset Account Storage Charge Accounting (Plan year 2019-2020)

	Utilization			Storage Charge		Prefunded Storage Charge				
Date	inflows	Total		Inflows/Transfers	charge	Inflows	Storage total	Evap total	Evap prefund	Balance
8/15/2019	42.62	8,679.41		0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/16/2019	40.73	8,720.14		0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/17/2019	61.54	8,781.68		0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/18/2019	46.99	8,828.67		0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/19/2019	12.61	8,841.28		0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/20/2019	23.40	8,864.68		0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/21/2019	20.16	8,884.84		0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/22/2019	14.70	8,899.54		0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/23/2019	9.59	8,909.13		0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/24/2019	17.82	8,926.95		0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/25/2019	40.49	8,967.44		0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/26/2019	33.30	9,000.74		0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/27/2019	12.47	9,013.21		0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/28/2019	20.42	9,033.63		0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/29/2019	18.50	9,052.13		0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/30/2019	8.89	9,061.02		0.00	0.00	0.00	0.00	0.00	0.00	0.00
8/31/2019	1.06	9,062.08		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/1/2019	8.71	9,070.79		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/2/2019	17.73	9,088.52		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/3/2019	39.10	9,127.62		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/4/2019	30.08	9,157.70		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/5/2019	12.46	9,170.16		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/6/2019	23.76	9,193.92		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/7/2019	20.43	9,214.35		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/8/2019	11.50	9,225.85		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/9/2019	16.01	9,241.86		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/10/2019	9.78	9,251.64		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/11/2019	8.71	9,260.35		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/12/2019	8.71	9,269.06		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/13/2019	8.71	9,277.77		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/14/2019	15.69	9,293.46		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/15/2019	42.36	9,335.82		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/16/2019	47.81	9,383.63		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/17/2019	21.69	9,405.32		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/18/2019	18.69	9,424.01		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/19/2019	17.02	9,441.03		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/20/2019	9.51	9,450.54		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/21/2019	8.71	9,459.25		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/22/2019	8.71	9,467.96		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/23/2019	8.71	9,476.67		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/24/2019	8.71	9,485.38		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/25/2019	27.93	9,513.31		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/26/2019	53.16	9,566.47		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/27/2019	34.49	9,600.96		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/28/2019	11.41	9,612.37		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/29/2019	17.27	9,629.64		0.00	0.00	0.00	0.00	0.00	0.00	0.00
9/30/2019	16.54	9,646.18		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/1/2019	8.23	9,654.41		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/2/2019	7.70	9,662.11		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/3/2019	7.70	9,669.81		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/4/2019	16.37	9,686.18		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/5/2019	31.48	9,717.66		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/6/2019	24.58	9,742.24		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/7/2019	7.70	9,749.94		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/8/2019	16.32	9,766.26		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/9/2019	22.07	9,788.33		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/10/2019	13.77	9,802.10		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/11/2019	14.15	9,816.25		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/12/2019	14.51	9,830.76		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/13/2019	8.42	9,839.18		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/14/2019	7.70	9,846.88		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/15/2019	7.70	9,854.58		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/16/2019	7.70	9,862.28		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/17/2019	7.70	9,869.98		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/18/2019	7.70	9,877.68		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/19/2019	7.70	9,885.38		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/20/2019	7.70	9,893.08		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/21/2019	7.70	9,900.78		0.00	0.00	0.00	0.00	0.00	0.00	0.00

Offset Account Storage Charge Accounting (Plan year 2019-2020)

	Utilization			Storage Charge		Prefunded Storage Charge				
Date	inflows	Total		Inflows/Transfers	charge	Inflows	Storage total	Evap total	Evap prefund	Balance
10/22/2019	7.70	9,908.48		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/23/2019	7.70	9,916.18		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/24/2019	7.70	9,923.88		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/25/2019	7.70	9,931.58		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/26/2019	31.24	9,962.82		0.00	0.00	0.00	0.00	0.00	0.00	0.00
10/27/2019	46.96	10,009.78		0.00	0.49	(0.49)	0.00	0.00	0.00	(0.49)
10/28/2019	25.01	10,034.79		0.00	1.25	(1.25)	0.00	0.00	0.00	(1.74)
10/29/2019	3.19	10,037.98		0.00	0.16	(0.16)	0.00	0.00	0.00	(1.90)
10/30/2019	7.99	10,045.97		0.00	0.40	(0.40)	0.00	0.00	0.00	(2.30)
10/31/2019	7.40	10,053.37		0.00	0.37	(0.37)	0.00	0.00	0.00	(2.67)
11/1/2019	188.43	10,241.80		0.00	9.42	(9.42)	0.00	0.00	0.00	(12.09)
11/2/2019	1.66	10,243.46		0.00	0.08	(0.08)	0.00	0.00	0.00	(12.17)
11/3/2019	1.18	10,244.64		0.00	0.06	(0.06)	0.00	0.00	0.00	(12.23)
11/4/2019	1.11	10,245.75		0.00	0.06	(0.06)	0.00	0.00	0.00	(12.29)
11/5/2019	1.06	10,246.81		0.00	0.05	(0.05)	0.00	0.00	0.00	(12.34)
11/6/2019	1.03	10,247.84		0.00	0.05	(0.05)	0.00	0.00	0.00	(12.39)
11/7/2019	1.03	10,248.87		0.00	0.05	(0.05)	0.00	0.00	0.00	(12.44)
11/8/2019	1.03	10,249.90		0.00	0.05	(0.05)	0.00	0.00	0.00	(12.50)
11/9/2019	1.03	10,250.93		0.00	0.05	(0.05)	0.00	0.00	0.00	(12.55)
11/10/2019	2.35	10,253.28		0.00	0.12	(0.12)	0.00	0.00	0.00	(12.66)
11/11/2019	1.13	10,254.41		0.00	0.06	(0.06)	0.00	0.00	0.00	(12.72)
11/12/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
11/13/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
11/14/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
11/15/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
11/16/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
11/17/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
11/18/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
11/19/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
11/20/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
11/21/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
11/22/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
11/23/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
11/24/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
11/25/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
11/26/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
11/27/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
11/28/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
11/29/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
11/30/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/1/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/2/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/3/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/4/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/5/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/6/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/7/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/8/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/9/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/10/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/11/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/12/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/13/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/14/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/15/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/16/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/17/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/18/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/19/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/20/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/21/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/22/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/23/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/24/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/25/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/26/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/27/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/28/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)

Offset Account Storage Charge Accounting (Plan year 2019-2020)

	Utilization			Storage Charge		Prefunded Storage Charge				
Date	inflows	Total		Inflows/Transfers	charge	Inflows	Storage total	Evap total	Evap prefund	Balance
12/29/2019	0.00	10,254.41		0.00	0.00	0.00	0.00	0.00	0.00	(12.72)
12/30/2019	0.75	10,255.16		0.00	0.04	(0.04)	0.00	0.00	0.00	(12.76)
12/31/2019	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/1/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/2/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/3/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/4/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/5/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/6/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/7/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/8/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/9/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/10/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/11/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/12/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/13/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/14/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/15/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/16/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/17/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/18/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/19/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/20/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/21/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/22/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/23/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/24/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/25/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/26/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/27/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/28/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/29/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/30/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
1/31/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/1/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/2/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/3/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/4/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/5/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/6/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/7/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/8/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/9/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/10/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/11/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/12/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/13/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/14/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/15/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/16/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/17/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/18/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/19/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/20/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/21/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/22/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/23/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/24/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/25/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/26/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/27/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/28/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
2/29/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
3/1/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
3/2/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
3/3/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
3/4/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
3/5/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)

Offset Account Storage Charge Accounting (Plan year 2019-2020)

	Utilization			Storage Charge		Prefunded Storage Charge				
Date	inflows	Total		Inflows/Transfers	charge	Inflows	Storage total	Evap total	Evap prefund	Balance
3/6/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
3/7/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
3/8/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
3/9/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
3/10/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
3/11/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
3/12/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
3/13/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
3/14/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
3/15/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
3/16/2020	0.00	10,255.16		0.00	0.00	0.00	0.00	0.00	0.00	(12.76)
3/17/2020	10.73	10,265.89		0.00	0.54	(0.54)	0.00	0.00	0.00	(13.29)
3/18/2020	21.35	10,287.24		0.00	1.07	(1.07)	0.00	0.00	0.00	(14.36)
3/19/2020	24.37	10,311.61		0.00	1.22	(1.22)	0.00	0.00	0.00	(15.58)
3/20/2020	9.16	10,320.77		0.00	0.46	(0.46)	0.00	0.00	0.00	(16.04)
3/21/2020	2.64	10,323.41		0.00	0.13	(0.13)	0.00	0.00	0.00	(16.17)
3/22/2020	2.44	10,325.85		0.00	0.12	(0.12)	0.00	0.00	0.00	(16.29)
3/23/2020	1.25	10,327.10		0.00	0.06	(0.06)	0.00	0.00	0.00	(16.36)
3/24/2020	1.25	10,328.35		0.00	0.06	(0.06)	0.00	0.00	0.00	(16.42)
3/25/2020	0.00	10,328.35		0.00	0.00	0.00	0.00	0.00	0.00	(16.42)
3/26/2020	0.00	10,328.35		0.00	0.00	0.00	0.00	0.00	0.00	(16.42)
3/27/2020	0.00	10,328.35		0.00	0.00	0.00	0.00	0.00	0.00	(16.42)
3/28/2020	0.00	10,328.35		0.00	0.00	0.00	0.00	0.00	0.00	(16.42)
3/29/2020	0.00	10,328.35		0.00	0.00	0.00	0.00	0.00	0.00	(16.42)
3/30/2020	8.22	10,336.57		0.00	0.41	(0.41)	0.00	0.44	0.00	(16.83)
3/31/2020	789.12	11,125.69		500.00	14.46	485.54	500.00	0.44	0.00	468.72
		56.28		500.00	31.28	468.72				31.28

Attachment 7 – Example of accounting for Fort Lyon deliveries to Offset Account (2020)

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TABLE ___
LAWMA'S REPLACEMENT SOURCES FROM FORT LYON CANAL THROUGH AUGMENTATION STATIONS

Month: November **Year:** 2017

		FORT LYON CANAL SHARES DELIVERED THROUGH AUGMENTATION STATIONS									TRANSIT LOSS CALCULATIONS									Total CU Credits Delivered to the Arkansas River										
		Above John Martin Dam				Below John Martin Dam				Total	Above John Martin Dam				Below John Martin Dam								22.5		To Offset	In-State	Below John Martin Dam		
		ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO		ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO	Reach 9	Reach 10	To Offset Account		Miles		Account	Repl.	Reach 11	Reach 12	Reach 13
Day	Fort Lyon Canal Diversions	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Yes or	Arkansas River @ Las Animas	Reach 9 TL to Offset Account	Reach 9 TL to Offset Account	Volume	Volume	Flow	Flow	Flow
	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	No	(cfs)	(% / mile)	(cfs)	(af)	(af)	(cfs)	(cfs)	(cfs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(23)	(24)	(25)	(26)	(27)
1	179.0	0.00	0.00	1.54	1.23	1.06	0.00	1.03	0.91	5.77	0.000	0.000	0.005	0.003	0.024	0.000	0.004	0.023	0.0	1.2	Yes	68.2	0.1%	0.0	2.4	0.0	0.5	0.5	0.4
2	174.0	0.00	0.00	1.47	0.52	1.31	0.96	0.95	0.86	6.06	0.000	0.000	0.005	0.001	0.029	0.005	0.003	0.021	0.0	0.9	Yes	67.9	0.1%	0.0	1.7	0.0	0.6	0.9	0.4
3	183.0	0.00	0.00	1.46	0.00	2.74	1.30	0.90	1.92	8.32	0.000	0.000	0.005	0.000	0.061	0.007	0.003	0.048	0.0	0.6	Yes	66.9	0.1%	0.0	1.2	0.0	1.2	1.0	0.9
4	235.0	0.00	0.00	1.38	0.00	4.65	0.00	0.79	0.00	6.82	0.000	0.000	0.004	0.000	0.104	0.000	0.003	0.000	0.0	0.6	Yes	71.6	0.1%	0.0	1.1	0.0	2.1	0.4	0.0
5	255.0	0.00	0.00	1.31	0.00	1.11	0.00	0.64	0.00	3.06	0.000	0.000	0.004	0.000	0.025	0.000	0.002	0.000	0.0	0.5	Yes	75.4	0.1%	0.0	1.1	0.0	0.5	0.3	0.0
6	249.0	0.00	0.00	1.28	0.00	1.14	0.00	0.58	0.00	3.00	0.000	0.000	0.004	0.000	0.025	0.000	0.002	0.000	0.0	0.5	Yes	65.7	0.1%	0.0	1.1	0.0	0.5	0.3	0.0
7	195.0	0.00	0.00	1.28	0.00	1.14	0.00	0.53	0.00	2.95	0.000	0.000	0.004	0.000	0.025	0.000	0.002	0.000	0.0	0.5	Yes	80.1	0.1%	0.0	1.1	0.0	0.5	0.2	0.0
8	198.0	0.00	0.00	1.28	0.00	1.03	0.00	0.00	0.00	2.31	0.000	0.000	0.004	0.000	0.023	0.000	0.000	0.000	0.0	0.5	Yes	82.6	0.1%	0.0	1.1	0.0	0.5	0.0	0.0
9	202.0	0.00	0.00	1.28	0.00	0.84	0.00	0.00	0.00	2.12	0.000	0.000	0.004	0.000	0.019	0.000	0.000	0.000	0.0	0.5	Yes	85.3	0.1%	0.0	1.1	0.0	0.4	0.0	0.0
10	208.0	0.00	0.00	2.92	0.00	0.91	0.00	0.00	0.00	3.83	0.000	0.000	0.009	0.000	0.020	0.000	0.000	0.000	0.0	1.2	Yes	88.0	0.1%	0.0	2.4	0.0	0.4	0.0	0.0
11	138.0	0.00	0.00	1.40	0.00	0.94	0.00	0.00	0.00	2.34	0.000	0.000	0.004	0.000	0.021	0.000	0.000	0.000	0.0	0.6	Yes	82.6	0.1%	0.0	1.2	0.0	0.4	0.0	0.0
12	0.0	0.00	0.00	0.00	0.00	0.93	0.00	0.00	0.00	0.93	0.000	0.000	0.000	0.000	0.021	0.000	0.000	0.000	0.0	0.0		159.0	0.1%	0.0	0.0	0.0	0.4	0.0	0.0
13	0.0	0.00	0.00	0.00	0.00	0.94	0.00	0.00	0.00	0.94	0.000	0.000	0.000	0.000	0.021	0.000	0.000	0.000	0.0	0.0		225.0	0.1%	0.0	0.0	0.0	0.4	0.0	0.0
14	0.0	0.00	0.00	0.00	0.00	0.93	0.00	0.00	0.00	0.93	0.000	0.000	0.000	0.000	0.021	0.000	0.000	0.000	0.0	0.0		211.0	0.1%	0.0	0.0	0.0	0.4	0.0	0.0
15	0.0	0.00	0.00	0.00	0.00	0.96	0.00	0.00	0.00	0.96	0.000	0.000	0.000	0.000	0.021	0.000	0.000	0.000	0.0	0.0		212.0	0.1%	0.0	0.0	0.0	0.4	0.0	0.0
16	0.0	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.99	0.000	0.000	0.000	0.000	0.022	0.000	0.000	0.000	0.0	0.0		212.0	0.1%	0.0	0.0	0.0	0.5	0.0	0.0
17	0.0	0.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.99	0.000	0.000	0.000	0.000	0.022	0.000	0.000	0.000	0.0	0.0		175.0	0.1%	0.0	0.0	0.0	0.5	0.0	0.0
18	0.0	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.00	0.63	0.000	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.0	0.0		159.0	0.1%	0.0	0.0	0.0	0.3	0.0	0.0
19	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0	0.0		0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0	0.0		0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0	0.0		0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0	0.0		0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0	0.0		0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0	0.0		0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0	0.0		0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0	0.0		0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0	0.0		0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0	0.0		0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0	0.0		0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0	0.0		0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
31																													
cfsd	2,216.0	0.0	0.0	16.6	1.7	23.2	2.3	5.4	3.7	53.0	0.0	0.0	0.1	0.0	0.5	0.0	0.0	0.1	0.0	7.7		2,187.3		0.0			10.6	3.5	1.7
ac-ft	4,395.4	0.0	0.0	32.9	3.5	46.1	4.5	10.8	7.3	105.0	0.0	0.0	0.1	0.0	1.0	0.0	0.0	0.2	0.0	15.3		4,338.5		0.0	15.4	0.0	21.0	7.0	3.3
CU CREDITS (ac-ft)																			0.0	15.3					15.4	0.0	21.0	7.0	3.3
Monthly CU Factor		37.3%	48.4%	41.7%	47.6%	46.6%	46.2%	45.9%	46.7%																				

Monthly FHG Delivery	105.0		
Cumulative Annual FHG Delivery	6,760.4		
Maximum Monthly FHG Delivery Limit	1,652.3	FALSE	Exceeds Limit
Cumulative Annual FHG Delivery Limit	20,029.4	FALSE	Exceeds Limit

(This row was hidder 2 3 4 5 6 7 8 9

	Into JMR		To LAWMA Bucket (6700999)						
	ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO	Total Del to JMR	
1	0	0	1.24	1.13	0.5	0	0.47	0.4	2.37	1
2	0	0	1.18	0.48	0.6	0.44	0.44	0.4	1.66	2
3	0	0	1.18	0	1.2	0.6	0.41	0.9	1.18	3
4	0	0	1.11	0	2.1	0	0.36	0	1.11	4
5	0	0	1.06	0	0.5	0	0.29	0	1.06	5
6	0	0	1.03	0	0.5	0	0.26	0	1.03	6
7	0	0	1.03	0	0.5	0	0.24	0	1.03	7
8	0	0	1.03	0	0.5	0	0	0	1.03	8
9	0	0	1.03	0	0.4	0	0	0	1.03	9
10	0	0	2.35	0	0.4	0	0	0	2.35	10
11	0	0	1.13	0	0.4	0	0	0	1.13	11
12	0	0	0	0	0.4	0	0	0	0	12
13	0	0	0	0	0.4	0	0	0	0	13
14	0	0	0	0	0.4	0	0	0	0	14
15	0	0	0	0	0.4	0	0	0	0	15
16	0	0	0	0	0.5	0	0	0	0	16
17	0	0	0	0	0.5	0	0	0	0	17
18	0	0	0	0	0.3	0	0	0	0	18
19	0	0	0	0	0	0	0	0	0	19
20	0	0	0	0	0	0	0	0	0	20
21	0	0	0	0	0	0	0	0	0	21
22	0	0	0	0	0	0	0	0	0	22
23	0	0	0	0	0	0	0	0	0	23
24	0	0	0	0	0	0	0	0	0	24
25	0	0	0	0	0	0	0	0	0	25
26	0	0	0	0	0	0	0	0	0	26
27	0	0	0	0	0	0	0	0	0	27
28	0	0	0	0	0	0	0	0	0	28
29	0	0	0	0	0	0	0	0	0	29
30	0	0	0	0	0	0	0	0	0	30
31	0	0	0	0	0	0	0	0	0	31
									14.98	

TABLE ___
LAWMA'S REPLACEMENT SOURCES FROM FORT LYON CANAL THROUGH AUGMENTATION STATIONS

Month: March **Year:** 2020

		FORT LYON CANAL SHARES DELIVERED THROUGH AUGMENTATION STATIONS									TRANSIT LOSS CALCULATIONS									Total CU Credits Delivered to the Arkansas River									
		Above John Martin Dam				Below John Martin Dam				Total	Above John Martin Dam				Below John Martin Dam														
		ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO		ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO	Reach 9	Reach 10	To Offset Account		22.5 Miles		To Offset Account	In-State Repl.	Below John Martin Dam		
Day	Fort Lyon Canal Diversions	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Yes or	Arkansas River @ Las Animas	Reach 9 TL to Offset Account	Reach 9 TL to Offset Account	Volume	Volume	Flow	Flow	Flow
	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	No	(cfs)	(% / mile)	(cfs)	(af)	(af)	(cfs)	(cfs)	(cfs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		310.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		315.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		311.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		303.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		300.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		320.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		323.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		321.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		320.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		319.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		319.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		312.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		304.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
14	22.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	313.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
15	288.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	257.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
16	320.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	115.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
17	311.00	11.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.00	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	Yes	82.8	0.1%	0.1	10.7	0.0	0.0	0.0	0.0
18	279.00	15.00	0.00	5.73	0.00	0.00	0.00	0.00	0.00	20.73	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	3.5	Yes	87.1	0.1%	0.2	21.5	0.0	0.0	0.0	0.0
19	366.00	12.60	0.00	10.30	0.00	0.00	0.00	0.00	0.00	22.90	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3	6.2	Yes	74.7	0.1%	0.1	24.7	0.0	0.0	0.0	0.0
20	367.00	3.06	1.03	4.25	0.00	0.00	0.00	0.00	0.00	8.34	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	3.2	Yes	50.6	0.1%	0.0	9.3	0.0	0.0	0.0	0.0
21	330.00	0.00	2.28	0.00	0.00	0.70	0.00	0.74	0.87	4.59	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	Yes	41.2	0.1%	0.0	2.7	0.0	0.4	0.5	0.5
22	369.00	0.00	1.03	0.00	0.97	3.00	0.00	0.96	0.00	5.95	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1.3	Yes	50.9	0.1%	0.0	2.5	0.0	1.8	0.6	0.0
23	350.00	0.00	0.00	0.00	0.97	1.20	0.00	0.00	2.24	4.41	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	Yes	80.4	0.1%	0.0	1.3	0.0	0.7	0.0	1.3
24	328.00	0.00	0.00	0.00	0.97	0.00	0.00	0.00	0.00	3.39	4.36	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.6	Yes	87.6	0.1%	0.0	1.3	0.0	0.0	0.0	2.0
25	292.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.87	1.87	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	83.6	0.1%	0.0	0.0	0.0	0.0	0.0	1.1
26	234.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	86.2	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
27	205.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	88.9	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
28	207.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	96.4	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
29	221.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	95.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
30	263.00	7.15	0.00	0.00	0.97	0.00	0.00	0.00	0.00	8.12	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.6	Yes	96.0	0.1%	0.1	8.3	0.0	0.0	0.0	0.0
31	289.00	13.00	0.00	0.00	0.97	0.00	0.00	0.00	0.00	13.97	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.6	Yes	110.0	0.1%	0.1	14.0	0.0	0.0	0.0	0.0
cfsd	5,041.9	61.8	4.3	20.3	4.8	4.9	0.0	1.7	8.4	106.2	1.1	0.1	0.1	0.0	0.1	0.0	0.0	0.2	31.1	18.1		5,973.4		0.7			3.0	1.0	5.0
ac-ft	10,000.6	122.6	8.6	40.2	9.6	9.7	0.0	3.4	16.6	210.7	2.1	0.1	0.1	0.0	0.2	0.0	0.0	0.3	61.7	35.9		11,848.2		1.4	96.2	0.0	5.9	2.1	9.9
CU CREDITS (ac-ft)																			61.7	35.9					96.2	0.0	5.9	2.1	9.9
Monthly CU Factor		51.2%	60.7%	60.7%	66.9%	61.8%	64.9%	62.1%	60.7%																				

Monthly FHG Delivery	210.7	
Cumulative Annual FHG Delivery	210.7	
Maximum Monthly FHG Delivery Limit	1,597.4	FALSE Exceeds Limit
Cumulative Annual FHG Delivery Limit	20,029.4	FALSE Exceeds Limit

	Into JMR				To LAWMA Bucket (6700999)				
	ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO	Total Del to JMR
1	0.00	0.00	0.00	0.00	0	0	0	0	0.00
2	0.00	0.00	0.00	0.00	0	0	0	0	0.00
3	0.00	0.00	0.00	0.00	0	0	0	0	0.00
4	0.00	0.00	0.00	0.00	0	0	0	0	0.00
5	0.00	0.00	0.00	0.00	0	0	0	0	0.00
6	0.00	0.00	0.00	0.00	0	0	0	0	0.00
7	0.00	0.00	0.00	0.00	0	0	0	0	0.00
8	0.00	0.00	0.00	0.00	0	0	0	0	0.00
9	0.00	0.00	0.00	0.00	0	0	0	0	0.00
10	0.00	0.00	0.00	0.00	0	0	0	0	0.00
11	0.00	0.00	0.00	0.00	0	0	0	0	0.00
12	0.00	0.00	0.00	0.00	0	0	0	0	0.00
13	0.00	0.00	0.00	0.00	0	0	0	0	0.00
14	0.00	0.00	0.00	0.00	0	0	0	0	0.00
15	0.00	0.00	0.00	0.00	0	0	0	0	0.00
16	0.00	0.00	0.00	0.00	0	0	0	0	0.00
17	10.73	0.00	0.00	0.00	0	0	0	0	10.73
18	14.63	0.00	6.72	0.00	0	0	0	0	21.35
19	12.29	0.00	12.08	0.00	0	0	0	0	24.37
20	2.98	1.19	4.99	0.00	0	0	0	0	9.16
21	0.00	2.64	0.00	0.00	0.4	0	0.46	0.5	2.64
22	0.00	1.19	0.00	1.25	1.8	0	0.59	0	2.44
23	0.00	0.00	0.00	1.25	0.7	0	0	1.3	1.25
24	0.00	0.00	0.00	1.25	0	0	0	2	1.25
25	0.00	0.00	0.00	0.00	0	0	0	1.1	0.00
26	0.00	0.00	0.00	0.00	0	0	0	0	0.00
27	0.00	0.00	0.00	0.00	0	0	0	0	0.00
28	0.00	0.00	0.00	0.00	0	0	0	0	0.00
29	0.00	0.00	0.00	0.00	0	0	0	0	0.00
30	6.97	0.00	0.00	1.25	0	0	0	0	8.22
31	12.68	0.00	0.00	1.25	0	0	0	0	13.93
Total	60.28	5.02	23.79	6.25					
				95.34					

TABLE ___
LAWMA'S REPLACEMENT SOURCES FROM FORT LYON CANAL THROUGH AUGMENTATION STATIONS

Month: April **Year: 2020**

		FORT LYON CANAL SHARES DELIVERED THROUGH AUGMENTATION STATIONS									TRANSIT LOSS CALCULATIONS to ARKANSAS RIVER								Total CU Credits Delivered to the Arkansas River									
		Above John Martin Dam				Below John Martin Dam				Total	Above John Martin Dam				Below John Martin Dam							22.5		To Offset	In-State	Below John Martin Dam		
		ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO		ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO	Reach 9	Reach 10	To Offset Account		Miles		Account	Repl.	Reach 11	Reach 12	Reach 13
Day	Fort Lyon Canal Diversions	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Yes or	Arkansas River @ Las Animas	Reach 9 TL to Offset Account	Reach 9 TL to Offset Account	Volume	Volume	Flow	Flow	Flow
		(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	No	(cfs)	(% / mile)	(cfs)	(af)	(af)	(cfs)	(cfs)	(cfs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
1	283.00	19.80	0.00	1.38	0.97	0.00	0.00	0.00	0.00	22.15	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.4	1.7	Yes	92.3	0.1%	0.3	27.3	0.0	0.0	0.0	0.0
2	229.00	16.00	1.55	3.17	0.97	0.00	0.00	0.00	0.00	21.69	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	4.0	Yes	81.0	0.1%	0.2	27.3	0.0	0.0	0.0	0.0
3	231.00	4.56	1.52	1.98	0.97	0.00	0.00	0.00	0.00	9.03	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	3.2	Yes	130.0	0.1%	0.1	11.8	0.0	0.0	0.0	0.0
4	249.00	0.00	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.97	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	Yes	128.0	0.1%	0.0	1.4	0.0	0.0	0.0	0.0
5	244.00	0.00	0.00	0.00	0.97	0.00	1.95	0.00	0.00	2.92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	Yes	162.0	0.1%	0.0	1.4	0.0	0.0	1.4	0.0
6	230.00	0.00	0.00	0.00	0.97	0.88	1.95	1.28	0.00	5.08	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	Yes	172.0	0.1%	0.0	1.4	0.0	0.6	2.2	0.0
7	235.00	0.00	0.00	0.00	0.97	1.35	0.00	3.74	1.32	7.38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	Yes	174.0	0.1%	0.0	1.4	0.0	0.9	2.5	0.9
8	235.00	0.00	0.00	0.00	0.97	0.00	0.00	2.73	3.28	6.98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.7	Yes	151.0	0.1%	0.0	1.4	0.0	0.0	1.9	2.2
9	267.00	0.00	0.00	0.00	0.00	0.00	0.00	1.03	2.24	3.27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	Yes	123.0	0.1%	0.0	0.0	0.0	0.0	0.7	1.5
10	263.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	72.1	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
11	257.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	46.2	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
12	233.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	36.1	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
13	209.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	32.9	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
14	277.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	29.7	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
15	312.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	23.6	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
16	273.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	21.7	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
17	269.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	22.4	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
18	258.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	22.8	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
19	229.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	24.1	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
20	191.00	9.19	3.11	2.73	0.00	0.00	0.00	0.00	0.00	15.03	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	4.1	Yes	26.5	0.1%	0.1	19.2	0.0	0.0	0.0	0.0
21	212.00	16.00	4.89	6.33	0.00	0.00	0.00	0.00	0.00	27.22	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	10.0	7.8	Yes	33.6	0.1%	0.2	34.9	0.0	0.0	0.0	0.0
22	233.00	20.20	1.86	4.44	0.00	0.00	0.00	0.00	0.00	26.50	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.6	4.4	Yes	39.0	0.1%	0.3	33.2	0.0	0.0	0.0	0.0
23	243.00	5.41	0.00	0.00	0.00	0.00	1.80	0.00	0.00	7.21	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	Yes	35.9	0.1%	0.1	6.6	0.0	0.0	1.3	0.0
24	225.00	0.00	0.00	0.00	0.00	0.78	3.98	1.01	0.00	5.77	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	27.9	0.1%	0.0	0.0	0.0	0.5	3.5	0.0
25	219.00	0.00	0.00	0.00	0.00	0.87	2.30	2.40	0.96	6.53	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	33.1	0.1%	0.0	0.0	0.0	0.6	3.2	0.6
26	232.00	0.00	0.00	0.00	0.00	0.00	0.00	2.34	2.90	5.24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	Yes	28.3	0.1%	0.0	0.0	0.0	0.0	1.6	1.9
27	221.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.66	2.66	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	Yes	27.1	0.1%	0.0	0.0	0.0	0.0	0.0	1.8
28	225.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	25.4	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
29	236.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	25.8	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
30	225.00	0.00	0.00	0.00	0.88	0.00	0.00	0.00	0.00	0.88	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	Yes	26.2	0.1%	0.0	1.3	0.0	0.0	0.0	0.0
31																													
cfsd	7,245.0	91.2	12.9	20.0	8.6	3.9	12.0	14.5	13.4	176.5	1.6	0.2	0.1	0.0	0.1	0.1	0.1	0.3	57.0	29.3		1,873.7		1.3			2.6	18.3	8.8
ac-ft	14,370.5	180.8	25.6	39.7	17.1	7.7	23.8	28.8	26.5	350.0	3.1	0.4	0.1	0.0	0.2	0.1	0.1	0.7	113.0	58.2		3,716.5		2.5	168.7	0.0	5.1	36.3	17.5
CU CREDITS (ac-ft)																			113.0	58.2					168.7	0.0	5.1	36.3	17.5
Monthly CU Factor		63.6%	70.4%	70.4%	73.6%	67.9%	70.7%	68.1%	67.7%																				

Monthly FHG Delivery	350.0		
Cumulative Annual FHG Delivery	560.7		
Maximum Monthly FHG Delivery Limit	2,155.9	FALSE	Exceeds Limit
Cumulative Annual FHG Delivery Limit	20,029.4	FALSE	Exceeds Limit

	2	3	4	5	6	7	8	9

	Into JMR				To LAWMA Bucket (6700999)				
	ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO	Total Del to JMR
1	23.99	0.00	1.88	1.37	0	0	0	0	27.24
2	19.39	2.09	4.31	1.37	0	0	0	0	27.16
3	5.53	2.04	2.69	1.37	0	0	0	0	11.63
4	0.00	0.00	0.00	1.37	0	0	0	0	1.37
5	0.00	0.00	0.00	1.37	0	1.37	0	0	1.37
6	0.00	0.00	0.00	1.37	0.6	1.37	0.87	0	1.37
7	0.00	0.00	0.00	1.37	0.9	0	2.54	0.9	1.37
8	0.00	0.00	0.00	1.37	0	0	1.85	2.2	1.37
9	0.00	0.00	0.00	0.00	0	0	0.7	1.5	0.00
10	0.00	0.00	0.00	0.00	0	0	0	0	0.00
11	0.00	0.00	0.00	0.00	0	0	0	0	0.00
12	0.00	0.00	0.00	0.00	0	0	0	0	0.00
13	0.00	0.00	0.00	0.00	0	0	0	0	0.00
14	0.00	0.00	0.00	0.00	0	0	0	0	0.00
15	0.00	0.00	0.00	0.00	0	0	0	0	0.00
16	0.00	0.00	0.00	0.00	0	0	0	0	0.00
17	0.00	0.00	0.00	0.00	0	0	0	0	0.00
18	0.00	0.00	0.00	0.00	0	0	0	0	0.00
19	0.00	0.00	0.00	0.00	0	0	0	0	0.00
20	11.14	4.18	3.71	0.00	0	0	0	0	19.03
21	19.39	6.58	8.61	0.00	0	0	0	0	34.58
22	24.48	2.50	6.04	0.00	0	0	0	0	33.02
23	6.56	0.00	0.00	0.00	0	1.27	0	0	6.56
24	0.00	0.00	0.00	0.00	0.5	2.8	0.69	0	0.00
25	0.00	0.00	0.00	0.00	0.6	1.62	1.63	0.6	0.00
26	0.00	0.00	0.00	0.00	0	0	1.59	1.9	0.00
27	0.00	0.00	0.00	0.00	0	0	0	1.8	0.00
28	0.00	0.00	0.00	0.00	0	0	0	0	0.00
29	0.00	0.00	0.00	0.00	0	0	0	0	0.00
30	0.00	0.00	0.00	1.25	0	0	0	0	1.25
Total	110.48	17.39	27.24	12.21					167.32

TABLE ___
LAWMA'S REPLACEMENT SOURCES FROM FORT LYON CANAL THROUGH AUGMENTATION STATIONS

Month: May **Year:** 2020

		FORT LYON CANAL SHARES DELIVERED THROUGH AUGMENTATION STATIONS									TRANSIT LOSS CALCULATIONS									Total CU Credits Delivered to the Arkansas River								
		Above John Martin Dam				Below John Martin Dam				Total	Above John Martin Dam					Below John Martin Dam								22.5		To Offset	In-State	Below John Martin Dam		
		ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO		ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO	Reach 9	Reach 10	To Offset Account		Miles		Account	Repl.	Reach 11	Reach 12	Reach 13
Day	Fort Lyon Canal Diversions	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Yes or	Arkansas River @ Las Animas	Reach 9 TL to Offset Account	Reach 9 TL to Offset Account	Volume	Volume	Flow	Flow	Flow
		(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	No	(cfs)	(% / mile)	(cfs)	(af)	(af)	(cfs)	(cfs)	(cfs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
1	164.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	26.2	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
2	143.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	22.7	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
3	165.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	23.7	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
4	162.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	24.1	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
5	158.0	0.00	0.00	1.87	0.00	0.00	0.00	0.00	0.00	1.87	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	Yes	28.0	0.1%	0.0	2.7	0.0	0.0	0.0	0.0
6	165.0	10.70	2.32	5.22	0.00	0.00	0.00	0.00	0.00	18.24	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	5.5	Yes	28.6	0.1%	0.2	24.2	0.0	0.0	0.0	0.0
7	165.0	16.20	4.60	11.60	0.00	0.00	0.00	0.00	0.00	32.40	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	10.4	11.7	Yes	36.8	0.1%	0.2	43.5	0.0	0.0	0.0	0.0
8	164.0	17.70	2.89	7.40	0.00	0.00	0.00	0.00	0.00	27.99	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.4	7.5	Yes	50.3	0.1%	0.3	36.9	0.0	0.0	0.0	0.0
9	164.0	6.58	0.00	0.00	0.00	0.00	2.10	0.00	0.00	8.68	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	Yes	75.9	0.1%	0.1	8.2	0.0	0.0	1.5	0.0
10	164.0	0.00	0.00	0.00	0.00	0.59	5.22	1.24	0.00	7.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	70.1	0.1%	0.0	0.0	0.0	0.4	4.6	0.0
11	165.0	0.00	0.00	0.00	0.00	2.26	2.40	3.08	0.00	7.74	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	Yes	49.0	0.1%	0.0	0.0	0.0	1.5	3.8	0.0
12	165.0	0.00	0.00	0.00	0.00	1.82	0.00	2.91	3.34	8.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	Yes	34.2	0.1%	0.0	0.0	0.0	1.2	2.0	2.2
13	164.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.10	5.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	Yes	38.3	0.1%	0.0	0.0	0.0	0.0	0.0	3.4
14	163.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	59.8	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
15	163.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	95.1	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
16	164.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	139.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
17	164.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	117.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
18	164.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	95.7	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
19	164.0	0.00	3.47	7.57	0.00	0.00	0.00	0.00	0.00	11.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	Yes	93.0	0.1%	0.0	15.9	0.0	0.0	0.0	0.0
20	164.0	15.30	5.20	11.90	0.00	0.00	0.00	0.00	0.00	32.40	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	9.9	12.4	Yes	96.4	0.1%	0.2	43.7	0.0	0.0	0.0	0.0
21	163.0	21.60	1.04	3.43	0.00	0.00	0.00	0.00	0.00	26.07	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.9	3.2	Yes	268.0	0.1%	0.3	33.4	0.0	0.0	0.0	0.0
22	164.0	5.91	0.00	0.00	1.40	0.00	2.57	0.00	0.00	9.88	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	1.1	Yes	310.0	0.1%	0.1	9.5	0.0	0.0	1.8	0.0
23	210.0	0.00	0.00	0.00	17.80	3.01	5.07	0.00	0.00	25.88	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	13.5	Yes	337.0	0.1%	0.0	26.7	0.0	2.0	3.6	0.0
24	473.0	0.00	0.00	0.00	0.78	2.76	1.57	3.05	2.85	11.01	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.6	Yes	415.0	0.1%	0.0	1.2	0.0	1.8	3.2	1.9
25	614.0	0.00	0.00	0.00	0.00	0.00	0.00	5.92	3.29	9.21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	Yes	372.0	0.1%	0.0	0.0	0.0	0.0	4.0	2.2
26	585.0	0.00	0.00	0.00	0.00	0.00	0.00	5.40	1.91	7.31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	382.0	0.1%	0.0	0.0	0.0	0.0	3.7	1.3
27	663.0	6.61	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.61	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	Yes	449.0	0.1%	0.1	8.3	0.0	0.0	0.0	0.0
28	520.0	21.80	0.00	0.00	0.00	0.00	2.90	0.00	0.00	24.70	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.1	0.0	Yes	461.0	0.1%	0.3	27.3	0.0	0.0	2.1	0.0
29	302.0	12.90	1.50	10.20	0.00	1.97	6.99	0.00	0.00	33.56	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	8.5	Yes	486.0	0.1%	0.2	33.0	0.0	1.3	5.0	0.0
30	204.0	0.00	4.76	6.79	0.00	4.57	4.20	4.18	0.00	24.50	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	8.4	Yes	483.0	0.1%	0.0	16.6	0.0	3.1	5.8	0.0
31	193.0	0.00	3.41	0.00	6.88	4.87	0.00	5.31	0.00	20.47	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	7.7	Yes	449.0	0.1%	0.0	15.2	0.0	3.3	3.6	0.0
cfsd	7,345.0	135.3	29.2	66.0	26.9	21.9	33.0	31.1	16.5	359.8	2.3	0.4	0.2	0.1	0.5	0.2	0.1	0.4	87.2	89.3		5,615.9		2.0			14.6	44.7	11.0
ac-ft	14,568.8	268.4	57.9	130.9	53.3	43.3	65.5	61.7	32.7	713.6	4.7	0.8	0.4	0.1	1.0	0.4	0.2	0.8	173.0	177.0		11,139.1		3.9	346.1	0.0	29.0	88.7	21.8
CU CREDITS (ac-ft)																			173.0	177.0					346.1	0.0	29.0	88.7	21.8
Monthly CU Factor		65.6%	72.9%	72.9%	75.9%	68.5%	71.7%	68.4%	68.5%																				

Monthly FHG Delivery	713.6		
Cumulative Annual FHG Delivery	1,274.3		
Maximum Monthly FHG Delivery Limit	2,868.0	FALSE	Exceeds Limit
Cumulative Annual FHG Delivery Limit	20,029.4	FALSE	Exceeds Limit

	Into JMR				To LAWMA Bucket (6700999)				
	ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO	Total Del to JMR
1	0.00	0.00	0.00	0.00	0	0	0	0	0.00
2	0.00	0.00	0.00	0.00	0	0	0	0	0.00
3	0.00	0.00	0.00	0.00	0	0	0	0	0.00
4	0.00	0.00	0.00	0.00	0	0	0	0	0.00
5	0.00	0.00	2.63	0.00	0	0	0	0	2.63
6	13.37	3.23	7.35	0.00	0	0	0	0	23.95
7	20.25	6.41	16.34	0.00	0	0	0	0	43.00
8	22.12	4.03	10.43	0.00	0	0	0	0	36.58
9	8.22	0.00	0.00	0.00	0	1.5	0	0	8.22
10	0.00	0.00	0.00	0.00	0.4	3.72	0.85	0	0.00
11	0.00	0.00	0.00	0.00	1.5	1.71	2.1	0	0.00
12	0.00	0.00	0.00	0.00	1.2	0	1.98	2.2	0.00
13	0.00	0.00	0.00	0.00	0	0	0	3.4	0.00
14	0.00	0.00	0.00	0.00	0	0	0	0	0.00
15	0.00	0.00	0.00	0.00	0	0	0	0	0.00
16	0.00	0.00	0.00	0.00	0	0	0	0	0.00
17	0.00	0.00	0.00	0.00	0	0	0	0	0.00
18	0.00	0.00	0.00	0.00	0	0	0	0	0.00
19	0.00	4.83	10.67	0.00	0	0	0	0	15.50
20	19.12	7.24	16.77	0.00	0	0	0	0	43.13
21	27.00	1.45	4.83	0.00	0	0	0	0	33.28
22	7.39	0.00	0.00	2.06	0	1.83	0	0	9.45
23	0.00	0.00	0.00	26.13	2	3.61	0	0	26.13
24	0.00	0.00	0.00	1.14	1.8	1.12	2.08	1.9	1.14
25	0.00	0.00	0.00	0.00	0	0	4.03	2.2	0.00
26	0.00	0.00	0.00	0.00	0	0	3.68	1.3	0.00
27	8.26	0.00	0.00	0.00	0	0	0	0	8.26
28	27.25	0.00	0.00	0.00	0	2.07	0	0	27.25
29	16.12	2.09	14.37	0.00	1.3	4.98	0	0	32.58
30	0.00	6.63	9.57	0.00	3.1	2.99	2.85	0	16.20
31	0.00	4.75	0.00	10.10	3.3	0	3.62	0	14.85
									342.15

TABLE ___
LAWMA'S REPLACEMENT SOURCES FROM FORT LYON CANAL THROUGH AUGMENTATION STATIONS

Month: June **Year: 2020**

		FORT LYON CANAL SHARES DELIVERED THROUGH AUGMENTATION STATIONS									TRANSIT LOSS CALCULATIONS								Total CU Credits Delivered to the Arkansas River								
		Above John Martin Dam				Below John Martin Dam				Total	Above John Martin Dam				Below John Martin Dam				Reach 9	Reach 10	To Offset Account		22.5 Miles		To Offset Account	In-State Repl.	Below John Martin Dam		
		ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO		ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO									Reach 11	Reach 12	Reach 13
Day	Fort Lyon Canal Diversions	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Yes or	Arkansas River @ Las Animas	Reach 9 TL to Offset Account	Reach 9 TL to Offset Account	Volume	Volume	Flow	Flow	Flow
	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	No	(cfs)	(% / mile)	(cfs)	(af)	(af)	(cfs)	(cfs)	(cfs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
1	554.0	0.00	0.00	0.00	5.46	0.00	0.00	4.59	1.64	11.69	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	Yes	438.0	0.1%	0.0	8.5	0.0	0.0	3.1	1.1
2	616.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.30	4.30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	Yes	450.0	0.1%	0.0	0.0	0.0	0.0	0.0	2.9
3	713.0	0.00	0.00	0.00	0.00	0.00	4.01	0.00	2.71	6.72	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	Tes	439.0	0.1%	0.0	0.0	0.0	0.0	2.9	1.8
4	763.0	7.81	0.00	0.00	0.00	0.00	6.63	0.00	0.00	14.44	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0	Yes	425.0	0.1%	0.1	10.3	0.0	0.0	4.8	0.0
5	763.0	24.50	0.00	0.00	0.00	1.17	3.07	0.00	0.00	28.74	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	Yes	370.0	0.1%	0.4	32.3	0.0	0.8	2.2	0.0
6	763.0	17.10	0.00	0.00	0.00	2.62	0.00	0.00	0.00	19.72	0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.0	11.6	0.0	Yes	480.0	0.1%	0.3	22.6	0.0	1.8	0.0	0.0
7	762.0	0.00	3.34	6.93	0.00	0.00	0.00	6.36	0.00	16.63	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	Yes	457.0	0.1%	0.0	15.5	0.0	0.0	4.4	0.0
8	763.0	0.00	5.26	10.30	6.27	0.00	0.00	5.04	0.00	26.87	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	Yes	405.0	0.1%	0.0	33.1	0.0	0.0	3.5	0.0
9	763.0	0.00	1.76	3.65	4.59	0.00	0.00	0.00	0.00	10.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	Yes	347.0	0.1%	0.0	15.3	0.0	0.0	0.0	0.0
10	763.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	447.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
11	763.0	17.50	0.00	0.00	0.00	0.55	2.03	0.00	0.00	20.08	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.9	0.0	Yes	528.0	0.1%	0.3	23.1	0.0	0.4	1.5	0.0
12	760.0	24.00	4.15	7.29	5.09	1.35	4.70	0.00	0.00	46.58	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	16.3	12.7	Yes	494.0	0.1%	0.4	56.7	0.0	0.9	3.4	0.0
13	732.0	22.80	5.64	9.70	10.90	2.18	3.59	0.00	1.48	56.29	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	15.5	20.1	Yes	413.0	0.1%	0.3	70.0	0.0	1.5	2.6	1.0
14	535.0	20.50	1.58	3.94	0.70	0.00	0.00	0.00	3.73	30.45	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.1	13.9	4.7	Yes	302.0	0.1%	0.3	36.4	0.0	0.0	0.0	2.5
15	344.0	6.65	0.00	0.00	0.00	0.00	0.00	0.00	2.26	8.91	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	4.5	0.0	Yes	309.0	0.1%	0.1	8.8	0.0	0.0	0.0	1.5
16	216.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	343.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
17	280.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	322.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
18	340.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	301.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
19	366.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	395.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
20	379.0	0.00	3.62	6.86	0.00	0.00	0.00	0.00	0.00	10.48	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	Yes	658.0	0.1%	0.0	15.8	0.0	0.0	0.0	0.0
21	399.0	0.00	5.43	10.00	0.00	0.00	0.00	0.00	0.00	15.43	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.7	Yes	897.0	0.1%	0.0	23.2	0.0	0.0	0.0	0.0
22	529.0	0.00	1.77	3.75	0.00	0.00	3.15	0.00	0.00	8.67	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	Yes	856.0	0.1%	0.0	8.3	0.0	0.0	2.3	0.0
23	592.0	0.00	0.00	0.00	3.12	3.16	4.00	0.00	1.11	11.39	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	2.4	Yes	608.0	0.1%	0.0	4.8	0.0	2.1	2.9	0.7
24	595.0	0.00	0.00	0.00	6.59	4.78	1.56	0.00	3.69	16.62	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	5.1	Yes	700.0	0.1%	0.0	10.2	0.0	3.2	1.1	2.5
25	446.0	0.00	0.00	0.00	0.00	2.01	0.00	0.00	2.72	4.73	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	Yes	525.0	0.1%	0.0	0.0	0.0	1.4	0.0	1.8
26	404.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	410.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
27	400.0	16.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.90	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5	0.0	Yes	374.0	0.1%	0.3	22.3	0.0	0.0	0.0	0.0
28	398.0	21.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.10	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	Yes	330.0	0.1%	0.3	27.8	0.0	0.0	0.0	0.0
29	451.0	4.96	1.49	1.74	0.00	0.00	0.00	0.00	0.00	8.19	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	2.4	Yes	334.0	0.1%	0.1	11.4	0.0	0.0	0.0	0.0
30	492.0	0.00	4.65	4.77	0.00	0.00	0.00	0.00	0.00	9.42	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	Yes	288.0	0.1%	0.0	14.2	0.0	0.0	0.0	0.0
31																													
cfsd	16,644.0	183.8	38.7	68.9	42.7	17.8	32.7	16.0	23.6	424.4	3.2	0.6	0.2	0.1	0.4	0.2	0.1	0.6	125.0	115.0		13,645.0		2.8			12.0	34.6	15.9
ac-ft	33,013.4	364.6	76.7	136.7	84.7	35.3	64.9	31.7	46.9	841.7	6.3	1.1	0.4	0.2	0.8	0.4	0.1	1.2	247.9	228.1		27,064.9		5.6	470.5	0.0	23.8	68.7	31.6
CU CREDITS (ac-ft)																			247.9	228.1					470.5	0.0	23.8	68.7	31.6
Monthly CU Factor		69.2%	76.4%	76.4%	78.3%	69.0%	72.7%	68.8%	69.1%																				

Monthly FHG Delivery	841.7		
Cumulative Annual FHG Delivery	2,116.0		
Maximum Monthly FHG Delivery Limit	3,560.6	FALSE	Exceeds Limit
Cumulative Annual FHG Delivery Limit	20,029.4	FALSE	Exceeds Limit

	Into JMR				To LAWMA Bucket (6700999)				
	ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CC	ARF166CO	ARF181CC	ARF182CC	Total Del to JMR
1	0	0	0	8.27	0	0	3.15	1.1	8.27
2	0	0	0	0	0	0	0	2.9	0
3	0	0	0	0	0	2.9	0	1.8	0
4	10.3	0	0	0	0	4.79	0	0	10.3
5	32.3	0	0	0	0.8	2.22	0	0	32.3
6	22.55	0	0	0	1.8	0	0	0	22.55
7	0	4.88	10.23	0	0	0	4.36	0	15.11
8	0	7.68	15.21	9.5	0	0	3.45	0	32.39
9	0	2.57	5.39	6.95	0	0	0	0	14.91
10	0	0	0	0	0	0	0	0	0
11	23.07	0	0	0	0.4	1.47	0	0	23.07
12	31.64	6.06	10.76	7.71	0.9	3.4	0	0	56.17
13	30.06	8.23	14.32	16.51	1.5	2.6	0	1	69.12
14	27.03	2.31	5.82	1.06	0	0	0	2.5	36.22
15	8.77	0	0	0	0	0	0	1.5	8.77
16	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0
20	0	5.29	10.13	0	0	0	0	0	15.42
21	0	7.93	14.77	0	0	0	0	0	22.7
22	0	2.58	5.54	0	0	2.28	0	0	8.12
23	0	0	0	4.73	2.1	2.89	0	0.7	4.73
24	0	0	0	9.98	3.2	1.13	0	2.5	9.98
25	0	0	0	0	1.4	0	0	1.8	0
26	0	0	0	0	0	0	0	0	0
27	22.28	0	0	0	0	0	0	0	22.28
28	27.82	0	0	0	0	0	0	0	27.82
29	6.54	2.18	2.57	0	0	0	0	0	11.29
30	0	6.79	7.04	0	0	0	0	0	13.83
31	0	0	0	0	0	0	0	0	0
	242.36	56.5	101.78	64.71					465.35

TABLE ___
LAWMA'S REPLACEMENT SOURCES FROM FORT LYON CANAL THROUGH AUGMENTATION STATIONS

Month: July **Year: 2020**

		FORT LYON CANAL SHARES DELIVERED THROUGH AUGMENTATION STATIONS									TRANSIT LOSS CALCULATIONS									Total CU Credits Delivered to the Arkansas River								
		Above John Martin Dam				Below John Martin Dam				Total	Above John Martin Dam				Below John Martin Dam								22.5		To Offset	In-State	Below John Martin Dam		
		ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO		ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO	Reach 9	Reach 10	To Offset Account		Miles		Account	Repl.	Reach 11	Reach 12	Reach 13
Day	Fort Lyon Canal Diversions	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Yes or	Arkansas River @ Las Animas	Reach 9 TL to Offset Account	Reach 9 TL to Offset Account	Volume	Volume	Flow	Flow	Flow
	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	No	(cfs)	(% / mile)	(cfs)	(af)	(af)	(cfs)	(cfs)	(cfs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
1	416.0	0.00	2.88	6.42	1.89	0.00	2.25	0.00	0.00	13.44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.6	Yes	222.0	0.1%	0.0	17.0	0.0	0.0	1.6	0.0
2	404.0	0.00	0.00	0.00	7.03	3.97	5.17	0.00	0.00	16.17	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	5.5	Yes	200.0	0.1%	0.0	11.0	0.0	2.6	3.7	0.0
3	405.0	0.00	0.00	0.00	1.27	3.81	2.25	0.00	0.69	8.02	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1.0	Yes	169.0	0.1%	0.0	2.0	0.0	2.5	1.6	0.5
4	417.0	0.00	0.00	0.00	0.00	1.40	0.00	0.00	3.15	4.55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	Yes	120.0	0.1%	0.0	0.0	0.0	0.9	0.0	2.1
5	404.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.79	1.79	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	172.0	0.1%	0.0	0.0	0.0	0.0	0.0	1.2
6	401.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	195.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
7	402.0	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.00	0.92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	149.0	0.1%	0.0	0.0	0.0	0.0	0.6	0.0
8	398.0	6.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.83	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	0.0	Yes	169.0	0.1%	0.1	9.0	0.0	0.0	0.0	0.0
9	403.0	22.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	22.00	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0	0.0	Yes	132.0	0.1%	0.3	29.1	0.0	0.0	0.0	0.0
10	401.0	14.80	2.00	3.76	0.00	0.00	0.00	0.00	0.00	20.56	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1	4.4	Yes	112.0	0.1%	0.2	28.3	0.0	0.0	0.0	0.0
11	391.0	0.00	5.73	10.00	0.00	0.00	0.00	0.00	0.00	15.73	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.0	Yes	71.7	0.1%	0.0	23.8	0.0	0.0	0.0	0.0
12	363.0	0.00	3.82	6.57	0.00	0.00	2.44	0.00	0.00	12.83	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.9	Yes	48.6	0.1%	0.0	15.7	0.0	0.0	1.7	0.0
13	350.0	0.00	0.00	0.00	4.65	0.00	5.06	1.11	0.00	10.82	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	Yes	43.3	0.1%	0.0	7.2	0.0	0.0	4.3	0.0
14	318.0	0.00	0.00	0.00	5.17	0.93	2.34	2.70	1.82	12.96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	Yes	41.4	0.1%	0.0	8.1	0.0	0.6	3.5	1.2
15	194.0	0.00	0.00	0.00	0.00	0.90	0.00	3.05	3.40	7.35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	Yes	69.3	0.1%	0.0	0.0	0.0	0.6	2.0	2.3
16	206.0	0.00	0.00	0.00	0.00	0.69	0.00	3.00	1.86	5.55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	206.0	0.1%	0.0	0.0	0.0	0.5	2.0	1.2
17	241.0	0.00	0.00	0.00	0.00	0.00	0.00	2.99	0.00	2.99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	265.0	0.1%	0.0	0.0	0.0	0.0	2.0	0.0
18	305.0	16.40	0.00	0.00	0.00	0.00	0.00	2.99	0.00	19.39	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	0.0	Yes	295.0	0.1%	0.3	21.7	0.0	0.0	2.0	0.0
19	179.0	18.20	0.00	0.00	0.00	0.00	0.00	2.99	0.00	21.19	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.4	0.0	Yes	257.0	0.1%	0.3	24.0	0.0	0.0	2.0	0.0
20	167.0	11.70	3.48	7.54	0.00	0.00	0.00	2.98	0.00	25.70	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	8.0	8.4	Yes	185.0	0.1%	0.2	32.1	0.0	0.0	2.0	0.0
21	167.0	0.00	5.35	10.90	0.00	0.00	0.00	2.98	0.00	19.23	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.4	Yes	120.0	0.1%	0.0	24.6	0.0	0.0	2.0	0.0
22	155.0	0.00	1.48	3.63	0.00	0.00	0.00	2.95	0.00	8.06	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	Yes	86.0	0.1%	0.0	7.7	0.0	0.0	2.0	0.0
23	157.0	0.00	0.00	0.00	2.19	2.58	2.63	0.00	0.00	7.40	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1.7	Yes	57.7	0.1%	0.0	3.4	0.0	1.7	1.9	0.0
24	143.0	0.00	0.00	0.00	8.05	1.78	5.00	0.00	2.51	17.34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	6.3	Yes	46.7	0.1%	0.0	12.5	0.0	1.2	3.6	1.7
25	160.0	0.00	0.00	0.00	1.50	0.00	2.21	3.23	4.67	11.61	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.2	Yes	42.5	0.1%	0.0	2.3	0.0	0.0	3.7	3.1
26	163.0	0.00	0.00	0.00	0.00	0.00	0.00	2.98	2.14	5.12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	Yes	71.0	0.1%	0.0	0.0	0.0	0.0	2.0	1.4
27	163.0	0.00	0.00	0.00	0.00	1.11	0.00	2.51	0.00	3.62	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	128.0	0.1%	0.0	0.0	0.0	0.7	1.7	0.0
28	163.0	0.00	0.00	0.00	0.00	1.61	0.00	0.00	0.00	1.61	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	253.0	0.1%	0.0	0.0	0.0	1.1	0.0	0.0
29	162.0	0.00	0.00	0.00	0.00	1.55	0.00	0.00	0.00	1.55	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	214.0	0.1%	0.0	0.0	0.0	1.0	0.0	0.0
30	165.0	0.00	0.00	0.00	0.00	1.56	0.00	0.00	0.00	1.56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	203.0	0.1%	0.0	0.0	0.0	1.0	0.0	0.0
31	319.0	0.00	0.00	0.00	0.00	1.57	0.00	0.00	0.00	1.57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	422.0	0.1%	0.0	0.0	0.0	1.0	0.0	0.0
cfsd	8,682.0	89.9	24.7	48.8	31.8	23.5	29.4	37.4	22.0	307.5	1.6	0.4	0.2	0.1	0.5	0.2	0.1	0.6	61.2	81.0		4,766.2		1.4			15.6	46.0	14.6
ac-ft	17,220.7	178.4	49.1	96.8	63.0	46.5	58.2	74.1	43.7	609.9	3.1	0.7	0.3	0.1	1.0	0.3	0.3	1.1	121.5	160.7		9,453.8		2.7	279.5	0.0	30.8	91.2	29.0
CU CREDITS (ac-ft)																			121.5	160.7					279.5	0.0	30.8	91.2	29.0
Monthly CU Factor		69.3%	76.8%	76.8%	78.7%	67.8%	71.6%	67.4%	68.1%																				

Monthly FHG Delivery	609.9		
Cumulative Annual FHG Delivery	2,725.9		
Maximum Monthly FHG Delivery Limit	3,853.9	FALSE	Exceeds Limit
Cumulative Annual FHG Delivery Limit	20,029.4	FALSE	Exceeds Limit

	Into JMR				To LAWMA Bucket (6700999)				
	ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CC	ARF166CO	ARF181CC	ARF182CO	Total Del to JMR
1	0	4.23	9.53	2.88	0	1.6	0	0	16.64
2	0	0	0	10.7	2.6	3.68	0	0	10.7
3	0	0	0	1.93	2.5	1.6	0	0.5	1.93
4	0	0	0	0	0.9	0	0	2.1	0
5	0	0	0	0	0	0	0	1.2	0
6	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0.62	0	0
8	9.02	0	0	0	0	0	0	0	9.02
9	29.05	0	0	0	0	0	0	0	29.05
10	19.54	2.94	5.58	0	0	0	0	0	28.06
11	0	8.41	14.84	0	0	0	0	0	23.25
12	0	5.61	9.75	0	0	1.74	0	0	15.36
13	0	0	0	7.08	0	3.6	0.75	0	7.08
14	0	0	0	7.87	0.6	1.67	1.81	1.2	7.87
15	0	0	0	0	0.6	0	2.05	2.3	0
16	0	0	0	0	0.5	0	2.01	1.2	0
17	0	0	0	0	0	0	2.01	0	0
18	21.65	0	0	0	0	0	2.01	0	21.65
19	24.03	0	0	0	0	0	2.01	0	24.03
20	15.45	5.11	11.19	0	0	0	2	0	31.75
21	0	7.85	16.18	0	0	0	2	0	24.03
22	0	2.17	5.39	0	0	0	1.98	0	7.56
23	0	0	0	3.33	1.7	1.87	0	0	3.33
24	0	0	0	12.25	1.2	3.56	0	1.7	12.25
25	0	0	0	2.28	0	1.57	2.17	3.1	2.28
26	0	0	0	0	0	0	2	1.4	0
27	0	0	0	0	0.7	0	1.69	0	0
28	0	0	0	0	1.1	0	0	0	0
29	0	0	0	0	1	0	0	0	0
30	0	0	0	0	1	0	0	0	0
31	0	0	0	0	1	0	0	0	0
Totals	118.74	36.32	72.46	48.32					275.84

TABLE ___

LAWMA'S REPLACEMENT SOURCES FROM FORT LYON CANAL THROUGH AUGMENTATION STATIONS

Month: August | Year: 2020

		FORT LYON CANAL SHARES DELIVERED THROUGH AUGMENTATION STATIONS								
		Above John Martin Dam				Below John Martin Dam				Total
		ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO	
Day (1)	Fort Lyon Canal Diversions (cfs) (2)	Flow (cfs) (3)	Flow (cfs) (4)	Flow (cfs) (5)	Flow (cfs) (6)	Flow (cfs) (7)	Flow (cfs) (8)	Flow (cfs) (9)	Flow (cfs) (10)	Flow (cfs) (11)
1	415.0	18.70	3.49	0.00	0.00	1.48	0.00	0.00	0.00	23.67
2	382.0	28.90	5.31	4.55	0.00	1.20	0.00	0.00	0.00	39.96
3	247.0	10.70	2.16	10.20	0.00	0.88	0.00	0.00	0.00	23.94
4	165.0	0.00	0.00	6.68	0.00	0.74	2.68	0.00	0.00	10.10
5	164.0	0.00	0.00	0.70	5.19	0.97	6.04	2.37	0.70	15.97
6	164.0	0.00	0.00	0.55	6.32	0.92	2.44	2.64	2.62	15.49
7	148.0	0.00	0.00	0.00	0.61	0.00	0.00	2.65	3.47	6.73
8	155.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.37	1.37
9	147.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	144.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	148.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	121.0	0.00	2.47	0.00	0.00	0.00	0.00	0.00	0.00	2.47
13	209.0	4.58	4.61	0.00	0.00	0.00	0.00	0.00	0.00	9.19
14	257.0	14.90	2.85	4.53	0.00	0.00	0.00	0.00	0.00	22.28
15	309.0	14.90	0.00	8.04	0.00	0.00	0.00	0.00	0.00	22.94
16	262.0	11.30	0.00	6.75	0.00	0.00	0.00	0.00	0.00	18.05
17	156.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	99.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	108.0	0.00	0.00	0.00	1.03	0.00	2.89	0.00	0.00	3.92
20	115.0	0.00	0.00	0.00	6.19	0.00	7.34	0.00	0.00	13.53
21	102.0	0.00	0.00	0.00	1.92	0.80	3.88	0.69	0.00	7.29
22	99.5	0.00	0.00	0.00	0.00	0.00	0.00	2.82	2.22	5.04
23	125.0	0.00	0.00	0.00	0.00	0.00	0.00	1.84	3.35	5.19
24	169.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04	1.04
25	164.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	157.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	148.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
28	100.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	93.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	105.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	131.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
cfsd	5,309.4	104.0	20.9	42.0	21.3	7.0	25.3	13.0	14.8	248.2
ac-ft	10,531.2	206.2	41.4	83.3	42.2	13.8	50.1	25.8	29.3	492.2
CU CREDITS (ac-ft)										
Monthly CU Factor		67.2%	74.2%	74.2%	76.5%	66.9%	70.1%	66.7%	67.1%	

	TRANSIT LOSS CALCULATIONS								Total CU Credits Delivered to the Arkansas River											
	Above John Martin Dam				Below John Martin Dam								22.5				Below John Martin Dam		
	ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO	Reach 9	Reach 10	To Offset Account		Miles		To Offset Account	In-State Repl.	Reach 11	Reach 12	Reach 13
Day (1)	Flow (cfs) (12)	Flow (cfs) (13)	Flow (cfs) (14)	Flow (cfs) (15)	Flow (cfs) (16)	Flow (cfs) (17)	Flow (cfs) (18)	Flow (cfs) (19)	Flow (cfs) (20)	Flow (cfs) (21)	Yes or No (22)	Arkansas River @ Las Animas (cfs) (23)	Reach 9 TL to Offset Account (% / mile) (24)	Reach 9 TL to Offset Account (cfs) (25)	Volume (af) (26)	Volume (af) (27)	Flow (cfs) (28)	Flow (cfs) (29)	Flow (cfs) (30)
1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	12.3	2.6	Yes	403.0	0.1%	0.3	29.0	0.0	1.0	0.0	0.0
2	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	19.1	7.2	Yes	337.0	0.1%	0.4	51.4	0.0	0.8	0.0	0.0
3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	9.1	Yes	307.0	0.1%	0.2	31.8	0.0	0.6	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	Yes	262.0	0.1%	0.0	9.8	0.0	0.5	1.9	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.5	Yes	250.0	0.1%	0.0	8.9	0.0	0.6	5.8	0.5
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	5.2	Yes	186.0	0.1%	0.0	10.4	0.0	0.6	3.5	1.7
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.5	Yes	114.0	0.1%	0.0	0.9	0.0	0.0	1.8	2.3
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	67.3	0.1%	0.0	0.0	0.0	0.0	0.0	0.9
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	51.3	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	45.3	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	42.5	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	Yes	40.2	0.1%	0.0	3.6	0.0	0.0	0.0	0.0
13	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.4	Yes	40.9	0.1%	0.1	12.6	0.0	0.0	0.0	0.0
14	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.8	5.4	Yes	46.3	0.1%	0.2	29.9	0.0	0.0	0.0	0.0
15	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.8	5.9	Yes	49.5	0.1%	0.2	30.9	0.0	0.0	0.0	0.0
16	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5	5.0	Yes	49.0	0.1%	0.2	24.4	0.0	0.0	0.0	0.0
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	41.2	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	31.3	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	Yes	20.7	0.1%	0.0	1.6	0.0	0.0	2.0	0.0
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	Yes	20.1	0.1%	0.0	9.4	0.0	0.0	5.1	0.0
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	Yes	19.6	0.1%	0.0	2.9	0.0	0.5	3.2	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	Yes	19.2	0.1%	0.0	0.0	0.0	0.0	1.9	1.5
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	Yes	18.4	0.1%	0.0	0.0	0.0	0.0	1.2	2.2
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	17.6	0.1%	0.0	0.0	0.0	0.0	0.0	0.7
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	17.1	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	20.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	22.5	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	16.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	16.1	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	15.7	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	14.9	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
cfsd	1.8	0.3	0.1	0.1	0.2	0.1	0.0	0.4	68.7	62.6		2,601.7		1.5			4.6	26.3	9.7
ac-ft	3.6	0.6	0.3	0.1	0.3	0.3	0.1	0.7	136.2	124.1		5,160.5		3.1	257.2	0.0	9.1	52.1	19.2
CU CREDITS (ac-ft)									136.2	124.1					257.2	0.0	9.1	52.1	19.2

Monthly FHG Delivery	492.2		
Cumulative Annual FHG Delivery	3,218.1		
Maximum Monthly FHG Delivery Limit	3,908.6	FALSE	Exceeds Limit
Cumulative Annual FHG Delivery Limit	20,029.4	FALSE	Exceeds Limit

2 3 4 5 6 7 8 9

	Into JMR				To LAWMA Bucket (6700999)					
	ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO	Total Del to JMR	
1	23.94	4.95	0	0	1	0	0	0	28.89	1
2	37	7.53	6.53	0	0.8	0	0	0	51.06	2
3	13.7	3.06	14.63	0	0.6	0	0	0	31.39	3
4	0	0	9.58	0	0.5	1.87	0	0	9.58	4
5	0	0	1.01	7.68	0.6	4.21	1.58	0.5	8.69	5
6	0	0	0.79	9.35	0.6	1.7	1.75	1.7	10.14	6
7	0	0	0	0.9	0	0	1.76	2.3	0.9	7
8	0	0	0	0	0	0	0	0.9	0	8
9	0	0	0	0	0	0	0	0	0	9
10	0	0	0	0	0	0	0	0	0	10
11	0	0	0	0	0	0	0	0	0	11
12	0	3.5	0	0	0	0	0	0	3.5	12
13	5.86	6.54	0	0	0	0	0	0	12.4	13
14	19.08	4.04	6.5	0	0	0	0	0	29.62	14
15	19.08	0	11.53	0	0	0	0	0	30.61	15
16	14.47	0	9.68	0	0	0	0	0	24.15	16
17	0	0	0	0	0	0	0	0	0	17
18	0	0	0	0	0	0	0	0	0	18
19	0	0	0	1.52	0	2.01	0	0	1.52	19
20	0	0	0	9.16	0	5.12	0	0	9.16	20
21	0	0	0	2.84	0.5	2.7	0.46	0	2.84	21
22	0	0	0	0	0	0	1.87	1.5	0	22
23	0	0	0	0	0	0	1.22	2.2	0	23
24	0	0	0	0	0	0	0	0.7	0	24
25	0	0	0	0	0	0	0	0	0	25
26	0	0	0	0	0	0	0	0	0	26
27	0	0	0	0	0	0	0	0	0	27
28	0	0	0	0	0	0	0	0	0	28
29	0	0	0	0	0	0	0	0	0	29
30	0	0	0	0	0	0	0	0	0	30
31	0	0	0	0	0	0	0	0	0	31
Totals	133.13	29.62	60.25	31.45					254.45	

TABLE ___
LAWMA'S REPLACEMENT SOURCES FROM FORT LYON CANAL THROUGH AUGMENTATION STATIONS

Month: September **Year:** 2020

		FORT LYON CANAL SHARES DELIVERED THROUGH AUGMENTATION STATIONS									TRANSIT LOSS CALCULATIONS									Total CU Credits Delivered to the Arkansas River									
		Above John Martin Dam				Below John Martin Dam				Total	Above John Martin Dam				Below John Martin Dam								22.5		To Offset	In-State	Below John Martin Dam		
		ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO		ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO	Reach 9	Reach 10	To Offset Account		Miles		Account	Repl.	Reach 11	Reach 12	Reach 13
Day	Fort Lyon Canal Diversions	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Yes or	Arkansas River @ Las Animas	Reach 9 TL to Offset Account	Reach 9 TL to Offset Account	Volume	Volume	Flow	Flow	Flow
	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	No	(cfs)	(% / mile)	(cfs)	(af)	(af)	(cfs)	(cfs)	(cfs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
1	169.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		15.4	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
2	146.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		115.7	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
3	142.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		15.2	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
4	86.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		15.3	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
5	72.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		15.2	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
6	70.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		14.7	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
7	56.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		14.3	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
8	93.8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		15.2	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
9	143.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		17.3	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
10	161.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		17.4	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
11	170.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		16.8	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
12	177.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		16.3	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
13	167.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		15.7	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
14	170.0	3.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.99	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0		15.7	0.1%	0.0	0.0	4.8	0.0	0.0	0.0
15	169.0	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.00	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0		21.3	0.1%	0.0	0.0	18.1	0.0	0.0	0.0
16	168.0	14.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.50	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	0.0		27.8	0.1%	0.0	0.0	17.5	0.0	0.0	0.0
17	168.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		23.6	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
18	157.0	0.00	2.30	0.00	0.00	0.00	0.00	0.00	0.00	2.30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6		20.0	0.1%	0.0	0.0	3.1	0.0	0.0	0.0
19	147.0	0.00	4.75	0.00	0.00	0.00	0.00	0.00	0.00	4.75	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3		18.3	0.1%	0.0	0.0	6.5	0.0	0.0	0.0
20	133.0	0.00	2.67	5.61	0.00	0.00	0.00	0.00	0.00	8.28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7		16.1	0.1%	0.0	0.0	11.4	0.0	0.0	0.0
21	112.0	0.00	0.00	8.68	0.00	0.00	0.00	0.00	0.00	8.68	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0		14.6	0.1%	0.0	0.0	11.9	0.0	0.0	0.0
22	50.2	0.00	0.00	2.61	0.00	0.00	0.00	0.00	0.00	2.61	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8		14.4	0.1%	0.0	0.0	3.6	0.0	0.0	0.0
23	93.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		15.1	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
24	96.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		14.6	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
25	108.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		14.2	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
26	94.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		13.9	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
27	78.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		12.8	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
28	73.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		13.8	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
29	72.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		14.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
30	71.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		13.7	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
31																													
cfsd	3,615.7	33.5	9.7	16.9	0.0	0.0	0.0	0.0	0.0	60.1	0.6	0.1	0.1	0.0	0.0	0.0	0.0	0.0	20.4	18.4		588.4		0.0			0.0	0.0	0.0
ac-ft	7,171.7	66.4	19.3	33.5	0.0	0.0	0.0	0.0	0.0	119.2	1.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0	40.4	36.5		1,167.1		0.0	0.0	76.9	0.0	0.0	0.0
CU CREDITS (ac-ft)																			40.4	36.5					0.0	76.9	0.0	0.0	0.0
Monthly CU Factor		61.9%	69.6%	69.6%	71.6%	63.7%	67.3%	63.8%	64.1%																				

Monthly FHG Delivery	119.2		
Cumulative Annual FHG Delivery	3,337.3		
Maximum Monthly FHG Delivery Limit	2,587.6	FALSE	Exceeds Limit
Cumulative Annual FHG Delivery Limit	20,029.4	FALSE	Exceeds Limit

					Into JMR			To LAWMA Bucket (6700999)				
					ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO	Total Del to JMR	
					0	0	0	0	0	0	0	0	0	1
					0	0	0	0	0	0	0	0	0	2
					0	0	0	0	0	0	0	0	0	3
2	3	4	5	6	7	8	9		0	0	0	0	0	0	0	0	0	4
									0	0	0	0	0	0	0	0	0	5
									0	0	0	0	0	0	0	0	0	6
									0	0	0	0	0	0	0	0	0	7
									0	0	0	0	0	0	0	0	0	8
									0	0	0	0	0	0	0	0	0	9
									0	0	0	0	0	0	0	0	0	10
									0	0	0	0	0	0	0	0	0	11
									0	0	0	0	0	0	0	0	0	12
									0	0	0	0	0	0	0	0	0	13
									4.71	0	0	0	0	0	0	0	4.71	14
									17.69	0	0	0	0	0	0	0	17.69	15
									17.1	0	0	0	0	0	0	0	17.1	16
									0	0	0	0	0	0	0	0	0	17
									0	3.06	0	0	0	0	0	0	3.06	18
									0	6.32	0	0	0	0	0	0	6.32	19
									0	3.55	7.55	0	0	0	0	0	11.1	20
									0	0	11.68	0	0	0	0	0	11.68	21
									0	0	3.51	0	0	0	0	0	3.51	22
									0	0	0	0	0	0	0	0	0	23
									0	0	0	0	0	0	0	0	0	24
									0	0	0	0	0	0	0	0	0	25
									0	0	0	0	0	0	0	0	0	26
									0	0	0	0	0	0	0	0	0	27
									0	0	0	0	0	0	0	0	0	28
									0	0	0	0	0	0	0	0	0	29
									0	0	0	0	0	0	0	0	0	30
									0	0	0	0	0	0	0	0	0	31
													75.17	

TABLE ___
LAWMA'S REPLACEMENT SOURCES FROM FORT LYON CANAL THROUGH AUGMENTATION STATIONS

Month: October **Year:** 2020

		FORT LYON CANAL SHARES DELIVERED THROUGH AUGMENTATION STATIONS									TRANSIT LOSS CALCULATIONS									Total CU Credits Delivered to the Arkansas River									
		Above John Martin Dam				Below John Martin Dam				Total	Above John Martin Dam					Below John Martin Dam								22.5		To Offset	In-State	Below John Martin Dam		
		ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO		ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO	Reach 9	Reach 10	To Offset Account		Miles		Account	Repl.	Reach 11	Reach 12	Reach 13
Day	Fort Lyon Canal Diversions	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Yes or	Arkansas River @ Las Animas	Reach 9 TL to Offset Account	Reach 9 TL to Offset Account	Volume	Volume	Flow	Flow	Flow
	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	No	(cfs)	(% / mile)	(cfs)	(af)	(af)	(cfs)	(cfs)	(cfs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
1	78.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	13.8	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
2	83.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	14.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
3	88.4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	13.9	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
4	101.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	14.4	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
5	112.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	14.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
6	109.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	14.2	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
7	106.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	14.8	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
8	108.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	14.8	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
9	111.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	14.8	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
10	109.0	0.00	0.00	0.00	0.00	0.00	2.46	0.00	0.00	2.46	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	14.5	0.1%	0.0	0.0	0.0	0.0	1.6	0.0
11	109.0	0.00	0.00	0.00	0.00	0.00	5.83	0.00	0.00	5.83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	13.6	0.1%	0.0	0.0	0.0	0.0	3.7	0.0
12	103.0	0.00	0.00	0.00	0.00	0.00	2.93	0.00	0.00	2.93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	15.1	0.1%	0.0	0.0	0.0	0.0	1.9	0.0
13	103.0	0.00	0.00	0.00	0.00	0.00	0.00	1.74	0.00	1.74	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	15.0	0.1%	0.0	0.0	0.0	0.0	1.1	0.0
14	97.5	0.00	0.00	0.00	0.00	0.00	0.00	1.23	0.00	1.23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	14.8	0.1%	0.0	0.0	0.0	0.0	0.8	0.0
15	95.7	0.00	0.00	0.00	0.00	0.00	0.00	1.07	0.00	1.07	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	15.1	0.1%	0.0	0.0	0.0	0.0	0.7	0.0
16	105.0	0.00	0.00	0.00	0.00	0.00	0.00	1.04	0.00	1.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	16.2	0.1%	0.0	0.0	0.0	0.0	0.6	0.0
17	113.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	15.5	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
18	116.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	15.6	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
19	115.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	16.2	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
20	124.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	16.3	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
21	131.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	16.4	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
22	148.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	15.3	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
23	1.6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	16.3	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
24	163.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.81	1.81	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	16.0	0.1%	0.0	0.0	0.0	0.0	0.0	1.1
25	167.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.64	2.64	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	Yes	16.0	0.1%	0.0	0.0	0.0	0.0	0.0	1.6
26	140.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16	1.16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	19.1	0.1%	0.0	0.0	0.0	0.0	0.0	0.7
27	178.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	25.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
28	211.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	19.2	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
29	257.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	18.3	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
30	234.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	17.9	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
31	201.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	17.2	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
cfsd	3,918.7	0.0	0.0	0.0	0.0	0.0	11.2	5.1	5.6	21.9	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0		493.3		0.0			0.0	10.3	3.5
ac-ft	7,772.8	0.0	0.0	0.0	0.0	0.0	22.3	10.1	11.1	43.5	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0		978.5		0.0	0.0	0.0	0.0	20.5	6.8
CU CREDITS (ac-ft)																			0.0	0.0					0.0	0.0	0.0	20.5	6.8
Monthly CU Factor		56.5%	64.0%	64.0%	68.3%	62.9%	64.1%	62.6%	63.1%																				

Monthly FHG Delivery	43.5		
Cumulative Annual FHG Delivery	3,380.8		
Maximum Monthly FHG Delivery Limit	2,094.7	FALSE	Exceeds Limit
Cumulative Annual FHG Delivery Limit	20,029.4	FALSE	Exceeds Limit

	Into JMR				To LAWMA Bucket (6700999)						
	ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CC	ARF166CO	ARF181CC	ARF182CO	Total Del to JMR	
1	0	0	0	0	0	0	0	0	0	1
2	0	0	0	0	0	0	0	0	0	2
3	0	0	0	0	0	0	0	0	0	3
4	0	0	0	0	0	0	0	0	0	4
5	0	0	0	0	0	0	0	0	0	5
6	0	0	0	0	0	0	0	0	0	6
7	0	0	0	0	0	0	0	0	0	7
8	0	0	0	0	0	0	0	0	0	8
9	0	0	0	0	0	0	0	0	0	9
10	0	0	0	0	0	1.57	0	0	0	10
11	0	0	0	0	0	3.72	0	0	0	11
12	0	0	0	0	0	1.87	0	0	0	12
13	0	0	0	0	0	0	1.09	0	0	13
14	0	0	0	0	0	0	0.77	0	0	14
15	0	0	0	0	0	0	0.67	0	0	15
16	0	0	0	0	0	0	0.65	0	0	16
17	0	0	0	0	0	0	0	0	0	17
18	0	0	0	0	0	0	0	0	0	18
19	0	0	0	0	0	0	0	0	0	19
20	0	0	0	0	0	0	0	0	0	20
21	0	0	0	0	0	0	0	0	0	21
22	0	0	0	0	0	0	0	0	0	22
23	0	0	0	0	0	0	0	0	0	23
24	0	0	0	0	0	0	0	1.1	0	24
25	0	0	0	0	0	0	0	1.6	0	25
26	0	0	0	0	0	0	0	0.7	0	26
27	0	0	0	0	0	0	0	0	0	27
28	0	0	0	0	0	0	0	0	0	28
29	0	0	0	0	0	0	0	0	0	29
30	0	0	0	0	0	0	0	0	0	30
31	0	0	0	0	0	0	0	0	0	31
									0	

2 3 4 5 6 7 8 9

TABLE ___
LAWMA'S REPLACEMENT SOURCES FROM FORT LYON CANAL THROUGH AUGMENTATION STATIONS

Month: November **Year:** 2020

		FORT LYON CANAL SHARES DELIVERED THROUGH AUGMENTATION STATIONS									TRANSIT LOSS CALCULATIONS									Total CU Credits Delivered to the Arkansas River									
		Above John Martin Dam				Below John Martin Dam				Total	Above John Martin Dam				Below John Martin Dam									22.5		To Offset	In-State	Below John Martin Dam		
		ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO		ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO	Reach 9	Reach 10	To Offset Account		Miles		Account	Repl.	Reach 11	Reach 12	Reach 13
Day	Fort Lyon Canal Diversions	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Flow	Yes or	Arkansas River @ Las Animas	Reach 9 TL to Offset Account	Reach 9 TL to Offset Account	Volume	Volume	Flow	Flow	Flow
	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	No	(cfs)	(% / mile)	(cfs)	(af)	(af)	(cfs)	(cfs)	(cfs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(23)	(24)	(25)	(26)	(27)
1	158.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	18.4	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
2	131.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	18.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
3	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
4	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
5	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
6	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
7	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
9	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
10	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
11	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
12	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
13	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
14	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
15	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
16	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
17	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
18	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
20	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
21	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
22	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
25	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
26	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
27	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
28	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
29	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
30	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Yes	0.0	0.1%	0.0	0.0	0.0	0.0	0.0	0.0
31																													
cfsd	289.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		36.4		0.0			0.0	0.0	0.0
ac-ft	573.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		72.2		0.0	0.0	0.0	0.0	0.0	0.0
CU CREDITS (ac-ft)																			0.0	0.0					0.0	0.0	0.0	0.0	0.0
Monthly CU Factor		50.0%	58.1%	58.1%	62.8%	59.8%	59.8%	59.6%	59.9%																				

Monthly FHG Delivery	0.0		
Cumulative Annual FHG Delivery	3,380.8		
Maximum Monthly FHG Delivery Limit	1,652.3	FALSE	Exceeds Limit
Cumulative Annual FHG Delivery Limit	20,029.4	FALSE	Exceeds Limit

(This row was hidden 2 3 4 5 6 7 8 9)

	Into JMR				To LAWMA Bucket (6700999)					
	ARF049CO	ARF125CO	ARF126CO	ARF145CO	ARF160CO	ARF166CO	ARF181CO	ARF182CO	Total Del to JMR	
1	0	0	0	0	0	0	0	0	0	1
2	0	0	0	0	0	0	0	0	0	2
3	0	0	0	0	0	0	0	0	0	3
4	0	0	0	0	0	0	0	0	0	4
5	0	0	0	0	0	0	0	0	0	5
6	0	0	0	0	0	0	0	0	0	6
7	0	0	0	0	0	0	0	0	0	7
8	0	0	0	0	0	0	0	0	0	8
9	0	0	0	0	0	0	0	0	0	9
10	0	0	0	0	0	0	0	0	0	10
11	0	0	0	0	0	0	0	0	0	11
12	0	0	0	0	0	0	0	0	0	12
13	0	0	0	0	0	0	0	0	0	13
14	0	0	0	0	0	0	0	0	0	14
15	0	0	0	0	0	0	0	0	0	15
16	0	0	0	0	0	0	0	0	0	16
17	0	0	0	0	0	0	0	0	0	17
18	0	0	0	0	0	0	0	0	0	18
19	0	0	0	0	0	0	0	0	0	19
20	0	0	0	0	0	0	0	0	0	20
21	0	0	0	0	0	0	0	0	0	21
22	0	0	0	0	0	0	0	0	0	22
23	0	0	0	0	0	0	0	0	0	23
24	0	0	0	0	0	0	0	0	0	24
25	0	0	0	0	0	0	0	0	0	25
26	0	0	0	0	0	0	0	0	0	26
27	0	0	0	0	0	0	0	0	0	27
28	0	0	0	0	0	0	0	0	0	28
29	0	0	0	0	0	0	0	0	0	29
30	0	0	0	0	0	0	0	0	0	30
31	0	0	0	0	0	0	0	0	0	31
									0	

Attachment 8 - Arkansas River Compact Administration Resolutions 2017-01, 2018-01, and 2019-01 *Regarding John Martin Reservoir Permanent Pool*

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Arkansas River Compact Administration
Resolution No. 2017-01

Regarding John Martin Reservoir Permanent Pool

WHEREAS, Section 204 of the Flood Control Act of 1965 authorized a "permanent pool for fish and wildlife and recreational purposes" at John Martin Reservoir ("JMR"); and

WHEREAS, Section 204 of the Flood Control Act of 1965 required that the State of Colorado "purchase and make available any water rights necessary under State law to establish and thereafter maintain the permanent pool"; and

WHEREAS, Section 204 of the Flood Control Act of 1965 required that the Arkansas River Compact Administration ("ARCA") approve "written terms and conditions . . . [for] establishing, maintaining, and operating the permanent pool"; and

WHEREAS, by the Resolution Concerning John Martin Reservoir Permanent Pool ("1976 Resolution") adopted on August 14, 1976, ARCA "approve[d] the creation in [JMR] of a permanent pool . . . and adopt[ed] the criteria . . . as procedures for the operation of [JMR]"; and

WHEREAS, the 1976 Resolution further provided that "water deliveries from other valid water rights owned or controlled by the State of Colorado may be added to the permanent pool water supply subject to the approval of [ARCA]"; and

WHEREAS, The Resolution Concerning an Operating Plan for John Martin Reservoir (Apr. 24, 1980, as amended) ("1980 Operating Plan") recognizes the permanent pool authorized by the 1976 Resolution and makes the operation of the permanent pool subject to the terms of the 1980 Operating Plan; and

WHEREAS, pursuant to a Water Management Agreement between the Colorado Division of Parks and Wildlife and the Lower Arkansas Water Management Association ("LAWMA"), LAWMA will allow use of its Highland Canal water rights located in District 17 upstream of JMR and diverting from the Purgatoire River as a source of water supply for the permanent pool; and

WHEREAS, the States of Colorado and Kansas have agreed to the delivery of fully consumable water from LAWMA's Highland Canal water rights under conditions provided by the document entitled "**Permanent Pool Agreement for 2017**," attached to this Resolution as Exhibit 1;

NOW THEREFORE, BE IT RESOLVED that pursuant to the terms of its 1976 Resolution the Arkansas River Compact Administration hereby approves the use of the Highland Canal water rights, formerly diverted from the Purgatoire River in District 17, as an additional source of water supply for the permanent pool at JMR through March 31, 2018, subject to the terms and conditions as described in the "**Permanent Pool Agreement for 2017**."

ADOPTED by the Arkansas River Compact Administration at the Special Meeting held telephonically on April 17, 2017.

The effective date of this Resolution shall be the date on which the Chief of Engineers of the Corps of Engineers, or his duly authorized representative, gives his/her approval by signing and dating below the space provided.

James J. Rizzuto — 4/17/2017

Jim Rizzuto, Chairman
Arkansas River Compact Administration — Date

Stephanie Gonzales — 4/20/2017

Stephanie Gonzales, Recording Secretary,
Arkansas River Compact Administration — Date

Approved

James L. Booth — 5/18/2017

Lt. Col. James L. Booth,
Commander and District Engineer,
Albuquerque District, U.S. Army Corps of Engineers
Duly Authorized Representative of the Chief of Engineers,
U.S. Army Corps of Engineers — Date

Copy 1 of 4

Permanent Pool Agreement
for 2017

The States of Colorado and Kansas ("States") agree to the delivery of fully consumable water from the Lower Arkansas Water Management Association's ("LAWMA") Highland Canal water rights ("Highland Canal Water") to the Permanent Pool Account in John Martin Reservoir ("Permanent Pool") under the following conditions:

1) The Highland Canal Water may not be delivered to the Permanent Pool pursuant to this agreement until the Arkansas River Compact Administration ("ARCA") approves the temporary use of the Highland Canal Water as a source of water for the Permanent Pool.

2) The State of Colorado and LAWMA shall deliver at least 6,000 acre-feet of fully consumable water to the Offset Account in John Martin Reservoir between January 1, 2017 and November 15, 2017, at least 4,000 acre-feet of which shall be delivered by August 1, 2017. This amount does not include the 500 acre-foot storage charge.

3) LAWMA and Colorado Parks and Wildlife must obtain approval for a Substitute Water Supply Plan (SWSP) pursuant to Colorado Revised Statutes §37-92-308(5) prior to delivery of the Highland Canal Water to the Permanent Pool.

4) Upon ARCA approval to use the Highland Canal Water as a source of water for the Permanent Pool as described in paragraph 1), above, and SWSP approval in paragraph 3), above, the Highland Canal Water may be delivered to the Permanent Pool on a daily basis to the extent it is not needed to fulfill the commitment made in paragraph 2), above.

5) The Highland Canal Water shall not be delivered to the Permanent Pool in months when any portion of the Highland Canal Water is used for in-state replacement.

6) Replacement credit will not be claimed as special water input to the H-I Model for the transit losses incurred when the Highland Canal Water is being delivered to the Permanent Pool. LAWMA may claim in-state replacement credit in the monthly accounting maintained by Colorado for unconsumed transit losses allowed by the LAWMA decree or approved Substitute Water Supply Plan.

7) The States will continue to work together to:

   a. Establish a methodology to annually determine LAWMA's projected depletions, projected replacements, and the amount and sources of water committed to the Offset Account

   b. Allow the use of the Highland Canal Water as a source of water for the Permanent Pool when the Offset Account is full. When the Offset Account is full, paragraph 2.a of Appendix A.4 of the decree entered in *Kansas v. Colorado*, No. 105, Original provides that there is no obligation to deliver replacement water to the Offset Account under Appendix A.4.

   c. Determine what replacement credit is allowed for transit losses on Highland Canal Water deliveries to the Offset Account and Permanent Pool.

d. Examine the potential for exchange from Fort Lyon and Lamar Canal augmentation stations to the Offset Account in lieu of direct delivery to the Stateline, including how the evaporative losses on those exchanged credits are charged.

e. Explore how augmentation station deliveries of Granada Irrigation Company shares could be managed to facilitate replacement of in-state and Stateline depletions.

8) LAWMA or Colorado Parks and Wildlife, through Colorado Division of Water Resources staff, shall notify the State of Kansas and the ARCA Operations Secretary prior to beginning delivery of the Highland Canal Water to the Permanent Pool.

9) The ARCA Operations Secretary shall keep accurate records of all deliveries into the Permanent Pool, provide such information to the State of Kansas upon request, and include an annual summary of all Permanent Pool operations in his annual report to the Administration.

10) Nothing in this agreement shall be construed to alter in any way the State of Colorado's obligation to maintain compliance with the Colorado-Kansas Arkansas River Compact.

11) This agreement shall not be binding on any future agreements related to the delivery of the Highland Canal Water to the Permanent Pool or to the Offset Account.

12) Approval of this agreement does not waive either State's position on allowable uses of the Highland Canal Water.

13) Approval of this agreement does not waive either State's position concerning the interpretation of Appendix A.4 of the decree entered in *Kansas v. Colorado*, No. 105, Orig.

14) The States agree to review the performance of this agreement at the 2017 ARCA Annual Meeting and to discuss renewal or modifications of the agreement to allow for continued delivery of the Highland Canal Water to the Permanent Pool on a temporary or permanent basis beyond the term of this agreement.

15) This agreement will expire on March 31, 2018.

Dick Wolfe, P.E.
Colorado State Engineer

David W. Barfield, P.E.
Kansas Chief Engineer

Date: 3/23/2017

Arkansas River Compact Administration
Resolution No. 2018-01

Regarding John Martin Reservoir Permanent Pool

WHEREAS, Section 204 of the Flood Control Act of 1965 authorized a "permanent pool for fish and wildlife and recreational purposes" at John Martin Reservoir ("JMR"); and

WHEREAS, Section 204 of the Flood Control Act of 1965 required that the State of Colorado "purchase and make available any water rights necessary under State law to establish and thereafter maintain the permanent pool"; and

WHEREAS, Section 204 of the Flood Control Act of 1965 required that the Arkansas River Compact Administration ("ARCA") approve "written terms and conditions . . . [for] establishing, maintaining, and operating the permanent pool"; and

WHEREAS, by the Resolution Concerning John Martin Reservoir Permanent Pool ("1976 Resolution") adopted on August 14, 1976, ARCA "approve[d] the creation in [JMR] of a permanent pool . . . and adopt[ed] the criteria . . . as procedures for the operation of [JMR]"; and

WHEREAS, the 1976 Resolution further provided that "water deliveries from other valid water rights owned or controlled by the State of Colorado may be added to the permanent pool water supply subject to the approval of [ARCA]"; and

WHEREAS, The Resolution Concerning an Operating Plan for John Martin Reservoir (Apr. 24, 1980, as amended) ("1980 Operating Plan") recognizes the permanent pool authorized by the 1976 Resolution and makes the operation of the permanent pool subject to the terms of the 1980 Operating Plan; and

WHEREAS, pursuant to a Water Management Agreement between the Colorado Division of Parks and Wildlife and the Lower Arkansas Water Management Association ("LAWMA"), LAWMA will allow use of its Highland Canal water rights located in District 17 upstream of JMR and diverting from the Purgatoire River as a source of water supply for the permanent pool; and

WHEREAS, the States of Colorado and Kansas have agreed to the delivery of fully consumable water from LAWMA's Highland Canal water rights under conditions provided by the document entitled "**Permanent Pool Agreement for 2018**," attached to this Resolution as Exhibit 1; and

WHEREAS, a clerical error in the Permanent Pool Agreement for 2018, paragraph no. 5 has been found. ARCA acknowledges that the reference to *paragraph no. 3)* should be a reference to *paragraph no. 4),* and both Kansas and Colorado agree to such.

NOW THEREFORE, BE IT RESOLVED that pursuant to the terms of its 1976 Resolution the Arkansas River Compact Administration hereby approves the use of the Highland Canal water rights, formerly diverted from the Purgatoire River in District 17, as an additional source of water supply for the permanent pool at JMR through March 31, 2019, subject to the terms and conditions as described in the "**Permanent Pool Agreement for 2018**."

ADOPTED by the Arkansas River Compact Administration at the Special Meeting held telephonically on March 20, 2018.

The effective date of this Resolution shall be the date on which the Chief of Engineers of the Corps of Engineers, or his duly authorized representative, concurs with this Resolution by signing and dating below in the space provided.

jm 7 ft 33-to

Jim Rizzuto, Chairman
Arkansas River Compact Administration

3/20/18
Date

Stephanie Gonzales

Stephanie Gonzales, Recording Secretary,
Arkansas River Compact Administration

3-2018
Date

Concurrence

James L. Booth

Lt. Col. James L. Booth,
Commander and District Engineer,
Albuquerque District, U.S. Army Corps of Engineers
Duly Authorized Representative of the Chief of Engineers,
U.S. Army Corps of Engineers

20 APR 18
Date

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Permanent Pool Agreement
for 2018

The States of Colorado and Kansas ("States") agree to the delivery of fully consumable water from the Lower Arkansas Water Management Association's ("LAWMA") Highland Canal water rights ("Highland Canal Water") to the Permanent Pool Account in John Martin Reservoir ("Permanent Pool") under the following conditions:

1) The Highland Canal Water may not be delivered to the Permanent Pool pursuant to this agreement until the Arkansas River Compact Administration ("ARCA") approves the temporary use of the Highland Canal Water as a source of water for the Permanent Pool.

2) The State of Colorado and LAWMA shall deliver at least 4,700 acre-feet of fully consumable water to the Offset Account in John Martin Reservoir between April 1, 2018 and November 15, 2018, at least 3,133 acre-feet of which shall be delivered by August 1, 2018. This amount does not include the 500 acre-foot storage charge.

3) In the case of a spill of the Offset Account, or if a spill of the Offset Account appears likely, any quantity of water required to be delivered to the Offset Account prior to August 1, 2018, may be delayed for the purpose of avoiding a spill of such deliveries. The terms and conditions of any such delay shall be first proposed by LAWMA and set forth in writing. There shall be no allowable delay in delivery until such terms and conditions are approved in writing by the Chief Engineer of the State of Kansas. In writing may include email communications and other electronic documents.

4) LAWMA and Colorado Parks and Wildlife must obtain approval for a Substitute Water Supply Plan (SWSP) pursuant to Colorado Revised Statutes §37-92-308(5) prior to delivery of the Highland Canal Water to the Permanent Pool.

5) Upon ARCA approval to use the Highland Canal Water as a source of water for the Permanent Pool as described in paragraph 1), above, and SWSP approval in paragraph 3), above, the Highland Canal Water may be delivered to the Permanent Pool on a daily basis to the extent it is not needed to fulfill the commitment made in paragraph 2), above.

6) The Highland Canal Water shall not be delivered to the Permanent Pool in months when any portion of the Highland Canal Water is used for in-state replacement.

7) Replacement credit will not be claimed as special water input to the H-I Model for the transit losses incurred when the Highland Canal Water is being delivered to the Permanent Pool. LAWMA may claim in-state replacement credit in the monthly accounting maintained by Colorado for unconsumed transit losses allowed by the LAWMA decree or approved Substitute Water Supply Plan.

8) The States will continue to work together to:

   a. Establish a methodology to annually determine LAWMA's projected depletions, projected replacements, and the amount and sources of water committed to the Offset Account

b. Allow the use of the Highland Canal Water as a source of water for the Permanent Pool when the Offset Account is full. When the Offset Account is full, paragraph 2.a of Appendix A.4 of the decree entered in *Kansas v. Colorado*, No. 105, Original provides that there is no obligation to deliver replacement water to the Offset Account under Appendix A.4.

c. Determine what replacement credit is allowed for transit losses on Highland Canal Water deliveries to the Offset Account and Permanent Pool.

d. Examine the potential for exchange from Fort Lyon and Lamar Canal augmentation stations to the Offset Account in lieu of direct delivery to the Stateline, including how the evaporative losses on those exchanged credits are charged.

e. Explore how augmentation station deliveries of Granada Irrigation Company shares could be managed to facilitate replacement of in-state and Stateline depletions.

9) LAWMA or Colorado Parks and Wildlife, through Colorado Division of Water Resources staff, shall notify the State of Kansas and the ARCA Operations Secretary prior to beginning delivery of the Highland Canal Water to the Permanent Pool.

10) The ARCA Operations Secretary shall keep accurate records of all deliveries into the Permanent Pool, provide such information to the State of Kansas upon request, and include an annual summary of all Permanent Pool operations in his annual report to the Administration.

11) Nothing in this agreement shall be construed to alter in any way the State of Colorado's obligation to maintain compliance with the Colorado-Kansas Arkansas River Compact.

12) This agreement shall not be binding on any future agreements related to the delivery of the Highland Canal Water to the Permanent Pool or to the Offset Account.

13) Approval of this agreement does not waive either State's position on allowable uses of the Highland Canal Water.

14) Approval of this agreement does not waive either State's position concerning the interpretation of Appendix A.4 of the decree entered in *Kansas v. Colorado*, No. 105, Orig.

15) The States agree to review the performance of this agreement at the 2018 ARCA Annual Meeting and to discuss renewal or modifications of an agreement to allow for continued delivery of the Highland Canal Water to the Permanent Pool on a temporary or permanent basis beyond the term of this agreement.

16) This agreement will expire on March 31, 2019.

Kevin Rein, P.E.
Colorado State Engineer

David W. Barfield, P.E.
Kansas Chief Engineer

Date: 2/28/2018

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Arkansas River Compact Administration
Resolution No. 2019-01

Regarding John Martin Reservoir Permanent Pool

WHEREAS, Section 204 of the Flood Control Act of 1965 authorized a "permanent pool for fish and wildlife and recreational purposes" at John Martin Reservoir ("JMR"); and

WHEREAS, Section 204 of the Flood Control Act of 1965 required that the State of Colorado "purchase and make available any water rights necessary under State law to establish and thereafter maintain the permanent pool"; and

WHEREAS, Section 204 of the Flood Control Act of 1965 required that the Arkansas River Compact Administration ("ARCA") approve "written terms and conditions . . . [for] establishing, maintaining, and operating the permanent pool"; and

WHEREAS, by the Resolution Concerning John Martin Reservoir Permanent Pool ("1976 Resolution") adopted on August 14, 1976, ARCA "approve[d] the creation in [JMR] of a permanent pool . . . and adopt[ed] the criteria . . . as procedures for the operation of [JMR]"; and

WHEREAS, the 1976 Resolution further provided that "water deliveries from other valid water rights owned or controlled by the State of Colorado may be added to the permanent pool water supply subject to the approval of [ARCA]"; and

WHEREAS, The Resolution Concerning an Operating Plan for John Martin Reservoir (Apr. 24, 1980, as amended) ("1980 Operating Plan") recognizes the permanent pool authorized by the 1976 Resolution and makes the operation of the permanent pool subject to the terms of the 1980 Operating Plan; and

WHEREAS, pursuant to a Water Management Agreement between the Colorado Division of Parks and Wildlife and the Lower Arkansas Water Management Association ("LAWMA"), LAWMA will allow use of its Highland Canal water rights located in District 17 upstream of JMR and diverting from the Purgatoire River as a source of water supply for the permanent pool; and

WHEREAS, the States of Colorado and Kansas have agreed to the delivery of fully consumable water from LAWMA's Highland Canal water rights under certain conditions ;

NOW THEREFORE, BE IT RESOLVED that pursuant to the terms of its 1976 Resolution the Arkansas River Compact Administration hereby approves the use of the Highland Canal water rights, formerly diverted from the Purgatoire River in District 17, as an additional source of water supply for the permanent pool at JMR so long as the States of Colorado and Kansas maintain a written agreement between them which allows such use and sets forth any applicable terms and conditions of that use.

ADOPTED by the Arkansas River Compact Administration at the Special Meeting held telephonically on February 14, 2019.

The effective date of this Resolution shall be the date on which the Chief of Engineers of the Corps of Engineers, or his duly authorized representative, concurs with this Resolution by signing and dating below in the space provided.

Jim Rizzuto, Chairman
Arkansas River Compact Administration

2/15/2019
Date

Stephanie Gonzales, Recording Secretary,
Arkansas River Compact Administration

2/21/2019
Date

Concurrence

Lt. Col Dale Caswell, Jr
Commander and District Engineer,
Albuquerque District, U.S. Army Corps of Engineers
Duly Authorized Representative of the Chief of Engineers,
U.S. Army Corps of Engineers

8 MAR 19
Date

Copy 1 of 4

MEMORANDUM OF AGREEMENT RELATED TO THE DELIVERY OF HIGHLAND CANAL WATER INTO THE PERMANENT POOL AT JOHN MARTIN RESERVOIR

This MEMORANDUM OF AGREEMENT RELATED TO THE DELIVERY OF HIGHLAND CANAL WATER INTO THE PERMANENT POOL AT JOHN MARTIN RESERVOIR ("Agreement") is entered into this 21st day of February, 2019, by and between the State of Colorado and the State of Kansas (collectively the "States").

WHEREAS, the Arkansas River Compact was entered into between the States and consented to by the United States in 1948 to equitably divide and apportion the waters of the Arkansas River and their utilization, among other purposes, between the States;

WHEREAS, the Flood Control Act of 1965 authorized a permanent pool for wildlife and recreation purposes at John Martin Reservoir ("Permanent Pool");

WHEREAS, various other acts by the States and by the Arkansas River Compact Administration ("ARCA") have recognized the authority for creating and operating the Permanent Pool;

WHEREAS, a ready source of water supply has not always been available to the State of Colorado for the Permanent Pool;

WHEREAS, the Highland Canal water rights ("Highland Canal Water") are an important source of water for the Offset Account at John Martin Reservoir;

WHEREAS, pursuant to a water management agreement between the Colorado Division of Parks and Wildlife and the Lower Arkansas Water Management Association ("LAWMA"), LAWMA will allow use of its Highland Canal Water, located in District 17 upstream of John Martin Reservoir and diverting from the Purgatoire River, as a source of water supply for the Permanent Pool; and

WHEREAS, for the mutual benefit of the States, the State of Colorado and the State of Kansas wish to authorize the delivery of Highland Canal Water into the Permanent Pool under the conditions contained in this Agreement.

NOW THEREFORE, BE IT AGREED,

1. Highland Canal Water may not be delivered to the Permanent Pool pursuant to this Agreement until ARCA approves the use of Highland Canal Water as a source of water for the Permanent Pool.

2. Each year that this Agreement is in effect, the State of Colorado and LAWMA agree to deliver an amount of fully consumable water ("Delivery Requirement") to the Offset Account in John Martin Reservoir between March 1st and November 15th, as determined each year pursuant to this Agreement.

3. This Agreement will be in effect during each calendar year that LAWMA delivers Highland Canal Water to the Permanent Pool and the terms and conditions of this Agreement will only apply at times when the Agreement is in effect.

4. By March 1st of each year, LAWMA shall provide to the Colorado Division of Water Resources, along with their Rule 14 Replacement Plan Application and their Annual Augmentation Plan Projection, an annual source analysis in the format shown in the file "LAWMA_SourceAnalysisForHighlandPermanentPool_EstimateV1.0" ("Annual Source Analysis") or a subsequent version as agreed to by the States pursuant to this Agreement. The Annual Source Analysis is hereby incorporated by reference. The Annual Source Analysis, LAWMA's Rule 14 Replacement Application, and LAWMA's Annual Augmentation Plan Projection shall be provided by the State of Colorado to the State of Kansas no later than March 5th of each year. This Annual Source Analysis will propose an Annual Target Amount and a Minimum Delivery Amount.

5. Water in the Kansas Charge subaccount and any non-consumable storage subaccounts in the Offset Account shall not be considered a part of the Annual Target Amount or Minimum Delivery Amount deliveries under this Agreement.

6. The March 1 Offset Account storage balance for the consumable subaccounts, with the exception of the Kansas Charge subaccount, will be used to determine a Minimum Delivery Amount as part of the Annual Source Analysis. If on March 1, the Offset Account storage balance is 4,000 acre-feet or less, the Minimum Delivery Amount will be 6,000 acre-feet. If on March 1, the Offset Account storage balance is between 4,001 acre-feet and 10,000 acre-feet, the Minimum Delivery Amount will be the difference between 10,000 acre-feet and Offset Account storage balance on March 1. If on March 1, the Offset Account storage balance is more than 10,000 acre-feet, the Minimum Delivery Amount will be zero. However, if the amount released by Kansas from the Offset Account during the prior calendar year for Stateline delivery was 2,000 acre-feet or less, the Minimum Delivery Amount as calculated above will be further reduced by 2,000 acre-feet or shall be zero, whichever is greater.

7. During the month of March each year the States shall confer with one another and LAWMA, and either accept or recommend modification of the values used in the Annual Source Analysis and determine the final values for the Annual Target Amount and the Minimum Delivery Amount. The Delivery Requirement will be the greater of Annual Target Amount or Minimum Delivery Amount and shall be set by agreement between the Assistant Operations Secretary and Operations Secretary acting on behalf of each State by March 31st of each year. If the States and LAWMA cannot reach agreement prior to March 31st in any year, Highland Canal Water will not be delivered to the Permanent Pool during that calendar year and none of the other requirements of this Agreement shall be in effect for that calendar year, unless otherwise agreed to in writing by the States and LAWMA.

8. Any agreement related to the values coming out of the Annual Source Analysis does not constitute agreement with LAWMA's underlying accounting.

9. This Agreement shall not prohibit deliveries to the Offset Account in excess of the Delivery Requirement, nor shall this Agreement limit the ability to deliver Highland Canal Water to the Offset Account.

10. At least two thirds of the Delivery Requirement shall be delivered to the Offset Account by July 1st.

11. LAWMA agrees to provide a clear and concise report to the State of Colorado on LAWMA's Stateline depletions that exceed LAWMA's replacement water deliveries made directly to the Stateline without use of the Offset Account, separated by pre-1986 and post-1985 depletions. Such report shall be delivered to the State of Colorado and forwarded to the State of Kansas by Colorado by the 15th of each month from April through October, recognizing that the data available to LAWMA's engineer will be estimated for some replacement sources and may be updated in subsequent reports. These reports shall be formatted to include, at a minimum, the following information:

> For _(month/year)_ there are _____ acre-feet of pre-1986 Stateline depletions and _____ acre-feet of post-1985 Stateline depletions that exceed LAWMA's replacement water deliveries made directly to the Stateline without use of the Offset Account. For the calendar year, there are a total of _____acre-feet of pre-1986 Stateline depletions and _____ acre-feet of post-1985 Stateline depletions that exceed LAWMA's replacement water deliveries made directly to the Stateline without use of the Offset Account.

12. In the case of a spill of the Offset Account, or if a spill of the Offset Account appears likely, any quantity of water required by this Agreement to be delivered to the Offset Account may be delayed for the purpose of avoiding a spill of such deliveries. The terms and conditions of any such delay shall be first proposed in writing by LAWMA. There shall be no allowable delay in delivery until such terms and conditions are approved in writing by the Chief Engineer of the State of Kansas.

13. LAWMA and the Colorado Division of Parks and Wildlife must obtain approval for a Substitute Water Supply Plan ("SWSP") pursuant to §37-92-308(4) or §37-92-308(5) of the Colorado Revised Statutes or obtain an applicable change of use decree from Colorado Water Court prior to delivery of Highland Canal Water to the Permanent Pool.

14. After ARCA has approved the use Highland Canal Water as a source of water for the Permanent Pool and upon receipt of an approved SWSP or Colorado Water Court approval, Highland Canal Water may be delivered to the Permanent Pool on a daily basis to the extent it is not needed to fulfill the commitment to the Offset Account pursuant to the terms of this Agreement.

15. Highland Canal Water shall not be delivered to the Permanent Pool in months when any portion of Highland Canal Water is used for in-state replacement.

16. Replacement credit will not be claimed as special water input to the H-I Model for the unconsumed transit losses incurred when Highland Canal Water is being delivered to the Permanent Pool. LAWMA may claim in-state replacement credit in the monthly accounting maintained by the State of Colorado for unconsumed transit losses allowed by either of the LAWMA decrees entered in Case Nos. 02CW181 and 10CW085, District Court, Water Division No. 2, State of Colorado, or an approved SWSP, provided that such claims do not exceed the allowable amounts contained in **Attachment A** (MEMORANDUM OF AGREEMENT RELATED TO THE HIGHLAND CANAL WATER RIGHT AND RESOLUTION OF LOWER ARKANSAS WATER MANAGEMENT ASSOCIATION MATRIX ISSUES NOS. 9 AND 12).

17. LAWMA or the Colorado Division of Parks and Wildlife, through Colorado Division of Water Resources staff, shall notify the State of Kansas and the ARCA Operations Secretary prior to beginning delivery of Highland Canal Water to the Permanent Pool.

18. The ARCA Operations Secretary shall keep accurate records of all deliveries into the Permanent Pool, provide such information to the State of Kansas upon request, and include an annual summary of all Permanent Pool operations in the Operation Secretary's annual report to ARCA.

19. Nothing in this Agreement shall be construed to alter in any way the State of Colorado's obligation to maintain compliance with the Arkansas River Compact.

20. Approval of this Agreement does not waive either State's position on allowable uses of Highland Canal Water.

21. Approval of this Agreement does not waive either State's position concerning the interpretation of Appendix A.4 of the decree entered in *Kansas v. Colorado*, No. 105, Orig.

22. The States agree to review at each ARCA Annual Meeting the terms of this Agreement and ensure they are being implemented as intended and with the desired effect, including whether any modification of the Agreement is necessary. The review shall be conducted by the Engineering Committee, unless otherwise assigned by ARCA, and the results shall be reported by the committee during its annual meeting report. The annual review may be waived if agreed to by both States.

23. Any proposed changes to the Annual Source Analysis, including any changes to the spreadsheet upon which the Annual Source Analysis is based, shall be considered during the ARCA Annual Meeting review of this Agreement. The States shall agree to any proposed changes by memorializing them in writing in a formal addendum that shall be attached to this Agreement. All approved changes shall take effect for the next Annual Source Analysis after approval by the States. Changes to the Annual Source Analysis shall not require approval by ARCA.

24. Following the annual review and ARCA Annual Meeting, this Agreement may be suspended by either State if notice is provided to ARCA and the other State by

January 15th of the calendar year in which the Agreement shall be suspended. Such notice shall be in writing and contain both a preliminary statement about why the Agreement has been suspended and any specific issues for discussion between the States. If the Agreement remains suspended for three consecutive years, then the Agreement shall terminate unless otherwise agreed upon in writing by the States.

25. All notices, reports, and other documents required by this Agreement may be delivered by email or any other electronic means acceptable to the States.

Kevin G. Rein, P.E.
Colorado State Engineer

David W. Barfield, P.E.
Kansas Chief Engineer

2 of 2 originals

Attachment A

MEMORANDUM OF AGREEMENT RELATED TO THE HIGHLAND CANAL WATER RIGHT AND RESOLUTION OF LOWER ARKANSAS WATER MANAGEMENT ASSOCIATION MATRIX ISSUES NOS. 9 AND 12

This MEMORANDUM OF AGREEMENT RELATED TO THE HIGHLAND CANAL WATER RIGHT AND RESOLUTION OF LOWER ARKANSAS WATER MANAGEMENT ASSOCIATION MATRIX ISSUES NOS. 9 AND 12 ("Agreement") is entered into this 21st day of February, 2019, by and between the State of Colorado and the State of Kansas (collectively the "States").

WHEREAS, the States have reached agreement on the use of the Lower Arkansas Water Management Association's ("LAWMA") Highland Canal water rights ("Highland Canal Water") for the Permanent Pool pursuant to the MEMORANDUM OF AGREEMENT RELATED TO THE DELIVERY OF HIGHLAND CANAL WATER INTO THE PERMANENT POOL AT JOHN MARTIN RESERVOIR ("Permanent Pool Agreement");

WHEREAS, Highland Canal Water is an important source of water for the Offset Account and Permanent Pool at John Martin Reservoir;

WHEREAS, the State of Kansas has raised outstanding issues regarding Highland Canal Water, based on LAWMA's change of water right decrees pursuant to Colorado Water Court, Case Nos. 2002CW181 and 2010CW85.

WHEREAS, the States have jointly developed a LAWMA Issues Matrix to identify the various issues that remain unresolved;

WHEREAS, the issues addressed by this Agreement are commonly known to the States in the LAWMA Issues Matrix as Issue Nos. 9 and 12;

WHEREAS, the State of Kansas has stated Issue No. 9 as "*LAWMA Decree should provide standards for determining the unconsumed portion of transit loss on deliveries of Highland Canal water to the Offset Account in John Martin Reservoir.*";

WHEREAS, the State of Kansas has stated Issue No. 12 as "*The LAWMA Decree should provide sufficient limits on the Highland Ditch credits, including proper volumetric limits, to prevent injury to Kansas.*"; and

WHEREAS, as a result of work on the Permanent Pool Agreement, the States have reached agreement on LAWMA Matrix Issues Nos. 9 and 12 raised by the State of Kansas regarding LAWMA's change of water right decrees.

NOW THEREFORE, BE IT AGREED,

1. Issue No. 9 is resolved by the Colorado State Engineer's agreement to implement and enforce terms and conditions consistent with **Attachment A** in all future LAWMA Plan Approvals.

2. Issue No. 12 is resolved by the Colorado State Engineer's agreement to implement and enforce terms and conditions consistent with **Attachment B** in all future LAWMA Plan Approvals.

3. By March 1st of each year, LAWMA shall provide to the Colorado Division of Water Resources, along with their Rule 14 Replacement Plan Application and their Annual Augmentation Plan Projection, the Annual Source Analysis pursuant to the Permanent Pool Agreement. The Annual Source Analysis, LAWMA's Rule 14 Replacement Application, and LAWMA's Annual Augmentation Plan Projection shall be provided by the State of Colorado to the State of Kansas no later than March 5th of each year. This shall be a continuing obligation independent of the status of the Permanent Pool Agreement.

4. LAWMA agrees to provide a clear and concise report to the State of Colorado on LAWMA's Stateline depletions that exceed LAWMA's replacement water deliveries made directly to the Stateline without use of the Offset Account, separated by pre-1986 and post-1985 depletions. Such report shall be delivered to the State of Colorado and forwarded to the State of Kansas by Colorado by the 15th of each month from April through October, recognizing that the data available to LAWMA's engineer will be estimated for some replacement sources and may be updated in subsequent reports. These reports shall be formatted to include, at a minimum, the following information:

   > For _(month/year)_ there are _____ acre-feet of pre-1986 Stateline depletions and _____ acre-feet of post-1985 Stateline depletions that exceed LAWMA's replacement water deliveries made directly to the Stateline without use of the Offset Account. For the calendar year, there are a total of _____acre-feet of pre-1986 Stateline depletions and _____ acre-feet of post-1985 Stateline depletions that exceed LAWMA's replacement water deliveries made directly to the Stateline without use of the Offset Account.

   This shall be a continuing obligation independent of the status of the Permanent Pool Agreement.

5. All terms contained in this Agreement shall remain in full force and effect regardless of the status of the Permanent Pool Agreement.

6. Nothing in this Agreement shall be construed to alter in any way the State of Colorado's obligation to maintain compliance with the Arkansas River Compact.

7. Approval of this Agreement does not waive either State's position on allowable uses of Highland Canal Water.

8. Approval of this Agreement does not waive either State's position concerning the interpretation of Appendix A.4 of the decree entered in *Kansas v. Colorado*, No. 105, Orig.

Kevin G. Rein, P.E.
Colorado State Engineer

David W. Barfield, P.E.
Kansas Chief Engineer

1 of 2 originals

Attachment A

In determining the unconsumed transit loss credits claimed by LAWMA under the decrees in Case Nos. 02CW181 and 10CW085 or any approved Substitute Water Supply Plan for in-state replacement credit in the monthly accounting maintained by the State of Colorado, the following procedure shall be applied: For Purgatoire River flows in the range of 1 cfs to 12 cfs, a factor ranging from 55% to 60% shall be applied pro-rata by flow; for flows between 12 cfs and 25 cfs a factor ranging from 60% to 75% shall be applied pro-rata by flow; for flows between 25 cfs and 40 cfs a factor ranging from 75% to 80% shall be applied pro-rata by flow; for flows above 40 cfs a factor of 80% shall be applied. The unconsumed transit loss credit shall be limited to that amount delivered to the Arkansas River after deducting the historical return flow obligation and the consumable credit to be delivered to the Offset Account or Permanent Pool.

Attachment B

Volumetric Limits for the Highland Canal shares changed in Case No. 02CW181 Paragraph 28.G:

The volumetric limits for the Highland Canal water rights are based upon river headgate diversions and diversions shall be calculated and measured as set forth in Sections 28.A. and B. of this Decree to apply the volumetric limits. LAWMA will limit the river headgate diversions for the Highland Canal water rights during April 2 through October 31 to a cumulative amount of 136,120 acre-feet in any twenty-year period, provided however that no more than one-half of this amount will be diverted in the first ten years after entry of this Decree, to a maximum of 12,257 acre-feet during April 2 through October 31 of any year and to the following maximum and cumulative monthly amounts:

MONTH	April	May	June	July	August	September	October
MAXIMUM AMOUNT (acre-feet)	1,445	1,854	2,172	2,369	2,570	1,996	1,142
CUMULATIVE AMOUNT IN ANY TWENTY YEAR PERIOD (acre-feet)	14,802	18,769	24,096	25,356	32,316	19,680	11,196

Volumetric Limits for the Highland Canal shares changed in Case No. 10CW085 Paragraph 28.G:

The volumetric limits for the Highland Canal water rights are based upon bypassed river headgate diversions attributable to LAWMA's interest in the Highland Canal water rights described in paragraph 8.C.vii above and shall be calculated and measured as set forth in paragraphs 17.A. and B. of this Decree to apply the volumetric limits. LAWMA shall limit the bypassed river headgate diversions for the Highland Canal water rights during April 1 through October 31 to a cumulative amount of 6,682 acre-feet in any twenty-year period, provided however that no more than one-half of this amount will be diverted in the first ten years after entry of this Decree. LAWMA shall also limit bypassed river headgate diversions for the Highland Canal water rights to a maximum of 602 acre-feet during April 1 through October 31 of any year and to the following maximum and cumulative monthly amounts:

MONTH	April	May	June	July	August	September	October
MAXIMUM AMOUNT (acre-feet)	71	91	107	116	126	98	56
CUMULATIVE AMOUNT IN ANY TWENTY YEAR PERIOD (acre-feet)	727	921	1,183	1,245	1,586	966	550

No more than one-half of each monthly cumulative twenty-year limit set forth in the above-table will be diverted in the first ten years after entry of this Decree. Additionally, LAWMA shall limit the bypassed river headgate diversions for the Highland Canal water rights Priority Nos. 27 and 97 during April 1 through October 31 to a cumulative amount of 6,243 acre-feet in any twenty-year period, provided however that no more than one-half of this amount will be claimed as a bypassed diversion in the first ten years after entry of this Decree.

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Attachment 9 - Example of initial notice letter (2019) and final delivery letter (2019)

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COLORADO
Division of Water Resources
Department of Natural Resources
Water Division 2 – Main Office

June 28, 2019

Kevin Salter
Kansas Department of Agriculture (By E-Mail)

Dear Kevin,

The purpose of this letter is to provide you with preliminary information regarding a delivery of water to the Offset Account in John Martin Reservoir on behalf of Colorado Water Protective & Development Association (CWPDA) per the provisions of Paragraph 6 of the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping as Amended March 30, 1998** ("Resolution"). The purpose of this delivery will be for storage in the Colorado Upstream Consumable account for the purpose of replacing depletions to Conservation Storage.

The delivery will be executed by release from Lake Meredith. The release will be made from CWPDA's account and will be fully consumable Arkansas River Basin water derived from Fountain Creek, CSU fully consumable East Slope water and Rocky Ford 2 water. Final documentation of water type will be provided with the delivery letter following the delivery. A transit loss of 7.5 % has been computed for the delivery using the Livingston Transit Loss Model from Pueblo Reservoir to John Martin Reservoir.

- CWPDA will began a release of approximately 1,250 acre-feet at 11:00 hours on July 1, 2019 at a rate of 315.10 cubic feet per second (624.99 acre-feet per day) release rate for delivery to the Offset Account. The arrival time will be monitored but is projected to be on approximately July 3, 2019 around 11:00 hours and at an arrival rate of 275.71 cubic feet per second (546.86 acre-feet per day) for a net deposit of just over 1,093.75 acre-feet. Since LAWMA has already paid the 5% storage charge to open the account (first 10,000 acre-feet of storage), this delivery by CWPDA will not result in additional transfers to the Kansas Charge subaccount. CWPDA will compensate LAWMA for the 5% storage charge associated with this delivery in the Colorado Upstream Consumable subaccount.
- The disposition of the water within the Offset account will be:
    - Colorado Upstream Consumable Water Subaccount 1,093.00 acre-feet
    - Kansas Charge Subaccount N/A
    - Return Flow Subaccount N/A
    - Return Flow Transit Loss Subaccount N/A

Pursuant to Paragraph 6 of the Resolution, the delivered water will either be (1) directed to be transferred from the Offset Account to conservation storage to replace depletions to inflows to conservation storage, or (2) to the extent such water is not

needed to replace depletions to the inflows to conservation storage, Colorado may change the prior designation of water previously designated for the purpose of transfer to conservation storage.

I will provide you with a formal notification, which will have all of the details concerning the transfer into the Offset Account. If you have any questions in the meantime, please call me.

Sincerely,

Rachel Zancanella, P.E.
Assistant Division Engineer

COLORADO
Division of Water Resources
Department of Natural Resources

Water Division 2 – Main Office

August 6, 2019

David Barfield
Kansas Chief Engineer
Kansas Board of Agriculture
901 S. Kansas Avenue, 2nd Floor
Topeka, KS 66612-1283

Dear Mr. Barfield,

The purpose of this letter is to provide the notice required by paragraph 3 of the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping As Amended March 30, 1998** ("Resolution") for each delivery or transfer conducted during 2019 in detail following the initial notice for each transaction originally sent to Kansas.

July 1, 2019 through July 11, 2019 delivery:

Colorado Water Protective and Development Association (CWPDA) delivered 1156.26 **acre-feet** of consumable water to the Colorado Upstream Consumable subaccount between July 3, 2019 and July 5, 2019. A portion of this water as provided by Colorado Springs Utilities (CS-U) on behalf CWPDA.

In order to accomplish the foregoing, a total of 1250 **acre-feet** of water was released from Lake Meredith beginning on July 1, 2019 at a rate of 315.1 cfs. The computed transit loss for this release was 7.5%. The arrival rate at John Martin Reservoir averaged 291.47cfs over 60 hours. The inflows were stored in the Colorado Upstream Consumable subaccount.

Details of the release from Lake Meredith are included at Enclosure 1. Details of the delivery at John Martin Reservoir are included at Enclosure 2. Documentation of the fully consumable source of water is included at Enclosure 3.

Summary

This letter summarizes the delivery to the Offset Account for CWPDA during 2019. The total amount of water delivered to the Offset Account on the above dates was **1156.26 acre-feet**. Total consumable water delivered was **1156.26 acre-feet**.

Please contact me if you have any questions or require additional information.

Sincerely,

Bill W. Tyner

Bill W. Tyner, P.E.
Division Engineer
Colorado Division of Water Resources

3 Enclosures
cc: Kevin Salter Dale Book Eunhye Kim Brent Campbell Rachel Zancanella
Dan Steuer Don Higbee Randy Hendrix Bethany Arnold

Enclosure 1

Delivery Details CWPDA from Lake Meredith
July 2019

Lake Meredith Accounting: July 2019

MEREDITH OUTFLOW 2018-19	Total Out	CCS Return Flow to River	Ag Boone Exch	CCS Release to River Over-Store / Rain	CS-U @ Fnt Crk to River for Colo Canal Return Flow	Aurora Return fow for Colo Canal	CWPDA Ex to P. Res Out River	CWPDA to River Ex Boone / Recharge	Aurora to River out for EX to PR	CWPDA to River out for CAA	CWPDA to JMR
Date	CFS	CFS	CFS	CFS		CFS	CFS	CFS	CFS	CFS	CFS
31-Oct-19											
NOV cfs:	155.73	132.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.98	0.00
DEC cfs:	22.55	22.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JAN cfs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FEB cfs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAR cfs:	123.01	102.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.04	0.00
APR cfs:	449.04	168.37	124.83	0.00	0.00	0.00	0.00	6.57	0.00	4.20	0.00
MAY cfs:	3135.24	163.15	894.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JUN cfs:	2560.55	173.58	15.61	0.00	0.00	0.00	0.00	0.00	410.04	49.48	0.00
JUL cfs:	544.29	22.65	0.00	0.00	0.00	0.00	0.00	0.00	346.96	16.00	630.20
AUG cfs:	0.00	0.00	0.00	0.00	0.00	0.00	35.97	0.00	0.00	0.00	0.00
SEP cfs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OCT cfs:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CFS Total:	6990.41	785.59	1034.85	0.00	0.00	0.00	35.97	6.57	757.00	82.70	630.20
Max cfs:	622.42	22.65	125.67	0.00	0.00	0.00	35.97	4.05	410.04	6.89	315.10
NOV af:	308.89	262.46	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.78	0.00
DEC af:	44.73	44.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JAN af:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FEB af:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAR af:	243.99	204.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.05	0.00
APR af:	890.67	333.96	247.60	0.00	0.00	0.00	0.00	13.03	0.00	8.33	0.00
MAY af:	6218.75	323.61	1774.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JUN af:	5078.85	344.30	30.96	0.00	0.00	0.00	0.00	0.00	813.32	98.14	0.00
JUL af:	1079.60	44.93	0.00	0.00	0.00	0.00	0.00	0.00	688.19	31.74	1250.00
AUG af:	0.00	0.00	0.00	0.00	0.00	0.00	71.35	0.00	0.00	0.00	0.00
SEP af:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OCT af:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AF Total:	13865.48	1558.22	2052.62	0.00	0.00	0.00	71.35	13.03	1501.51	164.04	1250.00

Enclosure 2

John Martin Reservoir Accounting for July 2019

OffsetAccount-Totals

Day	Inflow	TransIn	TransOut	Rel.	Evap	Balance
						13965.62
1	54.00	0.00	0.00	0.00	3.71	14015.91
2	55.51	0.00	0.00	0.00	11.98	14059.44
3	75.94	0.00	0.00	0.00	19.59	14115.79
4	649.33	0.00	0.00	0.00	19.67	14745.45
5	646.26	0.00	0.00	0.00	12.57	15379.14
6	82.68	0.00	0.00	0.00	13.02	15448.80
7	55.65	0.00	0.00	0.00	13.07	15491.38
8	56.35	0.00	0.00	0.00	15.95	15531.78
9	74.50	0.00	0.00	198.35	18.06	15389.87
10	67.46	0.00	0.00	198.35	18.69	15240.29
11	44.10	0.00	0.00	198.35	18.09	15067.95
12	59.45	0.00	0.00	198.35	23.81	14905.24
13	63.09	0.00	0.00	198.35	23.52	14746.46
14	63.49	0.00	0.00	198.35	23.32	14588.28
15	46.72	0.00	0.00	198.35	17.81	14418.84
16	46.06	0.00	0.00	198.35	14.63	14251.92
17	54.03	0.00	0.00	198.35	25.28	14082.32
18	31.44	0.00	0.00	198.35	20.57	13894.84
19	17.77	0.00	0.00	198.35	18.92	13695.34
20	20.53	0.00	0.00	198.35	18.77	13498.75
21	35.71	0.00	0.00	198.35	18.97	13317.14
22	47.43	0.00	0.00	198.35	11.44	13154.78
23	46.74	0.00	0.00	198.35	16.16	12987.01
24	34.69	0.00	0.00	198.35	14.59	12808.76
25	26.39	0.00	0.00	198.35	20.84	12615.96
26	37.64	0.00	0.00	198.35	14.13	12441.12
27	41.81	0.00	0.00	198.35	14.23	12270.35
28	64.81	0.00	0.00	198.35	14.07	12122.74
29	43.95	0.00	0.00	198.35	15.01	11953.33
30	28.11	0.00	0.00	198.35	19.94	11763.15
31	40.55	0.00	0.00	198.35	12.37	11592.98
	2712.19	0.00	0.00	4562.05	522.78	

OffsetAccount-Consumable Upstream

Day	Inflow	TransIn	TransOut	Rel.	Evap	Balance
						1331.29
1	0.00	0.00	0.00	0.00	0.35	1330.94
2	0.00	0.00	0.00	0.00	1.14	1329.80
3	24.09	0.00	0.00	0.00	1.85	1352.04
4	578.13	0.00	0.00	0.00	1.88	1928.29
5	554.04	0.00	0.00	0.00	1.64	2480.69
6	0.00	0.00	0.00	0.00	2.10	2478.59
7	0.00	0.00	0.00	0.00	2.10	2476.49
8	0.00	0.00	0.00	0.00	2.55	2473.94
9	0.00	0.00	0.00	0.00	2.88	2471.06
10	0.00	0.00	0.00	0.00	3.00	2468.06
11	0.00	0.00	0.00	0.00	2.93	2465.13
12	0.00	0.00	0.00	0.00	3.90	2461.23
13	0.00	0.00	0.00	0.00	3.89	2457.34
14	0.00	0.00	0.00	0.00	3.89	2453.45
15	0.00	0.00	0.00	0.00	3.00	2450.45
16	0.00	0.00	0.00	0.00	2.49	2447.96
17	0.00	0.00	0.00	0.00	4.34	2443.62
18	0.00	0.00	0.00	0.00	3.57	2440.05
19	0.00	0.00	0.00	0.00	3.32	2436.73
20	0.00	0.00	0.00	0.00	3.34	2433.39
21	0.00	0.00	0.00	0.00	3.42	2429.97
22	0.00	0.00	0.00	0.00	2.09	2427.88
23	0.00	0.00	0.00	0.00	2.99	2424.89
24	0.00	0.00	0.00	0.00	2.73	2422.16
25	0.00	0.00	0.00	0.00	3.95	2418.21
26	0.00	0.00	0.00	0.00	2.71	2415.50
27	0.00	0.00	0.00	0.00	2.77	2412.73
28	0.00	0.00	0.00	0.00	2.77	2409.96
29	0.00	0.00	0.00	0.00	2.99	2406.97
30	0.00	0.00	0.00	0.00	4.02	2402.95
31	0.00	0.00	0.00	0.00	2.53	2400.42
	1156.26	0.00	0.00	0.00	87.13	

OffsetAccount-Consumable Kansas

Day	Inflow	TransIn	TransOut	Rel.	Evap	Balance
						0.00
1	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	

OffsetAccount-Consumable Totals

Day	Inflow	TransIn	TransOut	Rel.	Evap	Balance
						13656.71
1	54.00	0.00	0.00	0.00	3.63	13707.08
2	55.51	0.00	0.00	0.00	11.71	13750.88
3	75.94	0.00	0.00	0.00	19.16	13807.66
4	649.33	0.00	0.00	0.00	19.24	14437.75
5	646.26	0.00	0.00	0.00	12.30	15071.71
6	82.68	0.00	0.00	0.00	12.76	15141.63
7	55.65	0.00	0.00	0.00	12.81	15184.47
8	56.35	0.00	0.00	0.00	15.63	15225.19
9	74.50	0.00	0.00	198.35	17.70	15083.64
10	67.46	0.00	0.00	198.35	18.32	14934.43
11	44.10	0.00	0.00	61.48	17.72	14899.33
12	59.45	0.00	0.00	95.31	23.55	14839.92
13	63.09	0.00	0.00	198.35	23.42	14681.24
14	63.49	0.00	0.00	198.35	23.22	14523.16
15	46.72	0.00	0.00	198.35	17.73	14353.80
16	46.06	0.00	0.00	198.35	14.56	14186.95
17	54.03	0.00	0.00	198.35	25.16	14017.47
18	31.44	0.00	0.00	198.35	20.48	13830.08
19	17.77	0.00	0.00	198.35	18.83	13630.67
20	20.53	0.00	0.00	198.35	18.68	13434.17
21	35.71	0.00	0.00	198.35	18.88	13252.65
22	47.43	0.00	0.00	198.35	11.38	13090.35
23	46.74	0.00	0.00	198.35	16.08	12922.66
24	34.69	0.00	0.00	198.35	14.52	12744.48
25	26.39	0.00	0.00	198.35	20.74	12551.78
26	37.64	0.00	0.00	198.35	14.06	12377.01
27	41.81	0.00	0.00	198.35	14.16	12206.31
28	64.81	0.00	0.00	198.35	14.00	12058.77
29	43.95	0.00	0.00	198.35	14.93	11889.44
30	28.11	0.00	0.00	198.35	19.83	11699.37
31	40.55	0.00	0.00	198.35	12.30	11529.27
	2712.19	0.00	0.00	4322.14	517.49	

OffsetAccount-Consumable Downstream

Day	Inflow	TransIn	TransOut	Rel.	Evap	Balance
						11862.89
1	54.00	0.00	0.00	0.00	3.16	11913.73
2	55.51	0.00	0.00	0.00	10.18	11959.06
3	51.85	0.00	0.00	0.00	16.67	11994.24
4	71.20	0.00	0.00	0.00	16.72	12048.72
5	92.22	0.00	0.00	0.00	10.27	12130.67
6	82.68	0.00	0.00	0.00	10.27	12203.08
7	55.65	0.00	0.00	0.00	10.32	12248.41
8	56.35	0.00	0.00	0.00	12.61	12292.15
9	74.50	0.00	0.00	0.00	14.29	12352.36
10	67.46	0.00	0.00	0.00	15.00	12404.82
11	44.10	0.00	0.00	0.00	14.72	12434.20
12	59.45	0.00	0.00	95.31	19.65	12378.69
13	63.09	0.00	0.00	198.35	19.53	12223.90
14	63.49	0.00	0.00	198.35	19.33	12069.71
15	46.72	0.00	0.00	198.35	14.73	11903.35
16	46.06	0.00	0.00	198.35	12.07	11738.99
17	54.03	0.00	0.00	198.35	20.82	11573.85
18	31.44	0.00	0.00	198.35	16.91	11390.03
19	17.77	0.00	0.00	198.35	15.51	11193.94
20	20.53	0.00	0.00	198.35	15.34	11000.78
21	35.71	0.00	0.00	198.35	15.46	10822.68
22	47.43	0.00	0.00	198.35	9.29	10662.47
23	46.74	0.00	0.00	198.35	13.09	10497.77
24	34.69	0.00	0.00	198.35	11.79	10322.32
25	26.39	0.00	0.00	198.35	16.79	10133.57
26	37.64	0.00	0.00	198.35	11.35	9961.51
27	41.81	0.00	0.00	198.35	11.39	9793.58
28	64.81	0.00	0.00	198.35	11.23	9648.81
29	43.95	0.00	0.00	198.35	11.94	9482.47
30	28.11	0.00	0.00	198.35	15.81	9296.42
31	40.55	0.00	0.00	198.35	9.77	9128.85
	1555.93	0.00	0.00	3863.96	426.01	

OffsetAccount-Consumable Kansas Charge

Day	Inflow	TransIn	TransOut	Rel.	Evap	Balance
						462.53
1	0.00	0.00	0.00	0.00	0.12	462.41
2	0.00	0.00	0.00	0.00	0.39	462.02
3	0.00	0.00	0.00	0.00	0.64	461.38
4	0.00	0.00	0.00	0.00	0.64	460.74
5	0.00	0.00	0.00	0.00	0.39	460.35
6	0.00	0.00	0.00	0.00	0.39	459.96
7	0.00	0.00	0.00	0.00	0.39	459.57
8	0.00	0.00	0.00	0.00	0.47	459.10
9	0.00	0.00	0.00	198.35	0.53	260.22
10	0.00	0.00	0.00	198.35	0.32	61.55
11	0.00	0.00	0.00	61.48	0.07	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	458.18	4.35	

OffsetAccount-ReturnFlow

Totals

Day	Inflow	TransIn	TransOut	Rel.	Evap	Balance
						308.91
1	0.00	0.00	0.00	0.00	0.08	308.83
2	0.00	0.00	0.00	0.00	0.27	308.56
3	0.00	0.00	0.00	0.00	0.43	308.13
4	0.00	0.00	0.00	0.00	0.43	307.70
5	0.00	0.00	0.00	0.00	0.27	307.43
6	0.00	0.00	0.00	0.00	0.26	307.17
7	0.00	0.00	0.00	0.00	0.26	306.91
8	0.00	0.00	0.00	0.00	0.32	306.59
9	0.00	0.00	0.00	0.00	0.36	306.23
10	0.00	0.00	0.00	0.00	0.37	305.86
11	0.00	0.00	0.00	136.87	0.37	168.62
12	0.00	0.00	0.00	103.04	0.26	65.32
13	0.00	0.00	0.00	0.00	0.10	65.22
14	0.00	0.00	0.00	0.00	0.10	65.12
15	0.00	0.00	0.00	0.00	0.08	65.04
16	0.00	0.00	0.00	0.00	0.07	64.97
17	0.00	0.00	0.00	0.00	0.12	64.85
18	0.00	0.00	0.00	0.00	0.09	64.76
19	0.00	0.00	0.00	0.00	0.09	64.67
20	0.00	0.00	0.00	0.00	0.09	64.58
21	0.00	0.00	0.00	0.00	0.09	64.49
22	0.00	0.00	0.00	0.00	0.06	64.43
23	0.00	0.00	0.00	0.00	0.08	64.35
24	0.00	0.00	0.00	0.00	0.07	64.28
25	0.00	0.00	0.00	0.00	0.10	64.18
26	0.00	0.00	0.00	0.00	0.07	64.11
27	0.00	0.00	0.00	0.00	0.07	64.04
28	0.00	0.00	0.00	0.00	0.07	63.97
29	0.00	0.00	0.00	0.00	0.08	63.89
30	0.00	0.00	0.00	0.00	0.11	63.78
31	0.00	0.00	0.00	0.00	0.07	63.71
	0.00	0.00	0.00	239.91	5.29	

OffsetAccount-ReturnFlow

RF Transit Loss

Day	Inflow	TransIn	TransOut	Rel.	Evap	Balance
						66.17
1	0.00	0.00	0.00	0.00	0.02	66.15
2	0.00	0.00	0.00	0.00	0.06	66.09
3	0.00	0.00	0.00	0.00	0.09	66.00
4	0.00	0.00	0.00	0.00	0.09	65.91
5	0.00	0.00	0.00	0.00	0.06	65.85
6	0.00	0.00	0.00	0.00	0.06	65.79
7	0.00	0.00	0.00	0.00	0.06	65.73
8	0.00	0.00	0.00	0.00	0.07	65.66
9	0.00	0.00	0.00	0.00	0.08	65.58
10	0.00	0.00	0.00	0.00	0.08	65.50
11	0.00	0.00	0.00	0.00	0.08	65.42
12	0.00	0.00	0.00	0.00	0.10	65.32
13	0.00	0.00	0.00	0.00	0.10	65.22
14	0.00	0.00	0.00	0.00	0.10	65.12
15	0.00	0.00	0.00	0.00	0.08	65.04
16	0.00	0.00	0.00	0.00	0.07	64.97
17	0.00	0.00	0.00	0.00	0.12	64.85
18	0.00	0.00	0.00	0.00	0.09	64.76
19	0.00	0.00	0.00	0.00	0.09	64.67
20	0.00	0.00	0.00	0.00	0.09	64.58
21	0.00	0.00	0.00	0.00	0.09	64.49
22	0.00	0.00	0.00	0.00	0.06	64.43
23	0.00	0.00	0.00	0.00	0.08	64.35
24	0.00	0.00	0.00	0.00	0.07	64.28
25	0.00	0.00	0.00	0.00	0.10	64.18
26	0.00	0.00	0.00	0.00	0.07	64.11
27	0.00	0.00	0.00	0.00	0.07	64.04
28	0.00	0.00	0.00	0.00	0.07	63.97
29	0.00	0.00	0.00	0.00	0.08	63.89
30	0.00	0.00	0.00	0.00	0.11	63.78
31	0.00	0.00	0.00	0.00	0.07	63.71
	0.00	0.00	0.00	0.00	2.46	

OffsetAccount-ReturnFlow

Return Flow

Day	Inflow	TransIn	TransOut	Rel.	Evap	Balance
						242.74
1	0.00	0.00	0.00	0.00	0.06	242.68
2	0.00	0.00	0.00	0.00	0.21	242.47
3	0.00	0.00	0.00	0.00	0.34	242.13
4	0.00	0.00	0.00	0.00	0.34	241.79
5	0.00	0.00	0.00	0.00	0.21	241.58
6	0.00	0.00	0.00	0.00	0.20	241.38
7	0.00	0.00	0.00	0.00	0.20	241.18
8	0.00	0.00	0.00	0.00	0.25	240.93
9	0.00	0.00	0.00	0.00	0.28	240.65
10	0.00	0.00	0.00	0.00	0.29	240.36
11	0.00	0.00	0.00	136.87	0.29	103.20
12	0.00	0.00	0.00	103.04	0.16	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	239.91	2.83	

John Martin Reservoir Accounting: July 2019

A	B	C	AG	AH	AI
NOTE: When adding a new column, copy over formulas in rows 375:385 (which pull from MASTER) to feed data to the					
Label 1			Highland Canal	Highland Canal	CPWDA
Label 2			Permenent Pool	Downstream Consumable	Pueblo Res.
Label 3			PURHILCO	PURHILCO	Offset Storage (UPSTREAM)
Date	Day	YrMo	Highland Canal Permenent Pool PURHILCO	l Downstream Consumat	CPWDA Pueblo Res. Offset Storage (UPSTREAM)
6/23/2019 0:00:00	Sun	201906	12.85	4.15	
6/24/2019 0:00:00	Mon	201906	11.97	17.63	
6/25/2019 0:00:00	Tue	201906	11.97	18.20	
6/26/2019 0:00:00	Wed	201906	11.97	19.99	
6/27/2019 0:00:00	Thu	201906	12.07	20.50	
6/28/2019 0:00:00	Fri	201906	11.57	20.48	
6/29/2019 0:00:00	Sat	201906	10.98	19.55	
6/30/2019 0:00:00	Sun	201906	10.59	19.43	
7/1/2019 0:00:00	Mon	201907	12.08	18.86	
7/2/2019 0:00:00	Tue	201907	12.18	21.06	
7/3/2019 0:00:00	Wed	201907	16.70	17.58	24.09
7/4/2019 0:00:00	Thu	201907	16.70	18.08	578.13
7/5/2019 0:00:00	Fri	201907	18.07	16.73	554.04
7/6/2019 0:00:00	Sat	201907	18.96	16.15	0.00
7/7/2019 0:00:00	Sun	201907	19.25	16.05	
7/8/2019 0:00:00	Mon	201907	19.65	15.77	
7/9/2019 0:00:00	Tue	201907	19.45	15.89	
7/10/2019 0:00:00	Wed	201907	18.96	16.45	
7/11/2019 0:00:00	Thu	201907	16.50	18.96	
7/12/2019 0:00:00	Fri	201907	15.42	19.86	
7/13/2019 0:00:00	Sat	201907	14.83	20.50	
7/14/2019 0:00:00	Sun	201907	15.13	19.47	
7/15/2019 0:00:00	Mon	201907	16.21	18.47	
7/16/2019 0:00:00	Tue	201907	14.34	10.28	
7/17/2019 0:00:00	Wed	201907	11.98	9.63	
7/18/2019 0:00:00	Thu	201907	15.91	8.86	
7/19/2019 0:00:00	Fri	201907			
7/20/2019 0:00:00	Sat	201907			
7/21/2019 0:00:00	Sun	201907			

Enclosure 3

Source of Fully Consumable Water Documentation from CWPDA/Colorado Springs Utilities

Subject: Re: CWPDA Delivery to JMR

Bruce Hughes <bhughes@ccanal.net>
to Tyner - DNR, Bill, Kent Ricken, Stacey Sober, Van Oort, John, Rachel Zancanella

Please see the correction below for the Colorado Canal and TLRC waters. My error!

Bruce

Twin Lakes
Colorado Canal Company
719 267 4411 office
719 980 3226 cell

On 7/2/2019 7:50 AM, Bruce Hughes wrote:

> Kent and Bill,
>
> On July 1st CWPDA released 10.81 cfs of Colorado Canal C/U water, 15.85 cfs TLRC Ark Riv Nat, 49.21 c and 98.81 cfs Rocky Ford. Today the release will be 315.10 cfs of Colorado Canal C/U and tomorrow it will cfs of Colorado Canal C/U water. Please let me know if this will suffice for the report you need to send. Thi total of 1250 af.
>
> Thanks
>
> Bruce
>
> Twin Lakes
> Colorado Canal Company
> 719 267 4411 office
> 719 980 3226 cell
>
> On 6/28/2019 1:37 PM, Tyner - DNR, Bill wrote:
>
> > This will be good enough for the initial notice and we can get exact details for the post-delivery letter.
> >
> > *Bill W. Tyner, P.E.Division EngineerDivision 2P 719.542.3368 x2110 | F 719.544.0800310 East Abriendo Ave. Suite B Pueblo, CO 81004Bill.Tyner@state.co.us <bill.tyner@state.co.us> | www.water.state.co.us <http://www.water.state.co.us/>*

Subject: FW: CWPDA to JRM

ssober@ccanal.net
to Kent Ricken, Bruce Hughes

FYI,

From: ssober@ccanal.net <ssober@ccanal.net>
Sent: Friday, July 5, 2019 9:03 AM
To: 'Kalsoum Abbasi' <kabbasi@csu.org>
Cc: Bruce Hughes <bhughes@ccanal.net>
Subject: CWPDA to JRM

Hi Kalsoum,

On July 2 301.88 cfs (598.78 AF) was release from CSU for CWPDA to JRM
On July 3 144.42 cfs (286.46 AF) was release from CSU for CWPDA to JRM
A Total of 446.3 cfs (885.24 AF) .

Have a good day,

Stacey L. Sober
Water Accounts
Twin Lakes
Colorado Canal company
(719) 267-4411 office
(719) 469-3268 cell

Colorado Springs Utilities
It's how we're all connected

August 5, 2019

VIA EMAIL

Bill Tyner
Colorado Division of Water Resources
Division 2 Engineer
310 E. Abriendo Ave., Suite B
Pueblo, CO 81004

Dear Mr. Tyner:

On July 2 and 3, 2019 Colorado Springs Utilities released 885.24 acre-feet of fully reusable water from Lake Meredith to the Arkansas River for the Colorado Water Protective and Development Association (CWPDA). Specifically, the water leased was the fully-consumable portion of Colorado Springs' Colorado Canal rights. This water was delivered by CWPDA to the Offset Account in John Martin Reservoir.

CWPDA is responsible for obtaining approval by the State Engineer or Division 2 Engineer, as well as all other necessary approvals required for delivery of this water from Lake Meredith to John Martin Reservoir.

Please contact me at (719) 668-8758 if you have any questions.

Sincerely,

Kalsoum Abbasi, P.E.
Planning Supervisor, Water Conveyance

cc: Rachel Zancanella
John Van Oort

1521 South Hancock Expressway
P.O. Box 1103, Mail Code 1825
Colorado Springs, CO 80947-1825

Phone 719.448.8888
www@csu.org

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Attachment 10 - Example of Colorado monthly letter reports to Kansas (June 2019)

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COLORADO
Division of Water Resources
Department of Natural Resources
Water Division 2 – Main Office

October 11, 2019

Mr. David Barfield
Kansas Chief Engineer
Kansas Board of Agriculture
901 S. Kansas Avenue, 2nd Floor
Topeka, KS 66612-1283

Ms. Stephanie Gonzales
Recording Secretary
Arkansas River Compact Administration
P.O. Box 1106
Lamar, CO 81052

RE: Monthly Report of Colorado Pumping and Offset Account Operations for July 2019

Dear Mr. Barfield and Ms. Gonzales:

The purpose of this letter is to provide the monthly report required by paragraph 12 of the **Resolution Concerning an Offset Account in John Martin Reservoir for Colorado Pumping as Amended April 30, 1998** ("Resolution"). This letter reports the monthly pumping in excess of Colorado's pre-Compact entitlement, Colorado's monthly accounting of Compact compliance, and the status of water delivered to the Offset Account, all during the month of July, 2019.

Table 1 shows the amount of pumping during the month of July 2019 by irrigation wells pumping from the Valley Fill Aquifer and surficial aquifers along the Arkansas River between Pueblo and the Stateline, as well as the corresponding wellhead depletions, by user group. The wellhead depletions were computed using the presumptive stream depletions in Rule 4.2 of the **AMENDED RULES AND REGULATIONS GOVERNING THE DIVERSION AND USE OF TRIBUTARY GROUND WATER IN THE ARKANSAS RIVER BASIN, COLORADO** ("Rules") approved in Case No. 95CW211.

Table 2 shows the wellhead depletions due to pumping by irrigation wells in the user groups below John Martin Reservoir that are in excess of the pre-Compact entitlements.

Since the replacement of depletions caused by pumping approved pursuant to the Rules that occurred above John Martin Reservoir has been detailed in the accounting previously provided to Kansas, the accounting in this report shows only remaining depletions caused by irrigation pumping in excess of the pre-Compact entitlements for those river reaches where no replacements were made to replace out-of-priority depletions to senior surface water rights in Colorado.

These stream depletions were computed using the wellhead depletions shown in Table 2 with the Ground Water Accounting Model. Please note that in Reaches 11, 12, and 13, replacements to senior surface water rights in Colorado replaced 100% of the stream depletions caused by pumping affecting those reaches since there was a call by a Colorado surface water right in those reaches during 31 days in July. Also note that in Reaches 14, 15, 16 replacements to senior surface water rights in Colorado replaced 100% of the stream

depletions caused by pumping affecting those reaches since there was a call by a Colorado surface right in those reaches during 31 days in July.

The remaining depletions shown in Table 3 are the estimated stream depletions caused by irrigation pumping in excess of the pre-Compact entitlements remaining after replacements were made to senior surface water rights in Colorado. Table 3 also shows the estimated depletions to usable Stateline flow, which were calculated using the assumptions in paragraph 5.B of the Resolution, and the replacements to Stateline flows, which were made during the month.

The Lower Arkansas Water Management Association (LAWMA) delivered 789.15 acre-feet from Fort Lyon Canal shares, 475.99 acre-feet from Highland Canal shares and 290.79 acre-feet from Keesee ditch shares during the month of July. Deliveries to the Offset Account in July 2019 by LAWMA totaled 1,555.93 acre-feet. In addition, CWPDA delivered 1,156.26 acre-feet into the Upstream Consumable Subaccount in July 2019 for a total delivery of 2,712.19 acre-feet.

Kansas called for a release of water from the Offset Account beginning on July 9, 2019 and released a total of 4,562.05 acre-feet in July from the account. The release extended beyond July and will be reported in a separate letter to document the entire operation.

As of July 31, 2019, a total of 11,592.98 acre-feet was stored in the Offset Account. The accounting spreadsheet for the Offset Account for the month of July is attached in Enclosure 1.

Please contact me if you have any questions or require additional information.

Sincerely,

Rachel A. Zancanella, P.E.
Assistant Division Engineer
Colorado Division of Water Resources

cc: Kevin Salter
Dale Book
Dan Steuer
Randy Hendrix
Bill Tyner

TABLE 1
Pumping By Rule 3 Irrigation Wells
July 2019

USER NO.	DITCH NAME	AF PUMPED	WELLHEAD DEPL
1	BESSEMER	1146.97	545.72
2	BOOTH ORCHARD	51.94	26.00
3	EXCELSIOR	143.42	71.72
4	COLLIER	0.00	0.00
5	COLORADO	370.03	216.71
6	ROCKY FORD HIGHLINE	287.59	132.57
7	OXFORD	183.75	103.03
8	OTERO	24.71	9.61
9	CATLIN	839.27	614.41
10	FORT LYON US	854.65	337.62
11	ROCKY FORD	46.71	23.38
12	HOLBROOK	343.26	226.34
13	LAS ANIMAS CONSOLIDATED	102.66	45.31
14	BALDWIN-STUBBS	310.17	210.86
15	FORT BENT	122.49	85.65
17	AMITY	1801.42	1084.66
18	LAMAR/MANVEL	428.47	233.23
19	HYDE	50.20	37.65
20	FORT LYON DS	904.29	481.93
21	XY GRAHAM	291.80	194.14
22	BUFFALO	72.24	26.01
24	STATELINE SOLE SOURCE	2791.26	2086.18
601	LAWMA A.P.D.	19.22	15.38
602	LAWMA A.P.D.	5.03	3.77
	Totals	11206.34	6822.96

TABLE 2
Wellhead Depletions from Irrigation Wells below John Martin Reservoir (Acre-Feet)
(Reduced By Pre-Compact Entitlements)
July 2019

USER NUMBER

10	15	16	17	18	19	20	21	22	23	24	Total
0.00	41.31	0.00	1084.66	236.75	37.65	453.97	182.08	26.01	0.00	2086.18	4148.61

TABLE 3
Remaining Depletions to Usable Stateline Flow (Acre-Feet)
July 2019

REACH NUMBER		11	12	13	14	15	16	17	18	21	Sum	
Balance Forward from Previous Month		0	0	0	0	0	0	0	0	0	0	
Remaining Depletion		0.00	0.00	0.00	0.00	0.00	0.00	240.96	1217.41	14.49	1472.87	
Depletion to Usable SL Flow		0.00	0.00	0.00	0.00	0.00	0.00	197.35	997.06	11.87	1206.28	
Replacements												Credit to Next Month
FRY-ARK Return Flows	0	0.00	0.00	0.00	0.00						0.00	0
Fort Lyon Aug Station/Recharge	0	31.74	76.50	9.17	0.00						117.41	0
CO Beef - Lamar Center Farm	0				0						0.00	0
Lamar Center Farm	0.00				0.00	0.00					0.00	436.64
Lamar Granada East/West	0.00								261.69		261.69	0.00
Ft Bent Ditch Shares	0.00				0						0.00	0
Stubbs Direct Flow	0.00								0		0.00	0.00
XY Direct Flow	0.00					179.09					179.09	0.00
Manvel Direct Flow	18.92					87.5					87.50	0.00
Offset Account Release Credit*	11900.35									562.67	562.67	10705.25
Offset Account Transit Loss	0	0.00			0.00			0.00			0.00	0.00
Offset Account Water	0	0									0.00	0
Total Replacements	0	31.74	76.50	9.17	0.00	266.59	0.00	0.00	261.69	562.67	1208.36	
Depletions Carried Forward	0	0	0	0	0	0	0	0	0	0	0.00	

*632.43 acre-feet of SWSP and Augmentation Plan depletion balance due was brought to zero using 632.43 acre-feet of Offset Account release credits.

Enclosure 1

John Martin Offset Accounting for July 2019

OffsetAccount-Totals

Day	Inflow	TransIn	TransOut	Rel.	Evap	Balance
						13965.62
1	54.00	0.00	0.00	0.00	3.71	14015.91
2	55.51	0.00	0.00	0.00	11.98	14059.44
3	75.94	0.00	0.00	0.00	19.59	14115.79
4	649.33	0.00	0.00	0.00	19.67	14745.45
5	646.26	0.00	0.00	0.00	12.57	15379.14
6	82.68	0.00	0.00	0.00	13.02	15448.80
7	55.65	0.00	0.00	0.00	13.07	15491.38
8	56.35	0.00	0.00	0.00	15.95	15531.78
9	74.50	0.00	0.00	198.35	18.06	15389.87
10	67.46	0.00	0.00	198.35	18.69	15240.29
11	44.10	0.00	0.00	198.35	18.09	15067.95
12	59.45	0.00	0.00	198.35	23.81	14905.24
13	63.09	0.00	0.00	198.35	23.52	14746.46
14	63.49	0.00	0.00	198.35	23.32	14588.28
15	46.72	0.00	0.00	198.35	17.81	14418.84
16	46.06	0.00	0.00	198.35	14.63	14251.92
17	54.03	0.00	0.00	198.35	25.28	14082.32
18	31.44	0.00	0.00	198.35	20.57	13894.84
19	17.77	0.00	0.00	198.35	18.92	13695.34
20	20.53	0.00	0.00	198.35	18.77	13498.75
21	35.71	0.00	0.00	198.35	18.97	13317.14
22	47.43	0.00	0.00	198.35	11.44	13154.78
23	46.74	0.00	0.00	198.35	16.16	12987.01
24	34.69	0.00	0.00	198.35	14.59	12808.76
25	26.39	0.00	0.00	198.35	20.84	12615.96
26	37.64	0.00	0.00	198.35	14.13	12441.12
27	41.81	0.00	0.00	198.35	14.23	12270.35
28	64.81	0.00	0.00	198.35	14.07	12122.74
29	43.95	0.00	0.00	198.35	15.01	11953.33
30	28.11	0.00	0.00	198.35	19.94	11763.15
31	40.55	0.00	0.00	198.35	12.37	11592.98
	2712.19	0.00	0.00	4562.05	522.78	

OffsetAccount-Consumable Upstream

Day	Inflow	TransIn	TransOut	Rel.	Evap	Balance
						1331.29
1	0.00	0.00	0.00	0.00	0.35	1330.94
2	0.00	0.00	0.00	0.00	1.14	1329.80
3	24.09	0.00	0.00	0.00	1.85	1352.04
4	578.13	0.00	0.00	0.00	1.88	1928.29
5	554.04	0.00	0.00	0.00	1.64	2480.69
6	0.00	0.00	0.00	0.00	2.10	2478.59
7	0.00	0.00	0.00	0.00	2.10	2476.49
8	0.00	0.00	0.00	0.00	2.55	2473.94
9	0.00	0.00	0.00	0.00	2.88	2471.06
10	0.00	0.00	0.00	0.00	3.00	2468.06
11	0.00	0.00	0.00	0.00	2.93	2465.13
12	0.00	0.00	0.00	0.00	3.90	2461.23
13	0.00	0.00	0.00	0.00	3.89	2457.34
14	0.00	0.00	0.00	0.00	3.89	2453.45
15	0.00	0.00	0.00	0.00	3.00	2450.45
16	0.00	0.00	0.00	0.00	2.49	2447.96
17	0.00	0.00	0.00	0.00	4.34	2443.62
18	0.00	0.00	0.00	0.00	3.57	2440.05
19	0.00	0.00	0.00	0.00	3.32	2436.73
20	0.00	0.00	0.00	0.00	3.34	2433.39
21	0.00	0.00	0.00	0.00	3.42	2429.97
22	0.00	0.00	0.00	0.00	2.09	2427.88
23	0.00	0.00	0.00	0.00	2.99	2424.89
24	0.00	0.00	0.00	0.00	2.73	2422.16
25	0.00	0.00	0.00	0.00	3.95	2418.21
26	0.00	0.00	0.00	0.00	2.71	2415.50
27	0.00	0.00	0.00	0.00	2.77	2412.73
28	0.00	0.00	0.00	0.00	2.77	2409.96
29	0.00	0.00	0.00	0.00	2.99	2406.97
30	0.00	0.00	0.00	0.00	4.02	2402.95
31	0.00	0.00	0.00	0.00	2.53	2400.42
	1156.26	0.00	0.00	0.00	87.13	

OffsetAccount-Consumable Kansas

Day	Inflow	TransIn	TransOut	Rel.	Evap	Balance
						0.00
1	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	

OffsetAccount-Consumable Totals

Day	Inflow	TransIn	TransOut	Rel.	Evap	Balance
						13656.71
1	54.00	0.00	0.00	0.00	3.63	13707.08
2	55.51	0.00	0.00	0.00	11.71	13750.88
3	75.94	0.00	0.00	0.00	19.16	13807.66
4	649.33	0.00	0.00	0.00	19.24	14437.75
5	646.26	0.00	0.00	0.00	12.30	15071.71
6	82.68	0.00	0.00	0.00	12.76	15141.63
7	55.65	0.00	0.00	0.00	12.81	15184.47
8	56.35	0.00	0.00	0.00	15.63	15225.19
9	74.50	0.00	0.00	198.35	17.70	15083.64
10	67.46	0.00	0.00	198.35	18.32	14934.43
11	44.10	0.00	0.00	61.48	17.72	14899.33
12	59.45	0.00	0.00	95.31	23.55	14839.92
13	63.09	0.00	0.00	198.35	23.42	14681.24
14	63.49	0.00	0.00	198.35	23.22	14523.16
15	46.72	0.00	0.00	198.35	17.73	14353.80
16	46.06	0.00	0.00	198.35	14.56	14186.95
17	54.03	0.00	0.00	198.35	25.16	14017.47
18	31.44	0.00	0.00	198.35	20.48	13830.08
19	17.77	0.00	0.00	198.35	18.83	13630.67
20	20.53	0.00	0.00	198.35	18.68	13434.17
21	35.71	0.00	0.00	198.35	18.88	13252.65
22	47.43	0.00	0.00	198.35	11.38	13090.35
23	46.74	0.00	0.00	198.35	16.08	12922.66
24	34.69	0.00	0.00	198.35	14.52	12744.48
25	26.39	0.00	0.00	198.35	20.74	12551.78
26	37.64	0.00	0.00	198.35	14.06	12377.01
27	41.81	0.00	0.00	198.35	14.16	12206.31
28	64.81	0.00	0.00	198.35	14.00	12058.77
29	43.95	0.00	0.00	198.35	14.93	11889.44
30	28.11	0.00	0.00	198.35	19.83	11699.37
31	40.55	0.00	0.00	198.35	12.30	11529.27
	2712.19	0.00	0.00	4322.14	517.49	

OffsetAccount-Consumable Downstream

Day	Inflow	TransIn	TransOut	Rel.	Evap	Balance
						11862.89
1	54.00	0.00	0.00	0.00	3.16	11913.73
2	55.51	0.00	0.00	0.00	10.18	11959.06
3	51.85	0.00	0.00	0.00	16.67	11994.24
4	71.20	0.00	0.00	0.00	16.72	12048.72
5	92.22	0.00	0.00	0.00	10.27	12130.67
6	82.68	0.00	0.00	0.00	10.27	12203.08
7	55.65	0.00	0.00	0.00	10.32	12248.41
8	56.35	0.00	0.00	0.00	12.61	12292.15
9	74.50	0.00	0.00	0.00	14.29	12352.36
10	67.46	0.00	0.00	0.00	15.00	12404.82
11	44.10	0.00	0.00	0.00	14.72	12434.20
12	59.45	0.00	0.00	95.31	19.65	12378.69
13	63.09	0.00	0.00	198.35	19.53	12223.90
14	63.49	0.00	0.00	198.35	19.33	12069.71
15	46.72	0.00	0.00	198.35	14.73	11903.35
16	46.06	0.00	0.00	198.35	12.07	11738.99
17	54.03	0.00	0.00	198.35	20.82	11573.85
18	31.44	0.00	0.00	198.35	16.91	11390.03
19	17.77	0.00	0.00	198.35	15.51	11193.94
20	20.53	0.00	0.00	198.35	15.34	11000.78
21	35.71	0.00	0.00	198.35	15.46	10822.68
22	47.43	0.00	0.00	198.35	9.29	10662.47
23	46.74	0.00	0.00	198.35	13.09	10497.77
24	34.69	0.00	0.00	198.35	11.79	10322.32
25	26.39	0.00	0.00	198.35	16.79	10133.57
26	37.64	0.00	0.00	198.35	11.35	9961.51
27	41.81	0.00	0.00	198.35	11.39	9793.58
28	64.81	0.00	0.00	198.35	11.23	9648.81
29	43.95	0.00	0.00	198.35	11.94	9482.47
30	28.11	0.00	0.00	198.35	15.81	9296.42
31	40.55	0.00	0.00	198.35	9.77	9128.85
	1555.93	0.00	0.00	3863.96	426.01	

OffsetAccount-Consumable Kansas Charge

Day	Inflow	TransIn	TransOut	Rel.	Evap	Balance
						462.53
1	0.00	0.00	0.00	0.00	0.12	462.41
2	0.00	0.00	0.00	0.00	0.39	462.02
3	0.00	0.00	0.00	0.00	0.64	461.38
4	0.00	0.00	0.00	0.00	0.64	460.74
5	0.00	0.00	0.00	0.00	0.39	460.35
6	0.00	0.00	0.00	0.00	0.39	459.96
7	0.00	0.00	0.00	0.00	0.39	459.57
8	0.00	0.00	0.00	0.00	0.47	459.10
9	0.00	0.00	0.00	198.35	0.53	260.22
10	0.00	0.00	0.00	198.35	0.32	61.55
11	0.00	0.00	0.00	61.48	0.07	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	458.18	4.35	

OffsetAccount-ReturnFlow

Totals

Day	Inflow	TransIn	TransOut	Rel.	Evap	Balance
						308.91
1	0.00	0.00	0.00	0.00	0.08	308.83
2	0.00	0.00	0.00	0.00	0.27	308.56
3	0.00	0.00	0.00	0.00	0.43	308.13
4	0.00	0.00	0.00	0.00	0.43	307.70
5	0.00	0.00	0.00	0.00	0.27	307.43
6	0.00	0.00	0.00	0.00	0.26	307.17
7	0.00	0.00	0.00	0.00	0.26	306.91
8	0.00	0.00	0.00	0.00	0.32	306.59
9	0.00	0.00	0.00	0.00	0.36	306.23
10	0.00	0.00	0.00	0.00	0.37	305.86
11	0.00	0.00	0.00	136.87	0.37	168.62
12	0.00	0.00	0.00	103.04	0.26	65.32
13	0.00	0.00	0.00	0.00	0.10	65.22
14	0.00	0.00	0.00	0.00	0.10	65.12
15	0.00	0.00	0.00	0.00	0.08	65.04
16	0.00	0.00	0.00	0.00	0.07	64.97
17	0.00	0.00	0.00	0.00	0.12	64.85
18	0.00	0.00	0.00	0.00	0.09	64.76
19	0.00	0.00	0.00	0.00	0.09	64.67
20	0.00	0.00	0.00	0.00	0.09	64.58
21	0.00	0.00	0.00	0.00	0.09	64.49
22	0.00	0.00	0.00	0.00	0.06	64.43
23	0.00	0.00	0.00	0.00	0.08	64.35
24	0.00	0.00	0.00	0.00	0.07	64.28
25	0.00	0.00	0.00	0.00	0.10	64.18
26	0.00	0.00	0.00	0.00	0.07	64.11
27	0.00	0.00	0.00	0.00	0.07	64.04
28	0.00	0.00	0.00	0.00	0.07	63.97
29	0.00	0.00	0.00	0.00	0.08	63.89
30	0.00	0.00	0.00	0.00	0.11	63.78
31	0.00	0.00	0.00	0.00	0.07	63.71
	0.00	0.00	0.00	239.91	5.29	

OffsetAccount-ReturnFlow

RF Transit Loss

Day	Inflow	TransIn	TransOut	Rel.	Evap	Balance
						66.17
1	0.00	0.00	0.00	0.00	0.02	66.15
2	0.00	0.00	0.00	0.00	0.06	66.09
3	0.00	0.00	0.00	0.00	0.09	66.00
4	0.00	0.00	0.00	0.00	0.09	65.91
5	0.00	0.00	0.00	0.00	0.06	65.85
6	0.00	0.00	0.00	0.00	0.06	65.79
7	0.00	0.00	0.00	0.00	0.06	65.73
8	0.00	0.00	0.00	0.00	0.07	65.66
9	0.00	0.00	0.00	0.00	0.08	65.58
10	0.00	0.00	0.00	0.00	0.08	65.50
11	0.00	0.00	0.00	0.00	0.08	65.42
12	0.00	0.00	0.00	0.00	0.10	65.32
13	0.00	0.00	0.00	0.00	0.10	65.22
14	0.00	0.00	0.00	0.00	0.10	65.12
15	0.00	0.00	0.00	0.00	0.08	65.04
16	0.00	0.00	0.00	0.00	0.07	64.97
17	0.00	0.00	0.00	0.00	0.12	64.85
18	0.00	0.00	0.00	0.00	0.09	64.76
19	0.00	0.00	0.00	0.00	0.09	64.67
20	0.00	0.00	0.00	0.00	0.09	64.58
21	0.00	0.00	0.00	0.00	0.09	64.49
22	0.00	0.00	0.00	0.00	0.06	64.43
23	0.00	0.00	0.00	0.00	0.08	64.35
24	0.00	0.00	0.00	0.00	0.07	64.28
25	0.00	0.00	0.00	0.00	0.10	64.18
26	0.00	0.00	0.00	0.00	0.07	64.11
27	0.00	0.00	0.00	0.00	0.07	64.04
28	0.00	0.00	0.00	0.00	0.07	63.97
29	0.00	0.00	0.00	0.00	0.08	63.89
30	0.00	0.00	0.00	0.00	0.11	63.78
31	0.00	0.00	0.00	0.00	0.07	63.71
	0.00	0.00	0.00	0.00	2.46	

OffsetAccount-ReturnFlow

Return Flow

Day	Inflow	TransIn	TransOut	Rel.	Evap	Balance
						242.74
1	0.00	0.00	0.00	0.00	0.06	242.68
2	0.00	0.00	0.00	0.00	0.21	242.47
3	0.00	0.00	0.00	0.00	0.34	242.13
4	0.00	0.00	0.00	0.00	0.34	241.79
5	0.00	0.00	0.00	0.00	0.21	241.58
6	0.00	0.00	0.00	0.00	0.20	241.38
7	0.00	0.00	0.00	0.00	0.20	241.18
8	0.00	0.00	0.00	0.00	0.25	240.93
9	0.00	0.00	0.00	0.00	0.28	240.65
10	0.00	0.00	0.00	0.00	0.29	240.36
11	0.00	0.00	0.00	136.87	0.29	103.20
12	0.00	0.00	0.00	103.04	0.16	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00
25	0.00	0.00	0.00	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00
29	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	239.91	2.83	

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Attachment 11 - Example of Colorado monthly accounting spreadsheet (July 2017)

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AUGMENTATION PLAN IMPLEMENTATION SPREADSHEET
PLAN YEAR 2017-2018

	JUN	July-17					JUL	JUL
	CREDIT	R101	R102	R103	R104	R105	CREDIT	SUM
AGUA								
BALANCE DEPLETIONS FORWARD PREVIOUS MONTH		0.00	0.00	0.00	0.00	0.00		0.00
Pre-48 Depletion		0.00	0.00	0.00	0.00	0.00		
Pre-48 Credit		0.00	0.00	0.00	0.00	0.00		
100% Stream Depletions		**0.85**	**0.83**	**2.92**	**13.71**	**16.74**		35.05
CSU Aug to User 101	0.00	0.00					**0.00**	0.00
CSU Aug to User 102	0.00		0.00				**0.00**	0.00
CSU Aug to User 103	0.00			0.00			**0.00**	0.00
CSU Aug to User 104	0.00				0.00		**0.00**	0.00
CSU Aug to User 105	0.00					0.00	**0.00**	0.00
Donala Aug to User 101	0.28	0.31					**0.00**	0.31
Donala Aug to User 102	0.56		0.00				**0.62**	0.62
Donala Aug to User 103	2.79			0.00			**3.36**	3.36
Donala Aug to User 104	12.37				0.00		**13.91**	13.91
Donala Aug to User 105	7.31					3.13	**6.83**	9.96
Triview Aug to User 101	0.21	0.05					**0.21**	0.26
Triview Aug to User 102	0.41		0.00				**0.53**	0.53
Triview Aug to User 103	2.06			0.00			**2.87**	2.87
Triview Aug to User 104	9.22				0.00		**11.83**	11.83
Triview Aug to User 105	6.30					0.00	**8.44**	8.44
SUM	41.52						48.60	48.60
		0.00	-0.15	-1.93	-7.88	0.00		
BALANCE FORWARDED		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		0.00

Updated: 8/10/2017

NOTE: 0.00 AF of Ftn. Crk. Depletions were Transferred to Arkansas River page for replacement since no local Ftn. Crk. Call

AUGMENTATION PLAN IMPLEMENTATION SPREADSHEET
PLAN YEAR 2017-2018

	JUN	July-17					JUL	JUL
	CREDIT	R101	R102	R103	R104	R105	CREDIT	SUM
MAGUA								
BALANCE DEPLETIONS FORWARD PREVIOUS MONTH			0.00		0.00	0.00		0.00
100% Stream Depletions			**1.96**		**0.95**	**0.05**		2.96
CSU Aug For MAGUA Node 17-Reach 102	0.00		0.00				**0.00**	0.00
CSU Aug For MAGUA Node 18-Reach 102	0.00		0.00				**0.00**	0.00
CSU Aug For MAGUA Node 25-Reach 104	0.00				0.00		**0.00**	0.00
CSU Aug For MAGUA Node 26-Reach 104	0.00				0.00		**0.00**	0.00
CSU Aug For MAGUA Node 32-Reach 105	0.00					0.00	**0.00**	0.00
Donala Aug for MAGUA Node 17-Reach 102	0.00		0.00				**0.00**	0.00
Donala Aug for MAGUA Node 18-Reach 102	0.57		0.62				**0.00**	0.62
Donala Aug for MAGUA Node 25-Reach 104	0.28				0.00		**0.04**	0.04
Donala Aug for MAGUA Node 26-Reach 104	0.28				0.00		**0.31**	0.31
Donala Aug for MAGUA Node 32-Reach 105	0.27					0.00	**0.05**	0.05
TriView Aug for MAGUA Node 17-Reach 102	0.00		0.00				**0.00**	0.00
TriView Aug for MAGUA Node 18-Reach 102	0.42		0.36				**0.17**	0.53
TriView Aug for MAGUA Node 25-Reach 104	0.21				0.00		**0.03**	0.03
TriView Aug for MAGUA Node 26-Reach 104	0.21				0.00		**0.26**	0.26
TriView Aug for MAGUA Node 32-Reach 105	0.21					0.00	**0.03**	0.03
SUM	2.43						0.89	0.89
			0.00		-0.02	-0.43		
BALANCE FORWARDED			**0.00**		**0.00**	**0.00**		0.00

Updated: 8/10/2017

NOTE: 0.00 AF of Ftn. Crk. Depletions were Transferred to Arkansas River page for replacement since no local Ftn. Crk. Call

Jul17 Arkansas

AUGMENTATION PLAN IMPLEMENTATION SPREADSHEET - AGUA

PLAN YEAR 2017-2018

Jul 2017

Updated: 8/28/2017

USER	WHT-U	R1	R2	R3	R4	R5	R6	R7	R8	R9	WHT-M	R10	R11	R12	R13	R14	R15	R16	WHT-L	SUM
AGUA																				
BALANCE FORWARDED PREVIOUS MONTH	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100% Stream Depletions	3.34	78.26	28.90	34.55	15.82	11.84	17.35	32.51	0.25	3.28	10.91	0.34	0.00	0.00	0.00	0.00	0.00	0.00	10.32	247.68
Municipal & Ftn. Crk. Depletions Balance Forwarded		0.01				0.04		0.04												0.09
SWSP Depletions Balance Below	9.55	25.11	0.83	0.00	0.00	0.00	89.84	3.90	0.00	0.00	0.00	0.00								129.22
TOTAL DEPLETIONS	12.89	103.38	29.73	34.55	15.82	11.89	107.19	36.45	0.25	3.28	10.91	0.34	0.00	0.00	0.00	0.00	0.00	0.00	10.32	377.00
FRY-ARK RETURN FLOWS (main)		**5.38**	**2.05**	**0.91**	**3.70**	**3.98**	**4.02**	**18.40**	**0.78**	**4.66**		**3.86**	**0.62**	**0.68**	**4.23**	**1.76**	**0.00**	**0.00**		55.03
BUSK-IVANHOE RETURN FLOWS		**0.09**	**0.03**	**0.01**	**0.08**	**0.15**	**0.02**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		0.38
TOTAL RETURN FLOWS AVAILABLE		5.46	2.09	0.92	3.78	4.13	4.05	18.40	0.78	4.66		3.86	0.62	0.68	4.23	1.76	0.00	0.00		55.41
Previous Month Credit			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
TOTAL RETURN FLOWS USED	12.89	**-7.43**	2.09	0.92	3.78	4.13	4.05	18.40	0.78	4.66		3.86	0.62	0.68	4.23	1.76	0.00	0.00		55.41
Forward Credit To Next Month			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
PBWW RETURN FLOWS		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**								0.00
Previous Month Credit																				0.00
Amount Used		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00								0.00
Forward Credit To Next Month		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00								0.00
EXCELSIOR NATIVE DIVERSION CREDIT (04CW62)		**54.89**																		54.89
Previous Month Credit		0.00																		0.00
Amount Used		54.89																		54.89
Forward Credit To Next Month		0.00																		0.00
EXCELSIOR TM DIVERSION CREDIT (04CW62)		**120.08**																		120.08
Previous Month Credit		134.27																		134.27
Amount Used		138.16																		138.16
Forward Credit To Next Month		116.19																		116.19
EXCELSIOR AUGMENTATION STATION NATIVE		**82.15**																		82.15
Previous Month Credit		0.00																		0.00
Amount Used		0.00																		0.00
Forward Credit To Next Month		82.15																		82.15
EXCELSIOR AUGMENTATION STATION TM		**0.00**																		0.00
Previous Month Credit		0.00																		0.00
Amount Used		0.00																		0.00
Forward Credit To Next Month		0.00																		0.00
AGUA I&W RELEASE		**0.00**						**0.00**												0.00
Previous Month Credit		0.00						0.00												0.00
Amount Used		0.00						0.00												0.00
Forward Credit To Next Month		0.00						0.00												0.00
UNION DITCH - FREMONT		**27.00**																		27.00
Previous Month Credit		0.00																		0.00
Amount Used		13.07																		13.07
Forward Credit To Next Month		13.93																		13.93
UNION DITCH - RMM		**9.60**																		9.60
Previous Month Credit		0.00																		0.00
Amount Used		9.60																		9.60
Forward Credit To Next Month		0.00																		0.00
SCMWD EXCESS CU CREDIT		**0.00**																		0.00
Previous Month Credit		87.94																		87.94
Amount Used		87.94																		87.94
Forward Credit To Next Month		0.00																		0.00
CATLIN CANAL AUG STATION								**0.00**												0.00
Previous Month Credit								0.00												0.00
Amount Used								0.00												0.00
Forward Credit To Next Month								0.00												0.00
AURORA-HIGHLINE AG RF					**5.94**	**3.06**	**2.47**	**4.10**												15.56
Previous Month Credit					0.00	0.00	0.00	0.00												0.00
Amount Used					5.94	3.06	2.47	4.10												15.56
Forward Credit To Next Month					0.00	0.00	0.00	0.00												0.00

Jul17 Arkansas

AUGMENTATION PLAN IMPLEMENTATION SPREADSHEET - AGUA

PLAN YEAR 2017-2018

Jul 2017

Updated: 8/28/2017

USER		WHT-U	R1	R2	R3	R4	R5	R6	R7	R8	R9	WHT-M	R10	R11	R12	R13	R14	R15	R16	WHT-L		SUM
Node 34 Deliveries			**3.48**																			3.48
Previous Month Credit			0.00																			0.00
Amount Used			3.48																			3.48
Forward Credit To Next Month			0.00																			0.00
AURORA-RULE 8 RF									**4.96**													4.96
Previous Month Credit									0.00													0.00
Amount Used									4.96													4.96
Forward Credit To Next Month									0.00													0.00
Open Source																						0.00
Previous Month Credit																						0.00
Amount Used																						0.00
Forward Credit To Next Month																						0.00
		0.00	-196.33	-168.43	-134.58	-128.31	-123.44	-22.60	-8.62	-9.14	-10.51	0.41	-3.10	-3.71	-4.39	-8.61	-10.36	-10.35	-10.33	0.00		
BALANCE FORWARDED		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
AGUA MUNICIPAL (SDF)		ONEAL	OLNEY	SK SCH																		
		RCH1	RCH5	RCH 7																		
100% Stream Depletions		**0.01**	**0.04**	**0.04**																		
																						0.00
FRY-ARK 1ST USE WATER		0.00	0.00	0.00																		0.00
FRY-ARK RETURN FLOWS				0.00																		
FRY-ARK RETURN FLOWS BALANCE FORWARDED	0.00			0.00																		
TRANSIT LOSS		0.00	0.00	0.00																		
BALANCE FORWARDED	0.00	0.01	0.04	0.04																		0.09
SWSP DEPLETIONS		**WHT-U**	**R1**	**R2**	**R3**	**R4**	**R5**	**R6**	**R7**	**R8**	**R9**	**WHT-M**	**R10**	**R11**	**R12**	**R13**	**R14**	**R15**	**R16**	**WHT-L**		
		9.55	25.11	0.83	0.00	0.00	0.00	89.84	3.90	0.00	0.00	0.00	0.00									129.22
SWSP REPLACEMENTS (outside of AGUA)																						
BALANCE FORWARDED		9.55	25.11	0.83	0.00	0.00	0.00	89.84	3.90	0.00	0.00	0.00	0.00									

Jul17 Arkansas

AUGMENTATION PLAN IMPLEMENTATION SPREADSHEET - AGUA

PLAN YEAR 2017-2018

Jul 2017

Updated: 8/28/2017

USER		WHT-U	R1	R2	R3	R4	R5	R6	R7	R8	R9	WHT-M	R10	R11	R12	R13	R14	R15	R16	WHT-L		SUM
USER STREAM DEPLETIONS																						
AGUA (SDF & GWAM Depletions)		**3.34**	**78.26**	**28.90**	**34.55**	**15.82**	**11.84**	**17.35**	**32.51**	**0.25**	**3.28**	**10.91**	**0.34**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**10.32**		247.68
Pre-48		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
SWSP DEPLETIONS (neg. depletion are credits)		**WHT-U**	**R1**	**R2**	**R3**	**R4**	**R5**	**R6**	**R7**	**R8**	**R9**	**WHT-M**	**R10**	**R11**	**R12**	**R13**	**R14**	**R15**	**R16**	**WHT-L**		
Booth SWSP (Non-Native Replacment Source ONLY)			**5.95**	**0.83**																		6.77
RFCFG AUG PLAN								**88.91**														88.91
MAGUA SWSP			**3.95**																			3.95
UNITED FEEDERS (14CW6)								**0.93**														0.93
OPEN SWSP			**0.00**																			0.00
Evans #2 Pit (Pueblo East) SWSP			**2.57**																			2.57
Mexican Ditch RF Maintenance			**-8.50**																			-8.50
Rich Pit SWSP			**7.80**																			7.80
Brady Nursery SWSP		**0.00**																				0.00
Rocky Mountain Materials SWSP		**0.00**																				0.00
North River Pit SWSP									**3.90**													3.90
MacKenzie Pit SWSP		**0.97**																				0.97
Evans #2 Pit (Stonewall) SWSP			**1.00**																			1.00
Future Dreams SWSP			**0.05**																			0.05
Midwest Wholesale SWSP			**0.84**																			
Pueblo Chemical Depot - ICAGRS			**0.09**																			
Stonewall Spring Quarry Grow Operation			**11.36**																			
EWSD SWSP		**8.58**																				8.58
TOTAL SWSP DEPLETIONS		9.55	25.11	0.83	0.00	0.00	0.00	89.84	3.90	0.00	0.00	0.00	0.00	0.00								
Number of days of 1948 or later call	**0**																					
Number of days in month	31																					
Number of days in month free river	0																					
Rule 3 Stateline Depletion ONLY %	81.9%																					

AUGMENTATION PLAN IMPLEMENTATION SPREADSHEET
PLAN YEAR 2017-2018

Updated: 8/28/2017

July-17

	CREDIT	R101	R102	R103	R104	R105	JUL CREDIT	JUL SUM
CWPDA								
BALANCE DEPLETIONS FORWARD PREVIOUS MONTH		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		0.00
Pre-48 Depletion		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		
Pre-48 Credit		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		
100% Stream Depletions		**0.00**	**12.94**	**1.78**	**136.64**	**0.10**		151.45
Woodmoor to CWPDA User 500	**0.00**		0.00				**0.00**	0.00
Woodmoor to CWPDA User 102	**0.00**		0.00				**0.00**	0.00
Woodmoor to CWPDA User 103	**0.00**			0.00			**0.00**	0.00
Woodmoor to CWPDA User 104	**0.00**				0.00		**0.00**	0.00
Woodmoor to CWPDA User 105	**0.00**					0.00	**0.00**	0.00
Donala Aug to CWPDA User 500	**0.00**		0.00				**0.00**	0.00
Donala Aug to CWPDA User 102	**0.00**		0.00				**0.00**	0.00
Donala Aug to CWPDA User 103	**0.00**			0.00			**0.00**	0.00
Donala Aug to CWPDA User 104	**0.00**				0.00		**0.00**	0.00
Donala Aug to CWPDA User 105	**0.00**					0.00	**0.00**	0.00
FMIC Aug to CWPDA User 500	**0.21**		0.00				**0.78**	0.78
FMIC Aug to CWPDA User 102	**0.25**		0.00				**0.67**	0.67
FMIC Aug to CWPDA User 103	**0.03**			0.00			**0.07**	0.07
FMIC Aug to CWPDA PPF User 103	**0.00**			0.00			**0.00**	0.00
FMIC Aug to CWPDA User 104	**0.00**				4.01		**0.00**	4.01
FMIC Aug to CWPDA HEIDI User 104	**0.00**				6.09		**0.00**	6.09
FMIC Aug to CWPDA User 105	**0.01**					0.00	**0.02**	0.02
Security Aug to CWPDA User 500	**0.00**		0.00				**0.00**	0.00
Security Aug to CWPDA User 102	**0.00**		0.00				**0.00**	0.00
Security Aug to CWPDA User 103	**0.00**			0.00			**0.00**	0.00
Security Aug to CWPDA User 104	**0.00**				0.00		**0.00**	0.00
Security Aug to CWPDA User 105	**0.00**					0.00	**0.00**	0.00
Widefield Aug to CWPDA User 500	**0.00**		0.00				**0.00**	0.00
Widefield Aug to CWPDA User 102	**0.00**		0.00				**0.00**	0.00
Widefield Aug to CWPDA User 103	**0.00**			0.00			**0.00**	0.00
Widefield Aug to CWPDA User 104	**0.00**				0.00		**0.00**	0.00
Widefield Aug to CWPDA User 105	**0.00**					0.00	**0.00**	0.00
Cruse Gulch to CWPDA User 500	**0.00**		0.00				**0.00**	0.00
Cruse Gulch to CWPDA User 102	**0.00**		0.00				**0.00**	0.00
Cruse Gulch to CWPDA User 103	**0.00**			0.00			**0.00**	0.00
Cruse Gulch to CWPDA User 104	**0.00**				0.00		**0.00**	0.00
Cruse Gulch to CWPDA User 105	**0.00**					0.00	**0.00**	0.00
Fountain Aug to CWDPA User 500	**0.00**		0.00				**0.00**	0.00
Fountain Aug to CWDPA User 102	**0.00**		0.00				**0.00**	0.00
Fountain Aug to CWDPA User 103	**0.00**			0.00			**0.00**	0.00
Fountain Aug to CWDPA User 104	**0.00**				0.00		**0.00**	0.00
Fountain Aug to CWDPA User 105	**0.00**					0.00	**0.00**	0.00
Cody Recl Aug to CWPDA User 500	**0.00**		0.00				**0.00**	0.00
Cody Recl Aug to CWPDA User 102	**0.00**		0.00				**0.00**	0.00
Cody Recl Aug to CWPDA User 103	**2.73**			0.00			**1.78**	1.78
Cody Recl Aug to CWPDA User 104	**15.47**				102.89		**0.00**	102.89
Cody Recl Aug to CWPDA User 105	**0.22**					0.00	**0.45**	0.45
Cody Laughlin to CWPDA User 500	**0.00**		0.00				**0.00**	0.00
Cody Laughlin to CWPDA User 102	**15.59**		0.00				**28.55**	28.55
Cody Laughlin to CWPDA User 103	**0.07**			0.00			**0.09**	0.09
Cody Laughlin to CWPDA User 104	**2.91**				1.40		**3.82**	5.22
Cody Laughlin to CWPDA User 105	**0.03**					0.00	**0.04**	0.04
Cody Owen&Hall to CWPDA User 104	**3.88**				0.00		**3.82**	3.82
Cody Owen&Hall to CWPDA User 105	**0.02**					0.00	**0.02**	0.02
COLORADO SPRINGS AND CHEYENNE MTN	**0.20**		0.00				**0.21**	0.21
Spring Creek Aug Sta (CCMD Lease)	**0.00**		0.00	0.00			**0.00**	0.00
	41.63						40.31	40.31
		0.00	-3.32	-1.06	-0.01	-0.18		-4.56
BALANCE FORWARDED		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		0.00

NOTE: 0.00 AF of Ftn. Crk. Depletions were Transferred to Arkansas River page for replacement since no local Ftn. Crk. Call

CWPDA RULE 14 ACCOUNTING

AUGMENTATION PLAN IMPLEMENTATION SPREADSHEET - CWPDA

PLAN YEAR 2017-2018

Mar 2018

Updated: 4/24/2018

USER	WHT-U	R1	R2	R3	R4	R5	R6	R7	R8	R9	WHT-M	R10	R11	R12	R13	R14	R15	R16	WHT-L	SUM
CWPDA																				
BALANCE FORWARDED PREVIOUS MONTH	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.00
CWPDA (SDF, GWAM & Rule5 Depletions)	**2.63**	**66.87**	**29.98**	**15.31**	**55.52**	**49.31**	**112.90**	**263.51**	**232.06**	**115.76**	**14.84**	**59.72**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.65**	1019.05
Pre-48 Depletion	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.00
Pre-48 Credit	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.00
Manweiler, Ftn. Crk. Xfer, Oxford Ditch & Ordway Feed Depletions Balance Forwarded	-----	**0.40**	**59.15**	-----	**0.00**	-----	**0.29**		-----	**2.58**	-----	-----	-----	-----	-----	-----	-----	-----	-----	62.42
TOTAL DEPLETIONS	2.63	67.27	89.13	15.31	55.52	49.31	113.19	263.51	232.06	118.34	14.84	59.72	0.00	0.00	0.00	0.00	0.00	0.00	0.65	**1081.47**
YTD Depletions	41.46	1254.58	619.93	301.16	788.99	699.88	1596.16	3319.06	3443.33	1601.00	194.29	851.48	0.20	0.39	1.14	0.56	0.00	0.00	6.60	14720.22
FRY-ARK RETURN FLOWS (Ft. Lyon Pilot Project)	-----	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.65**	**9.29**	**13.74**	-----	**9.59**	**5.06**	**4.93**	**7.75**	**4.82**	**0.00**	**0.00**	-----	55.83
FRY-ARK RETURN FLOWS (main)	-----	**37.02**	**14.21**	**6.12**	**27.98**	**26.49**	**22.77**	**73.72**	**6.94**	**16.98**	-----	**19.57**	**4.20**	**3.57**	**20.05**	**8.18**	**0.00**	**0.00**	-----	287.80
BUSK-IVANHOE RETURN FLOWS	-----	**0.01**	**0.00**	**0.00**	**0.06**	**0.11**	**0.02**	**0.00**	**0.00**	**0.00**	-----	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	-----	0.21
2016 RF HIGHLINE RETURN FLOWS	-----	**0.00**	**0.00**	**0.00**	**2.64**	**1.38**	**0.71**	**0.69**	**0.00**	**0.00**	-----	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	-----	5.42
TOTAL RETURN FLOWS AVAILABLE	-----	37.03	14.22	6.12	30.69	27.98	23.50	75.06	16.23	30.72	-----	29.16	9.26	8.50	27.80	13.00	0.00	0.00	-----	349.25
YTD RETURN FLOWS	-----	885.92	342.16	149.64	537.53	449.11	467.43	1887.85	203.91	857.16	-----	399.40	151.39	131.84	409.23	204.46	0.00	0.00	-----	7077.03
Previous Month Credit		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
TOTAL RETURN FLOWS USED	**2.63**	**34.40**	**14.22**	**6.12**	**30.69**	**27.98**	**23.50**	**75.06**	**16.23**	**30.72**		**29.16**	**9.26**	**8.50**	**27.80**	**13.00**	**0.00**	**0.00**	-----	349.25
Forward Credit To Next Month		**0.00**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
FOUNTAIN AUG PLAN TO NODE 34 (main)		**139.02**																		139.02
Previous Month Credit		0.00																		0.00
Amount Used		139.02																		139.02
Forward Credit To Next Month		0.00																		0.00
DONALA AUG PLAN TO NODE 34 (main)		**0.00**																		0.00
Previous Month Credit		0.00																		0.00
Amount Used		0.00																		0.00
Forward Credit To Next Month		0.00																		0.00
WIDEFIELD AUG PLAN TO NODE 34 (main)		**34.91**																		34.91
Previous Month Credit		0.00																		0.00
Amount Used		34.91																		34.91
Forward Credit To Next Month		0.00																		0.00
SECURITY AUG PLAN TO NODE 34 (main)		**100.97**																		100.97
Previous Month Credit		0.00																		0.00
Amount Used		100.97																		100.97
Forward Credit To Next Month		0.00																		0.00
FOUNTAIN MUTUAL TO NODE 34 (main)		**2.32**																		2.32
Previous Month Credit		0.00																		0.00
Amount Used		2.32																		2.32
Forward Credit To Next Month		0.00																		0.00
WOODMOOR RETURNS TO NODE 34 (main)		**6.22**																		6.22
Previous Month Credit		0.00																		0.00
Amount Used		6.22																		6.22
Forward Credit To Next Month		0.00																		0.00
CODY LAUGHLIN TO NODE 34		**16.03**																		16.03
Previous Month Credit		0.00																		0.00
Amount Used		16.03																		16.03
Forward Credit To Next Month		0.00																		0.00
CODY OWEN & HALL TO NODE 34		**0.00**																		0.00
Previous Month Credit		0.00																		0.00
Amount Used		0.00																		0.00
Forward Credit To Next Month		0.00																		0.00
CHILCOTT DITCH CREDITS TO NODE 34		**0.00**																		0.00
Previous Month Credit		0.00																		0.00
Amount Used		0.00																		0.00
Forward Credit To Next Month		0.00																		0.00
LOCK DITCH CREDITS TO NODE 34		**0.00**																		0.00
Previous Month Credit		0.00																		0.00
Amount Used		0.00																		0.00
Forward Credit To Next Month		0.00																		0.00
COLORADO CENTRE TO NODE 34		**0.00**																		0.00
Previous Month Credit		0.00																		0.00
Amount Used		0.00																		0.00
Forward Credit To Next Month		0.00																		0.00
CCMD ROBINSON & CRUSE GULCH TO NODE 34		**0.01**																		0.01
Previous Month Credit		0.00																		0.00

CWPDA RULE 14 ACCOUNTING

AUGMENTATION PLAN IMPLEMENTATION SPREADSHEET - CWPDA

PLAN YEAR 2017-2018

Mar 2018

Updated: 4/24/2018

USER	WHT-U	R1	R2	R3	R4	R5	R6	R7	R8	R9	WHT-M	R10	R11	R12	R13	R14	R15	R16	WHT-L	SUM
Amount Used		0.01																		0.01
Forward Credit To Next Month		0.00																		0.00
SEWAGE RETURN FLOW							**0.42**		**108.95**	**28.85**										138.22
Previous Month Credit							0.00		0.00	0.00										0.00
Amount Used							0.42		108.95	28.85										138.22
Forward Credit To Next Month							0.00		0.00	0.00										0.00
R/O RETURN FLOW									**68.98**	**20.44**										89.42
Previous Month Credit									0.00	0.00										0.00
Amount Used									68.98	20.44										89.42
Forward Credit To Next Month									0.00	0.00										0.00
LAWN RETURN FLOW		**0.43**	**0.28**		**1.04**		**0.12**		**5.60**	**0.97**										8.44
Previous Month Credit		0.00	0.00		0.00		0.00		0.00	0.00										0.00
Amount Used		0.43	0.28		1.04		0.12		5.60	0.97										8.44
Forward Credit To Next Month		0.00	0.00		0.00		0.00		0.00	0.00										0.00
Pueblo Board Water Works RF Lease		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**								0.00
Previous Month Credit		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00								0.00
Amount Used		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00								0.00
Forward Credit To Next Month		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00								0.00
Pueblo Board Water Works Reservoir Release		**0.00**																		0.00
Previous Month Credit		0.00																		0.00
Amount Used	0.00	0.00																		0.00
Forward Credit To Next Month		0.00																		0.00
ORVILLE TOMKY TWIN LAKES							**0.05**													0.05
Previous Month Credit							0.00													0.00
Amount Used							0.05													0.05
Forward Credit To Next Month							0.00													0.00
CATLIN CANAL & RFD AUG STATION							0.00	**125.00**												125.00
Previous Month Credit							0.00	0.00												0.00
Amount Used							0.00	125.00												125.00
Forward Credit To Next Month							0.00	0.00												0.00
CATLIN CANAL WINTER WATER RELEASE		**0.00**																		0.00
Previous Month Credit		0.00																		0.00
Amount Used		0.00																		0.00
Forward Credit To Next Month		0.00																		0.00
CWPDA IF&WHEN RELEASE		**0.00**																		0.00
Previous Month Credit		0.00																		0.00
Amount Used		0.00																		0.00
Forward Credit To Next Month		0.00																		0.00
FOWLER CATLIN PILOT PROJECT CU CREDIT								**1.41**												1.41
Previous Month Credit								0.00												0.00
Amount Used								1.41												1.41
Forward Credit To Next Month								0.00												0.00
HOLBROOK CANAL AUG STATION								**0.00**												0.00
Previous Month Credit								0.00												0.00
Amount Used								0.00												0.00
Forward Credit To Next Month								0.00												0.00
BESSEMER (Avondale) AUG STATION		**0.00**																		0.00
Previous Month Credit		0.00																		0.00
Amount Used		0.00																		0.00
Forward Credit To Next Month		0.00																		0.00
SUNDANCE PROJECT WATER RELEASE		**0.00**																		0.00
Previous Month Credit		0.00																		0.00
Amount Used		0.00																		0.00
Forward Credit To Next Month		0.00																		0.00
HANAGAN RECHARGE POND LAGGED CREDITS								**0.00**												0.00
Previous Month Credit								0.00												0.00
Amount Used								0.00												0.00
Forward Credit To Next Month								0.00												0.00
FT. LYON AUG STATION										**0.00**										0.00
Previous Month Credit										0.00										0.00
Amount Used										0.00										0.00
Forward Credit To Next Month										0.00										0.00
SCMWD EXCESS CU CREDIT		**0.00**																		0.00
Previous Month Credit		0.00																		0.00
Amount Used	0.00	0.00																		0.00
Forward Credit To Next Month		0.00																		0.00
SCMWD PROJECT WATER RELEASE		**0.00**																		0.00

CWPDA RULE 14 ACCOUNTING

AUGMENTATION PLAN IMPLEMENTATION SPREADSHEET - CWPDA
PLAN YEAR 2017-2018

Mar 2018

Updated: 4/24/2018

USER		WHT-U	R1	R2	R3	R4	R5	R6	R7	R8	R9	WHT-M	R10	R11	R12	R13	R14	R15	R16	WHT-L		SUM
Previous Month Credit			0.00																			0.00
Amount Used			0.00																			0.00
Forward Credit To Next Month			0.00																			0.00
FOWLER PROJECT WATER RELEASE			**0.00**																			0.00
Previous Month Credit			0.00																			0.00
Amount Used			0.00																			0.00
Forward Credit To Next Month			0.00																			0.00
SWINK PROJECT WATER RELEASE			**0.00**																			0.00
Previous Month Credit			0.00																			0.00
Amount Used			0.00																			0.00
Forward Credit To Next Month			0.00																			0.00
MANZANOLA PROJECT WATER RELEASE			**0.00**																			0.00
Previous Month Credit			0.00																			0.00
Amount Used			0.00																			0.00
Forward Credit To Next Month			0.00																			0.00
SWINK SCHOOL PROJECT WATER RELEASE			**0.00**																			0.00
Previous Month Credit			0.00																			0.00
Amount Used			0.00																			0.00
Forward Credit To Next Month			0.00																			0.00
LA JUNTA PROJECT WATER RELEASE			**0.00**																			0.00
Previous Month Credit			0.00																			0.00
Amount Used			0.00																			0.00
Forward Credit To Next Month			0.00																			0.00
LAS ANIMAS PROJECT WATER RELEASE			**0.00**																			0.00
Previous Month Credit			0.00																			0.00
Amount Used			0.00																			0.00
Forward Credit To Next Month			0.00																			0.00
SUGAR CITY PROJECT WATER RELEASE			**0.00**																			0.00
Previous Month Credit			0.00																			0.00
Amount Used			0.00																			0.00
Forward Credit To Next Month			0.00																			0.00
JOSEPH WATER PROJECT WATER RELEASE			**0.00**																			0.00
Previous Month Credit			0.00																			0.00
Amount Used			0.00																			0.00
Forward Credit To Next Month			0.00																			0.00
COLORADO CANAL RECHARGE LAGGED CREDITS					**1.52**																	1.52
Previous Month Credit					0.00																	0.00
Amount Used					1.52																	1.52
Forward Credit To Next Month					0.00																	0.00
HIGHLINE+CATLIN CANAL RCHRG & JMR OFFSET RELEASE					**2.05**	**7.26**	**10.39**	**27.56**					**22.89**									70.15
Previous Month Credit					0.00	0.00	0.00	0.00					0.00									0.00
Amount Used					2.05	7.26	10.39	27.56					22.89									70.15
Forward Credit To Next Month					0.00	0.00	0.00	0.00					0.00									0.00
	SCM	**PDA**	**FOWL**	**CSW**	**CMZ**	**SK SCH**	**CLJ**	**CLA**	**USVET**	**SUG**	**USER 700**	**JOS**										
Municipal Depletions (Information Only)	1.43	6.22	32.52	6.22	3.96	1.36	236.86	50.46	0.68	6.14	14.88	1.47										362.19
Municipal Credits (Information Only)	0.43	0.28	2.45	0.12	0.42		183.53	50.26														237.49
Balance	0.99	5.94	30.07	6.10	3.54	1.36	53.33	0.21	0.68	6.14	14.88	1.47										124.70
Total Forward Credit From Previous Month	716.85																					
		0.00	-267.03	-192.05	-186.18	-169.41	-158.24	-96.49	-34.33	-1.98	35.39	50.23	57.90	48.64	40.14	12.34	-0.65	-0.65	-0.65	0.00		
BALANCE FORWARDED		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		**0.00**
Number of days of 1948 or later call	**0**																					
Number of days in month	31																					
Number of days in month free river	0																					
Rule 3 Stateline Depletion ONLY %	34.9%																					

AUGMENTATION PLAN IMPLEMENTATION SPREADSHEET - LAWMA
PLAN YEAR 2017-2018
JUL 2017

Updated: 3/5/2018

USER	WHT-U	R1	R2	R3	R4	R5	R6	R7	R8	R9	WHT-M	R10	R11	R12	R13	R14	R15	R16	WHT-L	JUL SUM
LAWMA																				
BALANCE FORWARDED PREVIOUS MONTH	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.00
LAWMA SEC GWAM DEPLETIONS	-----	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.40**	**3.22**	**2.34**	-----	**3.29**	**20.39**	**40.67**	**95.77**	**0.00**	**0.00**	**0.00**	-----	166.10
Pre-48 SEC Depletion		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		0.00
Pre-48 SEC Credit		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		0.00
LAWMA NON-SEC GWAM & RULE 5 DEPLETIONS	-----	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	-----	**0.00**	**0.38**	**1.20**	**109.17**	**0.00**	**0.00**	**0.00**	**0.00**	110.74
TOTAL DEPLETIONS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	3.22	2.34	0.00	3.29	20.77	41.87	204.94	0.00	0.00	0.00	0.00	276.84
PBWW RETURN FLOWS		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		0.00
KEESEE ARTICLE 2 WATER													**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		0.00
MODIFIED TABLE 3 SOURCES:																				
Fry-Ark & Pilot Project (Applied to SECWCD Wells) & Busk Ivanhoe Water								**3.42**	**6.37**	**0.00**		**1.38**	**5.20**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**16.37**
Previous Month Credit Used								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Amount Used								3.42	6.37	0.00		1.38	5.20	0.00	0.00	0.00	0.00	0.00		16.37
Forward Credit To Stateline Worksheet								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
PBWW RF's Below JMR								**0.00**	**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**
Previous Month Credit Used								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Amount Used								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Forward Credit								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Keesee Direct Flow CU								**0.00**	**0.00**	**0.00**		**0.00**	**182.74**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**182.74**
Previous Month Credit Used								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Amount Used								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Forward Credit								0.00	0.00	0.00		0.00	182.74	0.00	0.00	0.00	0.00	0.00		182.74
Highland CU/TL Credits								**0.00**	**0.00**	**0.00**		**70.05**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**70.05**
Previous Month Credit Used								0.00	0.00	0.00		**20.83**	0.00	0.00	0.00	0.00	0.00	0.00		20.83
Amount Used								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Forward Credit								0.00	0.00	0.00		70.05	0.00	0.00	0.00	0.00	0.00	0.00		70.05
Fort Bent Ditch Shares @ Aug Station								**0.00**	**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**38.42**	**0.00**	**0.00**	**0.00**		**38.42**
Previous Month Credit Used								0.00	0.00	0.00		0.00	0.00	0.00	21.42	0.00	0.00	0.00		21.42
Amount Used								0.00	0.00	0.00		0.00	0.00	0.00	38.69	0.00	0.00	0.00		38.69
Forward Credit								0.00	0.00	0.00		0.00	0.00	0.00	21.15	0.00	0.00	0.00		21.15
Lamar Canal Shares at Lamar Canal West & Center Farm Turnout								**0.00**	**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**699.88**	**581.44**	**0.00**		**1281.32**
Previous Month Arkansas Credit NOT Forwarded to Stateline								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Amount Used								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Forward Credit To Stateline Worksheet								0.00	0.00	0.00		0.00	0.00	0.00	0.00	699.88	581.44	0.00		1281.32
Manvel Account Water at West Farm Turnout								**0.00**	**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**
Previous Month Credit Used								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Amount Used								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Forward Credit								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Ft. Lyon Augmentation Stations to Reach 9-13								**0.00**	**0.00**	**0.00**		**0.00**	**70.30**	**160.18**	**94.36**	**0.00**	**0.00**	**0.00**		**324.84**
Previous Month Credit Used								0.00	0.00	0.00		0.00	56.94	115.17	63.44	0.00	0.00	0.00		235.55
Amount Used								0.00	0.00	0.00		0.00	56.94	139.47	63.44	0.00	0.00	0.00		259.85
Forward Credit								0.00	0.00	0.00		0.00	70.30	135.88	94.36	0.00	0.00	0.00		300.54
X-Y Direct Flow								**0.00**	**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**71.26**		**71.26**
Previous Month Arkansas Credit NOT Forwarded to Stateline								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	**0.00**	0.00		0.00
Amount Used								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Forward Credit To Stateline Worksheet								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	71.26		71.26
Release from Meredith								**0.00**	**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**
Previous Month Credit Used								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Amount Used								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Forward Credit								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
CSU Fountain Creek at Node 34 w/ Transit Loss to Reach 7								**0.00**	**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**		**0.00**
Previous Month Credit Used								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Amount Used								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Forward Credit								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Excess City of Lamar Accretions								**0.00**	**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**50.00**	**0.00**	**0.00**	**0.00**		**50.00**
Previous Month Credit Used								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Amount Used								0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Forward Credit								0.00	0.00	0.00		0.00	0.00	0.00	50.00	0.00	0.00	0.00		50.00
Delivery To Offset Account TL Credit								**0.00**		**0.00**										**0.00**
Previous Month Credit Used								0.00		0.00										0.00
Amount Used								0.00		0.00										0.00
Forward Credit								0.00		0.00										0.00
BALANCE FORWARDED	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-3.02	-6.17	-3.82	-3.81	-1.89	-43.25	-140.80	-37.81	-37.76	-37.71	-37.66	-37.61	
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Number of days of 1948 or later call	31
Number of days in month	31
Number of days in month free river	0
Rule 3 Stateline Depletion ONLY %	81.9%

AUGMENTATION PLAN IMPLEMENTATION SPREADSHEET - LAWMA
PLAN YEAR 2017-2018

Updated: 3/5/2018

	July-17									JUL
	R11	R12	R13	R14	R15	R16	R17	R18	R21	SUM
CWPDA Rule 3 Wells										
BALANCE FORWARDED	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	
TOTAL DEPLETIONS	0.00	0.00	0.00	0.00	0.00	0.00				
LAWMA Rule 3 Wells										
BALANCE FORWARDED	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	
TOTAL DEPLETIONS	**20.11**	**40.36**	**185.55**	**165.51**	**86.79**	**102.17**	**223.76**	**1027.51**	**14.66**	**1866.42**
100% OF STATELINE DEPL	**0.00**	**0.00**	**0.00**	**165.51**	**86.79**	**102.17**	**223.76**	**1027.51**	**14.66**	**1620.40**
81.90% OF STATELINE DEPL	**0.00**	**0.00**	**0.00**	**135.55**	**71.08**	**83.68**	**183.26**	**841.53**	**12.01**	**1327.11**
REPLACEMENTS										
Fry-Ark & Pilot Project (Applied to SECWCD Wells)	0.00	0.00	0.00	0.00						0.00
Arkansas River Forward Credit	**0.00**	0.00	0.00	0.00						0.00
Amount Used	0.00	0.00	0.00	0.00						0.00
Forward Credit	0.00	0.00	0.00	0.00						0.00
TRANSIT LOSS ACCOUNT CREDITS	0.00									0.00
Previous Month Credit	0.00									0.00
Amount Used	0.00									0.00
Forward Credit	0.00									0.00
PBWW TM & AG RETURN FLOWS	0.00	0.00	0.00	0.00						0.00
Previous Month Credit	0.00	0.00	0.00	0.00						0.00
Amount Used	0.00	0.00	0.00	0.00						0.00
Forward Credit	0.00	0.00	0.00	0.00						0.00
COLORADO BEEF/LAMAR SHARES at CENTER FARM				0.00						0.00
Previous Month Credit				0.00						0.00
Amount Used				0.00						0.00
Forward Credit				0.00						0.00
DOW/CITY OF LAMAR SHARES at CENTER FARM Arkansas River Forward Credit				**699.88**	**581.44**					1281.32
Previous Month Stateline Forward Credit				0.00	0.00					0.00
Amount Used				699.88	521.00					1220.88
Forward Credit				0.00	60.44					60.44
FORT BENT DITCH SHARES				0.00						0.00
Previous Month Credit				0.00						0.00
Amount Used				0.00						0.00
Forward Credit				0.00						0.00
SISSON-STUBBS DIRECT FLOW **(USE IN STATELINE ONLY)**							0.00			0.00
Previous Month Stateline Forward Credit							0.00			0.00
Amount Used							0.00			0.00
Forward Credit (Seasonal)							0.00			0.00
X-Y DIRECT FLOW Arkansas River Forward Credit					0.00					0.00
Previous Month Stateline Forward Credit					0.00					0.00
Amount Used					0.00					0.00
Forward Credit (Seasonal)					0.00					0.00
MANVEL DIRECT FLOW **(USE IN STATELINE ONLY)**					**22.08**					22.08
Previous Month Stateline Forward Credit					**87.50**					87.50
Amount Used					0.00					0.00
Forward Credit (Seasonal)					109.58					109.58
Lamar Canal Shares at Granada East & West Farm Turnout **(USE IN STATELINE ONLY)**							**354.17**			354.17
Previous Month Credit Used							**108.02**			108.02
Amount Used							0.00			0.00
Forward Credit (Seasonal)							462.19			462.19

OFFSET ACCOUNT TL RELEASE CREDITS R11		**101.00**										101.00
Previous Month Credit		**15.00**										15.00
Amount Used		15.00										15.00
Forward Credit		101.00										101.00
OFFSET ACCOUNT TL RELEASE CREDITS R14					**418.00**							418.00
Previous Month Credit					**62.00**							62.00
Amount Used					62.00							62.00
Forward Credit					418.00							418.00
OFFSET ACCOUNT TL RELEASE CREDITS R17								**234.00**				234.00
Previous Month Credit								**34.00**				34.00
Amount Used								34.00				34.00
Forward Credit								234.00				234.00
OFFSET ACCOUNT RELEASE CREDITS										0.00	**12558.80**	12558.80
OFFSET ACCOUNT WATER	**0.00**	0									0.00	0.00
BALANCE FORWARD		-15.00	-14.98	-14.96	-641.27	-1090.35	-1005.25	-854.67	-12.02	0.00		
BALANCE FORWARD BY REACH		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
month deciamal equivalent	42917											
% of month Call on JM to Lamar Canal (11,12,13)	100%											
% of month Call on 14,15,16	0%											

Colorado Ditches Calling^

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Attachment 12 - Ten-year Compact compliance table (2021)

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Ten-year Accounting of Depletions and Accretions to Usable Stateline Flow
2012 - 2021

1	2	3	4	5	6	7	8	9
Year of Ten-year Cycle	Model Year	H-I Model Usable Depletion/ Accretion[1]	Offset Account Credits[2]					Remaining Usable Depletion/ Accretion[6]
			Stateline Delivery to Kansas	Evaporation Credit	Gross Credit[3]	Applied to Post-1985 Depletions[4]	Net Credit[5]	
1	2012	4,044	0	0	0	1,479	-1,479	5,523
2	2013	2,594	0	0	0	1,505	-1,505	4,099
3	2014	4,332	2,728	0	2,728	1,635	1,093	3,239
4	2015	2,779	2,695	0	2,695	2,337	358	2,421
5	2016	4,328	4,044	0	4,044	3,043	1,001	3,327
6	2017	-1,916	8,847	0	8,847	3,300	5,547	-7,463
7	2018	-9,062	4,543	0	4,543	3,346	1,197	-10,259
8	2019	11,807	8,045	0	8,045	3,756	4,289	7,518
9	2020	2,096	11,278	0	11,278	3,717	7,561	-5,465
10	2021	4,493	7,139	0	7,139	3,029	4,110	383
Total		25,495	49,319	0	49,319	27,147	22,172	**3,323**
	Shortfall for 2022							**3,323**

Water Quantities are in acre-feet.

1 Positive values in Columns 3 and 9 reflect depletions; negative values, accretions. H-I Model results in Column 3 for 2021 are based on input file UPDATE21_Jun22.dat.

[2] Positive values in Columns 4, 5, 6, and 8 reflect credits; negative values, debits.

[3] Column 6 is the sum of Columns 4 and 5.

[4] Column 7, a positive value, is the amount of Offset Credit applied to Post-1985 depletions, determined pursuant to Appendix A.3 of the 2009 Judgment and Decree in KS v CO.

[5] Column 8 is Column 6 minus Column 7.

[6] Column 9 is Column 3 minus Column 8.