

# ARKANSAS RIVER COMPACT ADMINISTRATION

Lamar, Colorado 81052

For Colorado

Chairman and Federal Representative

For Kansas

James Eklund, Denver  
Scott Malone, Holly  
Scott Brazil, Vineland

James Rizzuto, La Junta

David Barfield, Topeka  
Randy Hayzlett, Lakin  
Hal Scheuerman, Deerfield

December 1, 2015

Mr. Scott Malone, Chairman  
Mr. Hal Scheuerman, Member  
Operations Committee  
Arkansas River Compact Administration

Re: Compact Year 2015 Summary  
Assistant Operations Secretary Report

Gentlemen,

In this report, I will provide my perspective as Assistant Operations Secretary on operations that have occurred over the past Compact Year (CY), including communications, the Pueblo Winter Water Storage Program (PWWSP), Kansas Reservoir Call, Pass-thru & Status Accounting, Water Issues Matrix, and Presumptive Depletion Factor (PDF) Evaluation.

## **Communications**

The Operations Secretary, Assistant Operations Secretary, and their respective staff have set a goal of open and frequent communications regarding Arkansas River operational issues to foster a positive, collaborative, and productive working relationship. We continue to work on achieving this goal.

Although we did not meet in person this year, the States have communicated on a regular basis. These communications included a variety of topics including John Martin Accounting System (JMAS) data updates, PWWSP operational issues, John Martin Reservoir (JMR) permanent pool deliveries, Offset Account operations, Kansas releases, and runoff conditions within the Arkansas River Basin. Issues were generally resolved as they arose.

## Deliveries to Kansas

Prior to the 2015 irrigation season, Kansas anticipated a stored surface water supply estimated to be just over 12,000 AF (April 1, 2015). And then it started raining. By June 1<sup>st</sup>, the estimated stored water supply available to Kansas had exceeded 61,000 AF. Between April 1<sup>st</sup> and October 31<sup>st</sup>, John Martin Reservoir was in Compact conservation storage 155 days of the 214 days.

Kansas Release 1: A 400 cfs release from the Offset Account was started on June 6<sup>th</sup>. This release lasted approximately six (6) days. A total of 4,959 AF was released from the Offset Account. The release was stopped due to a rain event that supplied the irrigation demands of the ditch diverting this release. The release spreadsheet accounting was exchanged and reviewed by both offices. Corrections to the accounting were made and ultimately a final accounting accepted. The table below provides the basic information on this release.

<b>Offset Account (6/6-6/12/2015)</b>	
Offset Account released	
- consumable	4,504 AF
- nonconsumable	455 AF
Offset Account delivery efficiency	59.84%
Offset Stateline delivery	2,967 AF
Offset consumable Stateline delivery	2,695 AF

Kansas Release 2: A 650 cfs release from the Kansas Section II Account was started on June 27<sup>th</sup>. This release lasted approximately 47 days. A total of 65,380 AF was released from the Kansas Section II Account. The release rate was adjusted several times during the release. The release spreadsheet accounting was exchanged and reviewed by both offices. Corrections to the accounting were made and ultimately a final accounting accepted. The table below provides the basic information on this release. Regarding the issue of using provisional or approved flow data, I would note that using the approved USGS data would have resulted in no delivery deficit on this Kansas Section II release.

<b>Kansas Section II Account (6/27-8/12/2015)</b>	
Kansas Section II Account released	65,380 AF
Transit Account released	1,678 AF
ESF Delivery Efficiency	97.4 %
Section II Delivery	63,709 AF
Section II Delivery Transit Loss	(1,671) AF

Starting on August 1<sup>st</sup>, Kansas reduced the release on several occasions as the irrigation demands in Kansas were being met (declined). We had a significant rain event over much of the Kansas lower ditch service area overnight between August 11<sup>th</sup> and 12<sup>th</sup>. Based on initial polling of our ditches on the morning of August 12<sup>th</sup>, we made an initial 100 cfs cut to this release. As the

morning wore on, we continued to work with the ditches assessing their demands. In the meantime, the last ditch in our system had physical problems that resulted in them ceasing diversions from the river entirely. Although we still had some irrigation demand over and above the available flows, it was determined to stop the Kansas Section II release.

All through the morning of the 12<sup>th</sup>, we were in communication with the Division 2 office with the changing demands and ultimately ceasing our release early that afternoon. We also passed along that the last ditch in our system had physical problems with their ditch that resulted in them ceasing any diversion from the Arkansas River. The upstream ditches continued to divert the release. The Farmers Ditch was able to resume diversions on September 3<sup>rd</sup> after repairs were completed.

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

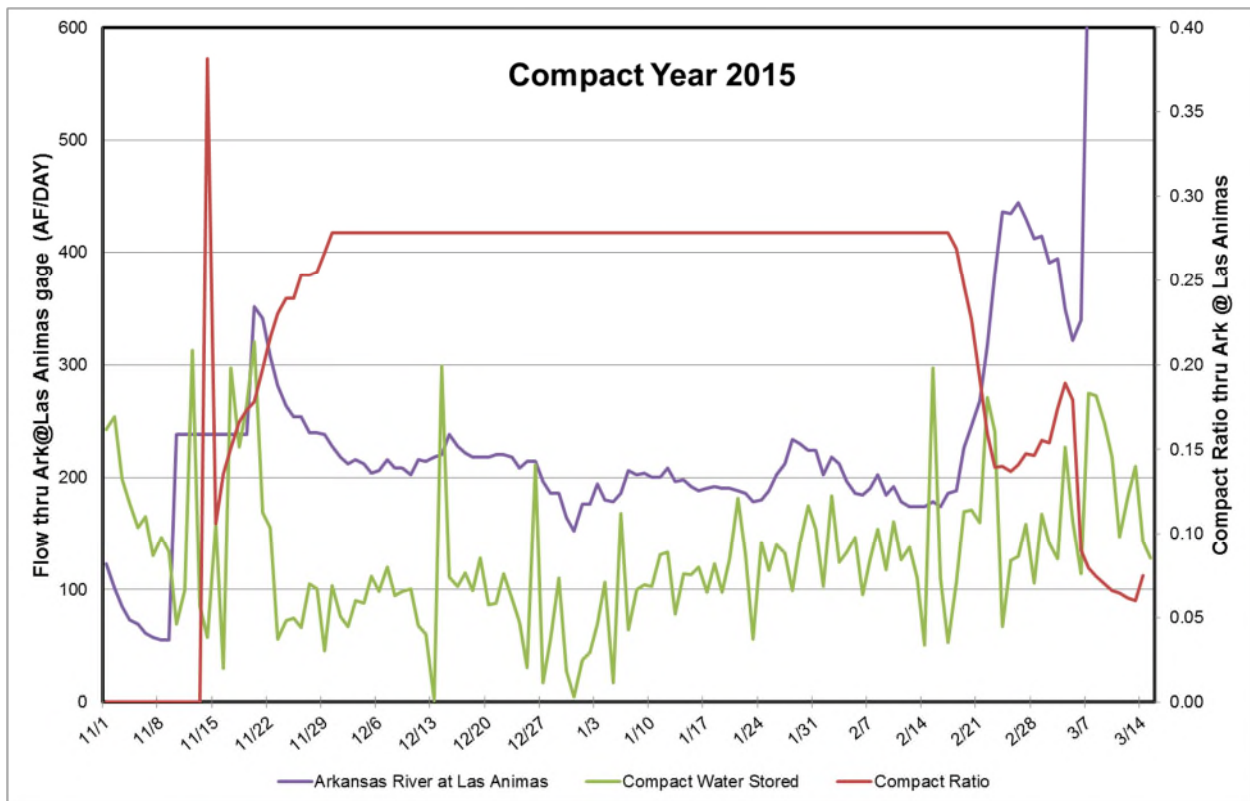
Kansas continues to have its long standing concern regarding how the split between the Compact conservation storage and PWWSP water passing through the Arkansas River at Las Animas USGS gage is determined. This is Issue 22 on the Water Issues Matrix. While both States have spent considerable time evaluating this issue, it has not been resolved. PWWSP issues have held up approval of the Operations Secretary's annual reports since 2006.

Our concern is whether the split methodology allows water to be stored under PWWSP that should have been stored in Compact conservation storage. The determination of the split between Compact conservation storage and PWWSP at the Arkansas River at Las Animas gage seems subjective and it raises questions such as whether it is subject to manipulation, e.g. by upstream ditch operations during the November 1<sup>st</sup> to November 14<sup>th</sup> period which reduce flows at that gage.

Additionally, in 2009 we noted a drop in the Purgatoire River near Las Animas gage between November 14<sup>th</sup> and November 15<sup>th</sup>. This raised a question of whether water was being passed around the Arkansas River at Las Animas gage. In reviewing the flow history of the Purgatoire River near Las Animas gage, this has occurred but not consistently and to varying degrees. Starting in November 2010, we have tried to visit the Consolidated Ditch on or before November 14<sup>th</sup> each year to determine whether the wasteway to the Purgatoire River is being used. During these visits, we did not find any water being returned to the Purgatoire by the wasteway. We also did not see flow reduction between November 14<sup>th</sup> and 15<sup>th</sup> as was seen in some previous years.

Another concern is the 2007 condition where a significant snowpack was present on the Las Animas Consolidated service area through a large part of the PWWSP storage period. Water would not have been diverted onto those lands during those times and that water would have likely been stored in Compact conservation storage absent the PWWSP.

**CY2015 PWWSP:** Figure 1 shows the Arkansas River at Las Animas flow, the Compact water stored in John Martin, and the Compact ratio from November 1, 2014 thru March 31, 2015. The PWWSP period is from November 15<sup>th</sup> through March 14<sup>th</sup> each year.



**Figure 1** Arkansas River at Las Animas and Compact Conservation storage for the period of November 1, 2014 to March 15, 2015 and the Compact ratio of the Arkansas River at Las Animas flows for the period of November 15, 2014 to March 14, 2015.

Previously, both States have exchanged information that reviews pre- and post-PWWSP years to determine whether there have been any changes to the gross diversions. Kansas has looked at individual ditch diversions for the November 1<sup>st</sup> to November 14<sup>th</sup> period where the split between Compact conservation storage and PWWSP occurs. Colorado’s review was more on the gross diversions of Colorado ditches above and below John Martin Reservoir.

Separately, guidelines are being developed for how the split between Compact conservation storage and the PWWSP is initially determined and is changed due to subsequent operational changes. These guidelines are being developed by Colorado Division 2 staff a draft has not yet been shared.

**CY2016 PWWSP:** As noted above, since November 2010, Colorado and Kansas have visited the Consolidated Ditch to review water being returned to either the Purgatoire above the Purgatoire River near Las Animas gage and at the tail end of the ditch itself. These visits occurred in the days ahead of the November 15<sup>th</sup> beginning of the PWWSP. This year I did not get the opportunity to visit to the Consolidated Ditch, however, Colorado Division 2 staff did.

During their visit, they found the Consolidated using their wasteway to the Purgatoire River and additional water was being passed out the bottom of the ditch system. As of the date of this report, we are currently working with the Division 2 Office on this issue.

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

JMR daily inflow, storage, and outflow were tracked by the Garden City Field Office staff for CY2015. A pass thru spreadsheet was first provided to the Operations Secretary on November 6<sup>th</sup> for inclusion in the Operations Secretary's report. This spreadsheet tracks the amount (AF) of river flows; JMAS inflow & release; reservoir evaporation, storage, and release.

The information in this spreadsheet was regularly updated and reviewed by the Garden City Field Office staff. The spreadsheet uses the tracked information to calculate:

- (1) gaged and ungaged inflows,
- (2) pass-thru, and
- (3) the reservoir "status."

The pass-thru represents that amount of JMR inflows which are not stored in any account and are released on downstream. The reservoir "status" represents the difference between the amount considered stored in JMAS and the amount shown as stored in JMR.

### **Water Issues Matrix**

As reported in the past, this matrix is a joint work product of the States which is designed to track various disputed issues. These disputed issues are primarily concerned with JMR related operations and accounting. Approximately half have been resolved through the efforts of this Committee and others. The matrix currently has 35 issues, of which 12 are pending resolution, four (4) have been removed or suspended, and 19 have been resolved.

The current versions of the matrix and issues summary table will be provided to the Operations Committee and Operations Secretary before the December 9<sup>th</sup> committee meeting. This version will incorporate suggestions recently made by Mr. Witte. I believe it is both Mr. Witte's and my opinion that this matrix be reviewed in detail at an Operations Committee meeting in 2016.

## Summary

Although there were no in person meetings, staff interacted on various issues throughout the year regarding current year operations and, on the issues that arose, agreement was reached. With the much improved hydrologic condition Kansas was able to call for both Offset and Kansas Section II releases. Even with those releases, Kansas is entering CY2016 with significantly more water than was available to it on April 1<sup>st</sup> of many years, including this one.

I look forward to working with the Operations Secretary and his staff on these issues and the day-to-day operations of the Arkansas River.

Sincerely,



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