

ARKANSAS RIVER COMPACT ADMINISTRATION

Lamar, Colorado 81052

For Colorado

Chairman and Federal Representative

For Kansas

Rebecca Mitchell, Denver
Lane Malone, Holly
Scott Brazil, Vineland

James T. Rizzuto, Swink

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

December 1, 2018

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

Re: Compact Year 2018 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, Deliveries to Kansas, the Pueblo Winter Water Storage Program (PWWSP), Pass-thru & Status Accounting, and Water Issues Matrix.

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.

The Operations and Assistant Operation Secretaries met once, on November 14th. We discussed several topics at this meeting.

We were also involved in a number of ARCA Special Engineering Committee meetings this year. This committee was focused on two issues: use of the Highland Canal water rights as an evaporation replacement source for the John Martin Reservoir (JMR) permanent pool and a proposed multi-purpose account. More recently, the focus has been on JMR permanent pool.



There was a tour of the Arkansas River between Las Animas, Colorado and Coolidge, Kansas that included Colorado & Kansas DWR staff, USGS, and Corps staff. The tour included stops at USGS gage locations, JMR, ditch headgates, augmentation stations, recharge and head stabilization ponds. This tour allowed for networking between the participants.

The States have communicated on a regular basis on a variety of topics including John Martin Accounting System (JMAS) data updates, PWWSP operational issues, Offset Account operations, Kansas releases, and runoff conditions within the Arkansas River Basin.

John Martin Reservoir

Figure 1 below provides a graphical representation of JMR and the accounts contained within for CY2018. The maximum end of day content occurred on March 18th with 316,647 AF in storage. The minimum end of day content occurred on October 31st with 132,946 AF in storage.

The JMR stilling basin is being examined for the first time since the reservoir was built. Both States are staying in communication with the Corps with regularly scheduled monthly conference calls.

Deliveries to Kansas

Kansas entered the irrigation season (April 1st) with approximately 87,625 AF in its Section II account and ended (October 31st) with 49,255 AF. During CY2018, Kansas made two releases that will be briefly described below.

The first release from the Kansas Section II Account was started on June 11th. Kansas also made a concurrent release from the Offset Account from July 6th to July 26th. The release rates from the Kansas Section II and Offset Account varied throughout this run as irrigation demand changed and precipitation occurred. Figure 2 below is a graphical summary of this release. The release to Kansas ended July 27th, or a run of approximately 47 days. The release spreadsheet was reviewed by both offices and modifications made as the result of those reviews.

The second release from the Offset Account was from August 18th to September 4th. The release rates varied throughout this run as irrigation demand changed and precipitation occurred. See Figure 3 for a graphic of this release at the end of this report. The release to Kansas ended September 4th, or a run of approximately 18 days. The release spreadsheet accounting was reviewed by both offices and no modifications were made as the result.

On an issue brought up last year related to the Frontier Ditch Parshall flume (flume) there were no days or times during CY2018 that the flume was in submergence. By comparison in CY2017, there was an issue of the flume being in submergence (21 of the 95 days they diverted). This improvement is due in part to Frontier Ditch cleaning a stretch of the ditch below the flume prior to their diversions in CY2018.

Pueblo Winter Water Storage Program

The States have committed to continue to work on this issue and will build upon the work that has already been done. Pueblo Winter Water Storage Program (PWWSP) issues have held up approval of the Operations Secretary's annual reports since 2006.

Colorado and Kansas have tried to visit the Consolidated Ditch to review water being returned to either the Purgatoire River above the Purgatoire River near Las Animas gage or at the tail end of the ditch to the Arkansas River below the USGS Arkansas River at Las Animas gage since November 2010. These visits have generally occurred in the days ahead of November 15th which is the beginning of the PWWSP.

In CY2018 I did not visit the Consolidated Ditch to review returns. However, during the November 14, 2017, OS-AOS meeting, Lonnie Spady, Division 2, showed pictures taken of the Consolidated Ditch. There were no concerns noted. Figure 4 below shows flows, storage, and changes to the ratio used to determine the split between the Compact and PWWSP at Arkansas River at Las Animas.

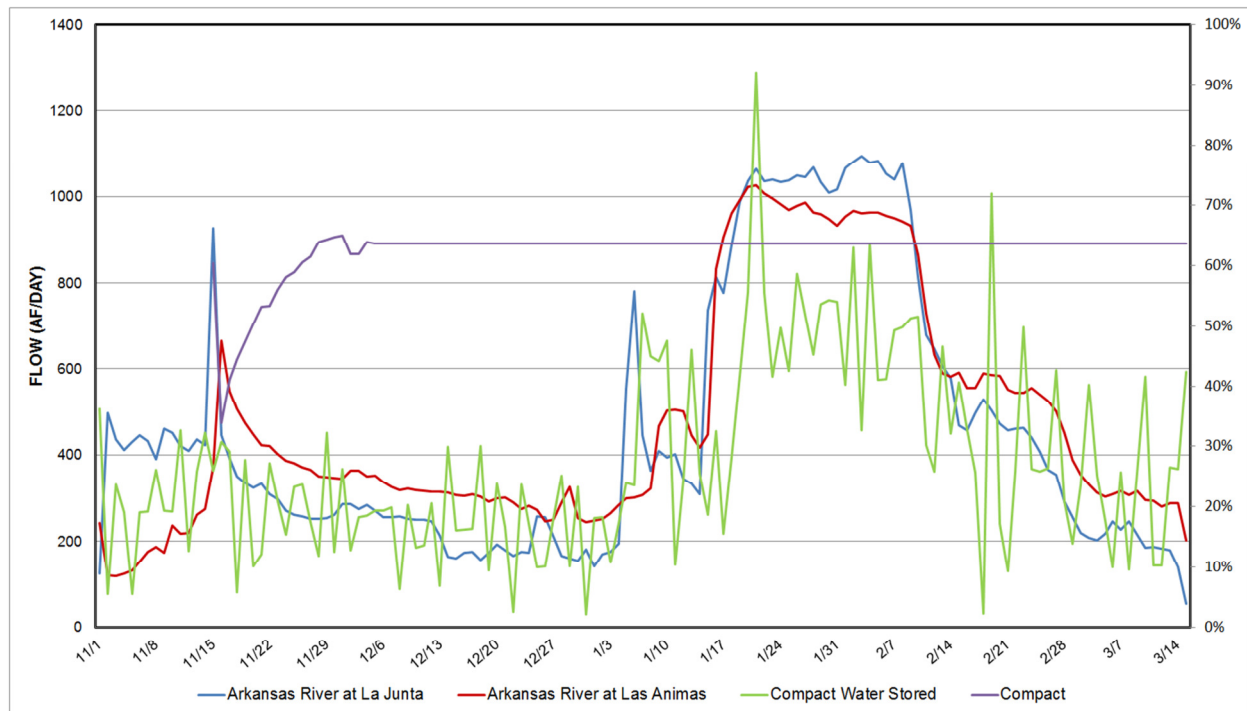


Figure 4. Flows of the Arkansas River at La Junta and Las Animas, Compact storage, and Compact Conservation storage for the period of November 1, 2017 to March 15, 2018 and the Compact ratio of the Arkansas River at Las Animas flows for the period of November 15, 2017 to March 14, 2018.

CY2018 saw two new operations occurring PWWSP period. I'm expecting that these operations will be detailed the OS report. The first was the delivery of water through the Arkansas River at Las Animas gage to the Offset Account during the first two weeks of November. This water was delivered from Lake Meredith and an augmentation station with both being located above the Arkansas River at Las Animas gage. Transit losses were applied from those delivery points to the Arkansas River at Las Animas gage to remove that water from that gage.

The second operation was a pass-thru operation where consumable water was delivered to gravel pit storage below JMR. Again, the Arkansas River at Las Animas flows were adjusted to remove this water from the Arkansas River at Las Animas gage.

CY2019 PWWSP: The Consolidated Ditch was not visited this year. However, during our November 14th meeting, Lonnie Spady, Division 2, reported on his recent visit to the Consolidated Ditch. He noted that there were only small amounts of water returning to the Arkansas River at the tail end of the Consolidated.

Pass-thru and Status Accounting

A spreadsheet is used to track: river flows; JMAS (John Martin Accounting System) inflows and releases; Corps JMR evaporation, storage, and releases. The spreadsheet calculates:

(a) gaged and ungaged inflows, (b) pass-thru, and (c) the reservoir “status.” The pass-thru represents that amount of JMR inflows which are not stored in any account and are released downstream. The reservoir “status” represents the difference between the amount considered stored in JMAS and the amount shown as stored in JMR by the Corps. This spreadsheet was updated by Garden City Field Office staff.

In reviewing the CY2018 spreadsheet before providing to the OS, it was recognized that augmentation stations that divert directly into JMR were not included. The spreadsheet was modified to include these augmentation flows into JMR reduced by the estimated transit loss. The modified pass-thru spreadsheet was provided to the OS on November 21st for inclusion in the Operations Secretary’s report.

Water Issues Matrix

As previously reported, 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, of which approximately half have been resolved through the efforts of this Committee and others. An updated Water Issues Matrix was not produced for this report.

Summary

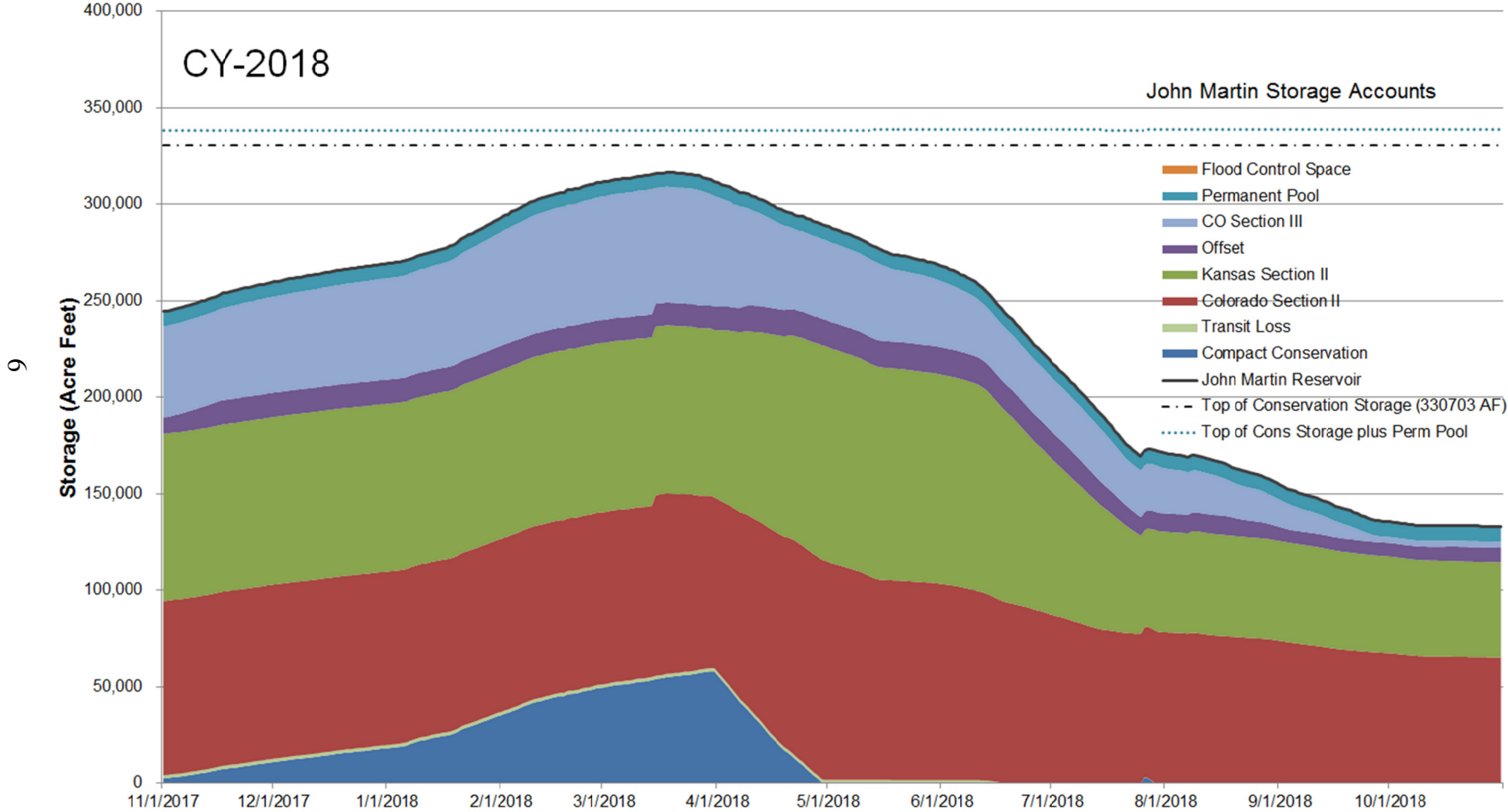
I look forward to working with the Operations Secretary and his staff on these issues and the day-to-day operations of the Arkansas River.

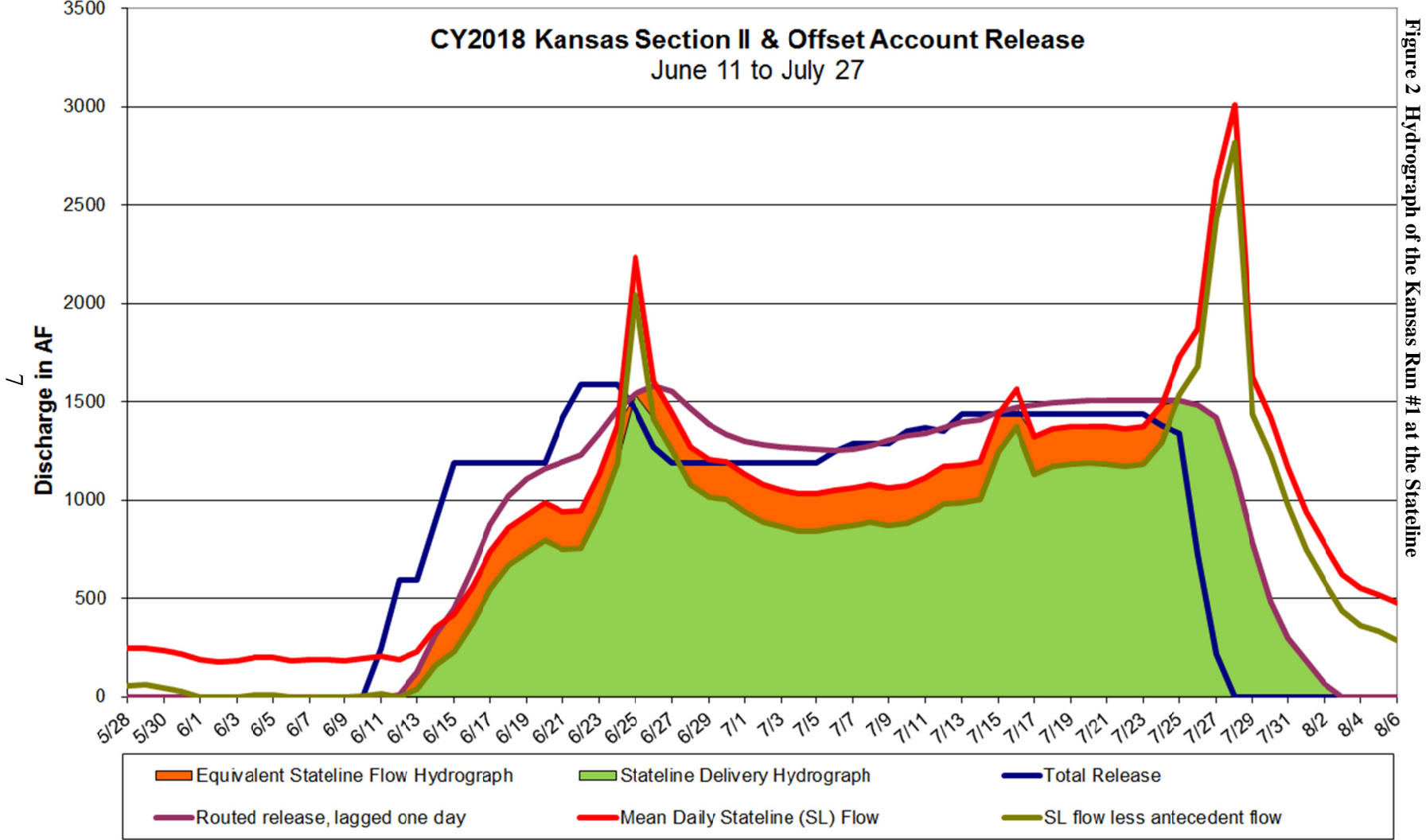
Sincerely,



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

Figure 1 Graphical representation of John Martin Accounts over CY2018





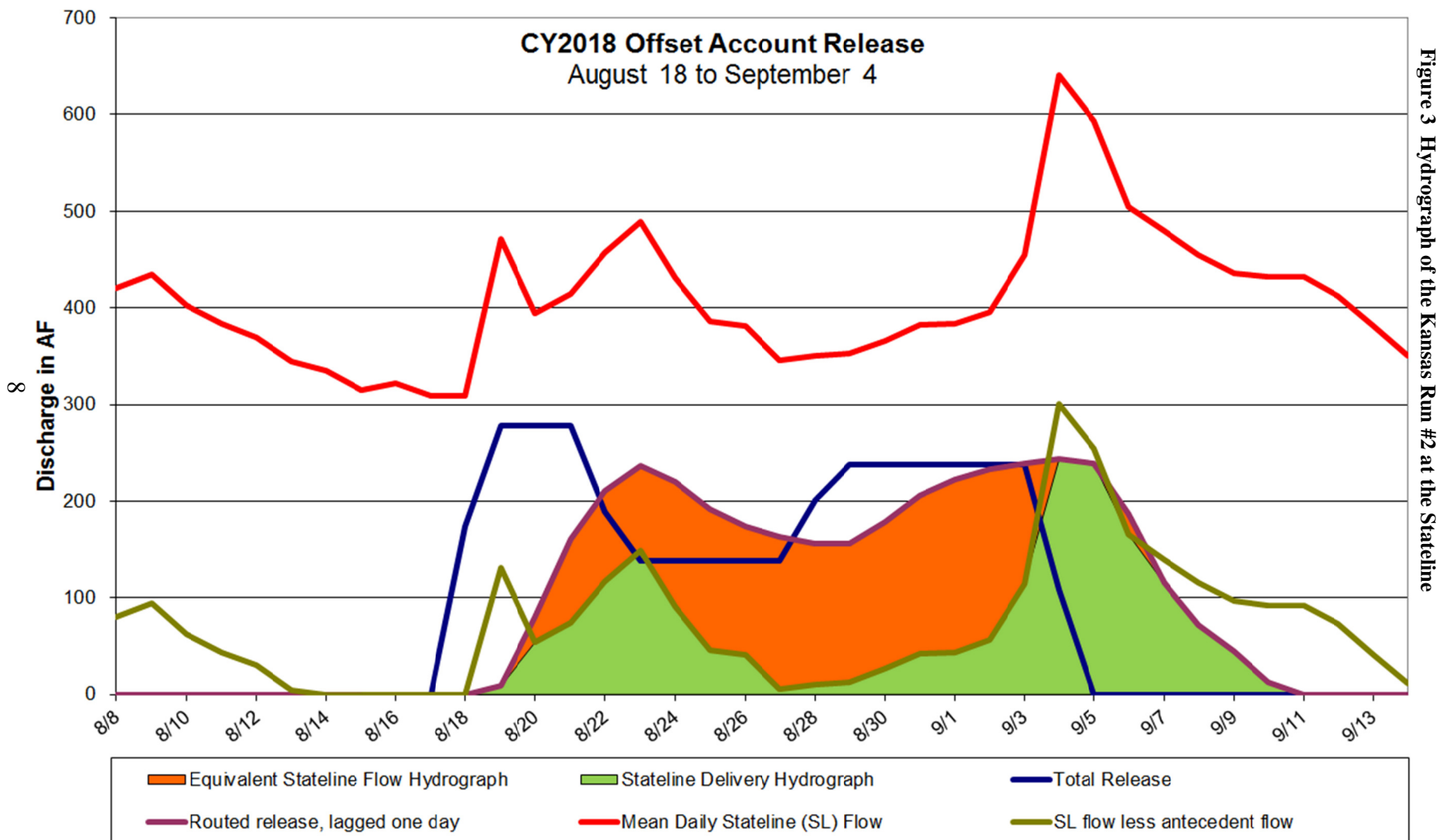


Figure 3 Hydrograph of the Kansas Run #2 at the Stateline