

# ARKANSAS RIVER COMPACT ADMINISTRATION

Lamar, Colorado 81052

For Colorado

Chairman and Federal Representative

For Kansas

Jennifer Gimbel, Denver

Robin Jennison

David Barfield, Topeka

Colin Thompson, Holly

Healy, Kansas

Randy Hayzlett, Lakin

Matt Heimerich, Olney Springs

David A. Brenn, Garden City

December 1, 2009

Mr. Colin Thompson, Chairman  
Mr. David Brenn, Member  
Mr. Robin Jennison, Ex-officio Member  
Operations Committee  
Arkansas River Compact Administration

Re: Compact Year 2009 Summary  
Assistant Operations Secretary Report

Gentlemen,

In this letter report, I will provide a Kansas perspective on operations that have occurred over the past Compact Year 2009, including communications, the Pueblo Winter Water Storage Program (PWWSP), deliveries to Kansas, deliveries to the John Martin Reservoir Permanent Pool, pass-thru & status accounting, the Water Issues Matrix and other issues which were worked on.

## **Communications**

The Operations Secretary, Assistant Operations Secretary and their staffs have set a goal of open and frequent communications regarding Arkansas River operational issues. Such communications should foster a more positive, collaborative, and productive working relationship between the parties.

Meetings: The Operations and Assistant Operations Secretaries met on two separate occasions: the first meeting was April 14<sup>th</sup> in La Junta, Colorado, and the second meeting was November 16<sup>th</sup> in Lamar, Colorado. These meetings were attended by staff from each State. Summaries of these meetings were not generated.

Among the issues discussed at these meetings were past Offset Account reports, inclusion of ten-year Compact compliance accounting in ARCA annual reports, the water

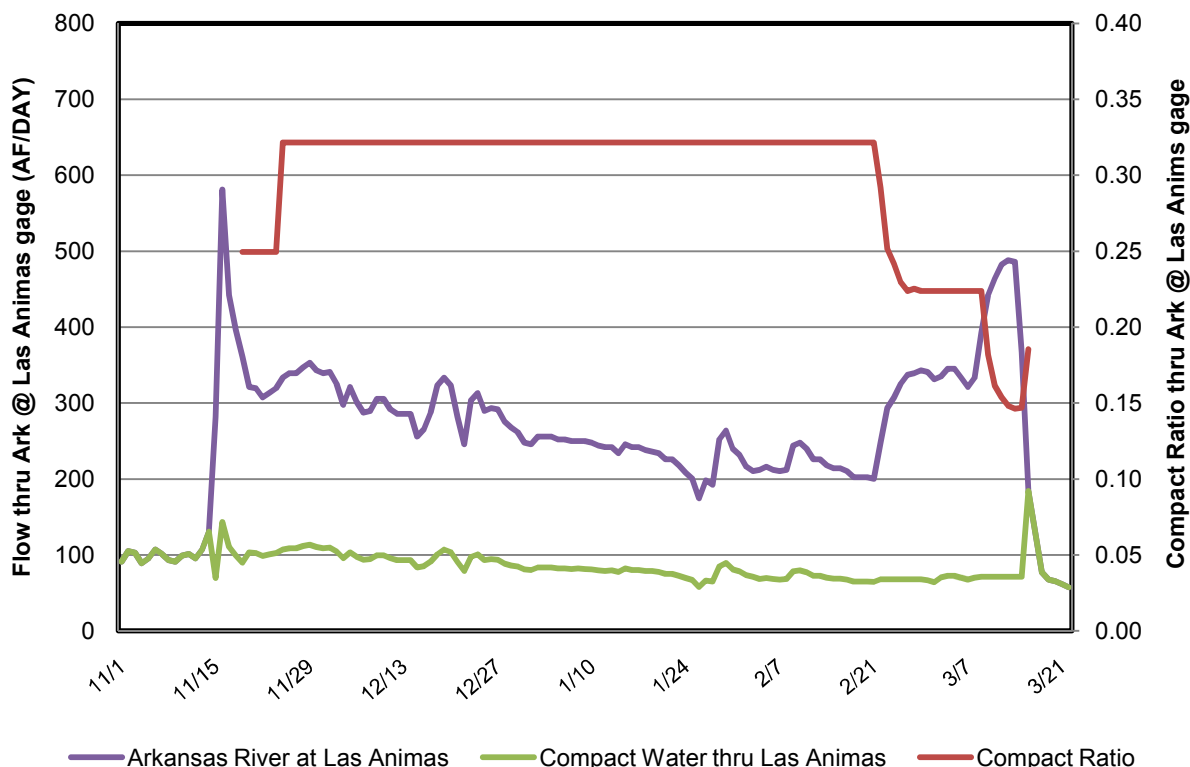
issues matrix, reservoir-to-reservoir deliveries, the PWWSP, 1980 Operating Plan revisions, Corps maintenance operations, and several other issues.

Other Communications: Just after the first of the year, the Corps' maintenance operations resulted in releases from John Martin Reservoir (JMR). These operations will be more fully described by the Operations Secretary and by the Corps in their respective reports. I want to note that the States were not initially in agreement on how the releases affected the water stored in JMR. Ultimately, through constructive dialogue, the States were able to agree on how these releases affected water being stored under the Compact and the PWWSP.

Regular Communications: The States communicated throughout the year on a variety of topics including John Martin Accounting System data updates, stockwater and return flow releases from Trinidad reservoir, PWWSP operational issues, permanent pool delivery, and Offset Account operations. Emails represented the primary means of communication.

### **Pueblo Winter Water Storage Program**

Kansas has long been concerned about how the split between the Compact and PWWSP water passing thru the Arkansas River at Las Animas USGS gage is determined. While both States have spent considerable time evaluating this issue, it has not been resolved. Now that the states have resolved a number of other issues, we hope to be able to devote more time to working through this issue. Kansas's key concern is whether or not water being stored under PWWSP includes water that would have otherwise been stored in Compact conservation storage. Figure 1 shows the flows attributable to Compact conservation storage thru the Arkansas River at Las Animas gage.



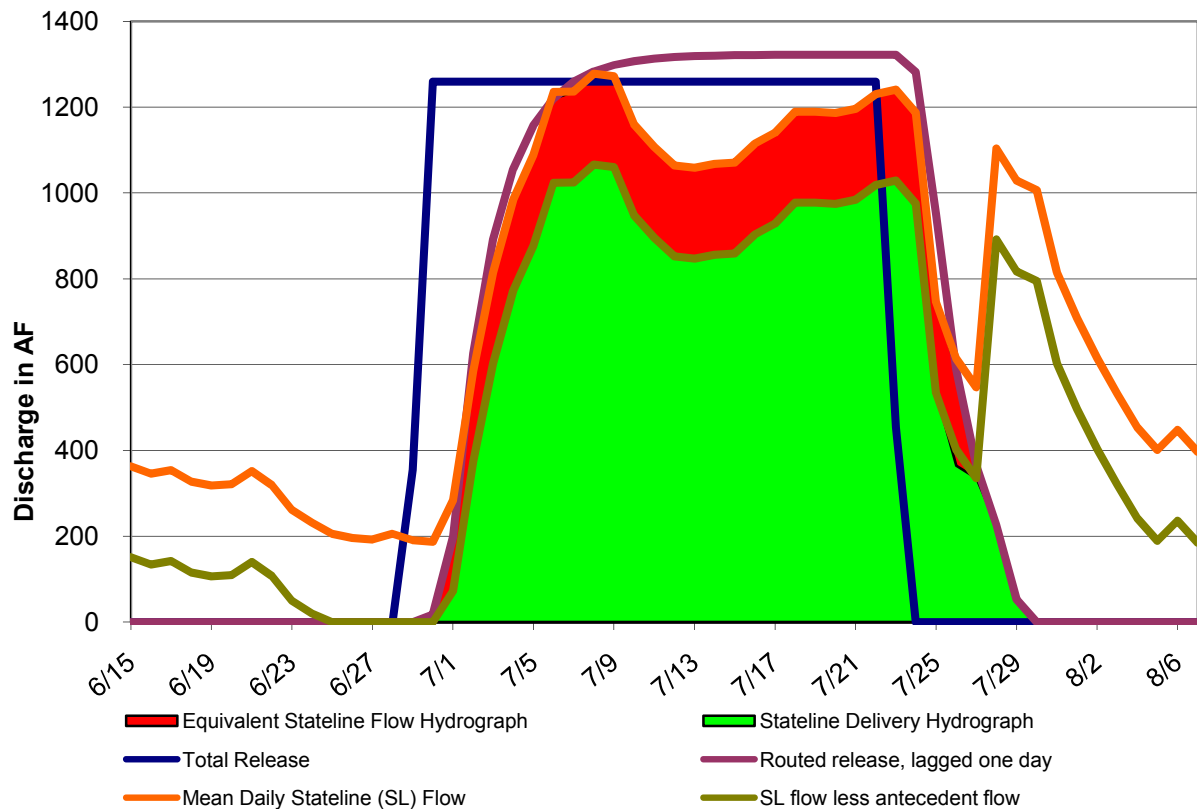
**Figure 1. Flows attributed to Compact conservation storage passing thru Arkansas River at Las Animas between November 1, 2008 and March 31, 2009.**

## Deliveries to Kansas

On June 29, 2009, Kansas placed a call for 635 cfs to be delivered to the Stateline from the Kansas Section II Account. The antecedent Stateline flow was 107 cfs for the prior ten days; therefore, a concurrent Transit Loss Account release was coordinated. Bill Tyner and Robert Phillips of Colorado Division 2 and Brandy Cole and I of Garden City Field Office discussed the river conditions as related to potential transit loss on the Kansas Section II delivery. Based on those discussions, the concurrent Transit Loss Account release was set at 80 cfs with agreement to monitor the release and make additional adjustments as needed. See emails dated June 29, 2009 (Attachment 1).

The delivery was monitored thru Lamar on June 30<sup>th</sup>. The flow appeared to top off at 553 cfs, which was less than the 640 cfs which was calculated with the transit loss to Lamar. The river conditions were again discussed between the States, and as a result the Transit Loss Account release was increased by 40 cfs in an attempt to meet the 568 cfs target flows thru Arkansas at Granada. See emails dated June 29, 2009 (Attachment 1). The Transit Loss Account release was maintained at 120 cfs until this account was exhausted on July 7<sup>th</sup>.

Stateline flow peaked on July 8<sup>th</sup> at 644 cfs and then began to fall off such that the Kansas call of 635 cfs was not being met on July 10<sup>th</sup> (Figure 2). Flows below JMR to



**Figure 2. Hydrograph of Kansas Section II and Offset Account releases during June 29 and July 23, 2008, from "KSJun29-July23l.xls" spreadsheet provided by Bill Tyner (email, August 3, 2009)**

the Stateline continued to be monitored over that weekend. On Monday morning, July 13<sup>th</sup>, since Stateline flows were less than the Kansas call of 635 cfs, Kansas staff sent an email inquiring about river conditions and diversions below JMR. Colorado staff evaluated the conditions, noting the decreasing native flow being passed thru JMR and increased transit losses in District 67. Adjustments were made to the amount of transit loss being released to support District 67 diversions. The flow conditions were monitored throughout the release and the Stateline flow gradually increased until the end of the Kansas call. The Kansas Section II Account was exhausted on July 16<sup>th</sup>, with a total of 21,092 AF released and an additional 1,654 AF released from the Transit Loss Account.

Upon exhaustion of Kansas Section II Account on July 16<sup>th</sup>, Kansas called for an Offset Account release. The Offset Account is to be delivered in addition to the antecedent Stateline flows. However, given that the Stateline flows were not at the needed 635 cfs, the Offset Account release was not reduced but rather continued at 635 cfs. This release rate was maintained until July 23<sup>rd</sup> when Kansas ceased the Offset Account release. A total of 8,685 AF was released from the Offset Account.

Both States reviewed the accounting and we were in agreement on final Stateline deliveries of both the Kansas Section II Account and Offset Account releases (Table 1). The Kansas Section II Stateline delivery was 19,746 AF; therefore, there was a delivery

deficit of 1,346 AF. The replenishment of the Kansas Section II delivery deficit began when there was storage under Amity's Great Plains water right on July 31<sup>st</sup>, which yielded 132.85 AF of storage charge water.

**Table 1. Summary of Kansas Section II and Offset Account releases during June 29 and July 23, 2008, from "KSJun29-July231.xls" spreadsheet provided by Bill Tyner (email, August 3, 2009)**

Offset Delivery Efficiency =	75.39%
Offset Net Delivery =	6,548 AF
Offset Consumable Delivery =	5,511 AF
ESF Delivery Efficiency =	93.6%
Section II Delivery =	19,746 AF
Section II Delivery Transit Loss =	1,346 AF
Evaporation Delivery Credit =	0 AF
Total Offset =	8,686 AF
Transit Loss on Consumable =	1,799 AF
Granada Transit Loss Credit Percentage =	100%
Transit Loss Model Input JMR to Lamar =	172 AF
Transit Loss Model Input Lamar to Granada =	733 AF
Transit Loss Model Input Granada to Stateline =	444 AF
Total Transit Loss Model Input =	1,349 AF

### **Deliveries to John Martin Reservoir Permanent Pool**

One transmountain delivery was made to the JMR Permanent Pool in May. Although Kansas continues to have concerns related to such deliveries, there were no new concerns identified. For this delivery, 3,000 AF of transmountain water was released from Pueblo Reservoir beginning on May 15<sup>th</sup>. The calculated transit loss was 14.7% and the transit loss charged to this release was 1.47%. The reduction was attributed to transit losses recovered after the completion of the release. This release accounted for as arriving at JMR from May 17<sup>th</sup> to May 21<sup>st</sup> with 2,955.90 AF being credited to the Permanent Pool account during this period.

### **Pass-thru and Status Accounting**

Over this Compact Year, the storage, inflows and releases from JMR were tracked by the Garden City Field Office in a spreadsheet. This spreadsheet calculated the amount of water being passed thru JMR. It also calculated the difference between the actual content based on the staff gage and JMR content based on the John Martin Accounting System. This spreadsheet was regularly reviewed by the Garden City Field Office staff and was provided occasionally throughout the irrigation season to the Operations Secretary. The final spreadsheet was provided to the Operations Secretary on November 10<sup>th</sup> for inclusion in his report.

## **Water Issues Matrix**

This is a joint work product of the States which is designed to track the various disputed issues. The latest is attached to this report (Attachment 2). A summary table showing the status of the 34 issues (12 pending, 4 removed and 18 resolved) is attached (Attachment 3).

## **Other Issues**

In reviewing the activities of this year, there was considerable time spent on various issues since the last Compact meeting. These are issues that are not normally reported on before the Compact, but are noteworthy. These activities included the following:

- Evaluation of the sufficiency and administration of the Amended Rules and Regulations Governing the Diversion and Use of Tributary Ground Water in the Arkansas River Basin, Colorado (Use Rules)
- Compact rules governing improvements to surface water irrigation systems in the Arkansas River Basin in Colorado
- Trinidad Operating Principles Ten-year Review
- 2008 Compact compliance issues

The States negotiated an agreement on the evaluation of the sufficiency and administration of the Use Rules. With this agreement, the retained jurisdiction, provided for in the Judgment and Decree entered in *Kansas v Colorado*, was relinquished. The agreement was in the form of an amended Appendix A.4.

Colorado provided Kansas the opportunity to comment during the development of proposed rules governing surface water irrigation system improvements within the Arkansas River basin in Colorado. Kansas will continue to monitor the progress and implementation of these rules to assure that Stateline flows are not affected by such improvements.

Comments were provided on the Trinidad Operating Principles Ten-year Review draft report. We look forward to finalizing this document with the other participants.

The States will be engaged in various Compact compliance issues as they implement the Judgment and Decree in *Kansas v Colorado*. The Decree calls out specific accountings and reviews that will be conducted into the future.

## **Summary**

In this report, I provided the Kansas perspective on JMR operations that have occurred in Compact Year 2009. Communication between Kansas and Colorado staff is key to working through operational issues between the States. There are several long

standing issues that remain between the states and, based on the past year's success, I am optimistic that those issues will be advanced and/or resolved in the upcoming year.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kevin L. Salter", with a stylized flourish extending to the right.

Kevin L. Salter, P.E.  
Assistant Operations Secretary

Attachments

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## **Attachment 1**

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## **Salter, Kevin**

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**From:** Tyner, Bill [Bill.Tyner@state.co.us]  
**Sent:** Monday, June 29, 2009 4:24 PM  
**To:** Salter, Kevin; Cole, Brandy  
**Subject:** FW: Kansas Section II call

Kevin & Brandy,

The Corps had no problem with reducing the gate, waiting a short time, then increasing the gate. They reminded Rob that for an increase of 700 cfs+ they have to do the increase in a couple of hitches so don't be surprised to see a bit of a stair step back up. I think they are limited by their operating criteria to only a certain cfs change in a short duration time so they have to stretch it out a bit.

Thanks,  
Bill Tyner

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**From:** Tyner, Bill  
**Sent:** Monday, June 29, 2009 3:04 PM  
**To:** 'Salter, Kevin'  
**Subject:** RE: Kansas Section II call

Thanks Kevin

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**From:** Salter, Kevin [mailto:Kevin.Salter@KDA.KS.GOV]  
**Sent:** Monday, June 29, 2009 3:02 PM  
**To:** Tyner, Bill; Phillips, Robert  
**Cc:** Witte, Steve; Cole, Brandy  
**Subject:** RE: Kansas Section II call

This email will document our discussions this afternoon related to setting the transit loss release rate. The transit loss release was discussed between Bill Tyner & Rob Phillips for Colorado Division 2 and Brandy Cole and myself for Kansas Division of Water Resources.

With Stateline 10-day antecedent flow being less than 150 cfs, we reviewed and discussed the transit loss calculation for this release to the Stateline that was included in the release spreadsheet. The calculations indicated a transit loss of 10.5%, which would be approx. 67 cfs on a Section II release of 635 cfs. The transit loss calculation was also estimating 57 hours from the time of release to arrival at the Stateline.

Given the dry river conditions, we decided set the transit loss release rate at 80 cfs and then monitor the flows through Lamar. The duration of the release would depend on how the release arrives at the various locations downstream of John Martin Reservoir. The combined Kansas Section II and transit loss account releases would be 715 cfs.

Bill and Rob noted that the native flow through John Martin Reservoir needed to be reduced, so for the purposes of administration, they will instruct the Corps to reduce the outflow for a period of time: this will create a dip in the river where the Lamar Canal would have to reduce their diversions.

Bill and Rob also noted that the native flows being released from Pueblo Reservoir was increased over the weekend. Some of those increased flows should arrive later this week at John Martin Reservoir and would be passed downstream.

....Kevin

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**From:** Tyner, Bill [mailto:Bill.Tyner@state.co.us]  
**Sent:** Monday, June 29, 2009 1:11 PM  
**To:** Cole, Brandy; Phillips, Robert  
**Cc:** Salter, Kevin; Witte, Steve  
**Subject:** RE: Kansas Section II call

Brandy & Kevin,

Please find attached the initial delivery spreadsheet. I filled in the streamflow data and extended the 6/28/09 values for ARKCOOKS and FRODITKS forward for June 29<sup>th</sup> and 30<sup>th</sup> and it looks like the antecedent flow calculates as approximately 108 cfs under the crediting agreement. That puts us in the consult category for the amount of transit loss water to release with the 635 cfs of Section II water. Can you take a look at the spreadsheet and the stream flow data (attached) and let us know how much Transit Loss Account water you believe we should start with to ensure your release? It looks like 5% would be 31.75 cfs. I would think we would want to start the first day with at least that much and perhaps as high as 60 cfs to get a good push.

Thanks,  
Bill Tyner

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**From:** Cole, Brandy [mailto:Brandy.Cole@KDA.KS.GOV]  
**Sent:** Monday, June 29, 2009 11:09 AM  
**To:** Phillips, Robert  
**Cc:** Tyner, Bill; Salter, Kevin; Witte, Steve  
**Subject:** Kansas Section II call

Rob:

Per phone our conversion today, Kansas is calling for 635 cfs at the stateline out of the Section II Account.

Thank you and if you have any questions, please give me a call.

*Brandy Cole*

*Environmental Scientist  
Dept. of Ag/Div. of Water Resources  
Garden City Field Office  
620-276-2901  
New email address: [Brandy.Cole@kda.ks.gov](mailto:Brandy.Cole@kda.ks.gov)  
DWR's improved website: [www.ksda.gov/dwr](http://www.ksda.gov/dwr)*

## **Salter, Kevin**

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**From:** Phillips, Robert [Robert.Phillips@state.co.us]  
**Sent:** Tuesday, June 30, 2009 3:31 PM  
**To:** Cole, Brandy; Tyner, Bill  
**Cc:** Salter, Kevin  
**Subject:** RE:

Hi All,

Per our discussion this afternoon at 14:00hrs, the transit loss to ARKLAMCO from John Martin Reservoir appeared to be more than originally thought. Current flow at ARKLAMCO at 14:00hrs is approximately 567.0cfs and fairly steady. Signs of the increase from John Martin Reservoir yesterday afternoon appeared to have gotten at ARKLAMCO around 9:00hrs this morning. The Livingston Model calculation for this release with previous antecedent flow computes a 5.2% transit loss from ARKLAMCO to the Gaging station at Granada. It was decided by all to increase the discharge at John Martin Reservoir an additional 40.0cfs at this time to meet the target at ARKGRACO of 567.74cfs.

Rob Phillips  
Ark Res Ops  
Division 2

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**From:** Cole, Brandy [mailto:Brandy.Cole@KDA.KS.GOV]  
**Sent:** Tuesday, June 30, 2009 12:38 PM  
**To:** Tyner, Bill  
**Cc:** Phillips, Robert; Salter, Kevin  
**Subject:**

Hi Bill:

Kevin and I were just going over how the release was looking and noticed that it has topped over at 553 cfs at Lamar. It appears that the Transit Losses to Lamar is over our predicted percentages. It seems like we should discuss the transit loss to see if a change in that release is needed.

You can give us a call when you have a moment. Thanks!

*Brandy Cole*

*Environmental Scientist  
Dept. of Ag/Div. of Water Resources  
Garden City Field Office  
620-276-2901*

*New email address: [Brandy.Cole@kda.ks.gov](mailto:Brandy.Cole@kda.ks.gov)*

*DWR's improved website: [www.ksda.gov/dwr](http://www.ksda.gov/dwr)*

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## **Salter, Kevin**

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**From:** Phillips, Robert [Robert.Phillips@state.co.us]  
**Sent:** Monday, July 13, 2009 11:09 AM  
**To:** Cole, Brandy; Tyner, Bill  
**Cc:** Salter, Kevin  
**Subject:** RE: Stateline Flows

Good morning Brandy,

Bill & I have looked at the flow data this morning at the District 67 ditches and state line flows. With the falling native flow in the Arkansas River we have seen the last few days, the transit loss for the District 67 ditches has more than likely increased as well. I have increased the transit loss to the District 67 ditches this morning which resulted in a slight increase at John Martin Reservoir while attempting to maintain the same flow rate at the ditches. The Ft. Bent Canal has elected to cut back to 38.0 cfs today until further notice. Bill & I are looking at the flow data as often as we can in order to keep the transit loss as close to actual as possible. Thanks and have a good day!

Rob

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**From:** Cole, Brandy [mailto:Brandy.Cole@KDA.KS.GOV]  
**Sent:** Monday, July 13, 2009 8:16 AM  
**To:** Tyner, Bill; Phillips, Robert  
**Cc:** Salter, Kevin  
**Subject:** Stateline Flows

Bill / Rob:

Stateline flows are less than what we called for. We would appreciate a review of the Colorado District 67 diversions.

If you have any questions please don't hesitate to call. I will be out in the field today. Both Kevin and I can be reached on our cell phones.

*Brandy Cole*

*Environmental Scientist*

*Dept. of Ag/Div. of Water Resources*

*Garden City Field Office*

*620-276-2901*

*New email address: [Brandy.Cole@kda.ks.gov](mailto:Brandy.Cole@kda.ks.gov)*

*DWR's improved website: [www.ksda.gov/dwr](http://www.ksda.gov/dwr)*

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## **Attachment 2**

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# Water Issues Matrix

<b>Pending JMR Accounting Issues .....</b>	<b>2</b>
10 – Resolved.....	2
11 – Removed .....	2
12 – Consideration of new sources for permanent pool water – no specific source has been identified for consideration .....	2
13 – Removed .....	2
20 – Resolved.....	2
21 – Resolved.....	2
22 – Criteria for determining Section III storage under the Pueblo Winter Water Storage Program (PWWSP).....	3
23 – Resolved.....	3
24 – Utilization of “Summer storage season” as defined by the 1980 Operating Plan ..	3
25 – Criteria for Summer storage event trigger – Section II. B 1 .....	4
26 – Section II limitations on use made of account water to irrigation only .....	4
30 – Resolved.....	5
31 – Resolved.....	5
32 – Resolved.....	5
33 – Transit loss on reservoir-to-reservoir deliveries .....	5
40 – Resolved.....	5
41 – Resolved.....	5
42 – Resolved.....	5
43 – Resolved.....	5
44 – City of Lamar regulating account .....	5
50 – Commencement of a spill event.....	6
51 – Resolved.....	6
52 – Upstream storage during JMR spill events .....	7
53 – Adjusted JMR inflows during times of spill .....	7
54 – Resolved.....	7
60 – Section II(C)(2) compliance (Agreement B) .....	8
61 – Resolved.....	8
62 – Resolved.....	8
63 – Removed .....	8
64 – Resolved.....	8
65 – Removed .....	8
66 – Resolved.....	8
67 – Resolved.....	8
70 – Trinidad Reservoir: Passing of inflows exceeding 1,000 cfs.....	9
<b>Notes on Water Issues Matrix.....</b>	<b>10</b>
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Water Issues Matrix Versions.....	11

### Pending JMR Accounting Issues

<b>10 – Resolved</b> -- Permanent Pool evaporation charges calculated by pro rata volume vs. incremental area	
<b>11 – Removed</b> -- Transfer of Account water to Permanent Pool during flood control operations in JMR	
<b>12 – Consideration of new sources for permanent pool water – no specific source has been identified for consideration</b>	
<i>ARCA Committee</i>	Engineering
<i>Issue Category &amp; Priority<sup>1</sup></i>	B – 8
<i>Legal<sup>2</sup> – Policy<sup>3</sup> – Technical<sup>4</sup></i>	Policy
<i>Kansas Staff Position</i>	<i>Colorado Staff Position</i>
<i>Kansas Staff Comments</i>	<i>Colorado Staff Comments</i>
<i>ARCA Committee or other general comment(s)</i>	
<ul style="list-style-type: none"> <li>• LAWMA made a conceptual proposal at the December 2005 ARCA Annual Meeting</li> <li>• LAWMA provided additional detail for this proposal in February 2007</li> <li>• Informal discussion between Kansas, LAWMA and Colorado</li> <li>• A timeline for discussion between Kansas &amp; LAWMA was established at 2007 ARCA Annual meeting.</li> <li>• David Barfield letter (26 December 2007)</li> <li>• Matt Heimerich letter (January 7, 2008)</li> <li>• David Barfield provided a list of discussion items (email Jan 18, 2008)</li> <li>• Discussion between Barfield &amp; Heimerich on proposal (call Feb 5, 2008)</li> <li>• Email from Matt (Feb 5, 2008) to Colorado team / Barfield agreed to provide a list of LAWMA Colorado Water Rights for use as a source for the permanent pool</li> <li>• LAWMA withdraws its request by letter dated (letter July 1, 2008)</li> <li>• LAWMA has an obligation to provide a source of water for the JMR Permanent Pool, so this issue remains active</li> <li>• David Barfield provides to Matt Heimerich principles that would guide Kansas evaluation (letter dated Nov 25, 2008)</li> </ul>	
<b>13 – Removed</b> -- 1980 Operating Plan's Restriction on use of Section III related to Perm Pool	
<b>20 – Resolved</b> -- Winter Water Account of convenience	
<b>21 – Resolved</b> -- Timely distribution of Section III storage charge during Pueblo Winter Water Storage Program (PWWSP)	

<sup>1</sup> Categories: **A** – capable of resolution; **B** – may need to be addressed by an ARCA Committee other than Operations; and **C** – staffs have taken this issue as far as they can. The priority based on two groupings “A” issues and “B & C” issues. From memos dated 5 Feb 2004 and 19 August 2004 (Witte & Rude)

<sup>2</sup> **Legal** is defined as an issue that is not resolvable at this time or within ARCA

<sup>3</sup> **Policy** is defined as an issue that needs to have input or guidance from either Operations Committee or ARCA

<sup>4</sup> **Technical** is defined as an issue that can be resolved by the respective State staffs

<b>22 – Criteria for determining Section III storage under the Pueblo Winter Water Storage Program (PWWSP)</b>	
<b>ARCA Committee</b>	Operations
<b>Issue Category &amp; Priority</b>	A – 4
<b>Legal – Policy – Technical</b>	Legal 1 <sup>st</sup> / Technical 2 <sup>nd</sup>
<b><i>Kansas Staff Position</i></b>	<b><i>Colorado Staff Position</i></b>
The criterion used by Colorado fails to adhere to what was established under the 1980 Operating Plan, specifically: “The Amity may store such water as it could otherwise divert from the Arkansas River for storage in the Great Plains Reservoir system ...” (Section III.A.) and for the Fort Lyon and Las Animas Consolidated they may deliver water under the PWWSP but “the delivery cannot include water that otherwise would have accumulated in conservation storage” (Sections III.B. and C.).	The criteria used to divide inflow to JMR into conservation storage/Section III is not provided in the 1980 Operating Plan, but has been continuously used. Since KS did not prove PWWSP caused injury, CO is reluctant to change.
<b><i>Kansas Staff Comments</i></b>	<b><i>Colorado Staff Comments</i></b>
ARCA should establish criteria for determining the water available for Section III storage in JMR to protect inflows to conservation storage. Water delivered to JMR under the PWWSP should meet those criteria.	Colorado consideration of changes may occur.
<b><i>ARCA Committee or other general comment(s)</i></b>	
The Operation Secretary and the Assistant Operation Secretary should continue to work on this issue (10 May 2002).	

<b>23 – Resolved --Reporting of Winter Water vs. Winter Compact storage split calculation</b>
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<b>24 – Utilization of “Summer storage season” as defined by the 1980 Operating Plan</b>	
<b>ARCA Committee</b>	Operations
<b>Issue Category &amp; Priority</b>	
<b>Legal – Policy – Technical</b>	
<b><i>Kansas Staff Position</i></b>	<b><i>Colorado Staff Position</i></b>
The 1980 Operating Plan defines the "Summer storage season shall be the period of time commencing at the first exhaustion of conservation storage and continuing to and including the next succeeding October 31."	
<b><i>Kansas Staff Comments</i></b>	<b><i>Colorado Staff Comments</i></b>
The 1998 Operations Secretary's Annual Report notes that the Operations Secretary deviate from ...	This is an aspect of Kansas' complaint regarding Agreement B (Issue # 60), not a separate issue and therefore should be removed.
<b><i>ARCA Committee or other general comment(s)</i></b>	

<b>25 – Criteria for Summer storage event trigger – Section II. B 1</b>	
<b>ARCA Committee</b>	Operations Committee
<b>Issue Category &amp; Priority</b>	na
<b>Legal – Policy – Technical</b>	technical
<b><i>Kansas Staff Position</i></b>	<b><i>Colorado Staff Position</i></b>
ARCA needs to address Section II. B (1) with respect to determination of “existing irrigation requirements” for ditches that no longer engage in irrigation. Also the criteria related to how the 1,000 AF over then existing irrigation requirements is applied.	Colorado law defines the extent of a water right based on historical use. Water rights submitted for adjudication of changed uses must meet standard of non-injury to other water users. This issue may be resolved by striking the word “irrigation” from the phrase quoted at left. The 1980 Operating Resolution should also be amended to add the words “per day” to follow “1000 AF”, to resolve the second concern
<b><i>Kansas Staff Comments</i></b>	<b><i>Colorado Staff Comments</i></b>
In general, this appears to be primarily a technical issue and we need to discuss the mechanics of how to quantify the “then existing irrigation requirements.”  This issue does have some relationship with Issue 26	
<b><i>ARCA Committee or other general comment(s)</i></b>	

<b>26 – Section II limitations on use made of account water to irrigation only</b>	
<b>ARCA Committee</b>	Operations Committee
<b>Issue Category &amp; Priority</b>	na
<b>Legal – Policy – Technical</b>	policy &/or legal
<b><i>Kansas Staff Position</i></b>	<b><i>Colorado Staff Position</i></b>
Use of Section 2 account water for uses other than irrigation is not allowed unless approved by ARCA. Such approval should be conditioned such that the historic flow regime of the river under irrigation is maintained and would be done on a case-by-case basis.	Colorado is not aware of any restrictions on the use of water stored in the respective Section II accounts of Kansas or the Colorado Water District 67 ditches. Water stored in the Section II accounts has been used to replace depletions from well pumping for many years without objection by Kansas.
<b><i>Kansas Staff Comments</i></b>	<b><i>Colorado Staff Comments</i></b>
Both the Compact and the 1980 Operating Plan are predicated on irrigation use. Any changes need to maintain the flow regime of the river as if irrigation was the only use of the water. ARCA has governance over operations of John Martin Reservoir, including storage accounts created under the 1980 Operating Plan. Any deviations from irrigation operations need to have those operations approved by ARCA so that the flow regime of the river can be maintained.  This issue does have some relationship with Issue 25.	
<b><i>ARCA Committee or other general comment(s)</i></b>	
xx	

<b>30 – Resolved</b> -- Determination of transit loss under Section II(E)(4)
<b>31 – Resolved</b> -- Sections II (E)(4) and III (D) are unclear as to where transfers to make up deficits should be made
<b>32 – Resolved</b> -- How should transit loss account be used?

<b>33 – Transit loss on reservoir-to-reservoir deliveries</b>	
<i>ARCA Committee</i>	Operations Committee
<i>Issue Category &amp; Priority</i>	na
<i>Legal – Policy – Technical</i>	Technical
<i>Kansas Staff Position</i>	<i>Colorado Staff Position</i>
<i>Kansas Staff Comments</i>	<i>Colorado Staff Comments</i>
<i>ARCA Committee or other general comment(s)</i>	
<ul style="list-style-type: none"> <li>■ Added to matrix at direction of Operations Committee in Dec 2008</li> <li>■</li> </ul>	

<b>40 – Resolved</b> -- Exchange of daily reservoir status accounting
<b>41 – Resolved</b> -- Non-reporting of Section II(C)(1) determinations
<b>42 – Resolved</b> -- Summer season interruption of transfers from conservation storage to accounts
<b>43 – Resolved</b> -- Winter storage period interruption of transfers from summer conservation storage to accounts

<b>44 – City of Lamar regulating account</b>	
<i>Kansas Staff Position</i>	<i>Colorado Staff Position</i>
[Working on a current position related to the engineering report submitted in December 2007.]	City of Lamar requested a permanent account at December 2006 meeting of ARCA. Matter referred to the Engineering Committee.
<i>Kansas Staff Comments</i>	<i>Colorado Staff Comments</i>
The City of Lamar should propose an account in JMR to allow for the re-regulation of flows from other releases. Consideration should be given to conditions contained in the minutes of 1989 ARCA Annual meeting and Kansas comments from ARCA Special Meeting May 2002.	An engineering proposal describing proposed operations was provided to the Engineering Committee in December 2007.
<i>ARCA Committee or other general comment(s)</i>	
City of Lamar renewed their request at the December 2006 ARCA Annual Meeting / ARCA referred to Engineering Committee / engineering report provided in December 2007 <ul style="list-style-type: none"> <li>■ Colorado and Kansas provided comments on the City of Lamar's proposal in Dec 2008</li> <li>■</li> </ul>	

<b>50 – Commencement of a spill event</b>	
<b><i>ARCA Committee</i></b>	Full ARCA
<b><i>Issue Category &amp; Priority</i></b>	C – 6a
<b><i>Legal – Policy – Technical</i></b>	Policy
<b><i>Kansas Staff Position</i></b>	<b><i>Colorado Staff Position</i></b>
The language places the event on the physical operation of the projects control structure and not on the elevation of the water surface or some other trigger. Colorado's timing of spill accounting is not suggested in the governing language.	Compact Article IV C (3) provides that the conservation pool will be operated for the benefit of water users in CO and KS...as provided by the Compact. See also, Art. IV C (2).
<b><i>Kansas Staff Comments</i></b>	<b><i>Colorado Staff Comments</i></b>
Rely on the physical operations of the project control structure to govern the loss of account water. No change to the language is required, unless clarifying language is desired.	Kansas' position ignores Corps of Engineers exclusive authority to determine flood control releases when JMR surface elevation rises into flood pool space.  Contrary to express language of 1980 Operating Plan, water does not "spill physically over the project's spillway" during flood operations. Flood releases are normally made through the outlet works.
<b><i>ARCA Committee or other general comment(s)</i></b>	
OS recommendation 12/08/03: amend Section II G of 1980 Operating Resolution to clarify criteria defining the commencement of spill.	
Operations recommended moving this issue to Full ARCA. (14 December 2004)	
Moved to Special Engineering Committee pursuant ARCA 2005-01.	
<b>51 – Resolved -- Spilling accounts</b>	

<b>52 – Upstream storage during JMR spill events</b>	
<b>ARCA Committee</b>	Administrative & Legal
<b>Issue Category &amp; Priority</b>	B - 10
<b>Legal – Policy – Technical</b>	Legal
<b>Kansas Staff Position</b>	<b>Colorado Staff Position</b>
Upstream storage is not in priority until Section II accounts is completely spilled.	Compact not intended to impair use of water by either state if no material depletion to useable Stateline flows results. Apportioning water during flood operations may be a Compact issue for negotiation by ARCA, but is clearly not a 1980 Operating Plan issue to be determined by the Operations Committee. See earlier exchange of letters between Mr. Simpson and Mr. Pope on this issue.
<b>Kansas Staff Comments</b>	<b>Colorado Staff Comments</b>
Discontinue the practice until authorized by resolution of ARCA.	
<b>ARCA Committee or other general comment(s)</b>	
OS recommendation 12/08/03: Operations Committee should refer this issue to the Administrative and Legal Committee.	
Operations Committee transferred this issue to the Administrative and Legal Committee by memo dated 8 October 2004.	

<b>53 – Adjusted JMR inflows during times of spill</b>	
<b>ARCA Committee</b>	ARCA
<b>Issue Category &amp; Priority</b>	C – 6c
<b>Legal – Policy – Technical</b>	Policy*
<b>Kansas Staff Position</b>	<b>Colorado Staff Position</b>
The 1980 Operating Plan does not provide for these adjustments. *Only can be resolved if 52 is resolved	Adjustments to inflow are necessary to account for the effect of post-compact upstream storage during the period that JMR is spilling.
<b>Kansas Staff Comments</b>	<b>Colorado Staff Comments</b>
Discontinue the practice until authorized by resolution of ARCA.	Inappropriate accounting related to conservation storage balances jeopardizes entitlements afforded by Compact Article V (f)
<b>ARCA Committee or other general comment(s)</b>	
OS recommendation 12/08/03: Operations Committee should table this matter until issue #52 is resolved.	
Operations recommended moving this issue to Full ARCA. (14 December 2004)	
Moved to Special Engineering Committee pursuant ARCA 2005-01.	

<b>54 – Resolved -- Section II spill volume during summer storage season</b>
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<b>60 – Section II(C)(2) compliance (Agreement B)</b>	
<b><i>ARCA Committee</i></b>	Administrative & Legal
<b><i>Issue Category &amp; Priority</i></b>	B - 9
<b><i>Legal – Policy – Technical</i></b>	Legal
<b><i>Kansas Staff Position</i></b>	<b><i>Colorado Staff Position</i></b>
District 67 priority calls under pre-JMR conditions are to occur when conservation storage is exhausted into accounts. Colorado does not comply with this requirement of the 1980 Operating Plan.	Agreement B is a separate document, not part of the 1980 Operating Plan, whereby Colorado water right owners agreed to subordinate certain aspects of their entitlement to enforce the priority of their water rights and is entirely consistent with administration of the priority system in Colorado. This issue is not properly before the Operations Committee.
<b><i>Kansas Staff Comments</i></b>	<b><i>Colorado Staff Comments</i></b>
Operate according to the 1980 Operating Plan as written or propose changes to the plan for consideration by the administration.	Agreement B is necessary to maintain the respective benefits of JMR between Colorado water rights above and below JMR granted under the Compact. It is not inconsistent with the Compact, the 1980 Operating Plan, or administration by Colorado of its priority system.
<b><i>ARCA Committee or other general comment(s)</i></b>	
<p>No further progress can be made at this time.</p> <p>OS recommendation 12/08/03: Committee should refer this matter to the Administrative and Legal Committee with a recommendation that no further consideration be given to this issue.</p> <p>Operations Committee transferred this issue to the Administrative and Legal Committee by memo dated 8 October 2004.</p> <p>Moved to Special Engineering Committee pursuant ARCA 2005-01.</p>	
<b>61 – Resolved – Retroactive adjustments of accounting for prior years if accounting methods are revised</b>	
<b>62 – Resolved -- OS Report status for 1994 through 2006</b>	
<b>63 – Removed -- Status of Assistant Operations Secretary Reports: 1998, 1999, 2000, 2001 &amp; 2002</b>	
<b>64 – Resolved -- Assistant Operations Secretary Reports: purpose and timeliness</b>	
<b>65 – Removed -- Consider Moving Date of Annual Meetings to January or February</b>	
<b>66 – Resolved -- Need for definite process for introducing and resolving operational issues</b>	
<b>67 – Resolved -- When issues are resolved, is it in the form of separate resolutions and /or revisions to the 1980 Operating Plan?</b>	

<b>70 – Trinidad Reservoir: Passing of inflows exceeding 1,000 cfs</b>	
<b>ARCA Committee</b>	Operations
<b>Issue Category &amp; Priority</b>	
<b>Legal – Policy – Technical</b>	
<b><i>Kansas Staff Position</i></b>	<b><i>Colorado Staff Position</i></b>
Releases exceeding 1,000 cfs should be passed as soon as possible, up to the channel capacity called for.	December 3, 1999 letter from Hal Simpson to USBR includes revised ‘Criteria for Temporary Detention and Subsequent Release of Flood Flows Below Flood Control Capacity...’ recognizes a 3000 cfs ‘non-damaging flow’ constraint directed by the Corps of Engineers by letter dated April 16, 1993.
<b><i>Kansas Staff Comments</i></b>	<b><i>Colorado Staff Comments</i></b>
Inflows to Trinidad Reservoir exceeded 1,000 cfs on two separate occasions in August 2004. Those releases should have been passed through the reservoir and may have triggered a summer storage event at John Martin Reservoir.	The Water Commissioner requested that the release of these inflows be made: beginning at 1,000 cfs on Friday afternoon, August 6, 2004. He requested that the release be increased to 1,500 cfs on Saturday afternoon. The Corps rating curve for a downstream gage had a maximum release of 1,000 cfs. The Corps should reconsider the allowable release criteria in light of the USBR’s October 2009 Hydraulic Modeling Results. There is no controversy at issue between the states. Furthermore, ARCA has no authority to determine the non-damaging flow below Trinidad Reservoir. Therefore, this matter should be removed from the matrix.
<b><i>ARCA Committee or other general comment(s)</i></b>	
A letter was received from the Corps, dated 1 Nov 2004. This letter explains the events in August and steps that have been and will be taken to assure these releases will be passed in the future.	
Moved to Special Engineering Committee pursuant ARCA 2005-01.	
Channel capacity study for the Purgatoire River below Trinidad Reservoir through Trinidad, Colorado, has been undertaken in 2008.	

## Notes on Water Issues Matrix

### Resolutions:

- ❖ ARCA Adopted Resolution 2006-01 (John Martin Reservoir Permanent Pool Evaporation Method) on 12 Dec 2006 based on ARCA Special Engineering Committee Recommendation A
- ❖ ARCA Adopted Resolution 2006-02 (Winter Water and District 67 Winter Water Storage Charge Holding Accounts in John Martin Reservoir) on 12 Dec 2006 based on ARCA Special Engineering Committee Recommendation B  
Colorado should have a draft resolution on the Winter Water Program account. – May 2002  
-- Kevin Salter responded to the Colorado draft resolution in October 2003
- ❖ ARCA Adopted Resolution 2006- 03 (Transfer of Conservation Storage to Section II Accounts  
under the 1980 Operating Plan) on 12 Dec 2006 based on ARCA Special Engineering Committee Recommendation C
- ❖ ARCA Adopted Resolution 2006-04 (Section II Account Spill Volume) on 12 Dec 2006 based on ARCA Special Engineering Committee Recommendation D
- ❖ For Issues #31 and 32, ARCA Special Engineering Committee Recommendation E addresses clarification of the 1980 Operating Plan for these two issues.  
*Issue #31 has been resolved, but need to look at clarification of the 1980 Operating Plan.* Steve Witte has drafted proposed resolution for this clarification.  
-- Kevin Salter has presented an interpretation of the 1980 Operating Plan that may negate the need for a resolution or amendment in August 2003.
- ❖ xx
- ❖ xx

City of Lamar is expected to submit at the May ARCA meeting a resolution for a regulating account in JMR.

- Colorado indicated that this issue has been tabled indefinitely
- LAWMA & DOW made presentation at December 2005 ARCA Annual Meeting
- December 2006 ARCA referred renewed request to Engineering Committee

<b>Water Issues Matrix Versions</b>		
<b><i>Version</i></b>	<b><i>Modification Date</i></b>	<b><i>Description of Modification(s)</i></b>
		Issues #32 & 67 were added 24 October 2003 at a meeting between State staffs
2002issues_table09b.doc	14 June 2004	Incorporate changes suggested by Steve Witte as transmitted by email dated 21 Jan 2004. Change status of issues based on Joint categorization of issues document dated 5 Feb 2004. I also made formatting and grammatical changes (KLS).
2005issues_table09c.doc	19 August 2004 12 Nov 2004 19 April 2005	-- Add a Trinidad Issues category. Specifically, Issue #70, the passing of inflows exceeding 1,000 cfs. -- Show Issue 52 & 60 as being transferred to the Admin & Legal Committee. -- add Issue #13 & 24 (19 April 2005), make formatting changes to table, adjust according to 19August 2004 Joint Prioritization memo, rename columns combining Legal, Policy & Technical and adding ARCA Committee and issue categorization
2005issues_table09d_letter.doc	20 April 2005	-- Changed format to 8-1/2 by 11 inch and reorganize sections -- Add actions taken at ARCA CY2004 Annual meeting
2006issues_table09d_letter.doc	11 December 2006	-- Add actions proposed by the ARCA Special Engineering Committee (created by ARCA Resolution 2005-01) on Issues 10, 20, 21, 30, 32, 42, 43 & 54.
2006issues_table10a_letter.doc	18 December 2006	-- Add ARCA actions taken at the 2006 ARCA Annual meeting -- Remove issues resolved by ARCA accepting Special Engineering Committee recommendations
2006issues_table10b_letter.doc	19 December 2006	-- Steve Witte offered suggestions for modifications in conference call with Kevin Salter on this date.
2007issues_table10bb_letter.doc	11 April 2007	-- working draft -- added Issue #25 & 26 according to the Operations Committee instructions -- added ARCA Resolutions information -- added ARCA Special Engineering Committee Recommendations on 31 & 32
2007issues_table10c.doc	1 December 2007	-- added Table of Contents -- modified according to 19 Nov OS-AOS meeting
2008issues_table10d.doc 2008issues_table10e.doc	1 December 2008	-- updated issues / Recommendation G / added City of Lamar / removed resolved issue(s)
2009issues_table11a.doc	22 December 2008	-- added reservoir-to-reservoir delivery issue -- updated issues / ARCA resolution adopting Recommendation G

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## **Attachment 3**

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# Water Issues Matrix Summary Table

Version Date : 12/01/2009

Issue #	Description	Pending	Removed	Resolved	ARCA Resolution	Comment
<b>34</b>	<b>Totals</b>	<b>12</b>	<b>4</b>	<b>18</b>		
10	Permanent Pool evaporation charges calculated by pro rata volume vs. incremental area			X	2006-01	Special Engineering Committee Recommendation A
11	Transfer of Account water to Permanent Pool during flood control operations in JMR		X			
12	Consideration of new sources for permanent pool water	X				LAWMA & CDOW made a conceptual proposal before Dec 2005 ARCA Annual Meeting. Issue has been removed from consideration by LAWMA.
13	1980 Operating Plan's Restriction on use of Section III related to Perm Pool		X			Steve Witte will review this to determine if it is still an issue.
20	Winter Water Account of convenience			X	2006-02	Special Engineering Committee Recommendation B
21	Timely distribution of Section III storage charge during Pueblo Winter Water Storage Program (PWWSP)			X	2006-02	Special Engineering Committee Recommendation B
22	Criteria for determining Section III storage under the Pueblo Winter Water Storage Program (PWWSP)	X				
23	Reporting of Winter Water vs. Winter Compact storage split calculation			X		See Joint Recommendations as transmitted by Operations Committee letter dated 19 August 2004.
24	Utilization of "Summer storage season" as defined by the 1980 Operating Plan	X				kls -- consider re-characterizing this issue under Issue 60 and remove as a separate issue per Steve's recommendation on 19 Nov 2007.
25	Criteria for Summer storage event trigger -- Section II.B 1	X				Placed on matrix in April 2007 / not currently before the Special Engineering Committee
26	Section II limitations on use made of account water to irrigation only	X				Placed on matrix in April 2007 / not currently before the Special Engineering Committee
30	Determination of transit loss under Section II(E)(4)			X		Resolved pursuant to an Agreement between State & Chief Engineers (December 2006).
31	Sections II (E)(4) and III (D) are unclear as to where transfers to make up deficits should be made			X	2007-05	Subject of Special Engineering Committee Recommendation E to be considered at the 2007 ARCA Annual meeting.
32	How should transit loss account be used?			X	2007-05	Subject of Special Engineering Committee Recommendation E to be considered at the 2007 ARCA Annual meeting.
33	Transit Loss on Reservoir-to-reservoir deliveries (e.g., deliveries of transmountain water to permanent pool)	x				Added in December 2008
40	Exchange of daily reservoir status accounting			X		See Joint Recommendations as transmitted by Operations Committee letter dated 19 August 2004.
41	Non-reporting of Section II(C)(1) determinations			X		See Joint Recommendations as transmitted by Operations Committee letter dated 19 August 2004.
42	Summer season interruption of transfers from conservation storage to accounts			X	2006-03	Special Engineering Committee Recommendation C
43	Winter storage period interruption of transfers from summer conservation storage to accounts			X	2006-03	Special Engineering Committee Recommendation C
44	City of Lamar regulating account	X				In Engineering Committee / pending further action by City of Lamar
50	Commencement of a spill event	X				
51	Spilling accounts			X	2007-06	Subject of Special Engineering Committee Recommendation F to be considered at the 2007 ARCA Annual meeting.
52	Upstream storage during JMR spill events	X				
53	Adjusted JMR inflows during times of spill	X				
54	Section II spill volume during summer storage season			X	2006-04	Special Engineering Committee Recommendation D
60	Section II(C)(2) compliance (Agreement B)	X				
61	Retroactive adjustments of accounting for prior years if accounting methods are revised			X	2008-03	Special Engineering Committee Recommendation G
62	OS Report status for 1994 through 2006			X	2008-03	Special Engineering Committee Recommendation G
63	Status of Assistant Operations Secretary Reports: 1998, 1999, 2000, 2001 & 2002		X			

## Water Issues Matrix Summary Table

Version Date : 12/01/2009

Issue #	Description	Pending	Removed	Resolved	ARCA Resolution	Comment
64	Assistant Operations Secretary Reports: purpose and timeliness			X		See Joint Recommendations as transmitted by Operations Committee letter dated 19 August 2004.
65	Consider Moving Date of Annual Meetings to January or February		X			
66	Need for definite process for introducing and resolving operational issues			X		See Joint Recommendations as transmitted by Operations Committee letter dated 19 August 2004.
67	When issues are resolved, is it in the form of separate resolutions and /or revisions to the 1980 Operating Plan?			X		Process has been established to address resolution of issues as they were resolved.
70	Trinidad Reservoir: Passing of inflows exceeding 1,000 cfs	X				