ARKANSAS RIVER COMPACT ADMINISTRATION

COMPACT YEAR 2013

ANNUAL MEETING

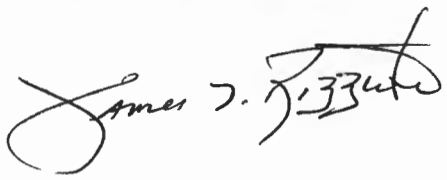
December 18, 2013

HELD AT THE

LAMAR COMMUNITY BUILDING

610 SOUTH SIXTH STREET

LAMAR, COLORADO



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APPEARANCES

COLORADO:

James Eklund

Colin Thompson

KANSAS:

David Barfield

Randy Hayzlett

Hal Scheuerman

P R O C E E D I N G S

MR. HAYZLETT: We're a little bit late. This is the Annual Meeting of the Arkansas River Compact Administration, 2013. I think Chris took care of the details there. If you have exhibits, we need four copies of those. Bring those forward so we can get them identified. If you have a business card, that would help the reporter, and probably one down at the end of the table here as well. I think that kind of gets us rolling for usually introductions is what we do.

My name is Randy Hayzlett. I'm the Vice-Chairman of the Administration. We're absent a federal Chairman yet, so I'll chair the meeting today. Got some new members on the Administration. I think I'll let them introduce themselves first and if they want to say a word about themselves, then we'll continue with introductions, so James.

MR. EKLUND: Thank you. My name is James Eklund. I'm the Director of the Colorado Water Conservation Board. Without boring you to tears on my entire background, I -- in the last, my last job, I was Governor Hickenlooper's legal counsel, working on education, transportation, health care, you name it, so it's good to be back in the water. Before

that, I was an Assistant Attorney General that primarily worked on Colorado River water issues and prior to that, was in private practice.

Got a wife, three kids. We're rushing back for our agency's holiday party. That's this afternoon, so hopefully I won't be slowing this process down at all, this meeting, and I spent some time growing up in Holly, Colorado, here near the Kansas line, so I'm happy to be in a position where I can come back down to southeast Colorado. It's one of the -- one of my favorite parts of the state, and talk about the issues of water in the Basin. So with that, I'll turn it back over to you.

MR. HAYZLETT: Thank you, James, and Colorado does have one other new representative, Scott Brazil, and Scott sent a message out saying that he had pneumonia and was under the weather so he said he would not make this meeting, so we wish him well and hope that he heals up quick and gets back. Another new member for Kansas.

MR. SCHEUERMAN: I'm Hal Scheuerman. I live at Deerfield, Kansas. I'm an active farmer; been involved in this water deal my whole life. I got a wife, couple of 20 something-year-old daughters that take my money, but anyway, glad to be

here.

MR. HAYZLETT: Thanks, and welcome. We'll start at that end of the table and we'll do introductions around the room.

MR. BEIGHTEL: I'm Chris Beightel with Kansas Division of Water Resources.

MR. NEWMAN: Brent Newman with the Colorado Water Conservation Board.

MR. SCHEUERMAN: Hal Scheuerman, ARCA.

MR. BARFIELD: Dave Barfield, Chief Engineer, and member for Kansas on ARCA.

MR. THOMPSON: Colin Thompson, District 67 Representative.

MR. MAKENS: Tom Makens, Kansas Department of Agriculture.

MR. STEUER: Dan Steuer, Colorado Attorney General's office.

MR. WOODRUFF: Jason Woodruff, U.S. Army Corps of Engineers, Albuquerque District.

MS. GONZALES: Stephanie Gonzales, ARCA Recording Secretary/Treasurer.

MR. MILLER: Steve Miller, Colorado Water Conservation Board.

MS. McDONALD: Eve McDonald, Colorado Attorney General's office.

MR. WITTE: I'm Steve Witte. I'm with the Colorado Division of Water Resources. I'm also the Operations Secretary to the Administration.

MR. STEERMAN: Don Steerman, attorney with Shinn, Steerman & Shinn, representing District 67 ditches and several of the individual ditches.

MR. RUDE: Mark Rude, Southwest Kansas Groundwater Management District, Garden City.

MR. AHRING: Trevor Ahring, Southwest Kansas Groundwater Management District.

MR. TRUAN: Van Truan, Corps of Engineers. I'm in Pueblo.

MAJ. BONHAM: Major Gary Bonham, Deputy Commander, Albuquerque District.

MR. GARCIA: Dennis Garcia, U.S. Army Corps of Engineers, Albuquerque District.

MS. DOWNEY: Karen Downey, Operations Manager of John Martin Reservoir, U.S. Army Corps of Engineers.

MS. ROBB: Traci Robb, Project Manager, Trinidad Lake, U.S. Army Corps of Engineers.

MR. SALTER: Kevin Salter, Interstate Water Engineer for the Kansas Division of Water Resources.

MR. BOOK: Dale Book with Spronk Water

Engineers.

MS. RONCA: Carlie Ronca, Bureau of Reclamation, Eastern Colorado Area Office.

MR. GILMORE: Andrew Gilmore, Reclamation in Loveland, Colorado.

MR. VAUGHAN: Roy Vaughan, Reclamation, Pueblo.

MR. KELLEY THOMPSON: Kelley Thompson with the Colorado Division of Water Resources.

MR. GOBLE: Jack Goble, Lower Arkansas Valley Water Conservancy District.

MR. PRUITT: Leonard Pruitt of Southeast Colorado Water Conservation District.

MR. SULLIVAN: Nathan Sullivan, USGS out of Hays, Kansas.

MS. SCHWERDFEGER: Nikki Schwerdfeger, Hamilton County Commissioner.

MR. BRASE: Leroy Brase. I work for Tri-State.

MR. ORENDORFF: Bill Orendorff, Tri-State Generation and Transmission.

MR. DUMLER: Troy Dumler, Garden City Company and Great Eastern Ditch, Garden City, Kansas.

MR. KASPER: I'm Josh Kasper, Colorado

Division of Water Resources, District 67.

MR. REYNOLDS: Phil Reynolds, reservoir operations, Division of Water Resources, Colorado.

MR. MONTOYA: Jeff Montoya, Colorado Division of Water Resources, District 19.

MR. MAXFIELD: Dan Maxfield, Amazon Canal, Lakin, Kansas.

MR. STANLEY HINES: Stanley Hines, Frontier Ditch, Coolidge, Kansas.

MR. STEVEN HINES: Steven Hines, Frontier Ditch, Coolidge.

MR. HOWLAND: Terry Howland, Amity Canal and Buffalo.

MR. MAU: David Mau, USGS, Pueblo.

MR. TYNER: Bill Tyner, Colorado Division of Water Resources in Pueblo.

MR. WOODKA: I'm Chris Woodka with the Pueblo Chieftain.

MR. BLOYD: Brian Bloyd, City of Syracuse, Kansas.

MR. PERKINS: Ed Perkins, Colorado Parks & Wildlife.

MS. LOPKOFF: Ann Lopkoff, Colorado Water Protective & Development Association.

MS. WOLDRIDGE: Julianne Woldridge, with

the Law Firm of MacDougall, Worley and Woldridge, and I represent CWPDA and the Purgatoire River District.

MR. DANIELSON: Jeris Danielson, General Manager of Purgatoire District.

MR. MEYER: Mike Meyer, Kansas Division of Water Resources, Garden City.

MS. COLE: Brandy Cole, Kansas Division of Water Resources, Garden City.

MS. DURAN: Rachel Duran, Kansas Division of Water Resources, Garden City Field Office.

MR. HAYZLETT: Okay. Thank you. We'll have a number of exhibits, and I should have on the new appointees, your credentials for appointment to this commission, we'll make those an exhibit. Exhibit A.

MR. BEIGHTEL: All of them?

MR. HAYZLETT: The new commission, mm-hmm.

MR. BEIGHTEL: Okay.

MR. HAYZLETT: As well, there will be an attendance list circulating and we'll make that an exhibit as well, so make sure and sign the attendance list if you will.

I believe that brings us to review and

revision of the agenda. Are there changes to the agenda? I think there was one came out of one of the committees yesterday.

MR. BARFIELD: I believe that's correct. I would move that we adopt the modified agenda that we worked up last night.

MR. HAYZLETT: Which was under Item 6, report of local water users. That would be addition of Groundwater Management District Number 3 from Kansas report. Is there a second?

MR. EKLUND: Second.

MR. HAYZLETT: All in favor, say Aye.

MR. BARFIELD: Aye.

MR. HAYZLETT: Opposed, same sign. (No response.) Okay. We'll make the addition there and work from that agenda.

MR. BARFIELD: So just to keep our exhibits straight, so Exhibit A was the credentials, Exhibit B then the attendance list, and then this would be Exhibit C, the revised agenda?

MR. HAYZLETT: Revised agenda.

MR. BARFIELD: All right.

MR. MILLER: Did Colorado provide a copy of the credentials for our new members or not?

MR. BEIGHTEL: We've not received them.

MR. MILLER: Well, I know we sent them out, but we didn't submit them as an exhibit today. Would you like us to add that to the exhibit that you --

MR. BARFIELD: We would like them reflected, yes.

MR. MILLER: Well, I'll get you a copy of those as part of the exhibit.

MR. BARFIELD: Thank you.

MR. HAYZLETT: Okay. Reports of officers. No federal Chairman, so no report there.

As Vice-Chairman, I just want to commend the work that the States have done and the staff for annual reports and the work they've done in the past year and encourage continued work on that. The rest of the items there will be deferred till later in the agenda, so I think that brings us to Item 5, Reports of Federal Agencies.

I think I had a request that we change and have the Corps of Engineers first because of the Power Point setup, so Mr.(sic) Gary Bonham, I believe you'll be making that report, and if you have exhibits as well or documents, we'll need four copies of those.

MAJ. BONHAM: Good morning,

Mr. Vice-Chairman and members. I am Major Gary Bonham, Deputy District Commander of the Albuquerque District, U.S. Army Corps of Engineers. I thank you for the opportunity to present key topics from our report of the last year and items of current interest.

Joining me from the Albuquerque District is Dennis Garcia, Reservoir Control Branch Chief. We also have Jason Woodruff, Arkansas River Basin Coordinator; Karen Downey, John Martin Dam Project Manager; and Traci Robb, Trinidad Lake Project Manager. In addition, we also have the pleasure of having Van Truan, our Pueblo Regulatory Chief, here this year.

I would like to start by giving you a brief history and description of the Albuquerque District of the U.S. Army Corps of Engineers. As the United States struggled in the throes of the Great Depression, a new U.S. Army Corps of Engineers District was created in New Mexico under the command of Captain Hans Kramer. Although flood control and irrigation projects in the sparsely populated region of the Canadian River were not economically feasible in 1929, widespread unemployment in the early 1930's helped convince President Franklin D. Roosevelt to

approve the building of Conchas Dam.

The U.S. Army Corps of Engineers established the Tucumcari District on August 2nd, 1935 to construct a dam for the purposes of irrigation, flood control and water supply. As the activities increased at the site, the local economy received a much needed boost. This infusion of Federal funds gradually spread to include a broad area of the state. The success of the project was a major consideration in the eventual expansion of the District's boundaries to include other watersheds in the states of Colorado and Texas, as well as New Mexico.

With the completion of the Conchas project, John Martin Dam at Caddoa, Colorado became the new focal point of District activity. Tucumcari District personnel transferred to Caddoa and on December 4th, 1939, the organizational name was officially changed to U.S. Army Corps of Engineers, Caddoa District. Work proceeded there till the dam was 85% complete. With the world at war however, John Martin Dam was temporarily put on hold.

Soon after the onset of World War II, in early 1942, the District headquarters was transferred to Albuquerque and given its permanent name along with

an additional mission. Switching from civil works projects to wartime activities, and with a peak workforce of 3,039 people, the Albuquerque District performed real estate and construction services in support of various military projects in the region. Among those projects was the work at Los Alamos Laboratory where scientists labored in development of atomic energy and its application to weapons.

After the war, the District resumed civil works construction and completed John Martin Dam Reservoir. Other major projects followed in the ensuing years. They are, in chronological order, Jemez Canyon Dam, Abiquiu Dam, Two Rivers Dam, and Cochiti Dam in New Mexico; Trinidad Dam in Colorado; and Santa Rosa Dam in New Mexico.

Today, the District continues several regional civil works projects. In addition, it now provides extensive design and construction services at three New Mexico military bases: Kirtland Air Force Base in Albuquerque, Holloman Air Force Base in Alamogordo, and Cannon Air Force Base in Clovis.

In 2013, the Arkansas River Basin snowmelt runoff was below normal throughout the entire basin. The reported snowpack in May, 2013 ranged from 93% of average in the Upper Arkansas Basin to 17%

average in the Purgatoire Basin. The U.S. Army Corps of Engineers did not operate for flood control at Trinidad, John Martin, or Pueblo Reservoirs in 2013.

Work on various projects with basin sponsors within the U.S. Army Corps of Engineers mission areas has continued in 2013 and I will highlight a few:

The development of the John Martin Dam Elevation-Area-Capacity tables were completed in early 2013 and forwarded to the interested parties for review and comment. No issues arose from these reviews and the tables were implemented on November 1st of this year.

The U.S. Army Corps of Engineers Albuquerque District, at the request of the City of Trinidad and the Purgatoire River Water Conservancy District, reviewed proposed amendments to the Trinidad Lake Operating Principles. The proposed amendments will allow the City of Trinidad to use water stored in the City's account on lands within the Purgatoire River Basin at or above Trinidad Lake. This preliminary review looked at potential impacts the amendments would have on lake operations, the environment, and cultural sites at the project.

Upon completion of the assessment, the U.S. Army Corps of Engineers was of the opinion that approval of the amendments to the Trinidad Lake Operating Principles would have a negligible effect on the existing conditions of water storage at the reservoir and operations of the dam. Furthermore, the Colorado State Historical Preservation Office (SHPO) concurred with the U.S. Army Corps of Engineers' determination that approval of the amendments would result in no adverse effect to historic properties and that the proposed amendments are in compliance with the National Historic Preservation Act of 1966, as amended. Therefore, the proposed action is considered a categorical exclusion from the National Environmental Policy Act of 1969, as amended.

In 2012, Telluride Energy, a limited liability corporation, approached the US Federal Energy Regulatory Commission with an interest in studying the feasibility of developing hydroelectric power projects at both Trinidad and John Martin Dams. Telluride Energy applied for, and was issued, preliminary permits to study the feasibility of such projects for both dam sites pursuant to the Federal Power Act. Over the three-year permit period, the

permittee is expected to carry out pre-filing consultations and prepare preliminary feasibility studies for both projects, during which both the U.S. Army Corps of Engineers and the public will have opportunity to review and provide comments or voice concerns. The permittee is also expected to coordinate with the U.S. Army Corps of Engineers to ensure that the studies will result in plans consistent with the authorized purposes of the Federal projects. To date, no communications from the Telluride Energy Corporation regarding Trinidad and John Martin have been received.

Corps Priority Mission: As you're all aware, we have some important activities going on around the country and the world, and I want to conclude with a few words about one priority mission for the Corps of Engineers: Support to our Overseas Contingency Operation, formerly known as the 'Global War on Terror'. While most of our Corps employees are not soldiers, I'm proud to say that in Fiscal Year 2013, 13 Albuquerque District members voluntarily deployed to Afghanistan, and we currently have four employees in harm's way. There have also been six employees deployed in response to the needs associated with the Hurricane Sandy

recovery, as well as FEMA taskers associated with the New Mexico September, 2013 floods.

This concludes my report. I will be happy to answer questions, with assistance of my staff as necessary.

MR. HAYZLETT: Thank you, Major. Are there questions?

MR. EKLUND: Mr. Chairman. Major Bonham, thank you for your report. I just wanted to extend the State of Colorado's sincere appreciation for the deployed folks that you just referenced. It's a -- it's a remarkable thing and didn't want it to go unnoticed or commented on. Thank you.

MAJ. BONHAM: Sir, thank you.

MR. HAYZLETT: Questions?

MR. BARFIELD: No questions.

MR. HAYZLETT: I too want to thank you for your service and comment we'd had an excellent tour of John Martin Dam yesterday. Dennis Garcia and staff presented that, so we appreciated that very much. Thank you for your service.

MAJ. BONHAM: Thank you and it was our pleasure.

MR. HAYZLETT: Mm-hmm. Okay. I think we'll jump back to the USGS. That would be David

Mau.

MR. MAU: Good morning.

Mr. Vice-Chairman and members of the Administration, I have an exhibit here that is the presentation I'm about to give. I have four copies of that.

MR. HAYZLETT: Okay. Thank you.

MR. BEIGHTEL: Exhibit E.

MR. MAU: My presentation today will be to summarize the water conditions in the Basin for the past Water Year 2013. Water conditions in the Lower Ark were above 2012 in most of the -- in several of the mainstem gages, but well below 50% or less below 2012. You see the Arkansas at Las Animas, John Martin, and Lamar, they all exceed the 2012, so that the year was better than 2012 but still far below our average conditions.

I wanted to share with you some photos of the -- one of the major problems we're currently having in the watershed is the incidence of beaver dams on two of our locations at Big Sandy and at Granada, and this is at Sandy Creek at Lamar. These are what we have been encountering for several years and they're very difficult to remove. This one, you can see the dam further downstream. It really wreaks havoc on trying to establish stage discharge

relationships, so we do need to address that and it was discussed in yesterday's meeting. That's at Granada.

Next thing I'd like to talk about are some stream duration hydrographs in the Basin, starting at Leadville. The black line you see is the 2012 and 2013 Water Year. The blue line is 100% average water conditions and the green line there is the 25 to 75% normal conditions; and for most of 2012 until about April of 2013 conditions, stream discharge was in about less than 10% of normal conditions.

Avondale and Lamar, same condition, but by April, May of 2013, things have been picked up, and currently we are in the 25% to 75% normal conditions. Go ahead to the last two. Granada is doing well and so is Coolidge for this time of the year, and go ahead to the next slide.

This just shows the entire basin plus the White and Red River Basins, and the light brown dots are in the 6 to 9% percentile and the dark brown are in, if you can even see that, is the very low flow conditions, less than 5% of percentile per monthly streamflow, and so most of the basin is very, very dry and very much below average. Go ahead to the next one.

These are we have two drought wells, one in Pueblo and one in Great Bend, Kansas, and that red line indicates where the water levels currently are reading, and the green area again is the 25 to 75% percentile. This is depth below land surface, so these are -- Pueblo is in the below 10% range, 10 to 24% range, and Great Bend is in below the 5% range and has dropped about 10 feet in the last -- since 2010. Go ahead.

Just a review of the climate conditions, streamflow comparison for the State of Colorado. Comparing 2002 to 2013, you see that in April of this year, conditions were much worse than they were in 2002 for the similar period. In June things started to improve slightly, and by September, we are above average conditions for September for streamflow in the state, almost the entire state, as opposed to 2002.

Statewide or nationwide, see a similar pattern occurring. The western states in 2002 were much below average and at less than 10% streamflow conditions, but they have improved by September. We've seen a significant improvement, especially for Colorado and Kansas. Go to the next one. No, go back one.

So this just shows comparing to the severe drought in 1934. Just wanted to compare that to 2013. That was the Dust Bowl period. We were actually worse in April of this year than they were in 1934, as you can see, but by June the entire -- almost the entire country in 1934 was suffering dramatically from the drought, but by September, we had improved significantly this year and they had also in 1934, but we are in much better shape now than we were, not only in 1934 but in 2002. That's the extent of my report. Is there any questions?

MR. HAYZLETT: Any questions?

MR. THOMPSON: I wanted to mention that yesterday we had discussed a little bit, Steve had the idea that perhaps on the beaver control problems, if there's anybody in the audience that knows somebody that wants to go out and kill beaver or if there's, you know, a youth group or 4-H or something like that or somebody wants them for pets or whatever, that maybe the Compact could come up with a little bit of funding or something like that to help, you know, some Boy Scouts or something like that or if anybody has an idea.

MR. HAYZLETT: Okay. Thanks, Colin. Any other questions? Thank you for your report.

MR. MAU: Thank you.

MR. HAYZLETT: The U.S. Bureau of Reclamation, Roy Vaughan, I believe.

MR. VAUGHAN: Good morning to everyone. My name is Roy Vaughan. I'm the facility manager at Pueblo Dam. My office is responsible for the East Slope operations of the Fryingpan-Arkansas Project and I'm just going to highlight kind of some of our operations and what we have going on this year in the Basin.

So with that, imports were slightly below average at about 46-six (46,600 AF). That's about 90%, or excuse me, 96% of our 40-year average. The snowpack in our collection system was less than half of normal for about 80% of the snow season, but we had really a great finish to the season that brought us about average.

Runoff this year began on May 12th, so this just shows you some comparisons. The dark line is 2013, the blue line is 2012, yellow is 2011 and the green line is 2010; and you can see how in April, we were kind of flattening out but we had a strong finish from April to May, and this is in the Upper Colorado Basin. Go ahead.

This is what it looked like in the Arkansas

Basin, same thing. It started to fall off but then we had some recovery during that same time period. Our forecasts were February 1st was 15,700; March was 25-seven (25,700 AF); April was 24-seven (24,700 AF); and then our last forecast in May was 47-two (47,200 AF).

And this is kind of the way we imported through the Boustead. You can see the blue line squares is average and the gray line is how we brought water in through the tunnel this year. This is where we're at currently in Turquoise. The silver line is this year. The blue line is 2013. The black line is average; so you can see we're well above average in Turquoise compared to where we were this -- and way above where we were this time last year. Twin, we're about close, but still below average; and in Pueblo, we're -- excuse me. Pueblo, we're about average.

So a summary, Turquoise is 88%, Twin Lakes is 85% of normal, and Pueblo is 95% of normal. I just did this because I wanted to show you what it looked like in 2012. That's the silver line. 2013 is last year's, so just give you an idea of where we're at. We're well above, like we said, for the water year in Turquoise. Twin, we're a little below; and

Pueblo, we're well below where we were last year.

Okay. So winter operations, currently we're meeting the minimum streamflow releases out of our upper reservoirs and supplying about 6 CFS to the Leadville Fish Hatchery, and we think that's where we're going to stay the rest of the water year and through the winter. We don't plan on moving anymore project water down or making any more room, but that of course will change with the snowpack.

A little update on where we're at (concering Zebra Mussels). It's not a -- not a lot has changed from where we are at last year. The assessments are complete. We have action response plans in place. We have not yet found any adults on substrate samples in Pueblo Reservoir.

AVC and Master Contract, you've heard a lot about it. The Excess Capacity Environmental Impact Statement has been completed, the Preferred Alternative has been identified, but the Record of Decision has not yet been signed.

Southern Delivery System, we talked about this last year. I think 85% -- 85% of the pipeline is in place and they have started construction on Juniper Pump Station, and I have a few slides to show you kind of what that looks like. This is the

replacement river outlet valve. It's operational. Reclamation has not yet taken control. Colorado Springs is operating it in the interim.

This is just a trencher that they used to move some of the rock. Here's the meter pit that Reclamation will actually own this section of the pipeline, and it will have a hydroelectric out-turn. With that, I'll take questions.

MR. HAYZLETT: Okay. Are there questions for Roy?

MR. EKLUND: I think it's --

MR. BEIGHTEL: Would you be willing to make your report an exhibit to the transcript?

MR. VAUGHAN: Yes.

MR. EKLUND: I think, Roy, it's appropriate that Mr. Woodka note that when you said there weren't any adults in Pueblo, you were talking about fish [laughter].

MR. VAUGHAN: Right.

MR. WOODKA: He was actually talking about mussels.

MR. EKLUND: Or, sorry, mussels.

MR. HAYZLETT: Thanks, Roy. Andrew, you've got a presentation for us then?

MR. GILMORE: I do. Unfortunately,

Randy, I do not have any paper copies but am more than willing to send an electronic version of it out. (pause) Waiting for the machine to warm up.

MR. BARFIELD: While he does that, can we keep our exhibits straight, so Exhibit D would be the Corps of Engineers. [Whereupon there was discussion related to the submitted exhibits to this point in the meeting.]

MR. BEIGHTEL: I did not get a report from them, sir.

MR. BARFIELD: Okay. They've provided them here.

MR. WOODRUFF: One was provided to the court reporter and I have additional copies.

MR. BARFIELD: USGS, did they provide one?

MR. BEIGHTEL: Yes, they did.

MR. BARFIELD: So they would be E. Then for the Bureau that would be Exhibit F; is that correct?

MR. BEIGHTEL: Yes.

MR. BARFIELD: Mr. Vaughan's report.

MR. GILMORE: My report is pretty brief. Last year I went and covered the AVC. Roy took that duty on today, so my name is Andrew Gilmore with

Reclamation and I'll be speaking on the Trinidad Project Operating Principles Review, so if you go ahead.

So a brief background -- a brief background on the Trinidad Project. It's a Corps of Engineers facility that was built mainly for flood control, as the Corps does, but has other purposes as well, ranging from irrigation and M & I use, as well as having a joint use pool that includes space for sedimentation and permanent fish and/recreation pool.

The Purgatoire River District is the signatory with Reclamation for the irrigation portion and M & I portion of the project, and they pay back a portion of the construction costs, and Reclamation is the signatory on the Federal side to handle their repayment for that.

The contract had -- I don't -- I wasn't here when all that, the contract was done in the '60s, but there is a couple of very interesting exhibits to that contract, one of which is the Trinidad Project Operating Principles. Those were signed by five agencies, ranging for -- ranging from the State of Kansas, the Arkansas River Compact Administration, this group, the Corps of Engineers,

Bureau of Reclamation, and the Conservancy -- the Water Conservation District.

The Operating Principles lay out how the project is to be operated and but they also have some requirements for a Ten-Year Review of the Principles to consider amendments that would seek as experienced changes as the world changes and as we gain more experience to seek optimum beneficial use while ensuring no significant increase in water use, and there is a responsibility in there to look at the impacts of downstream water users. Kansas put that in there as one of their, one of their conditions, and Reclamation and the signatories all agreed to those.

So Reclamation's contact with this project, we don't own the facility, we don't operate the project, so our connection really is through the repayment contract and as signatory to the Operating Principles, and so we work with the, with the Water Conservation District and I'd like to update you on a few things that are going on in that world.

Last year we were having some discussions about because of the drought, as you saw, the USGS and other reports, it said that the Purgatoire River Basin in 2013 had 17% of average snowpack, and that

is -- was actually an improvement from last year. The Purgatoire District especially has been suffering from an extended drought, and as the repayment that they make to on their, on their contract is tied to their water supply, this has resulted in a situation where they're, they're in full compliance with their contract, but projections suggested that their contract will not be paid out over the life of the 70-year repayment contract.

So therefore, we've brought this up as a concern and we now consider that issue. The Purgatoire District has requested that we look at using our available authority to extend the life of that contract to 75 years, and with that, even if they did a minimum payments, they have until 2026 before they have to start making maximum payments.

So that situation, while we're concerned, we have time to act, and so we've been working with the District on what their options are to, to, to figure out a way to get the project paid for, so that's, that situation is we feel we've gotten past the, the, the situation of great crisis and of great concern, but we're working with the District to see what our options may be.

The District also asked Reclamation what

ability we had to allow for excess capacity contracts from the Joint Use Pool, and we are currently talking with the District about a legal analysis that shows that we have authority to do so, and Reclamation at our first analysis suggested that we don't -- the Corps said that they don't and we don't believe the District does either, so the District disagrees with us and we're working to see what the result of that will be.

So the last item on this list is the proposed amendments. We'll go ahead and move to the next slide. So the -- this request, as the Corps of Engineers stated, is for use of the City's water upstream of the reservoir outside the District boundaries and for additional dryup of linked up acreage that the District currently owns or has dryup covenants for.

So at the request of the District, as the proponents, as one of the signatories, they had to propose that those amendments to the City (sic), and gave them as a signatory to the other signatories. At the request of the District, we are working directly with the City and we met with them a couple weeks ago before our project review meeting and then they in return are responding to some information

that we got that we have about the need for that water and for the, for the, the -- where the urgency is for that.

We have determined that if we amend the Operating Principles -- and this is a change from how it's been done in the past. In 2004, we worked together to make an amended set of Operating Principles. We determined that to adopt amended Operating Principles, because they are an exhibit to a Reclamation contract, we will need to adopt them as an amended exhibit, so that will require a bit more action than just signing, us signing the amended principles, so we continue to work with the City of Trinidad and the signatories as we have progress on that.

So as I stated, the Operating Principles require a Ten-Year Review. We have determined that to make these reviews come out in an ex- -- in an expe- -- expedited and reasonable manner, we have annual, at least an annual meeting to discuss our open issues. We had a meeting, as I said, two weeks ago and we make a call for issues a few weeks before that meeting and we originally scheduled to hold that in October, and unfortunately with the government, the federal government shutdown, we had

to postpone that meeting, but over the -- since August, when we started to make the first call for new issues, we're getting new issues raised by any interested parties, so we have a list, the same list we had last year.

We worked through and talked about all those issues, and the couple of the ones that we're working on, the biggest one is the double mass balance analysis, because as I said, the, the -- we set a next meeting for September of 2014. We invite other -- obviously, as ARCA is a signatory, anybody interested from the ARCA environment is also welcome to come to our project review meeting.

We're doing a project tour as the Ten-Year Review period, this next period ends October 31st, 2014, so we'll be working to complete a review of that operational period. So we're meeting September 4 for a tour and on the 5th we will be meeting in Trinidad to discuss our, the open issues.

As well, we're talking about the technical issue of on the, again, this determination of the impacts the project may have had on downstream users, we've -- so the -- we're currently using what's a double mass balance analysis. This compares the cumulative flow at Trinidad to the

cumulative flow at Thatcher. That's above the project irrigated acreage and below, and this was used in the last three reviews covering '83, '84 and 1985 to '94, and '95 to 2004, and this was a relatively coarse assessment of project impacts.

Kansas for many years has expressed concerns about this and so we are looking at some revisions to that analysis and I will be having a meeting at -- I'll be scheduling and sending out an interest, just an initial request of folks who have time and are interested in discussing this to have a meeting, probably in Pueblo, in February of 2014.

So if you have any other questions, there's my contact information. We'll definitely provide this as an exhibit, and at least electronically to the board or to the Administration, and with that, I'll take questions.

MR. HAYZLETT: Thank you, Andrew, and you said you would present that as an exhibit, your Power Point?

MR. GILMORE: Yes.

MR. HAYZLETT: Okay. Any questions for Andrew?

MR. BARFIELD: No.

MR. HAYZLETT: Hearing none, then, thank

you for your report. Appreciate it.

MR. GILMORE: Thank you.

MR. HAYZLETT: I believe that brings us to Item 6 on the agenda, reports from local water users and state agencies. Purgatoire River Water Conservancy District, Jeris Danielson.

MR. DANIELSON: Well, thank you, Mr. Chairman. You know, you hear all of these sad tales from the Corps and the USGS and the Bureau about how we don't have any moisture and runoff is very low. I'm reminded of an incident in my former reign of terror as State Engineer and Rio Grande Compact Commissioner, and I had the privilege to work with Steve Reynolds, who State of New Mexico ought to put a big statue up of Steve Reynolds in front of the Bataan Memorial Building. He was a power to be reckoned with, and Jess Gilmer, who was the Texas Commissioner, and we were discussing Rio Grande Compact issues, but Texas and New Mexico also have a compact on the Pecos River, and at that time, and I think it's changed, but basically New Mexico was stealing all the water in the Pecos, and Jess Gilmer from Texas raised the issue with Steve and he said, "You know, there's just no water. How can you explain to me that there's water above Pecos and you

guys divert it but no water ever gets to Texas?"

And Steve Reynolds -- how many of you ever knew Steve? Yeah, that's how old I'm getting. Steve looks at him and he says, "Well, Jess, the Good Book says it rains on the just and the unjust, but it don't never rain in Pecos, Texas." Well, translate that to Trinidad and that's the situation we've got.

As the Major reported, our snowpack on the Purgatoire watershed was 17% of normal. Eight out of the last 10 years, we have been at 50% of supply or less, full supply. We were on track this year to be worse than 2002, which was the worst year that we've ever experienced, in the period of record at least, looking at less than 10% of runoff. Farmers didn't plant and 50%, I would say, of the project was fallowed. A lot of alfalfa and other grass crops just died, and then it rained in Trinidad and so we ended up diverting about 50% of normal, but it was too late to really have any beneficial effect, so that's the sad story from Trinidad.

On the repayment issue in, oh, I guess mid-2012 currently, something like that, the Bureau became very concerned about the ability of the project to -- of the District to meet their

repayment obligation. We operate on a sliding scale. The repayment on O & M or on construction is geared to diversion, so we'll have a minimum. If it's below about 70% of full supply, we only pay a minimum amount. If we get better than that, then of course, that escalates. Well, with eight out of 10 years below 50%, you can see the Bureau's nervousness in terms of getting that minimal check every year, so we had quite a bit of dialogue.

I will say our congressional delegation was helpful. Having been a former bureaucrat, I understand when you get elected representatives sending letters to Washington, and I think it did have some effect, I think the Bureau sat back and took a look at what the situation really was, and with Carly's work, we've come to a resolution. It works for me. As Andrew said, we're probably good, even if minimum payments are only made until 2026, and I'm not going to worry about it beyond 2026, but I think we've got it ironed out and pray for rain.

Andrew mentioned the issue of storage and joint use. Trinidad Reservoir has a joint use pool. It's dedicated to the use of for conservation storage as well as sediment deposition. This pool, it's, it's I think an incredible resource available.

It's in place. It's, it's being paid for. About 35,000 Acre Feet of storage capacity goes unused every year.

The District would like to use a small amount of that storage capacity for third party contracts. There's a lot of mineral extraction above the reservoir. People need our conditional water. We have a perfect bucket for them to put it in, but we're having a little issue with the Bureau in terms of whether we can do that legally.

We went to the Corps first. This was, what, a year and-a-half ago, it being the Corps reservoir, and asked the Corps, can we do this? The Corps said, I don't know. We don't think so. We're not sure, but it's not in our decision scheme. Go talk to the Bureau.

So we went and talked to the Bureau. The Bureau says, well, I don't think it's up to us. It's a Corps project. It ought to be the Corps that lets you do it. At which point, instead of continuing to work with the Bureau, I should have just done it and let them sue us if that's what they wanted to do, but anyway, we're going to keep working on that issue because it is, it's an incredible resource and it just sits there unused.

We had a little bit of vandalism. The price of copper, if you follow commodities, is up and one of our major satellite gaging stations was stripped. We are putting in 12 new measuring devices, recording devices on the Baca Ditch with the help of the Colorado Water Conservation Board.

And the thing I guess I'm most proud of, we're doing a river restoration project through the City of Trinidad in concert with Trout Unlimited. We've completed -- and don't ask me the numbers. We completed Reach Four first, okay, and now we're working on Reach Three. It's been a major positive thing for the community. We see people fly fishing. We've established a cold water fishery there, and we hope in the next month to get Reach Four done, which will work out to about over half a mile of cold water fishery right through the center of town, so you can go to McDonald's, get your burger and put your fly in the river. Any questions?

MR. HAYZLETT: Any questions for Jeris?

MR. DANIELSON: Thank you.

MR. HAYZLETT: Thanks, Jeris. Colorado State Water Plan. James, are you going to give us a report on that?

MR. EKLUND: Sure. Thanks, and I'll be

brief. In Colorado, we've got a gap between supply and demand that we've documented well. We know more about that gap than ever before in our history. It could be as much as half a million Acre Feet by 2030. We also know our population is going to grow by as much as two million people by, by 2030, so we're at five million now. It would be two more million, and the Broncos are going to keep beating the Chiefs, so we're going to see a continued influx of people from Kansas.

But, you know, and we may not know it in Colorado, but this last November, a report just came out this morning from the National Weather Service or NOAA, and it shows that this last November was the warmest in recorded history as far as global temperature, so whether you call it climate change or global warming or whatever you call it, we don't really care. It's the fact is that the, you know, we're dealing with quite a bit of variability in our systems and, you know, and this last six-month period was indicative of that.

We went from wildfire in one part of the state to, in several parts of the state, to drought through almost the entire state, to flooding of -- on a scale that was unprecedented. We've never seen

flooding like this in Colorado up in our South Platte Basin. So, you know, we've got a lot of challenges on the hydrology, and trying to make sure that we've got a plan to address that variability is something that we're working on.

Also, you saw a graph of the -- from NRCS on the -- a snowpack in the Colorado River Basin. Obviously, the transmountain diversions, the 26 transmountain diversions unite our state and mean that the snowpack on the Colorado River is as important to the folks on the Front Range as it is the folks on the western slope, so that ties us together, and that basin's been doing some modeling and that was reviewed at the Colorado River Water Users Association meeting in Las Vegas last week. That shows that, you know, we have to be doing some contingency planning for Lakes Powell and Meade. The contingency planning needs to be in place so that if those reservoirs go too much lower, that we've got a plan in place in that basin.

We also have to -- we've heard loud and clear as we've gone around the state, really for the last several decades, that we've got to equip ag producers with alternatives to permanent ag buy and dry, and we're working on that. We've got a pilot

project process that Kevin Rein from the State Engineer's office reviewed with the committees yesterday and we also have, you know, our first pilot in that, you know, proposal was submitted yesterday, so we're, we're trying to move on that front and, you know, we have to -- the bottom line is we've got all these things going on and we have to have a plan if, you know, we're going to have our state's water portfolio match up with its water values, and we've got -- we've narrowed those down to four, and they're vibrant cities, productive ag, robust recreational economy, and a strong environment.

If we want Colorado to look the way we want it to look for our kids and our grandkids, then we've got to do something more than just let, as Mike Chaney has referred to it, water Darwinism take hold, so we're doing this work from the grass roots up.

We're really proud of that in Colorado. We've got eight years of civic engagement under our belt with the Basin Round Tables and the IBCC or Inter-Basin Compact Committee process, and that's, you know, the reason we're proud of it is because it's harnessing the local control attributes of our

state where that we're also proud of in doing this water planning, so we have a draft due to the governor in December of 2014. The final is due in 2015, and if there are any questions, I'd be happy to answer.

MR. HAYZLETT: Okay. Have a question for James? Well, thanks for the explanation of that. I was going to ask about the time frame, but it sounds like you have a deadline on when to complete that.

MR. EKLUND: Yeah. It's due to the governor by December 10th of 2014 and I usually have the days down, so it's 300 and I think 55 days or so, give or take.

MR. HAYZLETT: All right. Thank you for that report.

MR. MILLER: Do you want to mention Brent's role in it?

MR. EKLUND: Yes, and Brent Newman, who has been working with our agency in the interstate section, is moving over to our water supply planning section that's doing a lot of the heavy lifting on this water planning effort.

Brent's here and I'd be remiss -- thank you, Steve, for highlighting that. He's working and we'll be focusing on the Arkansas River Basin. He's

going to be at the Basin Round Tables. He's the liaison to the basin round table with the plans, so he's a good guy that you should know.

MR. HAYZLETT: Very good. Thank you. Thank you, Brent. With the revised agenda, I think we have Item C, Groundwater Management District Number 3, report from Mark Rude.

MR. RUDE: My name is Mark Rude. I'm Executive Director of the Southwest Kansas Groundwater Management District in Garden City, and we -- we're one of five groundwater management districts in Kansas.

Some of that history in Kansas is back in 1972, recognition of a need of local folks that have a voice on groundwater management in Kansas, so Kansas passed the Groundwater Management Act. In that Act, it says as each district is formed, they get their own name and then the next number, so we're Southwest Kansas Groundwater Management District Number 3, or GMD-3 in Kansas.

GMD-3 and Reclamation entered into a memorandum of agreement to construct a plan of study for an Ark River Basin study. This is just a plan of study and not a basin study under that Water Smart program with the Bureau. GMD-3 is interested

in utilizing the Reclamation Basin Study Program to address water reliability concerns caused by water quality issues in the Ark River Basin downstream at John Martin Reservoir, and in a way, that is in accordance with the existing Compact and does not harm existing water right holders.

The plan of study will describe the specific study purpose, objectives, study areas scope and tasks, and serve as a work plan for the cost share partners in a full basin study. If a full basin study should be developed, it will look at the full range of alternatives, including but not limited to new supplies, advanced treatment, or best management practices.

GMD-3 is soliciting partners, stakeholders, and other interested parties to be involved in the development of this plan of study. GMD-3 would like to hold public meetings to have Reclamation to explain how a basin study can assist in addressing the issues, as well as gather input from interested parties on the development of a plan of study, and so I want to invite anybody who's interested in that process to get ahold of us. We'll try to post on our web site, too, contacts with Reclamation.

We certainly want to meet with you and we plan

to have public meetings in the Basin to develop this concept of a plan of study to address water quality. So wanted to extend that invitation to folks attending today, Mr. Chairman, and appreciate the time.

MR. HAYZLETT: What's the length of the agreement you're in now? Is there a time frame on that?

MR. RUDE: We hoped to wrap this, this process up in basically six months, so it's a, a short time process. It's, again, it's just a plan of study, how we would study it if we were to study it. It's really meant to get the dialogue going on this problem that's there in water quality on both sides of the Stateline, and we talked about that a little bit sort of amongst some of the attendees here last year and we're moving forward with it.

MR. HAYZLETT: Okay. Questions?

MR. BARFIELD: Yeah. The geographic scope is John Martin to where?

MR. RUDE: Well, we asked the Bureau to, under this grant, to focus just John Martin to Garden City basically, so sort of an equal, equally distributed on both sides of the Stateline.

MR. BARFIELD: So you'd spend six months

sort of scoping and then if it looks like something that's worthwhile, that would -- would you apply for --

MR. RUDE: Well, the outcome will be -- the outcome, David, will be, we hope, just simply an identification of the issues that should be studied in a plan of study. I mean, that's basically the short and the long.

MR. HAYZLETT: Any questions from the front table?

MR. EKLUND: I will, but I'll ask it after Steve's.

MR. MILLER: Two questions, I guess: Who is your contact at Reclamation? What Reclamation offices?

MR. RUDE: Okay. Well, okay. It's down south. It's Thomas Malkowitz is the gentleman with Reclamation out of the -- Trevor, where is it?

MR. AHRING: Austin.

MR. RUDE: The Austin office.

MR. MILLER: The second question I have, you mentioned cost share partners. Can you identify them?

MR. RUDE: Well, right now, there's no cost share partners other than us and Reclamation,

but boy, we would -- we would welcome that, Steve, you know.

MR. MILLER: I'm not offering, but you made it sound like you had some, but this is pretty much a Groundwater District and Reclamation?

MR. RUDE: Right now, that's what it is. We've got stakeholders involved, but I think appropriately so, at least at this initial stage, they're stakeholders. Everyone else is basically in that category.

MR. HAYZLETT: More questions?

MR. EKLUND: Has, has the State of Kansas been approached by you or by Reclamation?

MR. RUDE: Yes, we -- we approached them and had some discussions. We have been involved with several of the officials in Kansas, talking about sort of a related area, but it's different. TMDL development, Total Maximum Daily Load under the Clean Water Act. That's happening in Kansas and it's my understanding it's happening in Colorado as well. That's in the process of some of those conversations we've brought this up, so when you say approached, I would characterize it as stakeholders. Obviously, state agents are stakeholders, but they were not interested in being cash sponsors, if you

will.

MR. HAYZLETT: More questions? If not, then thanks, Mark, for your report and --

MR. RUDE: Thank you, Mr. Chairman.

MR. HAYZLETT: Compact Compliance and Decree issues, Ten-Year Compact Compliance. Kevin.

MR. SALTER: Kevin Salter. I work with the State of Kansas Division of Water Resources. This report is really a joint report between Kansas and Colorado. We worked with Bill Tyner and Kelley Thompson, along with Dale Book and others from the State of Kansas.

On a yearly basis, the H-I Model, which is used to determine the Compact Compliance in Colorado is ran. The 2012 update was ran last year and the states agreed to that run, and as a part of that, there's also a Ten-Year Accounting Compliance table which was generated, and a number of years ago, it was recommended in order to monument this table going out, that it would be best to be included both in the transcript as an exhibit and as also included in the Compact Year Annual Report, so I have presented four copies for our transcript and also to be included in the Annual Report.

As far as some of the specifics of this table

this year, the 2012 update showed a depletion of about 5,500 Acre Foot coming out of the H-I Model to useable Stateline flows. The Ten-Year Accounting table still shows an accretion or credit, if you will, at the Stateline of 58,700 Acre Feet, and again, you have to consider that over a Ten-Year period and there's some other background information or background that is related to that particular number, so I'll present that to the Administration today, and I think there's been a recommendation by one of the committees that this be made both an exhibit to the transcript and as part of the Annual Report, so if there's questions from the Administration?

MR. HAYZLETT: Any questions?

MR. BARFIELD: No.

MR. HAYZLETT: Hearing none, thanks, Kevin.

MR. BARFIELD: So that's Exhibit H; is that correct?

MR. BEIGHTEL: Exhibit H.

MR. HAYZLETT: Implementation of Irrigation Improvement Rules, Bill Tyner.

MR. TYNER: I'm Bill Tyner, the Assistant Division Engineer in the Pueblo office for Colorado

Division of Water Resources. The Irrigation Improvement Rules are in their third year of operation since those rules went into effect in 2011.

During 2013, two Irrigation Improvement Rules plans operated, or they're referred to as Rule 10 plans, operated in the Arkansas Basin. Those plans were again sponsored by the Lower Arkansas Valley Water Conservancy District. The farmers under the Fort Lyon Canal split off into a separate plan this year and then the remainder of the improvements are covered under a second plan.

I wanted to update some numbers I gave the committee yesterday. Those two plans include over 100 farms that have improvements on 182 parcels that total 14,577 acres of ground covered by sprinkler and drip systems; and for 2013, the original projection on the reduction in return flows that needed to be maintained was 1100 Acre Feet. With amendments to those two plans, that projection goes up a little bit. So far during 2013, 1160 Acre Feet of water has been provided to maintain those return flows.

As far as developments in, in this season that are updates from last year as reported to you, this

was the first successful year of a pond seepage study conducted by the farmers that are involved in these plans. They were required to have at least 20 ponds that would have measurement of inflows to the ponds and outflows from the ponds to the improved fields, and then a calculation of the evaporation from the pond and then from that, pond seepage could be derived, and the results of that first year of pond seepage study work is an average of about 18% of the amount of water delivered to those sprinkler ponds ended up being pond seepage, rather than a delivery to the field.

In the computer model that we used to operate these plans, we have an assumed pond seepage that's more conservative than that, and in comparing those results for this year, the average pond seepage from that model is about 10%, so a little -- the actual pond seepage is almost double what, what the model assumes. The ponds that were involved in the study were able to submit their actual data and so those, those farms relied on their actual pond seepage data for 2013.

The farmers involved in that study are -- and again, the study was also enabled by the Lower Ark Valley Water Conservancy District's oversight and,

and funding through the Colorado Water Conservation Board. The farmers involved in that study have one more year to conduct, to complete an agreement that was entered through the Colorado Water Court when the rules were first put into effect. They'll complete that in 2014 and we'll see what the results are of that pond seepage study, and then next year, I'll be -- should be able to report to you what changes we may implement in the computer model that we used to measure compliance for those return flow maintenance plans.

Again, that quantity of water is not that large compared to what we've reported to you for years with respect to Colorado's compliance on well depletion replacement plans, but we understand that it's an important element in maintaining Stateline flows and keeping Colorado in compliance with the Compact. Are there any questions?

MR. HAYZLETT: Questions?

MR. BARFIELD: No questions. Appreciate the report.

MR. HAYZLETT: Thank you, Bill. Colorado PDF Evaluation, Kelley Thompson.

MR. KELLEY THOMPSON: Thank you, Vice-Chairman Hayzlett. Again, my name is Kelley

Thompson. I'm with the Colorado Division of Water Resources Modeling Group. I'm going to talk about the Presumptive Depletion Factors or PDF's that the State of Colorado uses in its administration to relate groundwater pumping amounts to stream depletion amounts, and Amended Appendix A.4 of the *Kansas v. Colorado* decree does direct the State of Colorado to re-evaluate the PDF for supplemental flood and furrow irrigation each year, and we did that.

As specified by Amended Appendix A.4, the 2013 evaluation did ensure that replacements made for groundwater pumping using the recommended PDF value and the recent range of pumping and hydrologic conditions will result in no net depletions to Stateline flows over a Ten-Year period; but in particular, the 2013 evaluation considered both replacements and depletions considering current groundwater irrigation application efficiencies.

So the State of Colorado submitted their 2013 PDF Evaluation report to Kansas in September, and the State of Kansas and their experts reviewed that report and agreed to the results in November per the timetable in Appendix A.4, and we will also be meeting in February to integrate several

recommendations from the State of Kansas to integrate into the methodology for the PDF Evaluation and we should have that finalized before the 2014 evaluation.

And so the 2013 study did indicate that a supplemental flood and furrow irrigation PDF would be most appropriate at 36.5%, and so that value will be used by the State of Colorado again in the 2014 replacement plan year.

And I also did again want to thank Eve McDonald for her help in particular with this year's plan report and I wanted to thank her also for all the work she has done to resolve issues in the Arkansas Basin on behalf of the State of Colorado. We'll be missing her, so, and -- so thank you, and thank you, Vice-Chairman.

MR. HAYZLETT: Any questions for Kelley? Comments?

MR. SCHEUERMAN: Kansas would like to make some comments.

MR. HAYZLETT: Okay.

MR. SCHEUERMAN: In the response from Kansas in accepting the Presumed Depletion Factor to be used in the 2014 replacement year, Kansas has recommended regarding the evaluations going forward.

These recommendation are: Number one, it is the Kansas position that the annual efficiencies and PDF's determined for each user group beginning with 2011 should be applied going forward until they drop out of a 20-year period.

Number two, it would also be appropriate to agree upon the set of years to be used in determining the current conditions used in the average calculation for the PDF, and irrigation efficiencies applied for years prior to 2011.

And the third item is Kansas would also like to discuss whether an average or a weighted average is better representation of the current conditions.

MR. HAYZLETT: Okay.

MR. KELLEY THOMPSON: Okay. If I can respond to those, those recommendations have been duly noted.

MR. SCHEUERMAN: Okay. Thank you.

MR. KELLEY THOMPSON: I'd also remind the commission as last year, we were submitting the PDF Evaluation report as an exhibit, so --

MR. HAYZLETT: Okay. Any other questions or comments? Thank you, Kelley.

MR. BARFIELD: So that's Exhibit H?

MR. BEIGHTEL: I.

MR. BARFIELD: I, all right. That's right.

MR. HAYZLETT: An update on the LAWMA Colorado Water Court decree, Eve McDonald.

MS. McDONALD: Thank you. Thank you, Vice-Chairman Hayzlett. My name is Eve McDonald from the Colorado Attorney General's office.

MR. STEVEN HINES: Use the mic, please.

MS. McDONALD: Eve McDonald from the AG's office here in Colorado, and I'd like to start by saying I've certainly enjoyed my nine years working on Arkansas River Compact issues, and I'd like to introduce my excellent successor in that role at the AG's office, Mr. Dan Steuer. As James said earlier, he's a good guy and he's good to know. Very capable hands that I'm turning this matter over to and I'm hoping he enjoys the work as much as I have. It's been such a pleasure working with the Colorado Division 2 folks, CWCB folks, and the Kansas team.

One of the things that I didn't get to wrap up was the attempt to resolve Kansas's list of 15 concerns about the LAWMA Replacement decree, and we had a thorough update on that in last year's meeting, so I will simply update you this year by saying while we didn't make the progress during 2013

that we hoped for, we did have a productive meeting in June in the summertime and walked through the 15 very complex technical issues that or concerns that Kansas has raised and talked about where, where to start when Kansas is ready to meet, when Kansas staff is ready to meet again in detail about those concerns, and help us remove the cloud of uncertainty and the threat of a lawsuit.

Of course, Colorado already believes that the decree is fully compliant with the Compact, but we remain willing to resolve the concerns as, as necessary and we're hoping that there will be another meeting between the States very soon to make some progress. Thank you.

MR. HAYZLETT: Any questions for Eve?

MR. BARFIELD: No questions.

MR. HAYZLETT: Thanks, Eve. We appreciate your work that you've done.

MS. McDONALD: Absolutely.

MR. HAYZLETT: Before we go into the committee reports, maybe it would be a good time to take about a, what, 15-minute break? Would that work for everybody? Okay. We'll break for till 10:15.

(A break was then taken.)

(Proceedings resumed at 10:20 a.m.)

MR. HAYZLETT: Okay. I think we're ready to reconvene for the remainder of the meeting here. We were ready for our reports from the committees. Item 8, a report from the Engineering Committee from yesterday's meeting. David Barfield?

MR. BARFIELD: Certainly. Well, I appreciate the opportunity to provide this report and the Engineering Committee --

MS. SCHWERDFEGER: Gentlemen, we can't hear very well.

MR. BARFIELD: Okay. I will -- okay. Very good. I'll just provide a very brief summary of yesterday's meeting. Colin Thompson chaired that with me because Mr. Brazil was not available to be a part of the committee. I won't give a detailed report of the meeting summary because much of that, you've heard today. We received updates and opportunities to sort of ask questions in that setting of the federal agencies, and I think they've pretty much covered most of what we covered.

Andrew Gilmore of the Bureau talked about the Trinidad proposed amendments and their consideration of that, so I would just report on a couple items that haven't been discussed here yet. The -- we

heard a little bit from Steve Miller on the status of the Muddy Creek storage right transfer request to the Permanent Pool, and the current status of that is Colorado is currently reviewing the matter internally and then we'll be having some additional dialogue on that point to come.

And then the other thing of consequence is we heard the request of the Colorado Water Protection and Development Association for a new temporary storage account in John Martin and sort of went through the details of that request and for the first time, and we agreed that Kansas would take a look at that and we'd have some dialogue with the District about that and look to have a, a meeting of the Engineering Committee on, on that this summer.

We also had a fairly significant briefing on the lease fallow legislation that we heard a little bit about this morning and had an opportunity to, to hear that at some length.

The only action item from the committee was that the committee -- this is the Engineering Committee -- recognized the value of the Special Engineering Committee and recommended its continuation, and I believe we'll be acting upon that later, so that will be my summary of our

meeting.

MR. HAYZLETT: Okay. An action to accept this, the committee summary action summary for inclusion to ARCA? Is there a motion?

MR. THOMPSON: Yeah, I'll move.

MR. HAYZLETT: Second?

MR. SCHEUERMAN: Second.

MR. HAYZLETT: It's moved and seconded to accept this report. All in favor, say aye.

MR. BARFIELD: Aye.

MR. HAYZLETT: Opposed, same sign. (No response.) Okay. Thank you. Report of the Operations Committee, is that Colin?

MR. THOMPSON: Yes. I could yell at you, Nikki, from here.

MS. SCHWERDFEGER: Sorry.

MR. THOMPSON: We met yesterday and it was myself and Hal Scheuerman. The committee received reports. Well, I'll just start at the top. We received the Compact Year 2013 reports from the Operations Secretary, Steve Witte and Assistant Operations Secretary, Kevin Salter. The Operations Secretary expressed a concern that when Kansas does not call for the Section 2 account or Offset Account waters in John Martin, this can potentially delay

Colorado's ability to allow the post Compact wells and/or water rights to divert water and would like this issue to be added to the Water Issues Matrix, so the committee recommended that it be added to the Water Issues Matrix. That's a place where we put things when, you know, both states disagree and we want to argue about it further, so that's that.

The committee received the 2013 report for the Offset Account and we received the Colorado Presumptive Depletion Factor Evaluation Report from Kelley and we heard an update on the implementation of the Irrigation Improvement Rules.

On our action items we've got -- the approve the Ten-Year Compact Compliance Accounting Table for 2003 to 2012 was presented, and we recommend that this table be an exhibit to the 2013 ARCA Annual Meeting transcript and included in the calendar (sic) year 2013 annual report.

The committee acknowledged -- and number two would be the committee acknowledged receipt of the 2006 through 2013 Operation Secretary's reports and the committee recommended -- three, the committee recommendation to ARCA that a the Special Engineering Committee be extended for two more years, through calendar year 2015, and so I would

move for adoption of the report.

MR. HAYZLETT: Okay. It's been moved. Is there a second?

MR. EKLUND: Second.

MR. HAYZLETT: Been moved and seconded. All in favor say aye.

MR. BARFIELD and MR. EKLUND: Aye (simultaneous).

MR. HAYZLETT: Opposed, same sign. (No response.) Okay. And you're keeping track of those as exhibits?

MR. BEIGHTEL: Are those going to be combined as one exhibit?

MR. HAYZLETT: Combined as...

MR. BEIGHTEL: Exhibit J. .

MR. HAYZLETT: Okay.

MR. BARFIELD: Yeah, I think that's a good idea.

MR. THOMPSON: So next up would be the Operations Secretary report, Steve Witte.

MR. WITTE: Good morning. I should compliment whoever came up with the idea of this meeting arrangement with the podium here. I think it works a lot better in this particular constraints of this meeting room, so good on whoever did that.

The -- it's been my privilege to be entrusted with the responsibility, as the Operations Secretary, to conduct the operations of John Martin Reservoir and to report on it, those operations for the past 25 years. I've certainly been aided and helped a great deal by some wonderfully talented and dedicated people in doing that. I'd like to recognize Bill Tyner in particular. John Van Ort is our River Operations Coordinator. He had to leave unexpectedly earlier, and so you'll have an opportunity to see John again. And then the day-to-day operations of, of the reservoir have been taken over by Mr. Phil Reynolds. Phil, your hand up will be fine. Thank you, Phil, for doing a good job.

So, listen, I just want to go through the report briefly, hit some of the highlights that were discussed in greater detail with the Operations Committee yesterday. As has been said several times before and everyone here knows, that the drought conditions going into 2013 were quite severe. We started the Compact Year with about just a little under 16,000 Acre Feet in all of the accounts in, in John Martin Reservoir. By year's end, the content was 19,000, just a shade over 19,000 Acre Feet.

Throughout the winter period last year, we stored a total of just about 7100 Acre Feet that were -- as Compact water that was transferred into the respective Colorado and Kansas accounts at the end of -- at the end of the year. By the time we transferred all the water into the accounts, that was the total amount transferred.

During the course of the winter, we also store what has been termed other water, pursuant to Section 3 of the 1980 Operating Plan. 65% of that inflow goes to participants in the Pueblo Winter Water Storage Program. That totaled about 6600 Acre Feet.

The other 35% gets distributed in a number of ways. There's about 700 and some went into the Kansas Transit Loss Account to top that off at the 1700 acre-foot level. From that point, a portion gets distributed to the Kansas Section 2 account and another portion gets distributed into the Colorado Section 2 accounts. In the -- in that year, 1800 Acre Feet went into the Water District 67 accounts and about 800 and almost 900 Acre Feet went into Section 2 as a result of that 35% that's assessed on that other water.

There will be a more detailed report following

me on the Offset Account, so I won't go into a great deal of detail on that. Just suffice it to say that between water delivered into the Offset Account and internal transfers within the reservoir, about 983 Acre Feet were delivered into that Offset Account, which is made available to offset the impacts to State of Kansas as a result of post Compact pumping in Colorado.

During the course of the year, the Permanent Pool shrank by, overall, by about 1900 Acre Feet; this despite the fact that there were two occasions when we were able to allow some storage in the Permanent Pool through the exercise of the Muddy Creek right that is owned by the Colorado Parks and Wildlife, and that is pursuant to a 1976 resolution approved by the Administration.

Kansas elected not to call for any water to be released from John Martin Reservoir again in 2013. The total losses due to evaporation amounted to about 9,317 Acre Feet this year. That's a combined, combined evaporative losses between their Section 2 account, the Offset Account, as well as the Kansas Transit Loss Account.

Coloradoans released and used about 14,794 Acre Feet from their Section 2 account this year.

There were three occasions when we were able to add to the conservation storage, due to inflow events that exceeded the current demand in Colorado, and we had one occasion in June and two occasions in August. The total additions over the course of the year were about just under 17,000 Acre Feet.

There were also four occasions when the Amity Ditch Company was able to store under the Great Plains storage decree at various times, and that totaled about 6500 Acre Feet. You heard Major Bonham talk this year, as I believe was the Corps also reported last year, that a area capacity study had been conducted for John Martin Reservoir. The result of that, that survey showed lost capacity of 2185 Acre Feet, and so by agreement between the states, that lost storage gets assessed between the parties that had water in the vessel at the time when the adjustment is made. It was decided to make that, that adjustment on November 1st, and so at that time, a pro rata distribution of that 2185 Acre Feet occurred between the folks that had water in the reservoir at the time.

The big losers in that process were the Permanent Pool, as well as the State of Kansas, as a consequence of the fact that they didn't call for a

release of their water last year; and then there were minor amounts that were also lost by other, other accounts that had smaller quantities of water in them at that time.

Over the course of the year, we had one meeting between my staff and the Assistant Operations Secretary and his staff. We hope to do a little better than that next year. We're planning to have four meetings that we have scheduled, primarily to work on issues that are on that matrix. A number of issues on the matrix have been resolved in the past, but there are still some that we think that we can perhaps narrow the issues between us and hopefully resolve if we would just spend the time working on, on those issues, and so we plan to do that and I believe that the Operations Committee members are planning to join us.

If any members of the public would like to get a copy of the Operations Secretary's report or if you'd like to review the data, until we get a Compact Administration web site established, for the time being, I'm posting them on the State of Colorado's Division of Water Resources web site, so if you would like to have access to the operations data or the Offset Account data, those reports are

available there.

And then I guess finally, I would like to add to the record acknowledgement of some of the work that Eve McDonald did, the fine work that Eve McDonald has done not only for Colorado, but I think for the benefit of Kansas in the past nine years. We've certainly enjoyed working with you, Eve. The -- I'm quite certain that left to our own devices, we never would have gotten the surface water improvement rules finalized. You've been instrumental in working on the LAWMA issues, also editing of the Offset Review Report last year. Just too many things to name, but those are a few, and thank you.

I think that concludes my report, unless there are questions.

MR. HAYZLETT: Okay. Thank you. Are there questions?

MR. MILLER: I have one, and I'm working the numbers or the various reports on this adjustment of content. Was it on November 1st, 2014?

MR. WITTE: No, it was 2013. In the Compact Year 2014, that actually occurred November 1, because the new Compact Year for 13-14

starts on November 1, so we did make the adjustment of -- on November 1, 2013.

MR. MILLER: So it's really the first act of Compact Year 2014; it's not the concluding act of --

MR. WITTE: That's correct.

MR. MILLER: That's what I thought, but I wasn't certain.

MR. WITTE: There are tables in -- Tables 14 and 15 in the Operations Secretary's report that show end of day content on October 31, and I did step over one day into the new Compact Year and included as Table 15 the first day of Compact Year 13-14, where that adjustment was made, so it should be clear from my report how that was done.

MR. HAYZLETT: Is that just an arbitrary date that you used to make that adjustment?

MR. WITTE: I don't remember what the basis was for it. Kevin, maybe you can help me.

MR. SALTER: I'm thinking --

MR. WITTE: We just kind of decided last year this time that we would do it the first of -- on the 1st of November.

MR. SALTER: Kevin Salter. In looking at the record, the survey, resurvey of John Martin

Reservoir happens on various occurrences. They usually try to do once every 10 years. I think this term was a little bit longer than that. At one point in time, it just happened whenever it happened, but at some point in time they did move it to where the resurvey would take impact on the reservoir on November 1st, and I think it has to do with the beginning of the Compact Year. It makes the record a lot clearer if you have that change in storage occur at the beginning of the Compact Year, rather than somewhere in the middle. That's my opinion from what I've seen in the record.

MR. MILLER: I might add -- Steve Miller -- that I think the Corps already left, but they do the survey, they quality control it, and this year, they -- this time they found some flaws and had to redo it or re- -- at any rate, they gave us the option, the states the option of when it should be implemented, so they didn't impose this on us. They consulted with us, saying when's the best time to make the adjustment.

MR. HAYZLETT: Okay. All right.

MR. WITTE: I think probably a consideration went into that also, Vice-Chairman, is -- was that the thought was that this would occur

after the irrigation season had been concluded, so that what was left in there was unused water or water that would be carried over into the new year. In other words, there was always the hope of replenishment prior to the new year.

MR. HAYZLETT: Yeah, so makes sense. Other questions? Okay.

MR. THOMPSON: Next up, Kevin, Assistant Operations Secretary report.

MR. BEIGHTEL: Mr. Vice-Chairman, is the Operations Secretary report to be made an exhibit or is that something else?

MR. HAYZLETT: I think -- do we normally accept that as an exhibit?

MR. MILLER: It's awful big.

MR. SALTER: What we -- kind of having a role also in the generation of the transcripts, what was done in last year was it was made an exhibit to the transcript, but it was a page insert that said that it would be electronically provided, rather than having the bulk of that report as far as the paper transcript.

MR. HAYZLETT: Okay.

MR. BEIGHTEL: So that will be Exhibit K.

MR. HAYZLETT: Thank you.

MR. SALTER: Kevin Salter. I serve as the Assistant Operations Secretary for the Administration. I'll briefly kind of go through. I did provide a written report to the Operations Committee on December 1st. I also provided a presentation to the committee yesterday with some graphs that kind of, again, as you've heard today and I will echo, how dry the past couple years have been.

So just kind of highlighting through that report, one of the key things since the establishment of the Assistant Operations Secretary as an office of the Administration, the communication between the Garden City Field Office and the Division 2 has greatly improved. Steve did mention the one meeting we had in November of this year, but there's a series of regular communications that occur throughout the year, both with data exchanges on what's happening within and then even just phone calls back and forth, primarily maybe me asking about different situations on the river or different operations. This particular year was a lot of that occurred related to the runoff precipitation events that were occurring throughout

the Ark River Basin.

One of the issues that the State of Kansas had a long-standing concern with is related to the Pueblo Winter Water Storage Program. Our primary concern is related to the split methodology for splitting the water between the Pueblo Winter Water Storage Program and the Compact Conservation Storage Ark at Las Animas. We have a couple specific points that we have brought out in this year's report related to some flows in the Purgatoire, as well as the snowpack that was across the basin back in 2007.

Related to this particular issue, we did work through a concern that we saw last November. I think it probably was an issue for both states, and that is that the transit loss that was being applied to the water from Ark at Las Animas down to the reservoir wasn't sufficient to really cover the transit losses that were actually occurring, so the staff's worked over several weeks. I appreciate the efforts of John Van Ort and Phil Reynolds and others in working to get that methodology put in place to more accurately reflect what was happening in the reservoir.

I've heard from Division 2 staff and others within the basin about reasons why Kansas was

holding its water and not calling for not just one year, but two years in a row, and it really comes down to four issues that are pretty interrelated. One was the limited account water that was available to the State of Kansas; the dry river conditions that we were seeing in both states, which resulted in a high expected transit losses should we release water from the reservoir. Then you put on top of that the lack of summer precipitation runoff events below the reservoir that would have affected the Stateline, and it just made for real adverse conditions. We ran scenarios looking at the expected transit loss and the losses that we would see at the Stateline, and we would lose less water through evaporation than we would if we were calling that water down through.

One of the expectations we had in Compact Year 2012 when we did calls, we have some seed water in there for the upcoming compact year, what was Compact Year 2013. Unfortunately, when we hit April 1st of this year, we had essentially the same amount of water available to us as we had in April of 2012; and then as we went through the summer year -- summer months of the year, we had less water available to us than we had in the previous Compact

Year.

It wasn't until September and October that we actually had some more water put to our account than we had in excess of what we had in 2012. We're still looking at an order of 14 to 15,000 acre-foot, which if released to the dry river, we didn't have much expectation that we'd be able to use it. It was also past the time that we normally would use surface water in Kansas.

To the committee yesterday, I provided some graphs showing, you know, how dry it was from the all-time monthly low flow in September, 2012 of 66 Acre Feet, so the entire month of September, 2012, we had 66 Acre Feet pass the Stateline. The conditions did improve somewhat, but it was still very low flow conditions at the Stateline. It wasn't until August and September and October that we kind of came back up a little bit, but these two Compact years are much -- the monthly flows in these two Compact years are still considerably less than the average flows that we would see at the Stateline.

We talked a little bit and showed a graph about the Ark River at Granada as compared to flows at the Stateline, and we kind of showed some of the

fate of that water. This is included in my report, which I do have a couple copies of and that I can provide to you if you'd like. So, again, the basic reasons why we didn't call was just a very dry conditions, as the other people that spoke before me.

I do detail in my report some issues related to the pass-through accounting that Steve has included in his Operations Secretary report and on the Water Issues Matrix. We have identified four meetings that we'll have throughout Compact Year. We've identified some specific issues to address with a number of those meetings.

Again, as far as recognitions go, I really appreciate the efforts of Rachel Duran and Brandy Cole in my office in supporting what I do. They make me look good, so Rachel particularly did a lot of work in getting this information ready for the Administration meeting today, did a lot of behind the scenes work, especially generating the action items that the committees read off today.

I'd be remiss in saying something to Eve McDonald. It was good to have her working with the State of Kansas, working with the Colorado AG's office and with the State of Kansas on various

issues that came up. As Steve mentioned, she was the driving force to make sure that we got our job done. I wouldn't say she was a tough task master, but she did make sure that we got things done, so I appreciate your time, so if there's any questions.

I guess the other thing I did want to note is that I think again it would be something that if we got by without saying, it would probably be all right, but I think of 65 years and retirement and that sort of thing, but I noticed as I was reviewing various documents that the Compact was signed 65 years ago on December 14th, 1948, so I think that's an accomplishment for this body. I think it's underwent a lot of growing pains. I think we've kind of hit a stride and hopefully we can continue to work to work through the disputed issues before they become much larger than what they need to be. So that's my report. I'll take any questions.

MR. HAYZLETT: Any questions for Kevin? And your report will be submitted as an exhibit as well? Is that how we've handled that?

MR. SALTER: We have done that.

MR. BARFIELD: Just to be clear, so what are we including on the -- what have we included on the OS report in the annual report? I mean, the --

MR. SALTER: What it has been, and I'll look to Rachel on this, but I think we've included in the actual transcript Steve's letter report.

MR. BARFIELD: Okay.

MR. SALTER: Is that correct, or just the first page?

MS. DURAN: Just the first page, and then on it, it says it's available electronically.

MR. BARFIELD: Seems like we ought to at least have the summary narrative sections. I understand we don't want hundreds of pages, but it seems like --

MR. SALTER: We can do that.

MR. BARFIELD: -- we ought to at least have the narrative summary as a part of the record.

MR. HAYZLETT: Okay. And thanks to all those behind the scenes that do all the work, Rachel and Eve, everybody back there that keeps us going up here. Any other questions for Kevin?

MR. SALTER: I guess before I leave the podium and the mic, I did notice that there was an attendance list that went around that had an e-mail on it. We are generating an e-mail distribution list for meeting notices, so if someone would like to receive and are not already currently receiving

the notices electronically, if you could see me after the meeting, I'll get you added to that e-mail distribution list.

MR. HAYZLETT: I think that list is making its way down the table, and everybody here make sure they get their name on there.

MR. BEIGHTEL: Anybody who has not signed the attendance list, raise your hand. Thank you. We'll get that to you.

MR. THOMPSON: Next up is the Offset Account Report. Bill.

MR. TYNER: Also, I need to thank Eve. One last accomplishment to mention that Eve really was significant in that will impact the Lower Arkansas someday. She was our attorney on the Tri-State Decree, and although Tri-State hasn't begun their power plant operations, that change of half shares in the Amity Canal was a significant water court case and Eve was our attorney on that case, so I wanted to also mention that.

And then if you'll indulge me just a minute, in two years of successive drought and we also had a number of significant forest fires that occurred in the Arkansas Basin, over those two years, water administration is a -- it's a tough job to have, and

so our water commissioners, Jeff Montoya in Water District 19 on the Purgatoire and Trinidad and Lonnie Spady in La Junta, who is a master of setting the mainstem river call, and Josh Casper in Lamar who has just been fantastic in District 67, you know, they've got a difficult job to do. When people see those monsoon rain events hit the Waldo Canyon burn area and the Black Forest burn area and the one down by Walsenburg and the one up by Canon City, you know, those who are in the flood path shudder, while water users from the Bessemer canal to the Frontier Ditch and probably further on downstream look at those big flows and after two years of drought, really hope they get a significant amount of water, and so there's a lot of pull on these water commissioners to make sure they operate fairly and with integrity to make sure that water gets to where it ought to go.

And I also wanted to mention that the hydrographers that work for the State of Colorado and USGS do a wonderful job to give accurate data so that those administrative calls can be made, and I think Nathan Sullivan is maybe the only hydrographer that's here today with the USGS from Kansas, but keep those guys in mind, because there's a lot of

folks that allow the operations that happen to be done properly, and it takes a lot of interaction between the two states to make things work.

Steve already mentioned the reservoir operations staff but, you know, the ability for the Kansas staff and the Colorado staff to pretty freely communicate has gotten better and better. I think Kevin Salter probably communicated with Josh on things that folks weren't even really all that aware of that happened because of some of those big rain events, and so I think that's a good sign that that communication can take place. Thanks for that time and the offset account report, fortunately, is very short, so I'll do it quickly.

This is by far the lowest year, as far as deliveries to the Offset Account by Colorado well associations. All those deliveries were made by the Lower Arkansas Water Management Association, LAWMA, and most of those deliveries to the Offset Account were from Article 2 transfers from LAWMA's Article 2 accounts into the Offset Account. A small amount of inflow from the Highland Canal in August was delivered to the Offset Account, but the total was less than a thousand Acre Feet, which is significantly lower than LAWMA has ever provided to

the Offset Account.

I think this was largely due to some instate obligations that LAWMA had to make some replacements, rectify some replacements from 2012 and 2013 to Colorado ditches, and they've been successful in doing that. The Offset Account contained 3,693 Acre Feet at the start of the Compact Year and actually lost water over the year, ended up with 2,640 Acre Feet. The loss was due to 2,036 Acre Feet of evaporation and no releases were made from the account.

The Colorado well associations suffered more in 2013 than they did in 2012. We have learned through the two significant drought periods, 2002-2003 and 2012-2013, that our ability to shield ourselves from droughts using our wells doesn't work well when you have a back-to-back drought scenario like we've had in those two, two-year cycles, so the second year is always much more devastating to the well owners.

This year during the Compact Year, the pumping by irrigation wells was just under 25,000 Acre Feet, whereas in the first year of that drought, in Compact Year 2012, the irrigation pumping was just a little under 100,000 Acre Feet. In order to allow

that small amount of irrigation pumping to occur and still cover the obligations that were owed the river from prior years' pumping, Colorado well owners dried up 10,740 acres below John Martin Reservoir and 8900 acres above John Martin Reservoir, removed the surface irrigation from acres and used those direct flow pre-Compact water rights to replace well depletions.

That is the end of the report. If you have any questions, I'd be glad to answer them.

MR. HAYZLETT: Are there questions for Bill?

MR. BARFIELD: No.

MR. HAYZLETT: Well, I don't hear anything. Thanks, Bill, for the report. Action on the Operations Committee then? You moved that we -- have you already moved that we accept that?

MR. THOMPSON: I've kind of already done it, I think. I forgot to read down the list far enough.

MR. HAYZLETT: Okay. Brings us to the Administrative and Legal report then. Getting closer to the housekeeping items. James, would you like to make that?

MR. EKLUND: Yeah, I'd be happy to,

Mr. Vice-Chairman. Vice-Chairman Hayzlett and I -- can you all hear me okay or you want me to use the mic? Here we go. Never mind. Hello. All right.

Vice-Chairman Hayzlett and myself met yesterday with this committee, and the meeting summary is as follows: The committee heard an update on the status of transcripts from prior annual meetings, and those were 1998, 99 and 2012, and a summary of the 2013 special meeting that we held in Holly. The committee reviewed the audit report for the fiscal year 2012-13 and, and again, that covered the fiscal year July 1, 2012 through June 30th of 2013. That's all I have in the meeting summary, and I can wait until after the secretary and treasurer's report to get into the recommendations.

MR. HAYZLETT: Okay. We're ready for Stephanie.

MS. GONZALES: I just wanted to make a note that we have -- I'm pretty loud. We have received the Kansas Joint Funding Agreement in the amount of $8,000 for approval, so we will get that done, and other than that, I do not have anything else to report. Thank you.

MR. HAYZLETT: Okay. Thank you.

MR. EKLUND: All right. Into the recommendations, so that you and the audience know that there's an end to this tunnel. We've got 1 through 14 here, so let me --

MR. SALTER: Let me make just a quick suggestion. Since -- this is Kevin Salter, and since mainly those action items will be actually handled in the ARCA action items, I wonder if you need to really enumerate all of them.

MR. EKLUND: Good. Do you have any recommendations on which ones I should?

MR. SALTER: I don't have those in front of me, but I think you're going to handle probably about all of them in the ARCA action items.

MR. EKLUND: Yeah. Okay. Well, if it's okay with the Vice-Chairman, I'll go ahead and tender my time to the action item list.

MR. HAYZLETT: Okay. Let's just wait because we will cover, I think, every one of those on action items. Okay. We do need to accept this report, though, probably at this time.

MR. EKLUND: Then I'd move acceptance of the report.

MR. BARFIELD: I would second, so that will be part of the Exhibit J. Okay.

MR. HAYZLETT: Moved and seconded. All in favor, say aye.

MR. BARFIELD and MR. EKLUND: Aye (simultaneous).

MR. HAYZLETT: Opposed, same sign. (No response.) Okay. I think that brings us to new business. I don't know that we have any new business in front of us today, so the ARCA action items then. We can move into recognitions. I think we have those that have left us, left the Commission, some recognition by James.

MR. EKLUND: Yes. I'll start with Jennifer Gimbel, my predecessor, and read this resolution into the record.

Whereas, Jennifer Gimbel, as Director of the Colorado Water Conservation Board, represented the State of Colorado on the Arkansas River Compact Administration from 2007 until her retirement from state service in June of 2013; and

Whereas, Jennifer's knowledge of water policies and requirements have been valued and relied upon by the Administration; and

Whereas, Jennifer provided service to the Administration with courtesy and wisdom demonstrating her commitment to the promotion of

interstate cooperation; and

Whereas, the success of the Administration is of vital importance to water users throughout the Basin and Jennifer strove to make it an effective organization; and

Whereas, Jennifer recognized the importance of the national environment and the recreation resources of the Basin, in particular the protection of the Permanent Pool at John Martin Reservoir.

Now, therefore, be it resolved by the Arkansas River Compact Administration that it does hereby express its sincerest gratitude and appreciation to Jennifer Gimbel for her service, dedication and courtesy to this Administration.

Be it further resolved that the Administration honor Jennifer by including this Resolution in the Administration's Annual Report for Compact Year 2013, and instructs the Recording Secretary to send a copy of the Resolution, to Jennifer and Colorado Governor John Hickenlooper.

Entered this 18th day of December, 2013, at the Annual Meeting of the Arkansas River Compact Administration held in Lamar, Colorado.

I'd move the acceptance of this resolution.

MR. HAYZLETT: Okay. Been moved.

MR. BARFIELD: Second.

MR. HAYZLETT: Been seconded. All in favor, say aye.

MR. BARFIELD and MR. EKLUND: Aye (simultaneous).

MR. HAYZLETT: Thank you. Resolution for Matt?

MR. BARFIELD: So that would be Resolution -- I mean, we number the resolutions, correct, so that would be Resolution 2013-1, correct, and then should we include these as exhibit -- maybe all of these recognitions as Exhibit A?

MR. HAYZLETT: It's included in the transcript, but we can make them exhibits, I guess.

MR. BARFIELD: Okay. Tell us what to do then.

MR. SALTER: Kevin Salter. We have been including the resolutions as part of the transcript, just as resolutions, not as exhibits.

MR. BARFIELD: Okay.

MR. SALTER: So Resolution 2013-1 is sufficient.

MR. HAYZLETT: Just include it in the transcript then? Okay. Thank you. Okay. We're

ready for the next one.

MR. EKLUND: Okay. The second resolution would be honoring Matt Heimerich.

Whereas, Mr. "Matt" Matthew Heimerich of Olney Springs, Colorado, a representative of Colorado Irrigation Districts 14 and 17, served on the Arkansas River Compact Administration from 2005 through 2013; and

Whereas, Matt zealously represented his home area of the Basin, while at the same time reaching out to water users in other parts of the Arkansas River Basin, particularly the Purgatoire watershed in Colorado and downstream in Kansas -- in Colorado and Kansas; and

Whereas, Matt worked closely with the other members of the ARCA and with the federal agencies to promote interstate comity and enhance the public's understanding of the value of water conservation; and

Whereas, Matt's concern for the Arkansas River Basin, its scarce and pressure water resources, and the prior appropriation system was expressed through his service on the Administration's Engineering Committee; and

Whereas, Matt and his family have successfully

operated a multigenerational family farming operation, thereby demonstrating the values of hard work and common sense, and Matt has been an outspoken and effective advocate for rural America and the continuation of successful irrigated agriculture in southeastern Colorado.

Now, therefore, be it resolved by the Arkansas River Compact Administration that it does hereby express its sincerest gratitude and appreciation for the opportunity to have known and worked with Matt and for his outstanding service, dedication, and courtesy to this Administration and to the States.

Be it further resolved that the Administration honor Mr. Heimerich by including this Resolution and appropriate dedicatory remarks in the Administration's Annual Report for Compact Year 2013, and hereby instructs the Recording Secretary to send a copy of this resolution to Mr. Heimerich and to Colorado Governor John Hickenlooper.

Entered this 18th day of December, 2013, at the Annual Meeting of the Arkansas River Compact Administration held in Lamar, Colorado.

I'd move the adoption of this resolution.

MR. HAYZLETT: Is there a second?

MR. BARFIELD: Second.

MR. HAYZLETT: Moved and second. All in favor, say aye.

MR. BARFIELD and MR. EKLUND: Aye (simultaneous).

MR. HAYZLETT: Opposed, same sign. (No response.) Thank you. We'll enter those.

MR. BARFIELD: Okay. And then I've got a third one here. This is to recognize the passing of a former commissioner for Kansas, Eugene Overton, so this will be resolution 2013-3.

Our attention was called to the passing of Eugene Overton on December 24, 2012. Mr. Overton served on the Arkansas River Compact Administration as a representative of the State of Kansas and the water users of the Arkansas River Valley in Kansas from December, 1994 until December, 1998.

Whereas, Mr. Overton served with the Administration with distinction and the current members wish to express their gratitude for his service and their condolences at his passing.

Now, therefore, be it resolved by the Arkansas River Compact Administration that this statement be placed into the record of the 2013 Arkansas River Compact Administration Annual Meeting and a copy of it be sent to the family of Eugene Overton.

Adopted by the Arkansas River Compact Administration in its 2013 Annual Meeting on December 18, 2013, Lamar, Colorado.

I'd move adoption of this resolution.

MR. EKLUND: Second.

MR. HAYZLETT: It's been moved and seconded. All in favor, say aye.

MR. BARFIELD and MR. EKLUND: Aye (simultaneous).

MR. HAYZLETT: All opposed, same sign. (No response.) Is that a resolution then, or in memoriam? How do we handle that?

MR. SALTER: It's been done both ways. I think the resolution may be a cleaner way to handle that.

MR. HAYZLETT: Okay. That's fine. Okay. I believe that takes care of those. Then the next resolution will be a Special Engineering Committee extension. You want to read that, David?

MR. BARFIELD: Sure. I'd go ahead and offer that, if that's fine. This is Resolution then 2013-4 regarding the eighth extension of the term of the Special Engineering Committee.

Whereas, pursuant to Bylaw Article 5, Roman V-5, the Arkansas River Compact Administration by

Resolution Number 2005-01 created the "Special Engineering Committee" at its December 2005 Annual Meeting to resolve four categories of "assigned tasks," including certain accounting and interpretation issues arising from the Resolution Concerning an Operating Plan for John Martin Reservoir ("1980 Operating Plan"); and

Whereas, the Special Provisions of the 2005 Resolution creating the Committee specify that: "Term: The Special Engineering Committee shall be authorized for a period expiring on December 31, 2006, ARCA may extend this period by Resolution adopted at any regular or special ARCA meeting prior to such date"; and

Whereas, at successive Annual Meetings the Administration adopted Resolutions extending the term of the Special Engineering Committee in periods of one year, with the most recent Resolution (2012-02) extending this committee through December 31, 2013; and

Whereas, the Committee has successfully resolved some disputed issues placed before it during its term, and assigned tasks still remain before it with the potential for future agreement.

Now therefore, be it resolved that the

Arkansas River Compact Administration does hereby extend the term of the Special Engineering Committee for two (2) full years to expire on December 31, 2015. All other Special Provisions of the 2005 Resolution shall remain unchanged and govern the actions of the Special Engineering Committee during this eighth extension throughout its term.

Adopted by the Arkansas River Compact Administration at its 2013 Annual Meeting on December 18, 2013 in Lamar, Colorado.

So I'd offer this resolution for consideration by the Administration.

MR. HAYZLETT: Is there a second?

MR. EKLUND: Second.

MR. HAYZLETT: Any more discussion? Hearing none, how does Kansas vote?

MR. BARFIELD: Aye.

MR. HAYZLETT: Colorado?

MR. EKLUND: Aye.

MR. HAYZLETT: Okay. Accept the resolution then.

That brings us to the financial matters, and we'll deal with the rest of the Administrative and Legal I think in the -- I believe part of those will be taken care of here as well.

MR. EKLUND: I think that's right.

MR. HAYZLETT: Okay. Financial matters, the approval of the audit report. I think that was in the Administrative and Legal.

MR. EKLUND: I'd move approval of that report.

MR. SCHEUERMAN: I'll second that.

MR. HAYZLETT: Been moved and seconded. All in favor, say aye.

MR. THOMPSON and MR. BARFIELD: Aye (simultaneous).

MR. HAYZLETT: Opposed, same sign. (No response.) Okay.

MR. BARFIELD: So this will be Exhibit M?

MR. HAYZLETT: M.

MR. MILLER: Beyond making it an exhibit, we'd like to get the Vice-Chairman to sign the cover of that, signifying the approval. Makes it a little easier to keep track of, so if you can sign that, Randy, before it becomes an exhibit.

MR. HAYZLETT: Before it becomes an exhibit? Well, yeah. I mean, we'll do signatures like we always do.

MR. MILLER: You don't sign all the exhibits, but this one, we'd like you to.

MR. HAYZLETT: Okay. Approval of the USGS contract. That was what Stephanie reported on a while ago?

MS. GONZALES: Yes.

MR. HAYZLETT: And then we had that in the Administrative and Legal; is that right?

MR. EKLUND: Yes, we did. It was Item Number 5 there, and I'd move adoption of that recommendation.

MR. HAYZLETT: Okay. Is there a second?

MR. SCHEUERMAN: I'd second.

MR. HAYZLETT: Moved and seconded. All in favor, say aye.

MR. EKLUND and MR. BARFIELD: Aye.

MR. HAYZLETT: Opposed, same sign. (No response.) The adoption of the budget. We did do a little different in the budget. We didn't build a 2000 or an 18-month budget there, so we'll have that noted on our Administrative and Legal, I believe.

MR. EKLUND: With the notation, I'd move adoption of that recommendation.

MR. HAYZLETT: Okay. Is there a second?

MR. BARFIELD: Second.

MR. HAYZLETT: Moved and second. All in favor, say aye.

MR. THOMPSON: Aye.

MR. BARFIELD: Aye.

MR. HAYZLETT: Motion approved, and that's an exhibit as well?

MR. BARFIELD: So N.

MR. HAYZLETT: Okay.

MR. MILLER: What is an exhibit?

MR. HAYZLETT: What?

MR. MILLER: What did you say was an exhibit?

MR. HAYZLETT: The --

MR. MILLER: Worksheet?

MR. HAYZLETT: The adoption of the budget; right?

MR. MILLER: Well, there was no budget submitted. I had a worksheet I used yesterday to walk through this, and we could make that an exhibit if it helps.

MR. HAYZLETT: Rachel?

MS. DURAN: If I may, we called them assessments yesterday.

MR. HAYZLETT: Okay. That's right.

MR. MILLER: There's no document. I think the recommendation was that ARCA today would agree that assessments would stay level for at least

the next 24 months, and maybe 36.

MR. HAYZLETT: Then that can be the exhibit, then.

MR. MILLER: Well, there is no exhibit. Like I say, it was an orally given recommendation. There was an e-mail talking about it, but --

MR. EKLUND: So I will withdraw my motion and substitute a new motion, which would be the adoption of the recommendation without an exhibit.

MR. HAYZLETT: Okay.

MR. BARFIELD: I will second that.

MR. HAYZLETT: Okay. All in favor, say aye.

MR. THOMPSON: Aye.

MR. BARFIELD and MR. EKLUND: Aye (simultaneous).

MR. HAYZLETT: Anybody opposed? (No response.) Okay. The approval of transcripts then.

MR. EKLUND: I move the approval of these transcripts.

MR. HAYZLETT: I think shall we take those as -- first, to keep them straight, 2013 written summary transcript, and action on that one to start with?

MR. EKLUND: Sure. I'd move that.

MR. HAYZLETT: Okay. Second?

MR. BARFIELD: I'll second it, and we're speaking here about the -- the transcript of the special meeting?

MR. HAYZLETT: Of the Annual Meeting.

MR. EKLUND: Of the 2012 meeting.

MR. BARFIELD: Okay. So the 2012 Annual Meeting transcript?

MR. HAYZLETT: Yeah, and this is -- mine says 2013, but it's 2012.

MR. BARFIELD: Correct.

MR. HAYZLETT: Yes. Action on the 2012 Annual Meeting transcript.

MR. BARFIELD: Okay. So it's --

MR. HAYZLETT: Been moved and seconded. Any more discussion? No discussion. All in favor, say aye.

MR. EKLUND: Aye.

MR. BARFIELD: Aye.

MR. HAYZLETT: Opposed, same sign. Okay. Now action on the 2012 Special Meeting.

MR. EKLUND: I'd move adoption of the transcript from the 2015 Special Meeting.

MR. HAYZLETT: 2013.

MR. EKLUND: I'm sorry. 2013 Special

Meeting. Thank you.

MR. BARFIELD: All right. I second.

MR. HAYZLETT: Second. Any more discussion?

MR. BARFIELD: I'd like to just say a few words, yeah. So we're speaking about the September, 2013 Special Meeting. I just wanted to express appreciation to the State of Colorado to allow the special meeting to happen, as well as proponents of the project, GP Resources, for coming to the special meeting and answer questions.

This special meeting was, you know, there's a significant development along the Stateline that's proposed, and due to the complexity and sort of the number of moving pieces in that, a lot of citizens were concerned and still are concerned on both sides of the Stateline. It just provided an opportunity to -- for people to come and sort of hear about the proposal and about the processes of under the CCompact and in the decree to consider such developments.

I think we had 90 in attendance. It was a fairly well-attended ARCA meeting, maybe one of the most, so anyway, just wanted to share that that occurred, and then I think people appreciated sort

of hearing more about the project and the processes and that will -- where this project will be evaluated, and we certainly plan to afford the opportunities that we have to participate in those reviews, so thank you.

MR. HAYZLETT: More discussion?

MR. EKLUND: I'd echo your thanks, especially to Colin Thompson, for his hospitality in Holly for that special meeting, so thanks.

MR. HAYZLETT: Yes, and the attendance was tremendous. I mean, it was probably the biggest ARCA meeting I've seen. More discussion? If not, call for the action.

MR. EKLUND: I'd move adoption of that meeting summary.

MR. SALTER: May I provide a comment? Or you've called for the vote. I'm sorry.

MR. HAYZLETT: Yeah, I've called for the vote.

MR. BARFIELD: Aye.

MR. EKLUND: Aye.

MR. HAYZLETT: Opposed, same sign. Kevin?

MR. SALTER: Sorry to interrupt that. We had thought about including the written summary as

an exhibit to this transcript, but really, ARCA has a choice. Because it was an individual meeting, it could either be a stand-alone document or you can include it as a transcript, so that may be something that you may want to discuss and decide, whether you want to have a stand-alone document or as an exhibit.

MR. EKLUND: I think we went with the summary, right? When we were there, we decided to go with the summary.

MR. HAYZLETT: We did the summary, mm-hmm.

MR. EKLUND: Just let the summary stand.

MR. BARFIELD: Right. The summary is in lieu of a transcript of the meeting. Kevin's question I think here is do we publish it as a separate report or do we include it in the proceedings of this meeting. I'd recommend the latter, unless that --

MR. MILLER: Historically, there's a long series of special meetings that stand alone of their own name and file, and when we go to the web, I think we want to have a direct link from the September, 2013 special meeting to that summary, rather than have it embedded in the transcript of

the --

MR. BARFIELD: Let's stay with history. I'm sorry. I'll correct my recommendation. Let's make it a separate, but the meeting summary we're approving today is in lieu of a transcript.

MR. HAYZLETT: Okay. Right. I believe that would be the better way to handle it.

MR. BARFIELD: Right.

MR. HAYZLETT: Okay. All right. Brings us to the officers and committee appointments. That was in Administrative and Legal?

MR. EKLUND: Yes, it was, and I would move the slate, and I can read through that, if I can find it.

Vice-Chairman, the slate that I'm moving here is Vice-Chairman Hayzlett. The slate I'm moving here is Vice-Chairman Hayzlett, Secretary and Treasurer Stephanie Gonzales, Operations Secretary Steve Witte, and Assistant Operations Secretary Kevin Salter.

MR. HAYZLETT: Is there a second?

MR. BARFIELD: I'll second.

MR. HAYZLETT: Moved and seconded. All in favor, say aye.

MR. BARFIELD and MR. EKLUND: Aye.

MR. HAYZLETT: Opposed, same sign. Hearing none, the appointment of the chairs -- don't know if we need action on that or if -- okay. Can you go ahead then?

MR. EKLUND: I'd move the slate of committee chairs as follows. Let's see. I think I have Scott Brazil as Chair of the Engineering Committee; Hal Scheuerman as the Chair of the Operations Committee; Randy Hayzlett as chair of the Administrative and Legal Committee.

MR. BARFIELD: Second.

MR. HAYZLETT: Moved and seconded. All in favor, say aye.

MR. BARFIELD and MR. EKLUND: Aye.

MR. HAYZLETT: Opposed, same sign. (No response.) Okay. I believe that takes care of the housekeeping on that part. There's still a few items on the Administrative and Legal that we probably need to deal with.

MR. EKLUND: Okay. So we did move the committee -- well, we, we recommended as a committee to amend the agenda, and I guess postmortem here, we're going to do -- we've already done the agenda item, so I think we've taken care of that. I don't know if we need to take action on it.

MR. HAYZLETT: I think just to include the report.

MR. EKLUND: Okay. So we'll -- I move the inclusion of the report and the meeting summary.

MR. BARFIELD: Second.

MR. HAYZLETT: Okay. Moved and seconded. Any more discussion? And when we'll deal with future meetings, that was in the Administrative and Legal, will deal with future meetings amendment. Moved and seconded. All in favor, say aye.

MR. BARFIELD: Aye.

MR. EKLUND: Aye.

MR. HAYZLETT: Opposed, same sign. Okay. Motion carried. I think the instruction to the committees were some meetings coming up in the summer. I think those are probably captured through the different committee meetings there.

Public comment time. Do we have anybody from the public that wants to comment, and if they do, I think we need to get the microphone to you and be sure and state your name.

MS. SCHWERDFEGER: I'd like to make a comment. Colin can get back at me now. I'm Hamilton County Commissioner Nikki Schwerdfeger. I am on a 32-Kansas county coalition right now that is

in, or I should really say at war, with the US Fish and Wildlife Service over Endangered Species Act with the prairie chicken, and in that research that we were doing, it's been pointed out to me that Kansas Arkansas River is a navigable river, even though it's not stated so in Colorado. But as you read the Clean Water Act of Section 404, I think it says the tributaries to any navigable river is under the control also of the US Fish and Wildlife Service if they choose to introduce an endangered species, so I think it might be argued that Colorado's side of the Arkansas River is a tributary.

I hope that as the Kansas and Colorado people evaluate what is transpiring currently at the Kansas-Colorado Stateline, that they take into account that Kansas for sure will be held accountable to that US Fish and Wildlife Service, and some of the project over in Colorado I think includes, I won't call it dredging, but I think at one time there was a gravel pit that was being involved. I don't know that you're changing streams or anything like that, but there are some issues that I hope you don't invite US Fish and Wildlife into the project. Once they come, you know, I know we're looking about water and everything, but you

bring on a whole bunch of new rules that will encumber those of us that come out of that aquifer, so I do want you to look at that.

Little sideline here. They did extend the prairie chicken comment till January the 10th, and that borders the entire length of Prowers County and Hamilton County on the Arkansas River, so those issues could also affect what can happen on both sides of the Stateline. I thank you.

MR. HAYZLETT: Okay.

MR. STEVEN HINES: Steven Hines, Frontier Ditch. I have a couple of questions for the Colorado people. The -- is there limits on the laws of how many Acre Feet you can pump, and if there is, what's the penalties for overpumping?

MR. HAYZLETT: Okay. I'm looking to who might be the one to answer that. Steve?

MR. EKLUND: I defer to Steve.

MR. WITTE: The first question: Do we put limits on, on individual Colorado wells, and I think the answer to that is yes. We do that on a year-by-year basis, Steven. In order to be able to, to pump a well, you have to be a part of a replacement plan. We do that under a process we call Rule 14, and the limitation is the amount of

pumping that can be done with the available replacement resources to offset stream depletions, so each year, the -- each farm has a limit.

Now, during the year, generally plans are done as -- not as plans that individuals put together, but they are done in as members of associations, and the associations have a pool of resources that they can shift around somewhat to benefit their -- to use the resources that they have to the benefit of their individual members.

So the point is that if a, if a well owner starts getting up against their annual limit for pumping that's approved initially, then they can go to their well association and say, hey, I'm hard up against my limit. Are there additional resources that I can, I can acquire from other members who don't seem to be pumping their well as much that could be made available to meet the -- to offset the stream depletion in the amount, time, and location where my well would impact the river? And if that works out, then the plan is amended to allow an increased amount of pumping.

If someone were to, to violate their limitation without an amendment of their plan having been approved, then yes, there is a penalty. The

penalty currently in place in Colorado is, is $500 per day. Yes, sir. Follow up.

MR. STEVEN HINES: If you keep doing it year after year, overpumping, do you lose water or you just pay $500 a day?

MR. WITTE: Well, in Colorado, our process is that if someone were in violation of an order to cease pumping and they continued to pump, then our way to enforce that is to take that to the district court, and we make our case and if the court agrees with us, then they can impose $500 per day. Okay.

So then if they continue to violate, then we can -- they would be acting in violation of a court order. The penalty for that can be a variety of penalties and sanctions available under the law, which can include imprisonment, so there -- it can be worse than $500 per day.

MR. HAYZLETT: Any other public comment, question? Okay. Thanks, Steve.

MR. STANLEY HINES: I'm Stanley Hines with Frontier Ditch. Could you kind of explain the portrayal on the water transfers and how that all works?

MR. HAYZLETT: As far as exchanges or --

MR. STANLEY HINES: Yes.

MR. HAYZLETT: Okay. Steve, you might be on the block again there.

MR. WITTE: Stanley, I'm going to ask for a little bit of clarification. Are you talking about the kinds of transfers within the well association that I just talked about, or are you talking about the kind of transfer that Tri-State did to change the use of a Colorado water right or -- help me answer the question that you really want answered.

MR. STANLEY HINES: Not the transfers on the river system, like on the offset accounts and that kind of transfers. I guess is the paper trail, does the actual transfer always go with the paper trail?

MR. WITTE: Boy, I hope we're not stepping into a trap here, but I think so. So when we amended our groundwater use rules in 1996, Stanley, there was a provision in the rules that said that irrigators could utilize a surface water right as a source of augmentation without changing the water right from the original use to augmentation for a period of up to -- up to 10 years; but at that point in time, they had to obtain

a, a Colorado Water Court decree to change the type of use.

So in that, in that intervening 10 years, the determination of what the consumable portion was, what the return flow portion was, as well as when the, the, the timing of replacements should occur or when the timing of return flows should be made was all left to the State Engineer's office, okay. So it was an administrative process and, frankly, there wasn't a lot of notice provided, but the fail-safe was that at the end of 10 years, you had to go to water court, and it became a very public process at that point in time.

So over the course of finalizing the decree in Kansas versus Colorado, one of the things Kansas asked for was, you know, we'd like to have that stepped up a little bit. Your rules allow 10 years, but after the third year that you administratively approve something, we'd like to see the court application filed at that point in time, and so we've, we've tried to -- that was part of one of those agreements that's made an appendices to the United States Supreme Court decree, and so we've tried to follow that since then, so it just accelerated when the paper trail, the public paper

trail becomes a little more open and available. And yes, then once the decree is, is entered, we do our very best to make sure the water follows the paper.

MR. STANLEY HINES: Okay. That answered it. Thank you.

MS. SCHWERDFEGER: I have a question for Steve.

MR. WITTE: Yes, ma'am.

MS. SCHWERDFEGER: Within your LAWMA group, say for instance, in the LAWMA group, whenever you're going to transfer water rights within the group, is that made by the entire group and the members, or is that decision made by the representatives on the board?

MR. WITTE: Um, I would say that the association generally empowers their general manager to -- and their engineer to propose those kinds of transfers, but the approval of the transfer is, is, is our responsibility, so over the years the, the engineers, the private engineer who works with LAWMA knows the parameters that we're looking for in terms of whether or not a particular replacement source can work, and actually, they've been through the court decree, so it's pretty well-established by decree how, how their resources can be utilized and

so the, the -- they suggest that the -- a transfer can be made and they make that known to us through an application process, which we then review to determine if it meets the need for the increased pumping at the new location or the different location.

MS. SCHWERDFEGER: Does that take into account conflict of interest on board members?

MR. WITTE: I don't know the answer to that question.

MS. SCHWERDFEGER: Okay. Thank you.

MR. HAYZLETT: Okay. Thanks, Steve, and thanks all of you for your public comments and questions there.

Brings us towards the end of this. Future meetings. I think we -- the 2014 Annual Meeting location and date, I think we have pretty much discussed that in committee meetings. The normal would be December 8th and 9th. I believe we're looking at maybe the 16th and the 17th. Is that agreeable?

MR. BARFIELD: Yes; here in Lamar, Colorado.

MR. HAYZLETT: Is that agreeable?

MR. EKLUND: Yes, sir.

MR. HAYZLETT: I don't believe we need any action on that. We'll just set the date.

MR. SALTER: Probably be a good idea to.

MR. BARFIELD: I mean, the rule says we can change it, but we probably ought to take it as an action, so --

MR. HAYZLETT: Okay. Is that a motion?

MR. BARFIELD: I would move that we set our Annual Meeting for 2014 to December 17th and have committee meetings on December 16th here in Lamar, Colorado.

MR. EKLUND: Second.

MR. HAYZLETT: Been moved and seconded. Any other discussion? If not, all in favor, say aye.

MR. BARFIELD and MR. EKLUND: Aye.

MR. HAYZLETT: Opposed, same sign. (No response.) Okay. Committee meetings, there were set out a few committee meetings in the -- that we agreed upon during our meetings yesterday. I don't think we need any action on that.

Special meetings of ARCA. I think is there some conversation about a tour? You want to talk on that, Kevin, or anything to comment?

MR. SALTER: I can. See exactly how I

want to start this. We've had some turnover in the Administration as far as representatives. There's a possibility that we may see a new federal representative. Thinking back over the time, we've had some discussions between the representatives today that it might be time to do a tour of the Ark River Basin for the Compact Administration.

We did a tour back in, I believe August of 2004, when we had a new federal chair. We had some new representatives on the Administration and that at the time, it was really helpful to get people out and see. We toured from Pueblo Reservoir ail the way down to Garden City. We looked at different sites along the way between Pueblo Reservoir and Garden City. It was helpful for our state staffs as well that may not get out and see what an augmentation station looks like.

To me, it's incredible to be in the bowels of Pueblo Reservoir or John Martin Reservoir and see exactly how those dams operate, just the physical size of them as well, so we thought maybe a tour for the Administration would be of benefit to see the lay of the land and get a feel for some of the structures that we talked about frequently, not only in these annual get-togethers but during committee

meetings and then just through some informal communications otherwise.

MR. HAYZLETT: Okay. Thanks. Sounds agreeable by the Administration. As we've talked, that would be a good idea. Thank you. Close to the end here. James, did you have a comment?

MR. EKLUND: That would be great. Thank you, Mr. Vice-Chair. I just wanted to, before the record closes, add my appreciation to Eve McDonald for all of her work.

MS. McDONALD: Thank you.

MR. EKLUND: Thank you. It's been a tremendous service to the state and we've been represented well and I wanted to make sure that got onto the record. And also, you know, thanks to our staff on both sides. I know that it's heavy lifting to get ready for these meetings and we stand up here and do the easy part, so thank you for your help and thank you, Vice-Chairman, for assuming the role and the added responsibility of doing this work in the absence of a Chairman. Hopefully we'll have that rectified soon, but it's not going unnoticed. Thank you very much.

MR. HAYZLETT: Thank you.

MR. MILLER: I don't really want to get

the last word, so I hope someone else will say something, but there are two things. The tour, I think, is a great idea. I don't know if Kevin was proposing it in the context of a formal special meeting of ARCA where members would feel like they had to come because there might be some business, or if it would just be a strictly voluntary event that was collaboratively put together.

And then the other one was I know there was some discussion about maybe this meeting facility in Lamar was not adequate. I think it performed pretty well today, but does the Administration want us to look at finding another location in Lamar for next year's meeting, or should we just try and get this reserved as soon as possible?

MR. HAYZLETT: I think the room was adequate today. I think our problem was running into having to be out of the room on committee meetings at a deadline.

MR. MILLER: I think several people probably --

MR. HAYZLETT: We'll deal with it next year. See what you can come up with. If we run into that problem, you guys can deal with it. Okay.

MR. MILLER: I'll pass that on to

Stephanie, so I think we reserve it early enough, we can get it for all the time we want.

MR. HAYZLETT: Anything else from the front table?

MR. BARFIELD: No. Appreciate Colorado hosting. If you can arrange weather like this next year, that would be appreciated as well, so --

MR. EKLUND: Well, hopefully we'll add snow next year.

MR. HAYZLETT: Is there a motion to adjourn?

MR. BARFIELD: I move we adjourn.

MR. EKLUND: Second.

MR. HAYZLETT: Moved and seconded to adjourn. All in favor, say aye.

MR. BARFIELD: Aye.

(Proceedings concluded at 11:40 p.m. Mountain Time.)

EXHIBIT LIST

Exhibits accepted by ARCA follow in the order introduced:

A. Credentials of new ARCA Representatives

B. Attendance List

C. Revised Agenda

D. U.S. Army Corps of Engineers Report

E. USGS Report

F. U.S. Bureau of Reclamation Report

G. U.S. Bureau of Reclamation Report, Part II

H. Ten-Year Compact Compliance Accounting Table

I. 2013 PDF Report

J. Committee Recommendations

K. Operations Secretary Report

L. Assistant Operations Secretary Report

M. Audit Report

ADOPTED RESOLUTION

ARCA adopted following resolutions:

1. Resolution 2013-01 Honoring Jennifer Gimbel
2. Resolution 2013-02 Honoring Matt Heimerich
3. Resolution 2013-03 Honoring Eugene Overton
4. Resolution 2013-04 Regarding Eighth Extension of the Term of the Special Engineering Committee

STATE OF KANSAS)
COUNTY OF RENO)

This is to certify that I, Lee Ann Bates, a Certified Shorthand Reporter in and for the State of Kansas, reported in shorthand the proceedings had at the time and place set forth on the title page hereof and that to the best of my ability, the above and foregoing pages contain a full, true and correct transcript of the said proceedings.

Certified to on this 7th day of December, 2014.

LeAnn Bates, CSR, RPR, CRR

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Topeka, KS 66612-1594
(785) 296-4575
www.sos.ks.gov

STATE OF KANSAS

April 17, 2013

Mr. Hal Scheuerman
PO Box 222
Deerfield, KS 67838

Dear Mr. Scheuerman:

Congratulations on your appointment as member of the Kansas Colorado Arkansas River Compact Commission.

Your Commission and oath of office form are enclosed. You are required to execute the oath of office before a Notary Public or other official empowered to administer oaths. After the oath is notarized, please return the original to this office. You are required by law to have your oath of office on file in the Secretary of State's Office.

Remember that you are prohibited by law from performing any official duties prior to the execution of your oath of office.

May you have every success in your position. If my office can ever be of assistance to you, please feel free to call upon us.

Sincerely,

KRIS W. KOBACH
Secretary of State

KWK:dt

Enclosure

Office of the Governor

STATE OF KANSAS

CERTIFICATE OF APPOINTMENT

I, Sam Brownback, Governor of the State of Kansas, hereby appoint and commission

Hal Scheuerman

as

a member on the Kansas-Colorado Arkansas River Compact Commission

and authorize this appointee to discharge the duties of this office

upon fulfilling all legal requirements

Signed this 15th day of April, 2013

Sam Brownback

Governor

Kris W. Kobach

Secretary of State

Oath of Office

State Of Kansas
County of KEARNY }ss.

I do solemnly swear, or affirm, that I will support the Constitution of the United States, and the Constitution of the State of Kansas, and will faithfully discharge the duties of the office of

Member of the Kansas Colorado Arkansas River Compact Commission
Office

So help me God.

Hal Scheuerman
Name

Hal Scheuerman
Signature

Subscribed and Sworn to, or Affirmed, before me this
24th day of April, 2013.

Jena Jenkinson
Signature*

KEARNY COUNTY, KANSAS (seal) Seal COUNTY CLERK

Kearny County Clerk
Title

My notarial appointment expires 1-9-2017.

*Notary public or other officer authorized to administer oaths.

STATE OF COLORADO

OFFICE OF THE GOVERNOR

136 State Capitol
Denver, Colorado 80203
Phone (303) 866-2471
Fax (303) 866-2003

John W. Hickenlooper
Governor

A 2013 163

EXECUTIVE ORDER

MEMBERS

ARKANSAS RIVER COMPACT ADMINISTRATION

ORDERED:

That the following named persons be and they are hereby appointed and reappointed to the:

ARKANSAS RIVER COMPACT ADMINISTRATION

for a term expiring August 16, 2015:

Colin Thompson of Holly, Colorado, a resident of, and water right owner, in water district 67, reappointed;

for a term to expire August 16, 2017:

Scott A. Brazil of Pueblo, Colorado, a resident of, and water right owner, in water district 14 or 17, appointed;

to serve at the Pleasure of the Governor:

James L. Eklund of Denver, Colorado, to serve as Executive Director, Water Conservation Board, appointed.

GIVEN under my hand and the Executive Seal of the State of Colorado, this twelfth day of August, 2013.

John W. Hickenlooper
Governor

ATTENDANCE LIST

2013 ARKANSAS RIVER COMPACT ADMINISTRATION ANNUAL MEETING

Wednesday, December 18, 2013, 8:30 A.M. (MST), Lamar, Colorado

NAME	REPRESENTING	ADDRESS	PHONE & FAX	EMAIL
Steve Miller	Colorado Water Conservation Bd	1313 Sherman St. #724 Denver CO 80203	303 866 3441 ext 3228	steve.miller@state.co.us
JASON WOODRUFF	USACE.	4101 JEFFERSON PL Albuquerque, NM 87109	505-342-3382	jason.r.woodruff@usace.army.mil
Eve McDonald	Colo AG			evewmcdonald@msn.com
Steve White	Colo DWR / Ops Sec.	310 E Abriendo Pueblo, CO 81004	(719) - 542-3368	steve.white@state.co.us
DAN STEUER	COLO AG	1300 Broadway 7th Fl Denver Co 80203	720 508 6262	DANIEL.STEUER@STATE.CO.US
Don Steerman	Dist 67	P.O. Box 390 LAMAR, CO 81052	719-336-4813	dls-555@Centurytel.net shinnsteermoulaw@Centurytel.net
MARK RUDE	SW KANSAS GROUNDWATER MGMT DIST.	2009 E. SPRUCE ST. GARDEN CITY, KS.	620-275-7147	MRUDE@GMD3.ORG
Trevor Ahring	SW Kansas Groundwater Management Dist. 3	209 E Spruce St Garden City, KS	620-275-7147	trevora@gmd3.org
THOM. MAKENS	KS Dept AG (DWR)	2508 JOHN ST GARDEN CITY KS 67846	620-276-2901	THOM.MAKENS@KDA.KS.GOV
BILL GRASMICK	LAWMA	LAMAR		
VAN TRUAN	CORPS OF ENGINEERS	200 S. Santa Fe Ave, Suite 301 Pueblo, Colo. 81003	719-543-6915	Van.a.truan@usace.army.mil
MAJ Gary Bonham	US Army Corps of Engineers Albuquerque Dist.	4101 Jefferson Plaza NE Albuquerque, NM 87109	505-342-3433	gary.s.bonham@usace.army.mil

ATTENDANCE LIST

2013 ARKANSAS RIVER COMPACT ADMINISTRATION ANNUAL MEETING

Wednesday, December 18, 2013, 8:30 A.M. (MST), Lamar, Colorado

NAME	REPRESENTING	ADDRESS	PHONE & FAX	EMAIL
[illegible]	USACE	ALBUQUERQUE NM 87109	505 342-3380	[illegible]
Karen Downey	USACE	29955 CR 25.75 Hasty, CO 81044	719-336-3476	Karen.S.Downey@usace.army.mil
Traci Robb	USACE	10950 County Rd 18.3 Trinidad, CO 81082	719-846-7990	Traci.M.Robb@usace.army.mil
Kevin Salter	KS DWR		620 276-2401	Kevin.salter@kda.ks.gov
Dale Book	Sprunk Water Engineers	1660 Logan St Denver, Co 80203	(303) 861-9700	debook@sprunkwater.com
Carlie Ronca	Reclamation	Loveland, CO	970-962-4350	cronca@usbr.gov
Roy Vaughan	Reclamation	610 Reservoir Rd Pueblo CO. 81005	719-561-9855	RVAUGHAN@USBR.GOV
[illegible]	Reclamation	Loveland, CO	970 962 4362	agilman@usbr.gov
[illegible]	KS DWR	GC		
Rachel Duran	KS DWR	Garden City, KS	620-276-2901	Rachel.Duran@KDA.KS.Gov
Michael Meyer	KS DWR	GARDEN City KS	620-276-2901	Mike.Meyer@kda.ks.gov
Kelley Thompson	CO DWR	Denver, CO		Kelley.thompson@state.co.us

ATTENDANCE LIST

2013 ARKANSAS RIVER COMPACT ADMINISTRATION ANNUAL MEETING

Wednesday, December 18, 2013, 8:30 A.M. (MST), Lamar, Colorado

NAME	REPRESENTING	ADDRESS	PHONE & FAX	EMAIL
Jeris Danielson	PRWCD	512 Belleview Ave. La Junta CO 81050	719-980-0075	jeris_danielson@hotmail.com
Julianne Waldridge	PRWCD & CWPDA	1586 S. 21st St. #200 Colo. Springs CO 80904	719-520-9288	jwaldridge@walterlaw.tv
Ann Lop Koff	CWPDA	1220 E 3rd St La Junta, Co 81050	719-384-2754	ann@cwpda.org
Ed Perkins	Colorado Parks & Wildlife	6060 Broadway Denver, CO 80216		ed.perkins@state.co.us
Brian Bloyd	City Administrator Syracuse, KS	PO Box 148 Syracuse, KS 67878	620-384-4080	brianb@pld.com
Chris Woodka	Pueblo Chieftain	PO Box 36 Pueblo, Co 81002	719-544-8214	cwoodka@chieftain.com
Bill Tyner	CO DWR	310 E. Abriendo Ave Ste B Pueblo, CO 81004	719-542-3368 x2110	bill.tyner@state.co.us
David Mau	USGS	201 E. 8th St. Pueblo, CO 81003	719-544-7155	dlmau@usgs.gov
Terry Howland	Amity	2045 main Holly Co. 81047 P.O. 187	719-537-6627	Amity@rural-com.com
Steven Hines	Frontier Ditch	Box 147 Coolidge Ks 67836	620-372-8251	brokenlark@Yahoo.com
Stanley Hines	Frontier Ditch	Coolidge, Ks 67836	620-384-4427	

ATTENDANCE LIST

2013 ARKANSAS RIVER COMPACT ADMINISTRATION ANNUAL MEETING

Wednesday, December 18, 2013, 8:30 A.M. (MST), Lamar, Colorado

NAME	REPRESENTING	ADDRESS	PHONE & FAX	EMAIL
DAN MAXFIELD	AMAZON CANAL	LAKIN KS	355-7637	whit@pld.com
Jeff Montoya	CO. DWR	Trinidad CO.		jeff.montoya@state.co.us
Phil Reynolds	CO DWR	Pueblo, Co		philip.reynolds@state.co.us
Josh Kasper	CO DWR	LAMAR CO		joshua.kasper@state.co.us
LonnieSpady	CO DWR	La Junta CO	719 384-1000	lonnie.spady@state.co.us
RANDAL RISTAU	Colo Dept P Health & Envi - Water Quality	4300 Cherry Creek Dr. S Denver, CO 80246	303-692-3571	randal.ristau@state.co.us
Chris Beightel	KS DWR	1095W 9th St Topeka KS	785 296 3890	Chris.beightel@kda.ks.gov
Brent Newman	CWCB	Denver CO	303 866 3441	brent.newman@state.co.us
Hal Scheuerman	ARCA	Deerfield Ks	620-426-6023	schrman@pld.com
David Barfield	Kansas	Topeka KS	785-296-3710	david.barfield@kda.ks.gov
Randy Haygett	Kansas ARCA	Lakin, KS	620 355-7469	haygett@pld.com

ATTENDANCE LIST

2013 ARKANSAS RIVER COMPACT ADMINISTRATION ANNUAL MEETING

Wednesday, December 18, 2013, 8:30 A.M. (MST), Lamar, Colorado

NAME	REPRESENTING	ADDRESS	PHONE & FAX	EMAIL
James Eklund	Colorado	1313 Sherman, Denver 80203	303-866-3441	james.eklund@state.co.us
Carri Thompson	Colo 67	30258 CR 31 Holly CO 81047	719 537 6774	Powergirlth@hotmail.com
Nathan Sullivan	USGS	1204 Canterbury Hays, KS 6760	785-764-6266	nsulliva@usgs.gov
Nikki Schwerdfeger	Hamilton Co KS County Commission	Box 130 Coolidge, KS	620 372-2493	nofarm@pld.com
Leroy Brase	Tri-state G&T	1201 N. main Lamar CO	719-336-0890	LBrase@Tristategt.org
Bill Orendorff	Tri-State G&T Assn.	P.O. Box 33695 Denver, CO 80233	303-254-3725 Ph -254-6068 FAX	borendorff@tristategt.org
Troy Dumler	The Garden City Company Great Eastern Irr. Ditch	P.O. Box 597 Garden City, KS 67846	620-276-3246 620-276-2795 Fax	troy.dumler@sbcglobal.net
Stephanie Gonzales	ARCA Rec. Sec/Treas	PO Box 97 Granada CO 81041	719-734-5102 719-688-0799 cell	jsgraphics@centurytel.net
Jack Goble	LAVLWCD			

ARKANSAS RIVER COMPACT ADMINISTATION
2013 ANNUAL MEETING
WEDNESDAY, DEC. 18, 2013, 8:30 A.M. (MST)
Lamar Community Building

TENTATIVE AGENDA (subject to change)
Presiding: Randy Hayzlett, Vice-Chair

1. **Call to Order: Vice-Chairman, Randy Hayzlett**
   (Instructions for those in attendance for benefit of court reporter)

2. **Introduction of representatives and visitors**

3. **Review and revisions of agenda**

4. **Reports of Officers**
   A. Chairman – Vacant
   B. Vice-Chairman – Randy Hayzlett
   C. Recording Secretary and Treasurer – Stephanie Gonzales (defer to item 10)
   D. Operations Secretary – Steve Witte (defer to item 9)
   E. Assistant Operations Secretary – Kevin Salter (defer to item 9)

5. **Reports of Federal Agencies**
   A. U.S. Geological Survey
   B. U.S. Army Corps of Engineers
   C. U.S. Bureau of Reclamation

6. **Reports from Local Water User and State Agencies**
   A. Colorado Water Conservancy Districts
   B. Colorado State Water Plan
   c. GMD # 3

7. **Compact Compliance / Decree Issues Updates**
   A. Ten-year Compact Compliance Accounting table (2003-2012) – Joint report of the States
   B. Implementation of Irrigation Improvement Rules
   C. Colorado's PDF Evaluation
   D. Update on LAWMA Colorado Water Court decree issues

8. **Report of Engineering Committee**
   A. Report from December 17, 2013 meeting – David Barfield
   B. Engineering Committee recommendations

9. **Report of Operations Committee**
   A. Report from December 17, 2013 meeting – Colin Thompson
   B. Operations Secretary Report – Steve Witte
   C. Assistant Operations Secretary Report – Kevin Salter
   D. Offset Account Report – Steve Witte / Bill Tyner
   E. Operation Committee recommendations

10. Report of Administrative & Legal Committee

A. Report from December 17, 2013 meeting – Randy Hayzlett
B. Recording Secretary and Treasurer Report – Stephanie Gonzales
C. Administrative & Legal Committee Recommendations
D. Procedures for approval of annual reports

11. New Business

12. ARCA Action Items

A. Recognitions
    i. Jennifer Gimbel
    ii. Matt Heimerich
    iii. Eugene Overton
B. Resolution – Special Engineering Committee extension
C. Financial Matters
    i. Approval of audit report
    ii. Approval of USGS contracts
    iii. Adoption of budget(s)
D. Approval of transcripts
E. Officers & Committee appointments
    i. Election of officers
    ii. Appointment of committee chairs
F. Instructions to Committees

13. Public Comment

14. Future meetings

A. 2014 Annual Meeting, set date and location (default date December 9, 2014)
B. Committee Meetings
C. Special Meeting(s) of ARCA

15. Adjourn

Arkansas River Basin

US Army Corps of Engineers®
Albuquerque District

Report of Civil Works Activities for 2013

1. General

During water year 2013, activities of the U.S. Army Corps of Engineers (USACE), Albuquerque District, in the Arkansas River Basin consisted of reservoir regulation, flood-control-related studies, floodplain management services, regulation under Section 404 of the Clean Water Act, and emergency assistance.

Trinidad Lake, 2005. USACE photograph.

2. Water Control Operations

In 2013, the Arkansas River Basin snowmelt runoff was below normal throughout the entire basin. The reported snowpack in May 2013 ranged from 93% of average in the Upper Arkansas basin to 17% of average in the Purgatoire basin. USACE did not operate for flood control at Trinidad, John Martin or Pueblo Reservoirs in 2013.

a. John Martin Reservoir Sediment Survey

The John Martin sediment survey report was completed in 2013 and the associated Elevation-Area-Capacity (EAC) tables finalized. The updated EAC tables have been implemented as of November 1, 2013.

b. John Martin Reservoir

During 2013, no major maintenance efforts took place on John Martin Dam. At this time, work on valve replacement on waterlines inside the dam is ongoing. Discovery of lead-based paint will delay installation somewhat while lead abatement takes place.

The Lake Hasty Restoration Project planning effort is on-going. To date, bathymetric data has been collected with help of Colorado Parks and Wildlife and preliminary sketches are being developed by the U.S. Army Corps of Engineers. Short-term goals are to place staff gauges in and around Lake Hasty to monitor depths of seepage water and subsequent patterns of yearly fluctuations. Also, discussions will be forthcoming with the Colorado State Division of Water Resources, Department of Natural Resources on how water rights will play a role in further restoration efforts. Long term goals are to have restoration completed by 2018 which will coincide with the 70th Anniversary of completion of John Martin Dam.

3. Civil Works Authorities and Programs

a. Continuing Authorities Program

The Continuing Authorities Program (CAP) is a group of nine legislative authorities under which the Secretary of the Army, acting through the Chief of Engineers, is authorized to plan, design, and implement certain types of water resources projects without additional project-specific congressional authorization. USACE had no active CAP projects in the Arkansas River Basin in 2013.

Arkansas River, 2001.
Photograph: Van Truan, USACE.

1. Section 205

Section 205 of the 1948 Flood Control Act, as amended, provides authority to USACE to plan and construct small flood damage reduction projects that have not been specifically authorized by Congress. USACE had no active Section 205 projects in the Arkansas River Basin in 2013.

2. Section 206

Section 206 of WRDA 1996 provides authority to USACE for aquatic ecosystem restoration projects in areas unrelated to existing USACE water projects. USACE had no active Section 206 projects in the Arkansas River Basin in 2013.

3. Section 14

Section 14 of the 1946 Flood Control Act, as amended, provides authority for USACE to plan and construct emergency streambank protection projects to protect endangered highways, highway bridge approaches, public facilities such as water and sewer lines, churches, public and private nonprofit schools and hospitals, and other nonprofit public facilities. USACE had no active Section 14 projects in the Arkansas River Basin in 2013.

4. Section 1135

Section 1135 of WRDA 1986, as amended, provides the authority to modify existing USACE projects to restore the environment and construct new projects to restore areas degraded by USACE projects. USACE has no active Section 1135 projects in the Arkansas River Basin in 2013.

b. Investigations Program

The USACE Investigations (I) program provides for comprehensive solutions to large complex problems relating to flooding, ecosystem restoration, loss of land and property, floodplain management, and watershed planning and analysis. The I program consists of three phases: The reconnaissance phase, the feasibility phase, and the pre-construction engineering and design phase. The reconnaissance phase

identifies the problem, identifies a potential non-Federal sponsor, ensures a Federal interest, and outlines a study plan. During the feasibility phase, an in-depth, comprehensive analysis is performed, which results in an array of alternative solutions to the problems identified. The solutions are evaluated and a "best plan" is determined based on economic justification, technical adequacy, environmental compliance, social-economic effects, and other factors. The feasibility report is the document on which congressional authorization is based. During the pre-construction engineering and design phase, development of the first construction contract bidding package can be accomplished while waiting for congressional construction authorization. If the project is authorized for construction by Congress, USACE and the project sponsor can move forward with the remaining detailed design and construction. USACE had no active Investigations in the Arkansas River Basin in 2013.

4. Planning Assistance to the States (Section 22) Program

Section 22 of the Water Resources Development Act (WRDA) of 1974, as amended, provides authority for USACE, under the Planning Assistance to the States (PAS) program, to assist states, local governments, and other non-Federal entities in the preparation of comprehensive plans for the development, use, and conservation of water and related land resources. Section 208 of WRDA 1992 amended WRDA 1974 to include Indian tribes. The studies are cost shared on a 50%-Federal/50%-non-Federal basis. USACE had no active PAS studies within the Arkansas River Basin in 2013.

5. Flood Plain Management Services Program

The USACE Flood Plain Management Services (FPMS) program authority stems from Section 206 of the Flood Control Act of 1960 (Public Law 86-645), as amended. The objective of the FPMS program is to support comprehensive floodplain management with technical services and planning guidance at all appropriate governmental and community levels. Services available include assistance relating to the interpretation and evaluation of basic flood-hazard data. These services are provided to state, local governments, and Indian tribes at no cost. Section 321 of the WRDA 1990 requires recovering the cost of services provided to Federal agencies and to private entities. Flood reports are also authorized under the FPMS Program. Additionally, another authority for developing post flood assessment reports is the Flood Control and Coastal Emergencies (FC&CE) program. The FC&CE program is authorized by Public Law (PL) 84-99, as amended. USACE had no active FPMS projects in 2013.

6. Flood Risk Management Program

USACE established the National Flood Risk Management Program (FRMP) in May 2006 to integrate and synchronize USACE activities, both internally and with counterpart activities of the Department of Homeland Security, Federal Emergency

Management Agency (FEMA), other Federal agencies, state organizations, and regional and local partners and stakeholders.

One component of the FRMP is the Levee Safety Program. The USACE Levee Safety Program was established by the National Levee Safety Act of 2007, which was authorized in WRDA 2007.

The Inspection of Completed Works/Rehabilitation and Inspection Program (ICW/RIP) is the USACE program that provides for the inspection and rehabilitation of Federal and non-Federal flood risk management projects. In FY13, USACE conducted routine inspections of completed works (levees) in southeastern Colorado at Holly and Granada in the Arkansas River Basin.

An additional component of FRMP is the Silver Jackets Program, which is part of the National Flood Risk Management Program. The Silver Jackets Program proposes establishing an interagency team in each state with a representative from FEMA, USACE, the State National Flood Insurance Program Coordination Office, and the State Hazard Mitigation Office as standing members and lead facilitators. The lead FRMP Manager for the formation of the Silver Jackets Program in Colorado and the Arkansas River Basin resides in the USACE Omaha District, and the Albuquerque District performs a support role.

The Colorado Silver Jackets team was officially created in 2013. The team consists of four USACE Districts that include the Sacramento, Albuquerque, Kansas City, and Omaha Districts. The team met face-to-face in early 2013 to discuss future needs that the State of Colorado will have regarding flooding. The State of Colorado is represented by the Colorado Water Conservation Board as well as the Colorado Department of Homeland Security. FEMA Region 8 is also part of the State team. The team plans on meeting once a year in person and quarterly by phone.

7. Regulatory Program

Section 404 of the Clean Water Act prohibits discharges of dredged or fill materials into waters of the United States, including wetlands, without a permit from USACE.

In 2013, USACE issued three individual permits in the Arkansas River Basin. An additional 227 activities in the basin were reviewed during this period, and most activities were covered under nationwide permits. Nationwide permits are activity-specific general permits, issued by the Chief of Engineers, for projects that have minimal impact on the aquatic environment. Nationwide permits are designed to regulate these minimal impacts with little, if any, delay or paperwork.

Persons or agencies who are planning to conduct fill or excavation activities in any waterway are advised to contact the Southern Colorado Project Office, 200 South Santa Fe Avenue, Pueblo, Colorado 81003 or telephone 719-543-9459. Information,

including all public notices, is also available on the USACE Albuquerque District web home page http://www.spa.usace.army.mil/reg/ .

8. Emergency Management Coordination

Public Law 84-99 provides USACE with the authority to assist state and local governments before, during, and after flood events. In the Arkansas River Basin, USACE works with the State of Colorado Division of Homeland Security and Emergency Management and the Colorado Water Conservation Board to prepare for flood fight activities in years with significant snowpack and spring snowmelt runoff.

In 2013, the Colorado Division of Homeland Security and Emergency Management, in response to the 2013 East Peak and West Fork Complex Wildfires, requested the USACE provide technical assistance in assessing vulnerable infrastructure, provide recommendations for emergency preparedness, and provide a Flood Fight Workshop, specifically sandbagging, to the communities in Huerfano and Rio Grande County that might potentially be affected by post fire flooding. The East Peak fire burned the National Forest areas of the Pike and San Isabel National Forests. Total burned area was approximately 13,572 acres. Since the burn area is in the Arkansas Basin watershed, there could be some increase in flows that discharge into the Arkansas River from the burn scar drainages.

The Corps of Engineers recommended that the Spanish Peaks Scout Camp be closed temporality until such time that the landscape has sufficiently recovered from the East Peak Fire burn scar and a emergency response plan be developed before the camp can reopen.

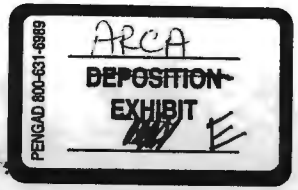
In addition on or about September 13th, 2013 one of the USACE flood control projects on Fountain Creek sustained damages from flooding in the vicinity of Pueblo, Colorado. The peak discharge at the Fountain Creek at Pueblo gage (US Hwy 50) was about 8,400 cfs on September 13, 2013. The bulk of the flow originated from Colorado Springs and Security, CO areas and made its way down to Pueblo, CO. Rainfall from radar data is estimated to be an average of 2.8 inches of rainfall for the entire area above Pueblo, CO within 24 hours for September 12-13, 2013. The City of Pueblo, CO has requested rehabilitation assistance from the USACE in repairing the section of the embankment where the riprap failed. The USACE has requested and received funding to do a field investigation and prepare a rehabilitation project information report (PIR) for Fountain Creek. This is the first step which ultimately leads to funding for construction of the repair identified in PIR.

Assistance can be obtained by contacting the U.S. Army Corps of Engineers, Albuquerque District, Readiness and Contingency Operations Office, 4101 Jefferson Plaza NE, Albuquerque, New Mexico 87109-3435 or telephone 505-342-3686 during our normal business hours between 7am and 4pm, weekdays.

9. FERC Feasibility Studies

Under the Federal Powers Act (FPA – 16 U.S.C 797), the US Federal Energy Regulatory Commission (FERC) is authorized to "...develop power from any streams or other bodies of water over which it has jurisdiction". Such hydroelectric power development is authorized at sites assuming that the use would be both technically and economically feasible. FERC is the agency responsible for processing all applications for the use of hydroelectric plants on the Nation's dam sites. The first step in this process is the application for a preliminary permit to allow an interested party to perform a feasibility study of a given hydroelectric project.

In 2012, Telluride Energy, LLC applied for, and was issued, preliminary permits for studies related to both Trinidad and John Martin Dams. Over the three year permit period, the permittee is expected to carry out pre-filing consultations and study development leading to the possible development of a license application. During the study development, the permittee is expected to coordinate with the USACE District Engineer to ensure that said study will result in a plan consistent with the authorized purposes of the Federal project. To date, no communications from Telluride, LLC regarding Trinidad and John Martin Dams have been received.



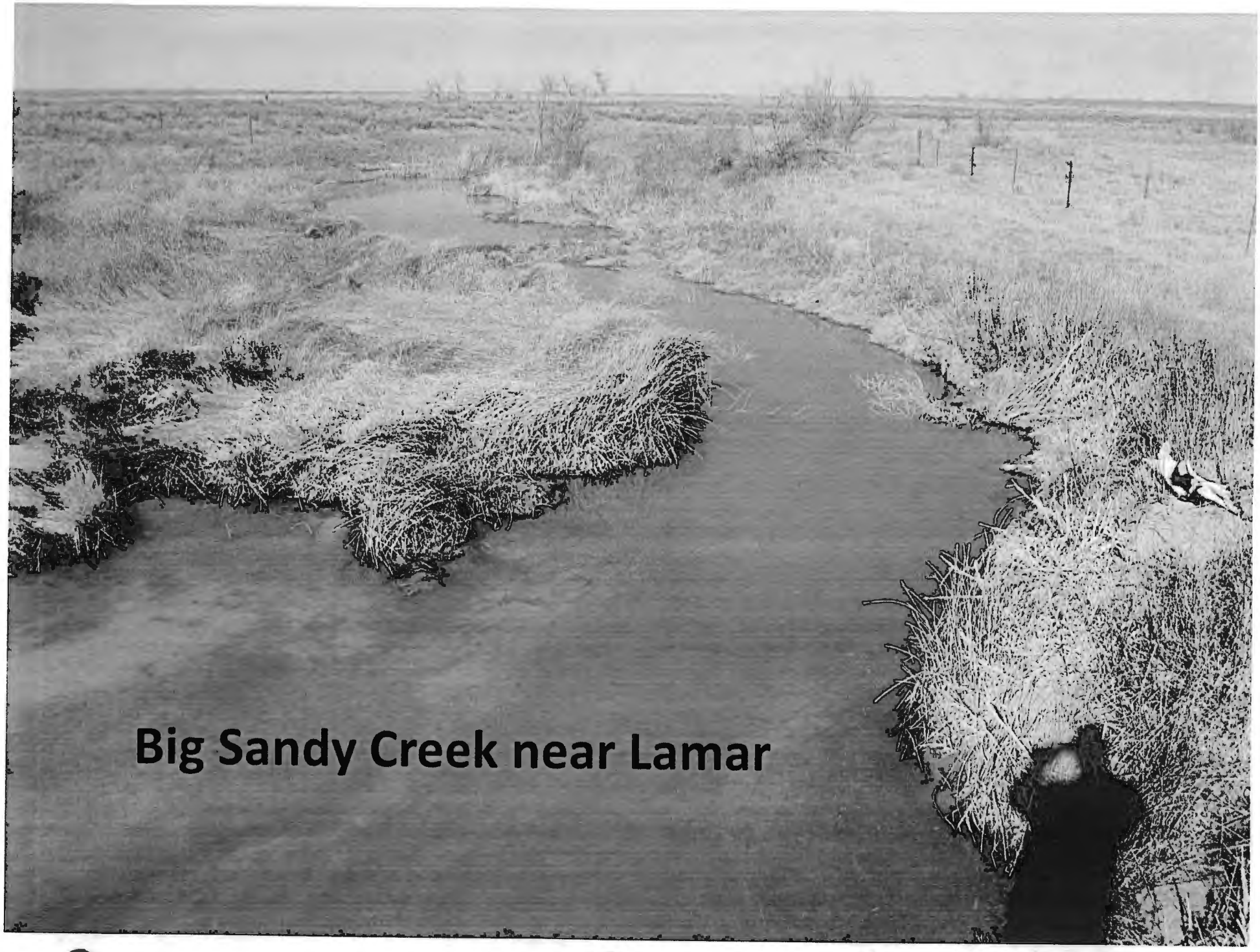
Summary of Mainstem and Tributary Flows,
Water Years 2012 and 2013

Station Name	WY2013 Annual Flow, in Acre Feet	WY2012 Annual Flow, in Acre Feet	2013 as % of 2012	2013 as % of Average[1]
Apishipa River near Fowler	5,700	6,480	89	33
Arkansas River at Las Animas	91,630	52,520	174	50
Purgatoire River near Las Animas	19,960	10,060	198	46
Arkansas River below John Martin Reservoir	95,040	43,510	218	48
Arkansas River at Lamar	18,380	12,800	144	23
Big Sandy Creek near Lamar	570	3,020	24	6
Baseflow	180	1,680	11	--
Above Baseflow	390	670	58	--
Arkansas River near Granada	7,700	17,450	44	6
Wildhorse Cr. above Holly (Oct, Apr-Sept)[2]	263	291	90	144
(April – Sept)[3]	244	243	100	105
Arkansas River near Coolidge	30,220	63,820	47	20
Frontier Ditch near Coolidge	2,780	7,125	62	--

Including 2013 water year
From 2002 to present
From 2002 to present

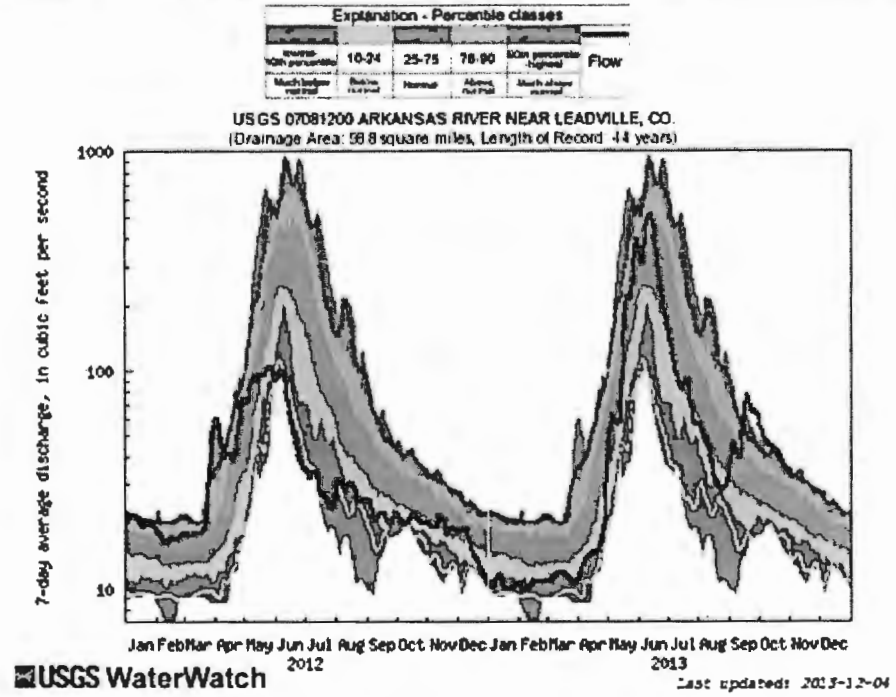

Big Sandy Creek near Lamar


Big Sandy Creek near Lamar

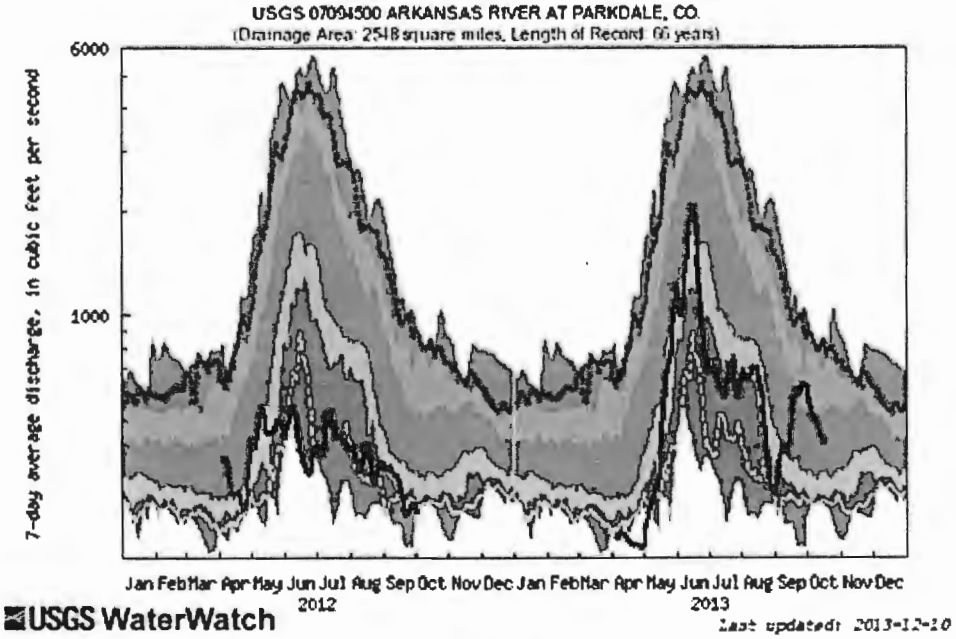

Big Sandy Creek near Lamar


Arkansas River near Granada

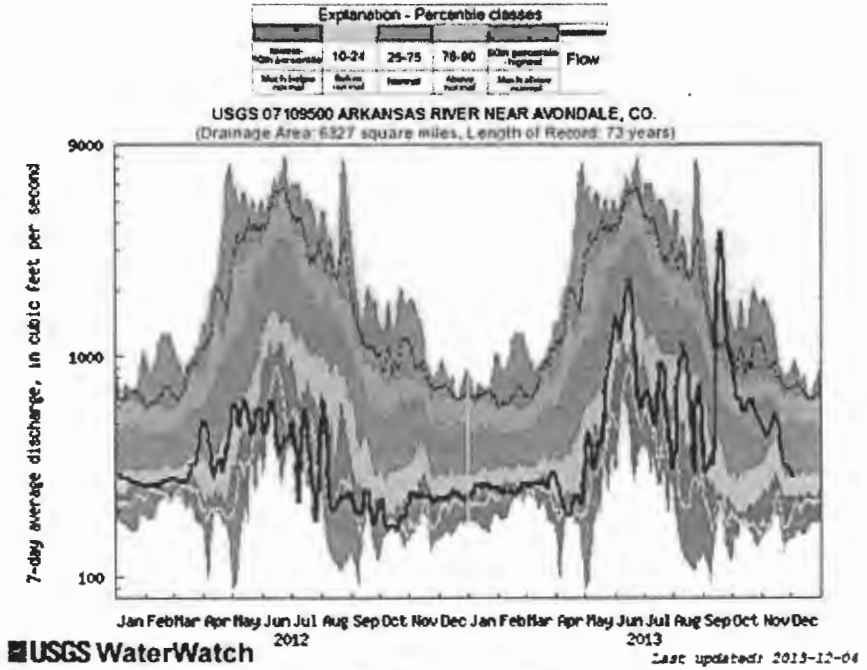
2012-2013 Daily Mean Streamflow Duration Hydrographs



Leadville

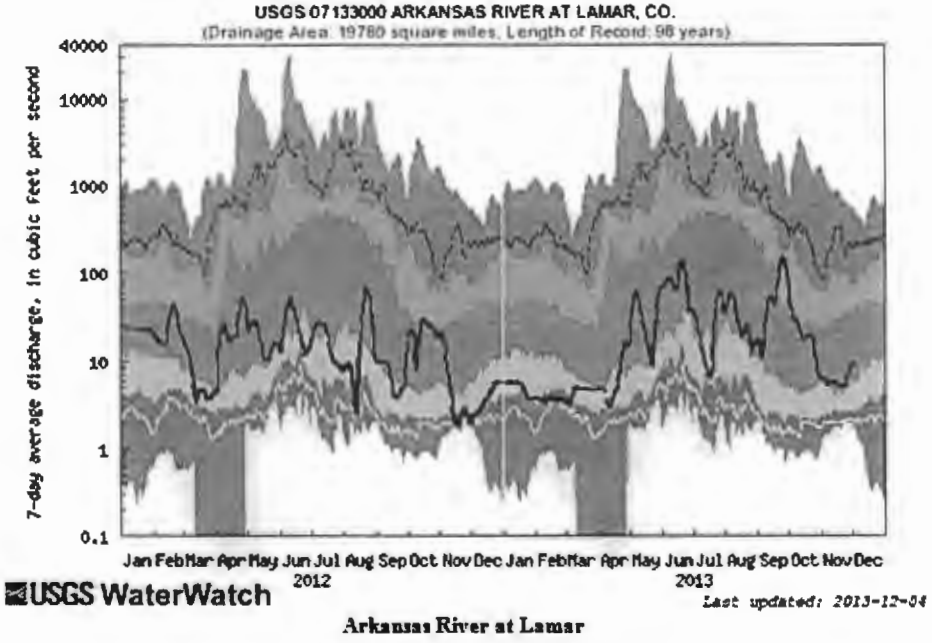


Parkdale



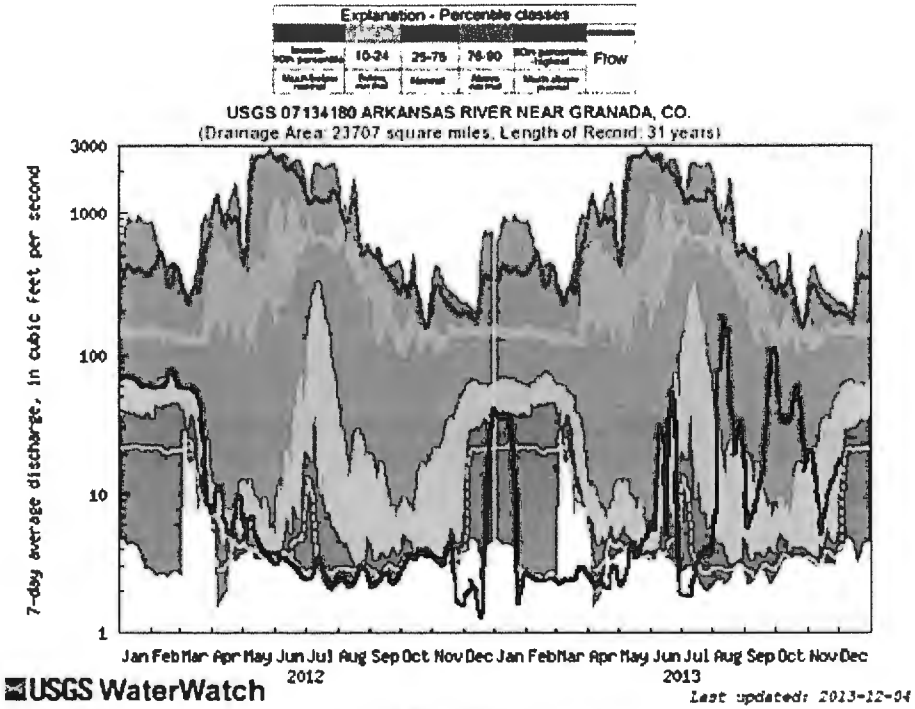
Avondale

Arkansas River at Avondale



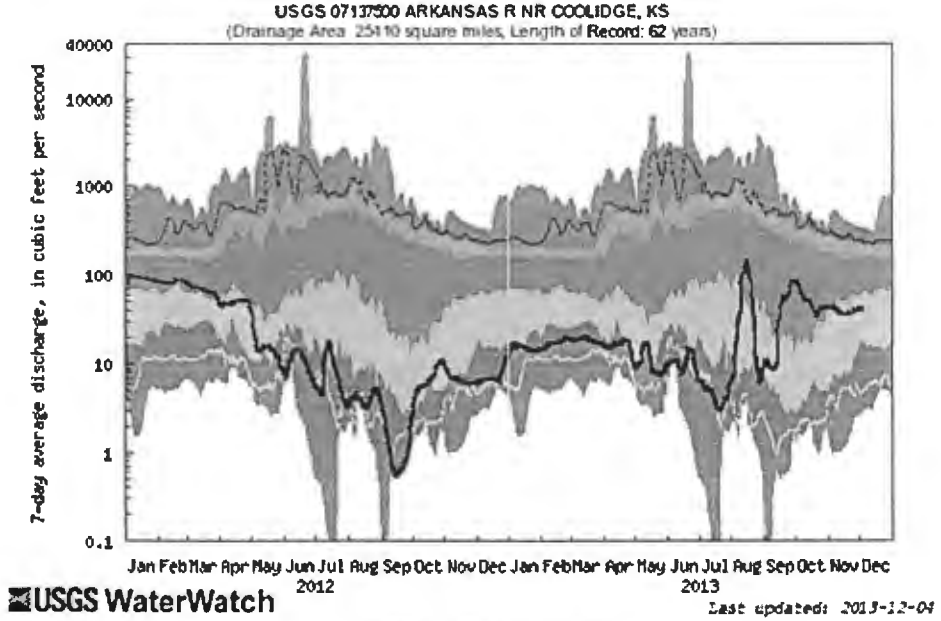
Lamar

Arkansas River at Lamar



Granada

Arkansas River near Granada

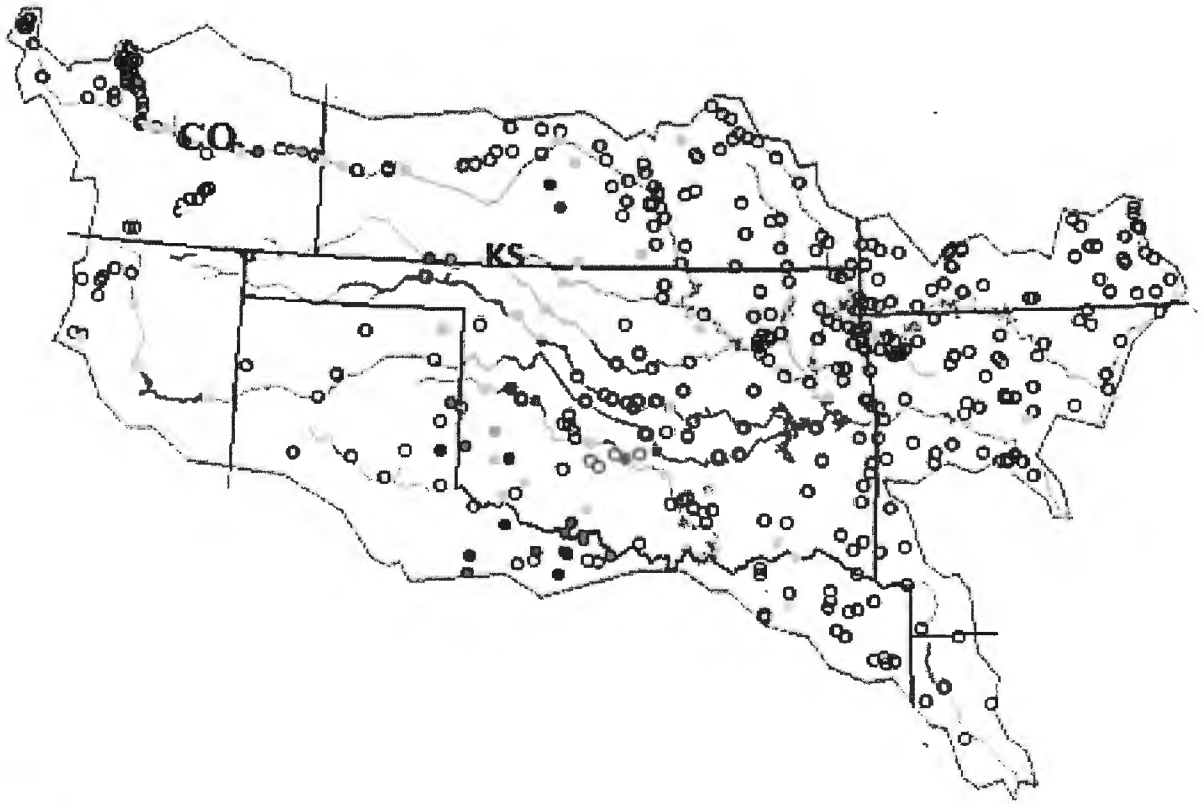


Coolidge

Arkansas River near Coolidge

Map of Monthly Average Streamflow
Arkansas-White-Red Basin

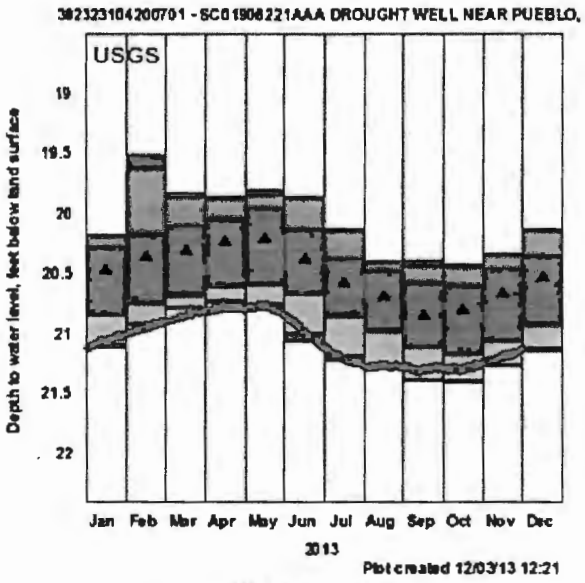
Sunday, December 01, 2019



USGS

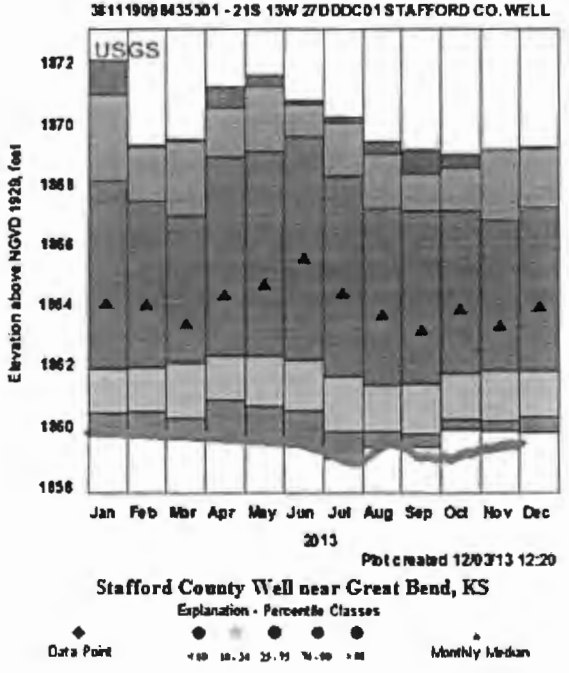
Explanation - Percentile classes				
New low	<=5	6-9	10-24	Not ranked
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal	

2012 USGS Climate – Response Network



Drought Well near Pueblo, CO

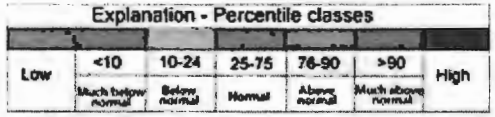
Pueblo



Stafford County Well near Great Bend, KS

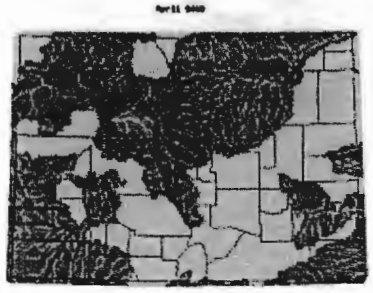
Great Bend, KS

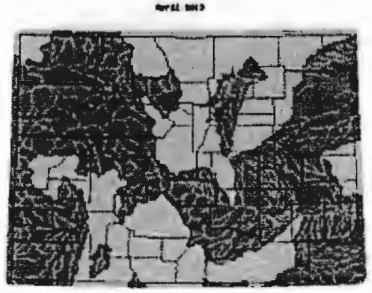
Monthly Streamflow Comparison, Summer 2002 vs Summer 2013



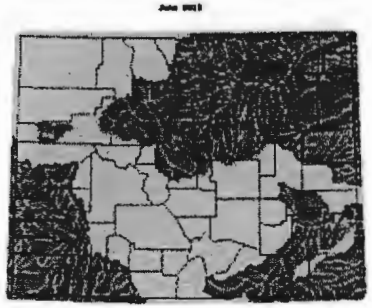
2002 **2013**

April



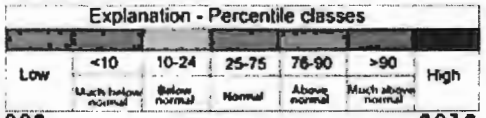


June



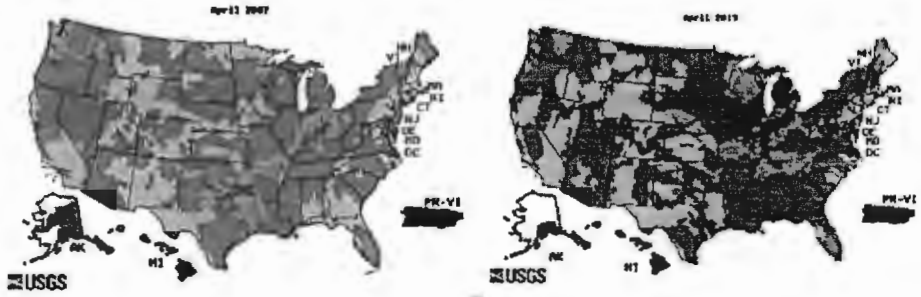
September

Monthly Streamflow Comparison, Summer 2002 vs Summer 2013



2002 2013

April



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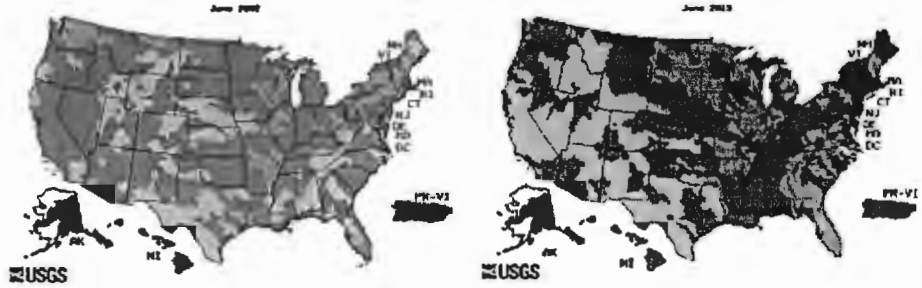
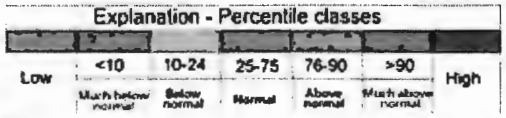


September

Monthly Streamflow Comparison, Summer 1934 (dust bowl) vs Summer 2013

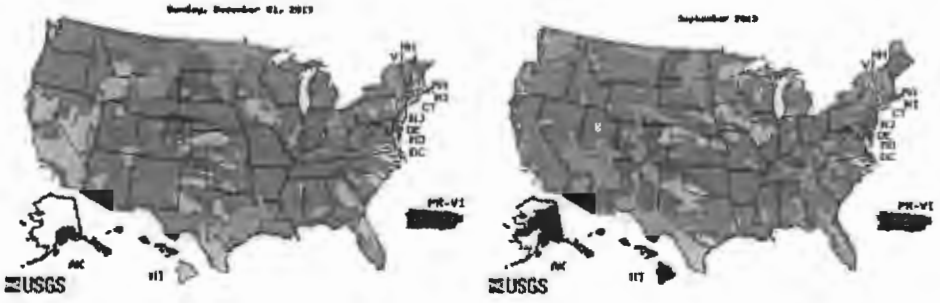


1934 **2013**

April

June

September



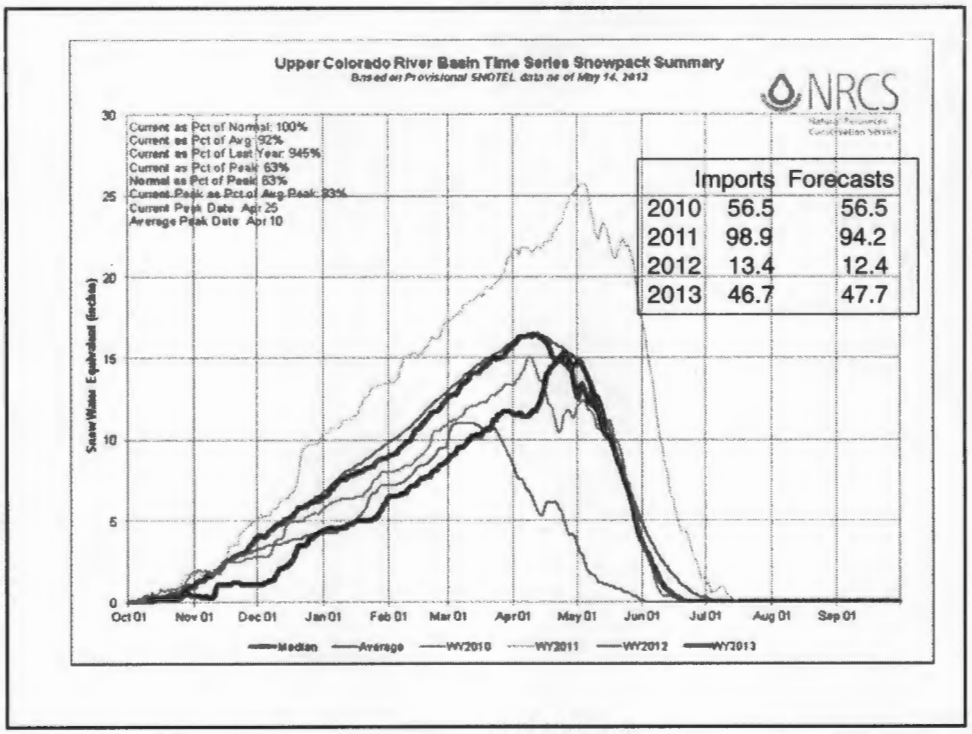
Arkansas River Compact Administration Meeting

2013 Report

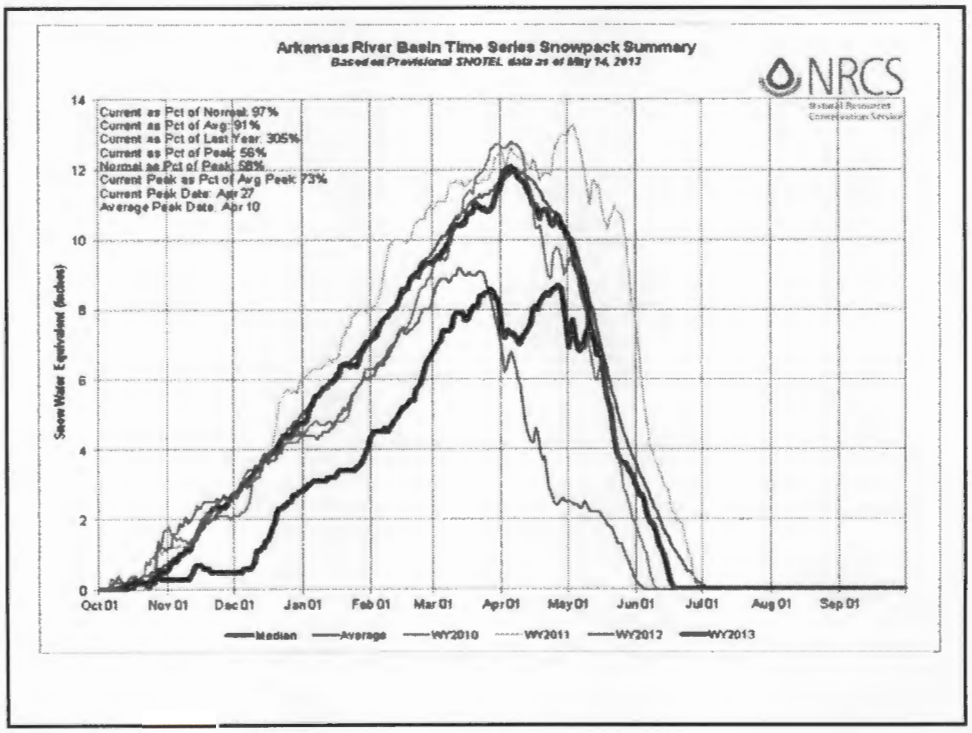
Roy Vaughan
Facility Manager
Pueblo Dam

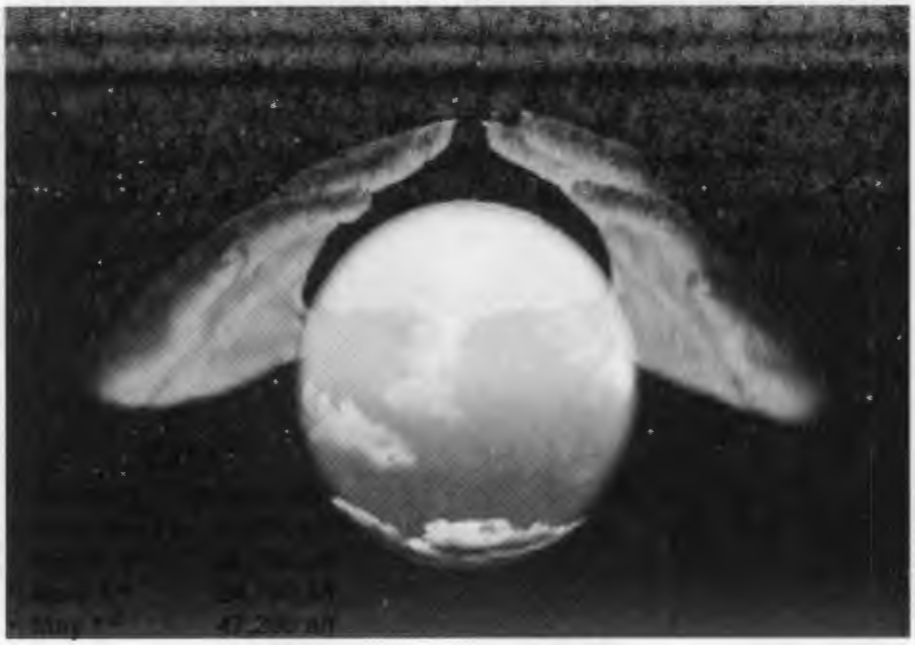
Fry-Ark Project 2013 Water Year

- **Imports were slightly below average at 46,669 AF. That is approximately 96% of our 40 year average.**
- **Snowpack in the collection system was less than half of normal for 80% of the snow season but late heavy snows brought it close to average by the end of April.**
- **Runoff began on 12 May and continued to the middle of August.**

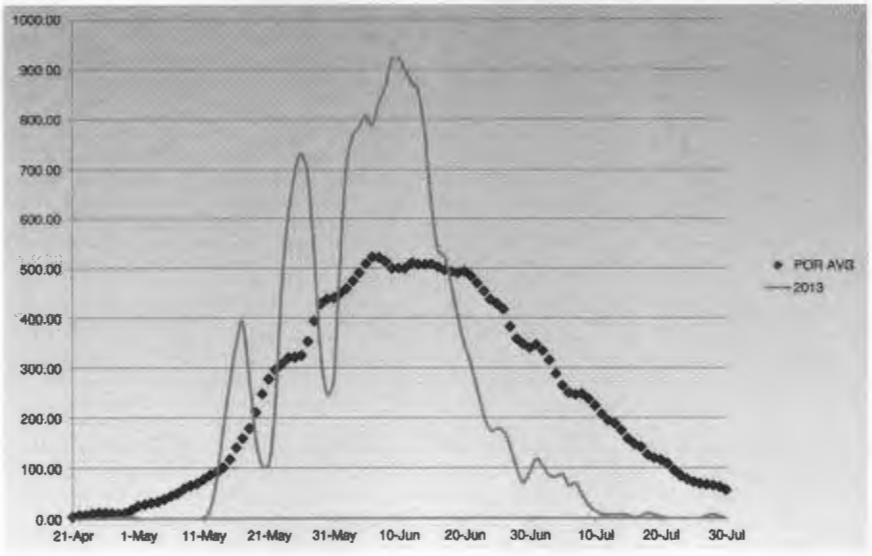


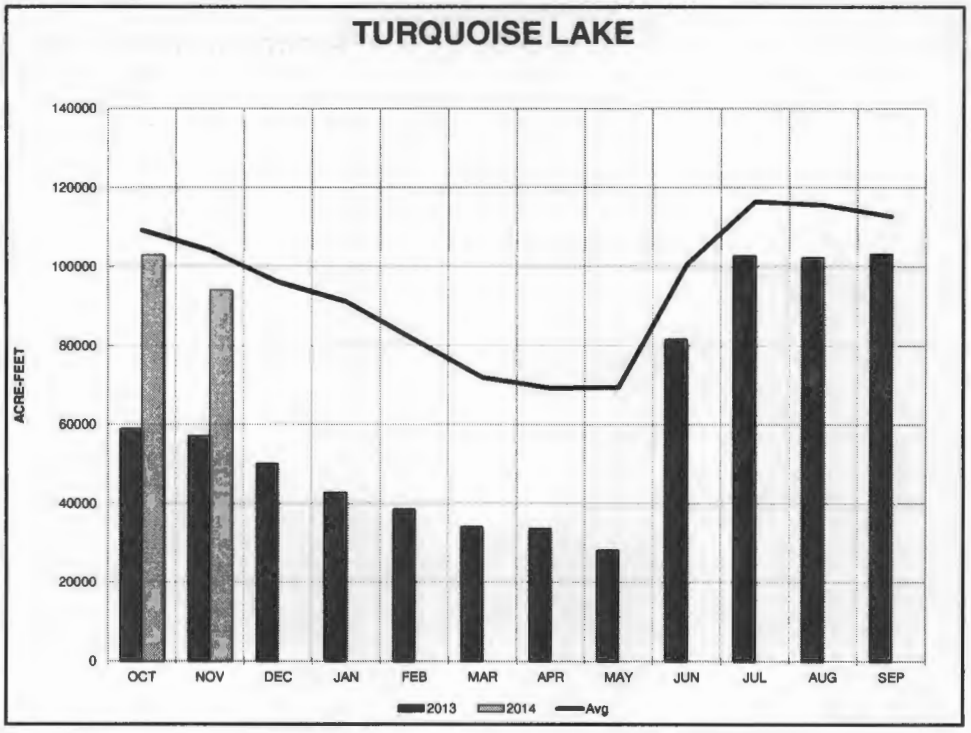
	Imports	Forecasts
2010	56.5	56.5
2011	98.9	94.2
2012	13.4	12.4
2013	46.7	47.7





Boustead Tunnel

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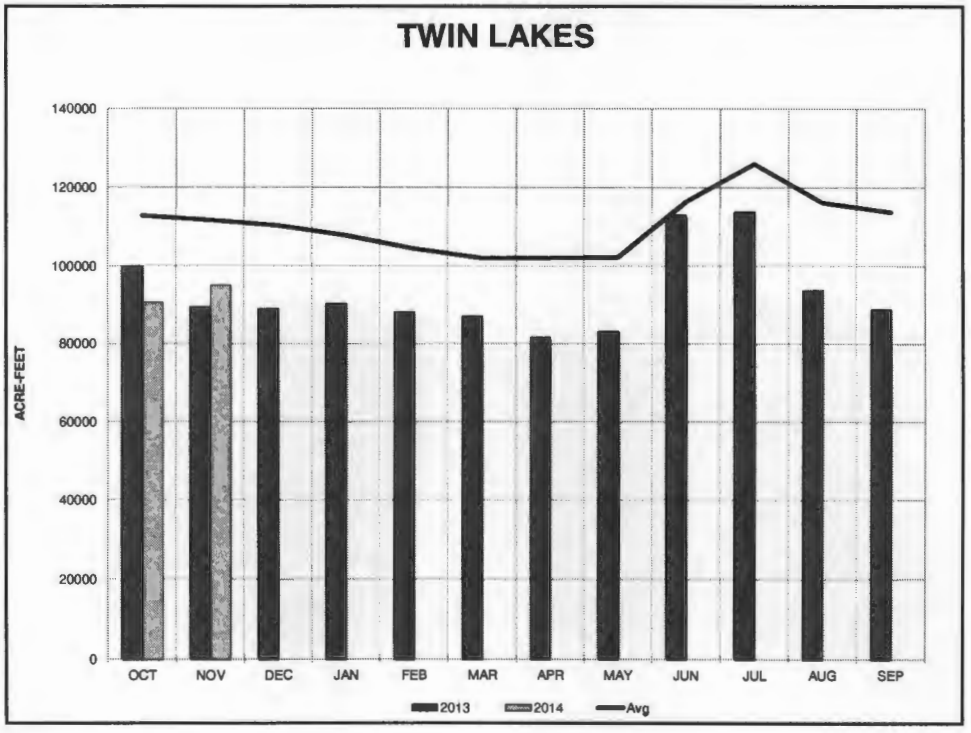
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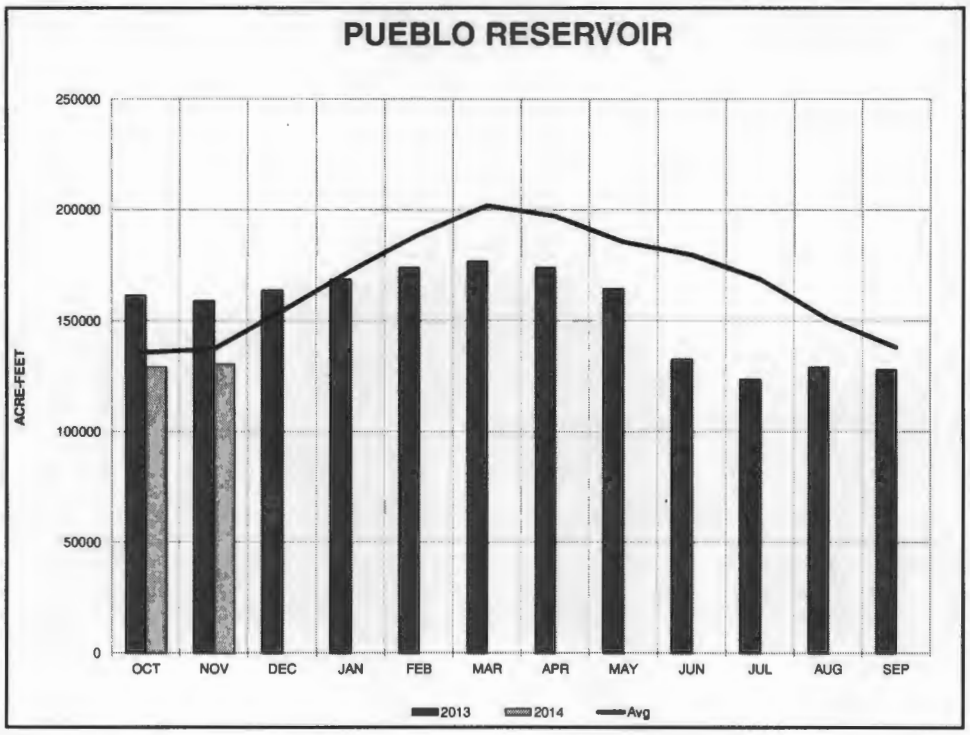
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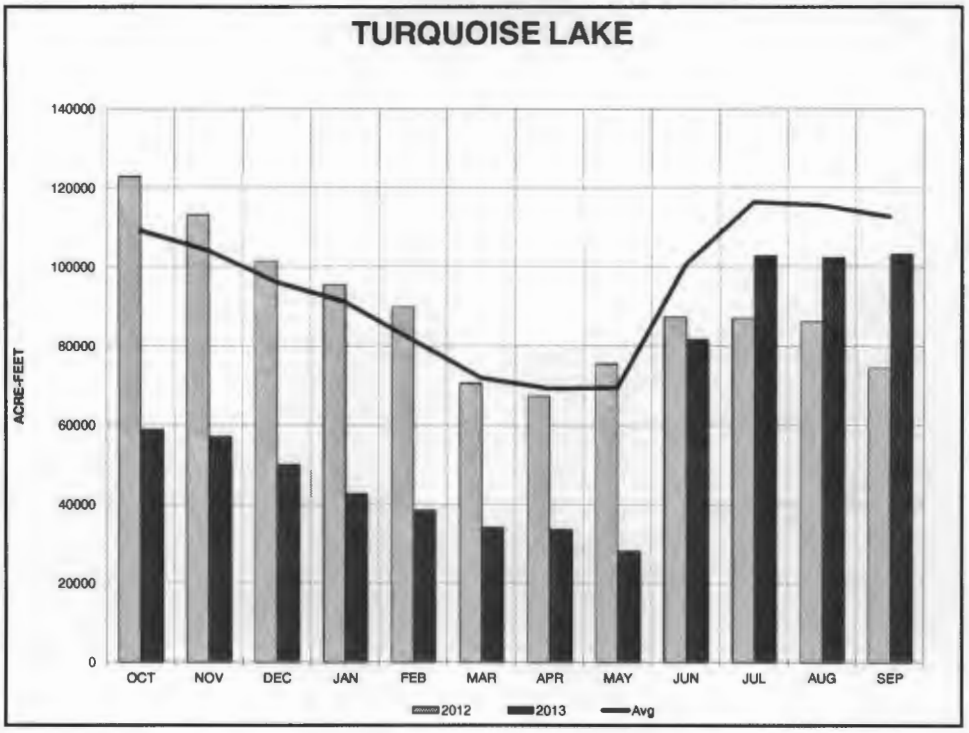
As of Nov 14, 2013
Project Reservoirs
Turquoise 88%
Twin Lakes 95%
Pueblo 96%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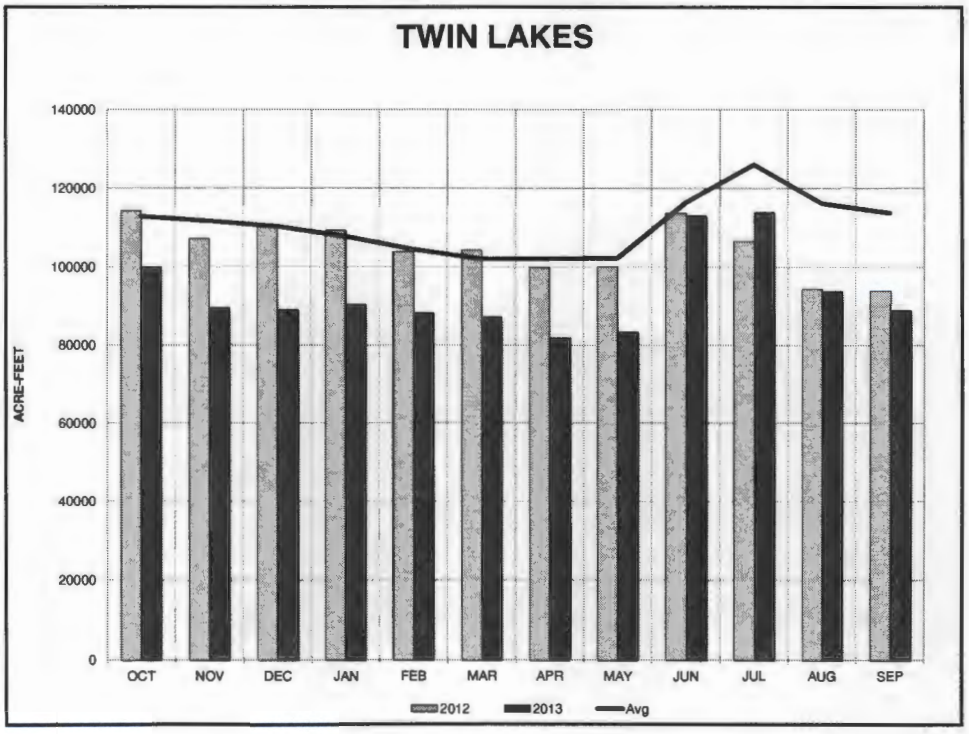
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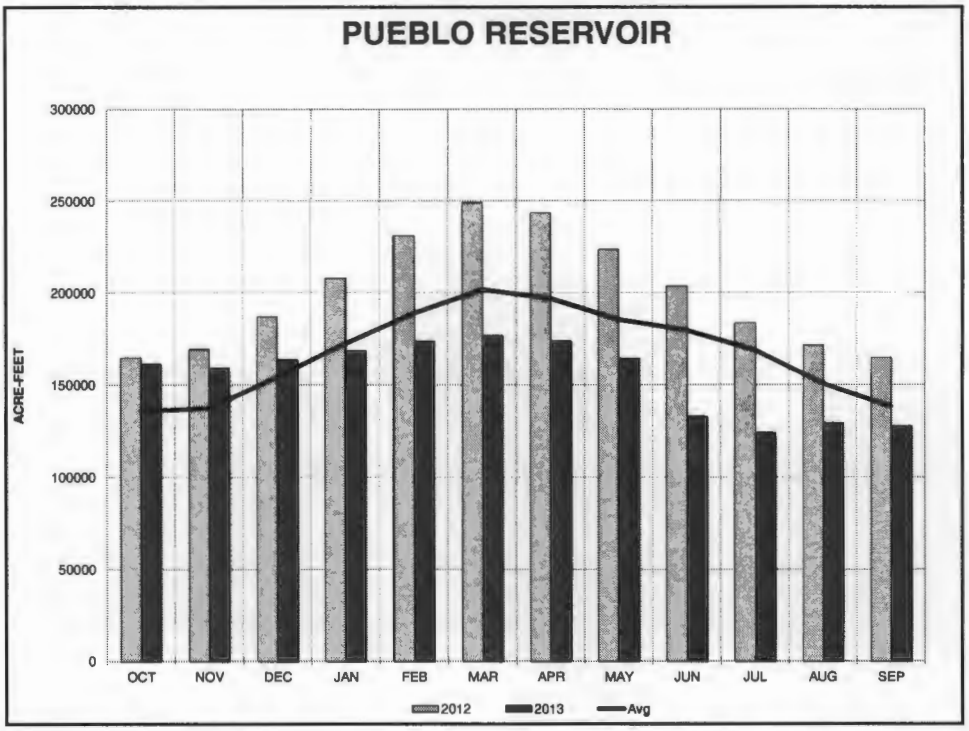


Winter Operations

- Currently moving 24 cfs from Twin to Pueblo.

- We anticipate moving only the minimum flow requirements from the upper reservoirs to Pueblo.

- Movement of water will be adjusted according to the forecast and customers needs.

Mussels

- Facility assessment for the Fry-Ark are complete.
- The action response plans are complete.
- To date we have found no adults on substrate samples, and results were negative this year for mussel larvae present in Pueblo reservoir.
- The Pueblo assessment report is available at: *http://ibr6ecanet.bor.doi.net/FinalPuebloReport_1.pdf*

AVC and Master Contract

- The Arkansas Valley Conduit and Long Term Excess Capacity Master Contract Environmental Impact Statement has been completed.
- The Preferred Alternative has been identified
- Record of Decision has yet to be signed
- For questions specific to the proposed actions or the EIS please contact: J. Signe Snortland Phone: 701-221-1278 E-mail: JSnortland@usbr.gov

Southern Delivery System

- SDS is a $1.1 billion dollar proposal by Colorado Springs, Security, Fountain and Pueblo West to build a 62-mile, 5-foot diameter pipeline from Pueblo Dam with a capacity of 96 million gallons a day.
- Construction has begun on Juniper Pump Station.
- Construction is ongoing with an anticipated startup date of 2016.
- http://www.sdseis.com/


Questions?

Trinidad

Andrew Gilmore
AGilmore@usbr.gov

RECLAMATION

Managing Water in the West

Project Updates on Trinidad Operating Principles

Andrew Gilmore
Eastern Colorado Area Office
Loveland, CO

U.S. Department of the Interior
Bureau of Reclamation

Trinidad Project Brief Background

- Trinidad Reservoir Purposes
  - Corps of Engineers Facility
  - Flood Control
  - Sedimentation/Joint Use + M&I
  - Irrigation
  - Permanent Fish/Recreation Pool
- Purgatoire River Water Conservancy District (PRWCD)
  - Reclamation repayment contract

RECLAMATION

Reclamation Trinidad Project Update

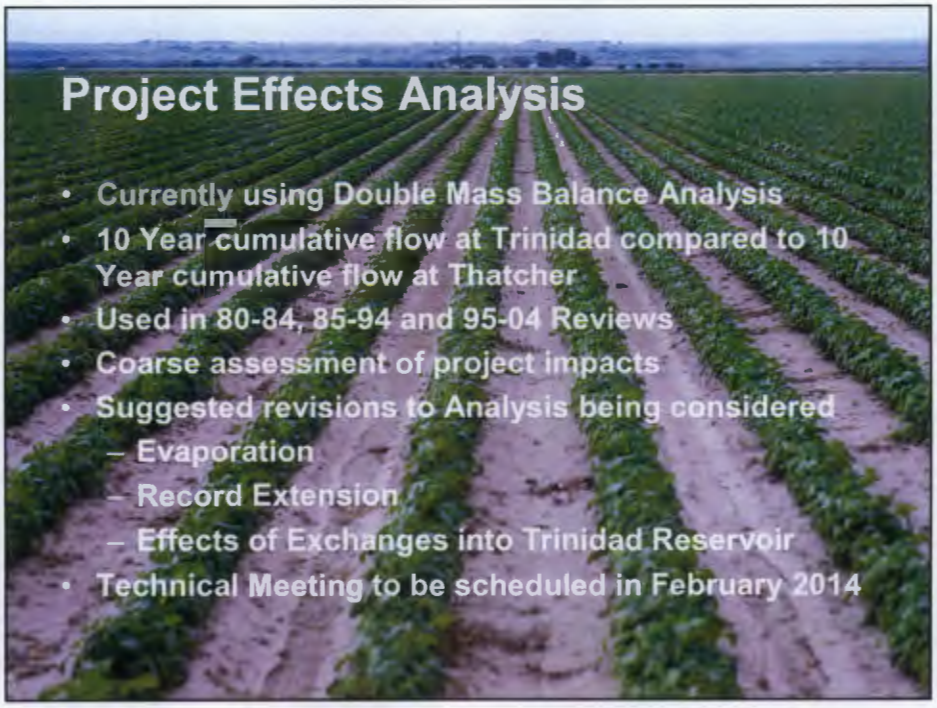
- Discussions on repayment contract
- Excess Capacity – ongoing discussions
- City of Trinidad Proposed Amendments
- 10 Year Review – 2005-2014
- Project Issues Meeting
  - Annual: September 5, 2014 in Trinidad
  - Project tour: September 4, 2014
  - Double Mass Balance Analysis discussion

RECLAMATION

City of Trinidad Proposed Amendments

- Request for use upstream of reservoir, out of District and additional dry-up acres
- At request of PRWCD, working directly with City
- City is currently working to provide requested information to Reclamation
- Operating Principles amendment will require adoption of amended contract exhibit
- Continue to Coordinate with
  - City of Trinidad
  - Corps of Engineers
  - States, PRWCD, other interested parties

RECLAMATION



Project Effects Analysis

- Currently using Double Mass Balance Analysis
- 10 Year cumulative flow at Trinidad compared to 10 Year cumulative flow at Thatcher
- Used in 80-84, 85-94 and 95-04 Reviews
- Coarse assessment of project impacts
- Suggested revisions to Analysis being considered
  - Evaporation
  - Record Extension
  - Effects of Exchanges into Trinidad Reservoir
- Technical Meeting to be scheduled in February 2014

For Further Information

- Andrew Gilmore
- 970-962-4362
- agilmore@usbr.gov
- http://www.usbr.gov/gp/ecao/trinidad

RECLAMATION

Ten-year Accounting of Depletions and Accretions to Usable Stateline Flow
2003 - 2012

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	2003	3,299	0	0	0	210	-210	3,509
2	2004	-3,442	6,565	1,850	8,415	260	8,155	-11,597
3	2005	-2,039	11,220	93	11,313	607	10,706	-12,745
4	2006	-1,493	8,507	0	8,507	619	7,888	-9,381
5	2007	-301	6,650	0	6,650	1,025	5,625	-5,926
6	2008	-2,198	11,617	0	11,617	1,288	10,329	-12,527
7	2009	-148	5,511	0	5,511	1,256	4,255	-4,403
8	2010	410	10,241	0	10,241	1,548	8,693	-8,283
9	2011	1,841	6,436	0	6,436	1,717	4,719	-2,878
10	2012	4,044	0	0	0	1,479	-1,479	5,523
Total		-27	66,747	1,943	68,690	10,009	58,681	-58,708
	Shortfall for 2013							0

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 2012 are based on input file "UPDATE_june2013.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.

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF WATER RESOURCES

John W. Hickenlooper
Governor

Mike King
Executive Director

Dick Wolfe, P.E.
Director/State Engineer

2013 Annual PDF (Presumptive Stream Depletion Factor) Evaluation Report
Hydrologic Institutional (H-I) Model Area, Arkansas River Basin

Prepared By: Kelley Thompson PE and Bill Tyner PE

Date: September 1, 2013

Introduction and Summary

Both the 1996 Amended Rules and Regulations Governing the Diversion and Use of Tributary Ground Water in the Arkansas River Basin, Colorado ("Use Rules") and the Amended Agreement Regarding the Colorado Use Rules, PDF Evaluation, Implementation Processes, and Related Matters, and Not to Terminate the Offset Account Resolution ("Amended Appendix A.4") (*Kansas v. Colorado,* ___ U.S. ___ (Original No. 105) establish presumptive stream depletion factors (PDFs). These PDFs relate groundwater well pumping for irrigation to stream depletions in the administration of replacement plans under the Use Rules. The Use Rules established PDFs of 30% for supplemental flood and furrow irrigation, 50% for sole source flood and furrow irrigation, and 75% for sole source sprinkler irrigation while a PDF of 100% has been used for drip irrigation. Amended Appendix A.4 established that a PDF value of 39% would be used for supplemental flood/furrow irrigation for years through 2012 and that future PDF values could not be lower than the original values in the 1996 Use Rules. Id. Para 3 and 5.a.

For years beginning in 2012, Amended Appendix A.4 also directs the state of Colorado to conduct an annual evaluation of the PDF value for the supplemental flood/furrow irrigation category ("Evaluation") using the Hydrologic Institutional Model (H-I Model). Id., para 4. The purpose of the Evaluation is to establish the most appropriate PDF for supplemental flood/furrow irrigation such that replacements for groundwater pumping depletions made using this PDF (along with the PDFs for sprinkler, drip, and sole-source irrigation) will result in no net depletions to usable stateline flow over a ten year period. The Evaluation uses the recent range of pumping and hydrologic conditions (within last 20 years). Id. Para 4.d. This is a reasonable range of conditions that could be expected in the future over a 10-year period. The analysis is not an evaluation of the sufficiency of past PDFs or replacements but establishes the PDF to be used in the future. Therefore, some variables such as irrigation application efficiency should most appropriately consider current rather than past conditions. The supplemental flood/furrow PDF value indicated by the Evaluation ("Evaluation PDF") is used to determine the replacement requirements in the following year's replacement plans under the Use Rules. Id., para 5.

The most current versions of the H-I Model or GWAM are utilized in the PDF evaluation. Id. Para 4.d and 4.e. Therefore, several additions to the general methodology and modification to model files

provided in Appendix A.4 have been made for this year's Evaluation. These include (a) updating the modified H-I Model code used in the evaluation to reflect the most current H-I Model code, (b) adding a methodology to consider current higher irrigation application efficiencies now that these efficiencies are calculated for and included in the H-I Model, and (c) updating the Fortran GWAM code to include changes to groundwater unit response functions that were added to the H-I Model.

Colorado's initial report is due to Kansas on September 1 of each year, and the experts for the two States then coordinate their review and attempt to agree on the Evaluation PDF by December 1. Id. Para 4.d. PDFs will be evaluated over ten-year compliance periods beginning in 1997 for a period to include up to 20 years (i.e. in 2018 the period of evaluation will be 1998 through 2017).

In this 2013 Annual PDF Evaluation Report, Colorado concludes that a supplemental flood/furrow irrigation PDF of **36.5%** is most appropriate and should be used by Division 2 for replacement plans in year 2014.

Methodology

The general methodology to be used in the annual PDF evaluations is described in Amended Appendix A.4, paragraph 4.

First, historic pumping is equated to wellhead depletions given the PDF value that is being tested, and the wellhead depletions are lagged to the Arkansas River reaches using the Ground Water Accounting Model (GWAM). These lagged stream depletions represent the idealized replacements that would have been made given the PDF being evaluated. The pumping and idealized replacements are then provided to a modified version of the H-I Model with a revised update file to evaluate annual stateline accretions or depletions when compared to a case without any pumping or replacements. The value of the supplemental flood/furrow PDF is incrementally increased until there are no stateline depletions over any 10-year period since 1997 (or eventually over the last 20 years).

Updates to Appendix A.4 Methodologies and Files

Amended Appendix A.4 provides a general methodology framework for the PDF analysis, and several files were also included on a CD including a Fortran version of GWAM and modified H-I Model code. Any changes to the H-I Model that are agreed to by the states or implemented pursuant to the procedures in Appendix B of the Decree should also be utilized in the PDF analysis. Id. Para 4.d and 4.e. In addition, Amended Appendix A.4 states that GWAM will use the same unit response functions (URFs) that are used in the most current version of the H-I Model. Id. Para 4.d. The following underlined sections describe updates to the more general Amended Appendix A.4 methodologies or to the files that were provided with Amended Appendix A.4 that were included so that the PDF evaluation reflects the most current H-I Model code and model update methodologies.

Updates to PDF Version of H-I Model Code

An example "PDF version" of the H-I Model code (update6eV1_06repl) was provided with Appendix A.4 for use in the PDF evaluation. This code was based on a previous version of the H-I Model (update6eV1_06) which was updated in 2011 (update6eV1_06_GWEff). Therefore, the "PDF version" of the H-I Model code was also updated to reflect the most current H-I Model code. The code changes in the current H-I Model that consider explicit irrigation application efficiencies were copied into the PDF version code and re-compiled. This new code was used in the 2012 PDF evaluation, and differences between this code and H-I Model code were described in detail in the 2012 PDF Evaluation report. The 2012 PDF Evaluation Report also included a table (Table 6) that demonstrated how the new compiled code replicated the results that were listed in Appendix A.4.

For every new annual evaluation, both the PDF version of the H-I Model code provided with Appendix A.4 and the PDF version code updated for the 2012 PDF Evaluation required the period end of month to be changed in the code and the code re-compiled. For the 2013 Evaluation, changes were made to lines 0251.870.08R, 0251.870.16R, and 0251.870.25R in the PDF version of the H-I Model code so that the analysis period end month does not have to be re-entered in future years (the explicit month number was changed to the variable NMNEW).

For 2013, Colorado believes it has found a small error in the H-I Model code in the code block related to the GW responses (the code block is described more in the following section regarding changes to GWAM). The code error is described in more detail in an attachment to this report. The term "GWRFSW" in line 4736.08RF was corrected to "GWRFGW".

Colorado believes the error is obvious and was a simple coding mistake, and that correction of the code represents an error correction and not a change in logic or in the intent of the code. Therefore, Colorado corrected the error in the PDF version of the H-I Model code that was used for the 2013 PDF Evaluation as well as to the identical section of code that was copied into the Fortran GWAM as described in a following section. Testing indicated that including the code correction in the 2013 Annual PDF Evaluation raised the "Evaluation PDF" value by 0.1%.

Colorado also proposes that the two States agree to correct this coding error in the H-I Model code for use in the 2013 H-I Model update. Colorado invites Kansas' experts to ask any questions about this coding fix during the coordinated review on the Evaluation PDF leading up to December 1 . Colorado also requests that Kansas include specific written agreement to this coding fix in any correspondence agreeing to the Evaluation PDF.

Irrigation Application Efficiencies

Appendix A.4 was amended in 2009. The H-I Model and modeling methodology was revised in 2011 to acknowledge higher application efficiencies due to sprinkler and drip system irrigation. Division 2 recognizes higher application efficiencies to calculate actual wellhead depletions and replacement requirements and uses PDF's of 75% and 100% for sprinkler and drip irrigation, respectively, for both supplemental and sole-source wells. Therefore, the 2009 PDF methodologies should be updated to incorporate higher application efficiencies that can now be recognized in the H-I Model code.

Appendix B.1 and C.1 of the Decree as amended in 2011 established both a new H-I Model code that could consider higher irrigation application efficiencies and a method to calculate efficiencies by ditch. Appendix C.1 presented formulas and a specific table for calculation of annual weighted efficiencies based on the proportions of groundwater pumping for flood/furrow, sprinkler, and drip irrigation by ditch from both sole-source and supplemental wells. The data and formulas in this table are used with limited modification for calculation of PDF coefficients weighted by efficiency. In the C.1 table, efficiencies of 65% for gravity (flood/furrow) and 85% for sprinkler irrigation are replaced with values of 50% for sole-source irrigation and 75% for all sprinkler irrigation as established by the 1996 Use Rules. The value for drip irrigation is maintained at 100%. For supplemental irrigation, the 50% gravity irrigation value is replaced with the supplemental flood/furrow PDF value being considered.

This method was first used in the 2012 PDF analysis considering 2011 pumping data to produce annual PDF coefficients that consider irrigation application efficiency for use in the GWAM portion of the analysis. For years 2011 onward, the ditchwide efficiencies for use in the H-I Model portion of the analysis are calculated as part of the annual H-I Model update, are included in the model update file, and have been approved by Kansas experts.

As mentioned, the PDF analysis considers the range of past pumping and hydrologic conditions to establish the most appropriate PDF for use in the future. Therefore, potential future replacements considering this range of past conditions should be evaluated as a function of current (not past) irrigation application efficiencies. Therefore, in addition to incorporating higher sprinkler and drip irrigation efficiencies for evaluation of year 2011 and 2012 data, the analysis should also consider current application efficiencies to evaluate hydrologic conditions from years prior to 2011.

Year 2011 and 2012 ditchwide irrigation application efficiencies did vary somewhat based on annual water allocations. Therefore, for the PDF evaluation, the best estimate of current application efficiencies is an average of efficiencies for the most recent several years. As data to accurately estimate efficiencies has been produced and approved as part of the H-I Model beginning in 2011, it is proposed that efficiencies applied to pre-2011 pumping in both the GWAM and H-I portions of the analysis be calculated as the average of efficiencies for years since 2011. In the modified update file for the H-I portion of the analysis, both pre-2011 application efficiencies and tailwater factors are calculated from the average from 2011 onward since the tailwater factors are functions of application efficiency.

Ground Water Unit Response Functions

Appendix A.4 states "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 ..". Lines 4736.01RF through 4736.21HOL were added to 2002 and 2007 versions of the H-I Model to move portions of GW responses from the Ft. Lyon, Otero, and Catlin Canals below the Ft Lyon diversion (from Reach 7 to Reach 8) and to move a portion of the Holbrook Canal's return from Lake Cheraw to mainstem reaches. This code section is described in more detail in an attachment to this report. These code changes were not incorporated into the Fortran version of GWAM provided with Appendix A.4 or the other versions of GWAM used by Division 2 prior to 2013. This difference between the H-I Model code and GWAM was noted as part of changes to the Irrigation System Analysis Model (ISAM) that were proposed in April 2013, and the H-I coding has been used to determine lagged replacement requirements for the 2013 Rule 10 Plan. The H-I coding will be incorporated in other versions of GWAM used by Division 2 by 2014 to determine future replacement requirements along with the PDFs determined in the current analysis as well to estimate lagging of replacement sources.

For the Fortran GWAM code to use the same URFs as the H-I Model, the blocks of H-I code modifying the responses for the Ft. Lyon, Otero, Catlin, and Holbrook Canals (and corrected as described in the following section) was pasted verbatim into the Fortran GWAM code used for the PDF evaluation and recompiled. For this recompiled version of the Fortran GWAM, the precision of the output was also increased form 1AF to 0.1AF in order to improve accuracy and maintain the same precision as input files and other files in the analysis.

Detailed Description of Methodologies

Ground Water Accounting Model Analysis

The Ground Water Accounting Model (GWAM) determines wellhead depletions and lagged stream responses from well pumping using the unit response functions from the H-I Model. Division 2 uses MS Excel and Access based GWAM versions in monthly administration of replacement plans. Appendix A.4 included a Fortran version of GWAM to calculate ideal replacements that would be made to stream reaches given assumed PDF values and pumping data from the H-I Model.

Pumping data for 1995 through 2012 was extracted from the June 2012 update.dat file and formatted into the GWAM input file format using a script, while pumping data for 1950 through 1994 were taken from the sample files provided in Amended Appendix A.4. Separate GWAM pumping files must be created that contain pumping amounts for sole-source and supplemental acreage.

A depletion factor coefficient file for the Fortran GWAM program relates well pumping to wellhead depletion prior to lagging this depletion to river reaches. For the current Fortran GWAM code, separate coefficient files must be used in the PDF analysis to evaluate sole-source and supplemental supplies (the code lumps monthly pumping together prior to applying an overall percentage for pumping types effectively losing the monthly differences between sole-source and supplemental pumping). The depletion factors shown in Table 1 were used in the PDF analysis.

Table 1. Depletion Factors by Irrigation Method Used for PDF analysis

Well Supply	Irrigation Method		
	Flood/Furrow	Sprinkler	Drip
Sole Source	50%	75%	100%
Supplemental	PDF Evaluated	75%	100%

Note: Flood/Furrow and Sprinkler depletion factors established by 1996 Use Rules; Drip depletion factors currently used by Division 2 for replacement obligations and supported by Decree Appendix C.1

Appendix C.1 (amended September 2011) demonstrates a table for calculation of annual weighted efficiencies by user for use in the H-I Model. The data and formulas in this table can be used with limited modification for calculation of annual weighted PDF coefficients. In the C.1 table, efficiencies of 65% gravity (flood/furrow) and 85% for sprinkler irrigation are replaced with the depletion factors in Table 1. Calculations of weighted PDF coefficients for GWAM for 2011 and 2012 are shown in Table 2 given supplemental PDFs for flood/furrow irrigation of 36.4% and 36.5%.

For application to pumping from years prior to 2011, PDF coefficients for GWAM are calculated as the average of the coefficients calculated for 2011 and 2012 by ditch which is considered representative of current application efficiencies. PDF coefficients that were used for the GWAM PDF evaluation and applied to pre-2011, 2011, and 2012 pumping are shown in Table 3.

For each PDF value for supplemental flood/furrow irrigation being tested, the Fortran GWAM program had to be run six times (sole-source pre-2011, supplemental pre-2011, sole-source 2011, supplemental 2011, sole-source 2012, supplemental 2012) and the resulting ideal replacements summed by reach to create a replacement file for the H-I Model. As specified in Appendix A.4, the replacements determined by GWAM were modified for appropriate reaches below John Martin Reservoir using the Durbin usable flow method with the Larson coefficients. During summer months (April – October), replacements for reaches below the Buffalo Canal were multiplied by 81.9% while replacement for all reaches below John Martin Reservoir were multiplied by 34.9% in winter months. A script was written to manage the six runs per PDF similar to a batch program, aggregate replacements by reach, and format the replacement file (REPLC.DAT) for use in the version of the H-I Model adapted for the analysis.

A new GWAM script was also written that reads pumping data from the H-I data files and incorporates both sole-source and supplemental coefficients and a variable annual coefficient in one run. The script replicates the results obtained from the six runs of the Fortran GWAM program except for very slight differences due to rounding in the Fortran code. The script enabled rapid testing of PDF values. However, the Fortran GWAM program, as specified in Appendix A.4 but with the code revisions described earlier, was used to produce the exact results presented in the results section of this report.

Table 2a. Computation of 2011 Weighted PDF Coefficients using 2011 Pumping Data for GWAM PDF Analysis

H-I Model User Number	Sole Source Pumping (acre-feet)				Supplemental Pumping (acre-feet)				HIM Weighted		Weighted PDF Coefficients for GWAM		
	Gravity Irrigation	Sprinkler Irrigation	Drip Irrigation	Total Pumping	Gravity Irrigation	Sprinkler Irrigation	Drip Irrigation	Total Pumping	Sole Source	Supple-mental	Sole Source	Supplemental	Supplemental
											50.0%	**36.4%**	**36.5%**
1	2,549	1,166	7	3,723	6,502	59	75	6,637	71%	66%	57.9%	37.5%	37.6%
2*	0	0	0	0	250	0	0	250		65%	50.0%	50.0%	50.0%
3*	0	0	0	0	1,074	717	154	1,945		75%	50.0%	63.2%	63.2%
4	0	0	0	0	242	0	0	242		65%	50.0%	36.4%	36.5%
5	1,252	438	989	2,679	533	0	0	533	84%	70%	72.5%	36.4%	36.5%
6	1,467	7	0	1,473	3,624	0	0	3,624	65%	65%	50.1%	36.4%	36.5%
7	82	124	6	212	4,068	0	0	4,068	78%	65%	66.1%	36.4%	36.5%
8	105	0	0	105	582	0	0	582	65%	65%	50.0%	36.4%	36.5%
9	1,670	1,822	2,072	5,563	9,447	68	19	9,534	85%	65%	76.8%	36.8%	36.9%
10	1,575	2,160	1,080	4,816	14,462	1,263	0	15,725	82%	67%	72.4%	39.5%	39.6%
11	397	427	723	1,547	0	0	0	0	87%		80.3%	36.4%	36.5%
12	500	0	198	698	2,138	317	471	2,926	75%	73%	64.2%	50.8%	50.9%
13	799	47	0	846	480	0	0	480	66%	65%	51.4%	36.4%	36.5%
14	2,264	1,463	0	3,727	0	0	0	0	73%		59.8%	36.4%	36.5%
15	139	714	0	853	602	277	0	879	82%	71%	70.9%	48.6%	48.6%
16				0				0			50.0%	36.4%	36.5%
17	1,489	3,881	0	5,370	4,841	578	0	5,418	79%	67%	68.1%	40.5%	40.6%
18	413	763	177	1,353	5,323	668	55	6,047	82%	72%	70.6%	41.2%	41.3%
19	0	58	0	58	204	0	0	204	85%	65%	75.0%	36.4%	36.5%
20	0	0	0		0	0	0				50.0%	36.4%	36.5%
21*	0	0	0	0	2,553	1,729	0	4,281		73%	50.0%	60.1%	60.1%
22	35	0	148	184	320	0	0	320	93%	65%	90.4%	36.4%	36.5%
23*	0	0	0	0	0	439	0	439		85%	50.0%	75.0%	75.0%
24	2,104	8,125	0	10,229	0	0	0	0	81%		69.9%	36.4%	36.5%

Note: Value shown in header for PDF coefficients is used for gravity (flood/furrow) for weighting with sprinkler and drip irrigation
*for HI users with * (Booth, Excelsior, X-Y Graham, and Sisson-Stubbs), gravity (flood/furrow) for sole source (50%) used even though pumping shown as supplemental*
Weighted PDF Coefficient = Gravitypump/totalpump(PDF Value for Flood/Furrow)+sprinklerpump/totalpump*0.75+drippump/totalpump*1.00*
PDF values for flood/furrow shown when no pumping indicated

Table 2b. Computation of 2012 Weighted PDF Coefficients using 2012 Pumping Data for GWAM PDF Analysis

H-I Model User Number	Sole Source Pumping (acre-feet)				Supplemental Pumping (acre-feet)				HIM Weighted		Weighted PDF Coefficients for GWAM		
	Gravity Irrigation	Sprinkler Irrigation	Drip Irrigation	Total Pumping	Gravity Irrigation	Sprinkler Irrigation	Drip Irrigation	Total Pumping	Sole Source	Supple-mental	Sole Source	Supplemental	Supplemental
											50.0%	**36.4%**	**36.5%**
1	1,829	1,278	9	3,115	5,006	83	52	5,141	73%	66%	60.4%	37.7%	37.8%
2*	0	0	0	0	303	0	0	303		65%	50.0%	50.0%	50.0%
3*	0	0	0	0	949	1,128	9	2,086		76%	50.0%	63.7%	63.7%
4	0	0	0	0	309	0	0	309		65%	50.0%	36.4%	36.5%
5	1,835	298	3	2,137	10	0	0	10	72%	70%	53.6%	36.4%	36.5%
6	931	8	0	939	2,546	0	0	2,546	65%	65%	50.2%	36.4%	36.5%
7	0	138	21	159	2,833	0	0	2,833	87%	65%	78.2%	36.4%	36.5%
8	49	0	0	49	289	0	0	289	65%	65%	50.0%	36.4%	36.5%
9	1,180	1,114	1,679	3,973	8,083	62	0	8,146	85%	65%	78.1%	36.7%	36.8%
10	2,134	1,786	965	4,885	12,521	1,611	0	14,132	79%	67%	69.0%	40.8%	40.9%
11	172	461	902	1,534	0	0	0	0	92%		86.9%	36.4%	36.5%
12	347	0	169	516	1,350	377	310	2,036	76%	74%	66.4%	53.2%	53.3%
13	502	37	0	539	303	0	0	303	66%	65%	51.7%	36.4%	36.5%
14	959	487	0	1,446	0	0	0	0	72%		58.4%	36.4%	36.5%
15	25	721	0	746	742	339	0	1,081	84%	71%	74.1%	48.5%	48.6%
16	0	0	0	0	0	0	0	0			50.0%	36.4%	36.5%
17	1,497	3,690	0	5,187	5,324	779	0	6,102	79%	68%	67.8%	41.3%	41.4%
18	184	1,115	187	1,486	8,380	606	48	9,034	85%	71%	75.1%	39.3%	39.4%
19	0	33	0	33	448	0	0	448	85%	65%	75.0%	36.4%	36.5%
20	0	0	0	0	0	0	0	0			50.0%	36.4%	36.5%
21*	0	0	0	0	1,668	557	0	2,225		70%	50.0%	56.3%	56.3%
22	28	0	102	130	2,338	0	0	2,338	92%	65%	89.2%	36.4%	36.5%
23*	0	0	0	0	0	0	0	0			50.0%	36.4%	36.5%
24	1,498	8,194	0	9,692	0	0	0	0	82%		71.1%	36.4%	36.5%

Note: Value shown in header for PDF coefficients is used for gravity (flood/furrow) for weighting with sprinkler and drip irrigation
*for HI users with * (Booth, Excelsior, X-Y Graham, and Sisson-Stubbs), gravity (flood/furrow) for sole source (50%) used even though pumping shown as supplemental*
Weighted PDF Coefficient = Gravitypump/totalpump(PDF Value for Flood/Furrow)+sprinklerpump/totalpump*0.75+drippump/totalpump*1.00*
PDF values for flood/furrow shown when no pumping indicated

Table 3. PDF Coefficients used for 2012 GWAM PDF Evaluation

H-I Model User	Sole Source			Supplemental Flood/Furrow=36.4%			Supplemental Flood/Furrow=36.5%		
	pre-2011	2011	2012	pre-2011	2011	2012	pre-2011	2011	2012
1	59.2	57.9	60.4	37.6	37.5	37.7	37.7	37.6	37.8
2	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
3	50.0	50.0	50.0	63.5	63.2	63.7	63.5	63.2	63.7
4	50.0	50.0	50.0	36.4	36.4	36.4	36.5	36.5	36.5
5	63.1	72.5	53.6	36.4	36.4	36.4	36.5	36.5	36.5
6	50.2	50.1	50.2	36.4	36.4	36.4	36.5	36.5	36.5
7	72.1	66.1	78.2	36.4	36.4	36.4	36.5	36.5	36.5
8	50.0	50.0	50.0	36.4	36.4	36.4	36.5	36.5	36.5
9	77.5	76.8	78.1	36.8	36.8	36.7	36.8	36.9	36.8
10	70.7	72.4	69.0	40.2	39.5	40.8	40.2	39.6	40.9
11	83.6	80.3	86.9	36.4	36.4	36.4	36.5	36.5	36.5
12	65.3	64.2	66.4	52.0	50.8	53.2	52.1	50.9	53.3
13	51.5	51.4	51.7	36.4	36.4	36.4	36.5	36.5	36.5
14	59.1	59.8	58.4	36.4	36.4	36.4	36.5	36.5	36.5
15	72.5	70.9	74.1	48.5	48.6	48.5	48.6	48.6	48.6
16	50.0	50.0	50.0	36.4	36.4	36.4	36.5	36.5	36.5
17	67.9	68.1	67.8	40.9	40.5	41.3	41.0	40.6	41.4
18	72.9	70.6	75.1	40.3	41.2	39.3	40.4	41.3	39.4
19	75.0	75.0	75.0	36.4	36.4	36.4	36.5	36.5	36.5
20	50.0	50.0	50.0	36.4	36.4	36.4	36.5	36.5	36.5
21	50.0	50.0	50.0	58.2	60.1	56.3	58.2	60.1	56.3
22	89.8	90.4	89.2	36.4	36.4	36.4	36.5	36.5	36.5
23	50.0	50.0	50.0	55.7	75.0	36.4	55.8	75.0	36.5
24	70.5	69.9	71.1	36.4	36.4	36.4	36.5	36.5	36.5

Note: 2011/2012 PDF coefficients from weighting of pumping amounts by irrigation method
pre-2001 PDF coefficients from average of 2011 and 2012 coefficients

H-I Model Analysis

A modified version of the H-I Model code (update6eV1_06repl) was provided with Amended Appendix A.4 for use in the PDF evaluation. The code had been modified to use the replacement file from GWAM and explicitly coded replacement operations were removed. This code was updated for the 2012 annual PDF evaluation to consider higher irrigation application efficiencies as in the 2011 H-I Model code. For 2013, a correction proposed for the H-I Model code for 2013 was also included in the code for the PDF evaluation and a small change was made to three lines detailing the months of the analysis so that the code would not have to be changed and recompiled every year.

In the final 2012 update.dat from June, all special waters were removed, dried-up acreage was redistributed to surface water only and supplemental acreage, spill factors set to zero, mainstem and Fountain Creek TM deliveries were removed, and fractions of consumable water placed in winter water undistributed pool were set to zero.

The H-I Model update file includes weighted sole source and supplemental application efficiencies and tailwater factors calculated using pumping data for 2011 and 2012. For all years prior to 2011, ditch efficiencies and tailwater factors were calculated as the average of 2011 and 2012 values for the new update file for the PDF H-I Model analysis.

For years through 2007, the redistribution of dried-up acreage to surface water only and supplemental acreage was taken from the update.dat provided with Appendix A.4. As done through 2007, all dry-up acres for years 2008 through 2012 for the Excelsior (3), Keesee (16), X-Y Graham (21), and Sisson (23) were redistributed to supplemental acreage as detailed in Table 4. For other ditches, dry-up acres were re-distributed based on an evaluation of parcel data from 2003 contained in the GIS database. For the Catlin (9), Ft Lyon (10), Holbrook (12), and Ft Bent (15), dry-up parcels were re-designated supplemental if the parcel had been designated supplemental or groundwater (more recently than it had been designated surface water only) in other years with data in the GIS. This methodology was not appropriate for the Lamar (18); rather dry-up parcels were re-designated supplemental if there was a GW WDID listed for the parcel in the GIS. One additional Catlin parcel was designated supplemental in 2008 because it was listed as supplemental in the "normal irrigation" column in the GIS. For the Holbrook, one additional parcel was designated supplemental in 2008 and 2009 because it had a GWID listed in the GIS (but was listed as dried up in all other years). For a ditch, the new supplemental area was calculated as the sum of the areas of dry-up parcels re-designated as supplemental plus the original supplemental area. The new surface water only area was taken as the original surface water only area plus the original dry-up area minus the dry-up area re-designated as supplemental. Table 5 details parcels that were re-designated from dried-up to supplemental as well as the supplemental and surface water only areas used for the PDF evaluation.

Table 4. Re-distribution of Dry-up Acreage to Supplemental Acreage Only

#	Ditch	Year	Original 2012 Update.dat (acres)				New Update.dat for PDF Eval. (acres)			
			Swonly	Supp.	Gwonly	Dryup	Swonly	Supp.	Gwonly	Dryup
3	EXCELSIOR	2008	0	1193	0	1011	0.0	2204.0	0.0	0.0
3	EXCELSIOR	2009	0	1398	0	837	0.0	2235.0	0.0	0.0
3	EXCELSIOR	2010	0	1064	0	1138	0.0	2202.0	0.0	0.0
3	EXCELSIOR	2011	0	1071	0	1127	0.0	2198.0	0.0	0.0
3	EXCELSIOR	2012	0	1507	0	723	0.0	2230.0	0.0	0.0
16	KEESEE	2008	0	1	0	1807	0.0	1807.0	0.0	0.0
16	KEESEE	2009	0	1	0	1950	0.0	1950.0	0.0	0.0
16	KEESEE	2010	0	1	0	1950	0.0	1950.0	0.0	0.0
16	KEESEE	2011	0	1	0	1950	0.0	1950.0	0.0	0.0
16	KEESEE	2012	0	1	0	1950	0.0	1950.0	0.0	0.0
21	XY-GRAHAM	2008	0	1634	0	2704	0.0	4338.0	0.0	0.0
21	XY-GRAHAM	2009	0	1838	0	2709	0.0	4547.0	0.0	0.0
21	XY-GRAHAM	2010	0	1838	0	2627	0.0	4465.0	0.0	0.0
21	XY-GRAHAM	2011	0	1902	0	3460	0.0	5362.0	0.0	0.0
21	XY-GRAHAM	2012	0	2010	0	3460	0.0	5470.0	0.0	0.0
23	SISSON	2008	0	240	0	240	0.0	480.0	0.0	0.0
23	SISSON	2009	0	240	0	240	0.0	480.0	0.0	0.0
23	SISSON	2010	0	240	0	240	0.0	480.0	0.0	0.0
23	SISSON	2011	0	240	0	240	0.0	480.0	0.0	0.0
23	SISSON	2012	0	1	0	480	0.0	480.0	0.0	0.0

Table 5. Re-distribution of Dry-up Acreage to Supplemental and SW-Only Acreage

#	Ditch	Year	Original 2011 Update.dat (acres)				Dry-up Area Re-Designated as Supplemental		New Update.dat for PDF Eval. (acres)			
			Swonly	Supp.	Gwonly	Dryup	Acres	Parcel ID's	Swonly	Supp.	Gwonly	Dryup
9	CATLIN	2008	9915	4054	1914	438	154.0	23570207, 23570215, 23571139, 23571132, 22573426, 22582302, 22572810, 22572809, 24560431, 23553119, 23571115, 22573321, 23562504, 23570232	10199.0	4208.0	1914.0	0.0
9	CATLIN	2009	10920	4271	1988	301	59.0	23571132, 22573426, 22572810, 22572809, 24560431, 23553119, 23571115, 22573321, 23571311	11162.0	4330.0	1988.0	0.0
9	CATLIN	2010	11256	3989	2093	319	71.4	22573426, 22572810, 22572809, 24560431, 23553119, 23571115, 22573321, 23562504, 22582604	11503.6	4060.4	2093.0	0.0
9	CATLIN	2011	10657	4318	2101	417	78.0	24560431, 23553119, 23571115, 22573321, 22582604, 23562512	10996.0	4396.0	2101.0	0.0
9	CATLIN	2012	10501	4292	2176	379	99.7	22573426, 24560431, 23553119, 23571115, 22573321, 22582604, 23562512, 24560408, 22582313	10780.3	4391.7	2176.0	0.0
10	FTLYON	2008	64653	11422	2605	137	51.4	23543205, 23542929, 23530707, 23531803	64738.6	11473.4	2605.0	0.0
10	FTLYON	2009	72472	11396	2734	68	17.5	23543205, 23542929	72522.5	11413.5	2734.0	0.0
10	FTLYON	2010	72863	10957	2780	108	36.4	23542204	72934.6	10993.4	2780.0	0.0
10	FTLYON	2011	72304	12327	2942	76	4.8	23542929	72375.2	12331.8	2942.0	0.0
10	FTLYON	2012	72101	12241	2635	22	0.0		72123.0	12241.0	2635.0	0.0
12	HOLBROOK	2008	10248	1024	739	60	25.6	22572101, 22572720	10282.4	1049.6	739.0	0.0
12	HOLBROOK	2009	11508	1192	815	26	25.6	22572101, 22572720	11508.4	1217.6	815.0	0.0
12	HOLBROOK	2010	11465	1312	635	0	0.0		11465.0	1312.0	635.0	0.0
12	HOLBROOK	2011	11666	1476	368	0	0.0		11666.0	1476.0	368.0	0.0
12	HOLBROOK	2012	11707	1216	386	0	0.0		11707.0	1216.0	386.0	0.0
15	FTBENT	2008	2276	632	577	532	8.6	23460511	2799.4	640.6	577.0	0.0
15	FTBENT	2009	2892	627	735	704	8.6	23460511	3587.4	635.6	735.0	0.0
15	FTBENT	2010	2601	877	776	662	8.6	23460511	3254.4	885.6	776.0	0.0
15	FTBENT	2011	2612	795	754	671	8.6	23460511	3274.4	803.6	754.0	0.0
15	FTBENT	2012	2465	808	1021	684	8.6	23460511	3140.4	816.6	1021.0	0.0
18	LAMAR	2008	1809	4509	742	2717	1175.0	22452804, 22452807, 22453204, 22453304, 22453305, 22453306, 22453307, 22453308, 22453401, 22453402, 22453410, 22462504, 22453410, 22463507, 22463602, 22463603, 22462808, 22462903, 22462707, 22462605, 22462609, 22462804	3351.0	5684.0	742.0	0.0
18	LAMAR	2009	2157	4908	796	2314	1049.4	22452804, 22452807, 22453204, 22453304, 22453305, 22453306, 22453307, 22453308, 22453401, 22453402, 22453410, 22462504, 22453410, 22463507, 22463602, 22463603, 22462808, 22462903, 22462707, 22463503, 22463508	3421.6	5957.4	796.0	0.0
18	LAMAR	2010	1895	5365	604	2288	1031.9	22452804, 22452807, 22453204, 22453304, 22453305, 22453306, 22453307, 22453308, 22453401, 22453402, 22453410, 22462504, 22453410, 22463507, 22463602, 22463603, 22462605, 22462609, 22463503, 22463508, 22463601	3151.1	6396.9	604.0	0.0
18	LAMAR	2011	1908	5010	867	2598	1049.4	22452804, 22452807, 22453204, 22453304, 22453305, 22453306, 22453307, 22453308, 22453401, 22453402, 22453410, 22462504, 22453410, 22463507, 22463602, 22463603, 22462808, 22462903, 22462605, 22463503, 22463508	3456.6	6059.4	867.0	0.0
18	LAMAR	2012	1478	4995	836	2817	1268.4	22452804, 22452807, 22453204, 22453304, 22453305, 22453306, 22453307, 22453308, 22453401, 22453402, 22453410, 22462504, 22462605, 22462608, 22462609, 22462706, 22462707, 22462804, 22462808, 22462902, 22462903, 22463503, 22463507, 22463508, 22463602, 22463603	3026.6	6263.4	836.0	0.0

Results

Several PDF values for supplemental flood/furrow irrigation were tested using the PDF evaluation methodologies described previously. Supplemental irrigation PDFs were tested until the minimum PDF was found which produced no cumulative shortfall to usable stateline flows over any 10-year period. Annual and ten-year sums of accretions and depletions for the limiting PDF values are shown in the following table. A supplemental flood/furrow irrigation PDF of 36.4% indicates a shortfall in the ten-year 2003 to 2012 period while a supplemental flood/furrow irrigation PDF of 36.5% is sufficient. Therefore, for replacement plans in year 2014, Division 2 should use a new PDF of 36.5% for supplemental flood/furrow irrigation.

Table 6. 2013 PDF Evaluation Results

Year of Review Period	Calendar Year	Annual Usable Stateline Depletions (+)/ Accretions (-) (acre-feet)		10-Year Period	10-year Sum of Usable Stateline Depletions (+) / Accretions (-) (acre-feet)	
		SF.PDF: 36.4%	SF.PDF: 36.5%		SF.PDF: 36.4%	SF.PDF: 36.5%
1	1997	-5519	-5547			
2	1998	-909	-917			
3	1999	-1114	-1120			
4	2000	-251	-257			
5	2001	-464	-472			
6	2002	-439	-332			
7	2003	1601	1578			
8	2004	-206	-222			
9	2005	-234	-244			
10	2006	-476	-487	1997-2006	-8011	-8020
11	2007	-564	-573	1998-2007	-3056	-3045
12	2008	-1680	-1691	1999-2008	-3828	-3819
13	2009	-1267	-1276	2000-2009	-3981	-3975
14	2010	237	230	2001-2010	-3494	-3488
15	2011	345	337	2002-2011	-2685	-2679
16	2012	2277	2269	2003-2012	**31**	-78
17	2013					
18	2014					
19	2015					
20	2016					

Note: indicated PDF is for supplemental flood/furrow irrigation
PDF of 50% sole-source flood/furrow, 75% for sprinkler, and 100% for drip irrigation used
Annual ditch PDF weighted based on post-2011 gravity, sprinkler, and drip pumping proportions

Attachment A

H-I Model Code used to update the Ground Water Accounting Model and Code Correction

The following section demonstrates a block of the current (2011) H-I Model code (version update6eV1_06_GWEff) related to groundwater pumping. This code block and a similar block related to surface water returns (4707.1RF-4708) was revised in 2002 and 2007 to modify unit response functions (URFs). In both code blocks, the variable GWRFSW is meant to store URFs from surface water returns while the variable GWRFGW stores URFs from ground water pumping. In the ground water pumping code block, line 4736.08RF refers to GWRFSW rather than GWRFGW. This reference is in error and results in the GW pumping URFs for user 8 (Otero Canal) summing to 1.178 rather than 1.0. Therefore, in line 4736.08RF, the reference to GWRFSW should be changed to GWRFGW.

For the 2013 Annual PDF Evaluation, this code change was made in the PDF Version of the H-I Model and in the code section that was pasted into the Fortran GWAM. Colorado proposes that the two States agree to correct this coding error in the H-I Model code for use in the 2013 H-I Model update. Colorado invites Kansas' experts to ask any questions about this coding fix during the coordinated review on the Evaluation PDF leading up to December 1 . Colorado also requests that Kansas include specific written agreement to this coding fix in any correspondence agreeing to the Evaluation PDF.

Section of Code Modifying GW responses in current H-I Model Code with Error:

```
CDRS *** CHANGE GW RESPONSES FOR FT. LYON, OTERO AND CATLIN                4736.01RF
CDRS *** MOVE FT. LYON RESPONSE FOR REACH 7 TO REACH 8                     4736.011RF
CDRS *** FOR OTERO, MOVE 19.34% OF REACH 7 RESPONSE TO REACH 8(NEW REACH)  4736.012RF
CDRS ***       19.34% OF 51.70(FORMER REACH 7)=10% OF TOTAL                4736.013RF
CDRS *** FOR CATLIN, MOVE 25.15% OF REACH 7 RESPONSE TO REACH 8            4736.014RF
CDRS ***       25.15% OF 79.51(FORMER REACH 7)=20% OF TOTAL                4736.015RF
      NFUNGW(8)=6                                                          4736.02RF
      JRECHG(8,6)=8                                                        4736.03RF
      DO 132 IELE=1,NELE                                                   4736.04RF
         GWRFGW(10,2,IELE)=GWRFGW(10,2,IELE)+GWRFGW(10,1,IELE)             4736.05RF
         GWRFGW(10,1,IELE)=0.0                                             4736.06RF
         GWRFGW(8,6,IELE)=GWRFGW(8,6,IELE)+0.1934*GWRFGW(8,4,IELE)         4736.07RF
         GWRFGW(8,4,IELE)=(1.0-0.1934)*GWRFSW(8,4,IELE)                    4736.08RF
         GWRFGW(9,4,IELE)=GWRFGW(9,4,IELE)+0.2515*GWRFGW(9,3,IELE)         4736.09RF
         GWRFGW(9,3,IELE)=(1.0-0.2515)*GWRFGW(9,3,IELE)                    4736.10RF
  132 CONTINUE                                                             4736.11RF
CGKS *** MOVE 77% OF HOLBROOK'S RETURN TO LAKE CHERAW TO OTHER REACHES     4736.12HOL
      CHFAC=0.23                                                           4736.13HOL
      XCHFAC=((1-CHFAC)*0.168875+0.831125)/0.831125                        4736.14HOL
      DO 136 IELE=1,NELE                                                   4736.15HOL
         GWRFGW(12,1,IELE)=GWRFGW(12,1,IELE)*XCHFAC                        4736.16HOL
         GWRFGW(12,2,IELE)=GWRFGW(12,2,IELE)*XCHFAC                        4736.17HOL
         GWRFGW(12,3,IELE)=GWRFGW(12,3,IELE)*XCHFAC                        4736.18HOL
         GWRFGW(12,4,IELE)=GWRFGW(12,4,IELE)*XCHFAC                        4736.19HOL
         GWRFGW(12,5,IELE)=GWRFGW(12,5,IELE)*CHFAC                         4736.20HOL
  136 CONTINUE                                                             4736.21HOL
```

HI model Code Line with error

```
GWRFGW(8,4,IELE)=(1.0-0.1934)*GWRFSW(8,4,IELE)                  4736.08RF
```

Proposed Correction to HI model Code Line:

```
GWRFGW(8,4,IELE)=(1.0-0.1934)*GWRFGW(8,4,IELE)                  4736.08RF
```

Arkansas River Compact Administration
Engineering Committee
Meeting Summary and Action Items
December 17, 2013
Lamar, Colorado

The committee requested Rachel Duran and Brent Newman to produce a brief summary of presentations made and a list of action items for this committee meeting.

Meeting Summary

The committee heard an update from Andrew Gilmore, Bureau of Reclamation on the status of the Bureau of Reclamation's consideration of the City of Trinidad proposed amendments to the Trinidad Operating Principles, which are on-going.

The committee heard a brief report by Steve Miller, Colorado Conservation Board (CWCB), on the status of Colorado's development of its Decision Support System for the Arkansas River.

The committee heard an update from Steve Miller, CWCB, on the status of the Muddy Creek Reservoir Storage right transfer to the Permanent Pool in John Martin Reservoir. Colorado is reviewing the matter internally.

The committee heard an update on the status of efforts to resolve Kansas concerns with LAWMA change of water rights decrees from Eve McDonald. The States have identified three specific issues that are most fruitful for discussion and are committed to continue discussions in the coming year.

The committee heard a report from Dennis Garcia on behalf of the Corps of Engineers noting revisions to the John Martin reservoir-area-capacity table, their decision to approve the proposed amendment to Trinidad Operating Principles, and a potential study of hydropower potential at Trinidad and John Martin Reservoirs.

The committee heard a report from Andrew Gilmore on behalf of the Bureau of Reclamation noting plans for a technical committee meeting in March on methodology to evaluate the long-term impacts of project operations.

The committee heard a report from David Mau on behalf of USGS noting concerns with beaver problems at gages on Big Sandy and the Arkansas River at Granada.

The committee heard a request from and Ann Lopkoff, Colorado Water Protective and Development Association (CWPDA), for a new temporary storage account in John Martin Reservoir. Committee recommends meeting during the summer of 2014 to determine how to move forward on their request.

The committee heard a briefing on lease-fallow legislation and criteria from Kevin Rein, Deputy

State Engineer with the Colorado Division of Water Resources.

Action items

1. The committee recognizes the value of the Special Engineering Committee and recommends its continuation.

David Barfield, Chair

Date: 12/17/2013

Colin Thompson, Member

Date: 12/17/13

No. 4 of 4 originals

Arkansas River Compact Administration
Operations Committee
Meeting Summary and Action Items
December 17, 2013
Lamar, Colorado

The committee instructed Brent Newman, Brandy Cole and Rachel Duran to produce a short summary of any presentations and a list of action items for this committee meeting.

Meeting Summary

The committee received the Compact Year (CY) 2013 reports of the Operations Secretary and Assistant Operations Secretary. The Operations Secretary expressed concern that when Kansas does not call for their Section II Account or Offset Account waters this can potentially delay Colorado's ability to allow the post-Compact wells to divert water and would like this issue to be added to the Water Issues Matrix. The committee recommended that this issue be added to the Water Issues Matrix.

The committee received the 2013 report for the Offset Account.

The committee received Colorado's Presumptive Depletion Factor (PDF) Evaluation Report.

The committee heard an update on the implementation of Irrigation Improvement Rules.

Action items

1. The Ten-year Compact Compliance Accounting table for 2003-2012 was presented. The Committee recommended that this table be an exhibit to the 2013 ARCA Annual Meeting transcript and included in the CY 2013 Annual Report.

2. The committee acknowledged receipt of the CY 2006 - CY2013 Operations Secretary's Reports.

3. The committee recommends to ARCA that the Special Engineering Committee be extended for another two years, thru calendar year 2015.

Colin Thompson, Chair

Date: 12/17/13

Hal Scheuerman, Member

Date: 12-17-2013

No. 3 of 4 originals

Arkansas River Compact Administration
Administrative & Legal Committee
Meeting Summary and Action Items
December 17, 2013
Lamar, Colorado

The committee requested Brent Newman, Brandy Cole, and Rachel Duran to produce a short summary of any presentations and a list of action items for this committee meeting.

Meeting Summary

The committee heard an update on the status of transcripts from prior annual meetings (1998, 1999, and 2012) and summary of 2013 special meeting.

The committee reviewed the audit report for the Fiscal Year 2012-13 (July 1, 2012 to June 30, 2013).

Action items

1. The committee reviewed the Annual Meeting agenda and made amended recommendations to add a Ground Water Management District #3 update under number 6 as item C.

2. The committee recommends approval of the 2012 Annual meeting transcript and the 2013 special meeting summary.

3. The committee recommends approving the audit report for the Fiscal Year 2012-13 (July 1, 2012 to June 30, 2013).

4. The committee agrees with the proposed assessments through FY 2016.

5. The committee recommends that Stephanie Gonzales sign the Colorado USGS Cooperative agreement as well as the Kansas USGS Cooperative agreement so long as it does not exceed $9,000.

6. The committee recommends meeting in January with Kevin Salter and Steve Miller to review the 1997 Annual Report to determine what the contents of these reports should be in order to use the 1997 Annual Report as a template moving forward.

7. The committee heard an update on the CoAgMet funding status and cost-share agreement and defers the decision for extention of that $5,000 contract that will be up October 2014 to ARCA.

8. The committee heard an update for the development of a website for ARCA and

recommends ARCA approve funds of $2,500 for website startup costs and charge the States to prepare the website for ARCA approval.

9. The committee recommends to ARCA that the Special Engineering Committee be extended for calendar year 2016 through the proposed resolution incorporating discussed changes.

10. The committee received a proposed resolution memorializing Eugene Overton and recommends ARCA adopt that resolution and have it read into the record.

11. The committee recommends ARCA adopt the proposed resolution recognizing Jennifer Gimbel and have it read into the record.

12. The committee recommends ARCA adopt the proposed resolution recognizing Matt Heimerich and have it read into the record.

13. The committee recommends the following slate of officers and committee chairs for CY 2014:

    a. ARCA officers:
    Vice-chair..... Randy Hayzlett
    Recording/Secretary- Treasurer..... Stephanie Gonzales
    Operations Secretary.....Steve Witte
    Assistant Operations Secretary..... Kevin Salter

    b. Committee Chairs:
    Engineering..... Scott Brazil as Chair
    Operations..... Hal Scheuerman as Chair
    Administrative & Legal..... Randy Hayzlett as Chair

14. The committee recommends to ARCA that the 2014 ARCA Annual meeting dates be December 16th for the committee meetings with December 17th for the annual meeting. Both meetings to be held in Lamar, Colorado.

Randy Hayzlett, Chair

Date: 12/17/2013

James Eklund, Member

Date: 12-17-2013

No. 2 of 4 originals

Exhibit K

ANNUAL REPORT

OF THE

OPERATIONS SECRETARY

CONCERNING THE OPERATION

OF

JOHN MARTIN RESERVOIR

COMPACT YEAR 2013

SUBMITTED TO THE

OPERATIONS COMMITTEE

ARKANSAS RIVER COMPACT ADMINISTRATION

INDEX

SECTION 1

ARKANSAS RIVER COMPACT ADMINISTRATION

307 South Fifth Street, Lamar, Colorado 81052

719-336-9696

For Colorado	Chairman and Federal Representative Vacant	For Kansas
James Eklund, Denver		David Barfield , Topeka
Scott Brazil, Pueblo		Hal Scheuerman, Deerfield
Colin Thompson, Holly		Randy Hayzlett, Lakin

December 01, 2013

Mr. Colin Thompson, Chairman
Arkansas River Compact Administration – Operations Committee, 2012-2013

Gentlemen,

The purposes of this letter report is to provide you with an accounting summary of the operation of John Martin Reservoir for the (2013) compact year, which is incorporated and made a part hereof and to document certain activities and accomplishments that occurred within the year in concert with the directions of the Operations Committee.

Summary of Operations
November 1, 2012 to October 31, 2013

The 2013 compact year started with a balance for all accounts totaling 15,995.49 ac/ft. The compact year closed on October 31, 2013 with an ending balance for all accounts in John Martin Reservoir totaling, 19,013.98 ac/ft. See Section 2 – Table XIV.

WINTER WATER

In accordance with the revised 1980 Operating Plan, the 2013 compact year began at 00:00 hours on November 1, 2012 with a period of "winter storage" in which all inflow into John Martin Reservoir accrued to conservation storage.

During the period of winter storage from November 1st through March 31st, 6,514.97 ac/ft (net) was stored as Compact Water. An additional 600.00 acre feet was added to conservation storage during April 2013, prior to the end of period of winter storage. Distribution began on April 7, 2013, in accordance with Subsection II A of the revised 1980 Operating Plan and continued at the prescribed rates until exhausted on April 10, 2013, resulting in 7,094.03 ac/ft having been transferred as prescribed by Section II D of the 1980 Operating Plan. See Section 2 -Table 1

Beginning on November 16, 2012, and pursuant to the provisions of Section III of the 1980 Operating Plan as subsequently clarified by Resolution 2006-02 of the Arkansas River Compact Administration, the storage of certain "other" inflow was credited to a winter water holding account. See Section 2 – Table II for details. Sixty five percent of the total amount was detained in this account. This detention in the winter water holding account continued through March 15, 2013, when the distribution of 6,613.73 ac/ft occurred to the appropriate accounts pursuant to Section III D of the 1980 Operating Plan. See Section 2 - Tables VI, VII and VIII. The remaining thirty five percent was transferred out of the winter water holding account each day and distributed as prescribed by Section III D of the 1980 Operating Plan: 724.73 ac/ft of water to complete the initial fill of the Kansas transit loss account (accomplished December 3, 2012), 891.45 ac/ft was transferred to the Kansas Section II account (See Section 2 – Table IX) and 1,887.74 ac/ft to the Water District 67 winter water storage charge account and thereafter to Colorado Section II accounts (less evaporation). See Section 2 – Table XI for details.

The base flow at the Arkansas River at Las Animas gage was determined during the period November 1st through November 14th with current meter measurements conducted by the USGS on November 7, 2012 and by the Colorado Division of Water Resources (CDWR) on November 12, 2012. The base flow was determined to be 12.29 cfs. During the period November 15th through November 22nd additional current meter measurements were conducted on November 27, 2012 by CDWR and by the USGS on November 21, 2012 to verify flow rates at the Arkansas River at Las Animas. After flow rates were verified, computations were made to determine the enhanced flow associated with arrival of winter water at the gage. The resulting storage rates were 12.71% for Compact Water and 83.83% for Winter Water. The methodology for determining the conservation storage to winter water ratio was consistent with the method utilized in prior years and a worksheet summarizing the determinations made was provided to the Assistant Operations Secretary's staff. During the winter water/conservation storage season no adjustments to the ratio of enhanced flow to base flow were made due to the fact that there were no operational changes to the delivery of winter water to John Martin Reservoir.

For the period November 1, 2012 to April 1, 2013, Winter Water Conservation Storage accumulated 6,514.97 ac/ft. In contrast, the previous year's storage totaled 19,064.75 acre feet. The 1950 to 1975 historical average winter storage amount is 22,209 ac/ft. See Section 2 – Table I.

OFFSET

A delivery of 184.41 ac/ft was made to the Offset Account to cover the storage charge during the month of March 2013 and additional deliveries totaling 664.02 ac/ft were made throughout the remainder of the compact year resulting in transfers totaling 848.43 ac/ft. See Section 2 – Table III. The operations of the Offset Account are covered in greater detail in a separate report.

PERMANENT POOL

The permanent recreation pool decreased by 1,989.21 acre feet during compact year 2013. On August 4, 2013 there was 316.5 ac/ft stored and on August 9, 2013 there was 157.00 ac/ft stored in the permanent pool for a total of 473.50 ac/ft. This water was stored under the "Muddy Creek" water right pursuant to a resolution of the Compact Administration dated August 14,

1976. See Section 2, Table IV. See also correspondence documenting the sources of water included in Section 1, following this narrative summary.

KANSAS RELEASES

Kansas did not place a call for a release of water available to them from the Kansas Section II account or from the Offset Account at any time during the year 2013 Compact year. A total of 9,317.34 ac/ft evaporated from the Offset Account, the Kansas Article II Account and the Transit Loss Account during compact year 2013. See Section 2 – Tables III, IX and X.

COLORADO ART II RELEASES

A total of 14,794.56 acre feet were released out of the Colorado Section II accounts. A summary of combined operations of the Colorado Section II accounts is included in Section 2 – Table XII.

CONSERVATION STORAGE

During the 2013 Compact Summer Storage season there were three storage events that resulted in additions to Conservation Storage of 16,905.04 ac/ft. The first event was June 18 through June 19 for a total of 3,589.05 ac/ft. The second event was August 5 through August 6 for a total of 3,032.49 ac/ft. The third event was August 9 through August 14 for a total of 10,283.5 ac/ft. (See Section 2, Table I)

"OTHER WATER"

There also were four occasions when the Amity Canal was entitled to store Great Plains Storage water in its Section III account totaling an additional 6,588.45 ac/ft. The first event was June 18 through June 19 totaling 268.90 ac/ft. The second event was August 5 through August 7 totaling 1,425.01 ac/ft. The third event was August 10 through August 15 totaling 1,628.93 ac/ft. The fourth event was September 18 through September 20 totaling 3,265.61 ac/ft. (See Section 2, Table VIII)

Section 3 of this report contains the daily accounting for the compact year.

Section 4 contains information provided by and included at the request of the Assistant Operations Secretary that documents operations related to efforts to bypass inflows as required by Section II C (1) of the 1980 Operating Plan and other pass through operations.

NEW AREA CAPACITY TABLE

The new John Martin Reservoir Elevation-Area-Capacity-Table was implemented on November 1, 2013 resulting in a reduction of 2,185 ac/ft to the total content. The 2,185 ac/ft was deducted from each account's volume on a pro-rata basis as of the beginning volume on November 1, 2013. The evaporation tool in the JMAS account program was used to determine the pro-rata amounts. This process was discussed with the Assistant Operations Secretary (AOS) and his staff at the OS-AOS meeting on November 14, 2013. The AOS and his staff agreed on the

on the November 1, 2013 report and no actual evaporation was applied that day. The actual evaporation for November 1, 2013 was added to the November 2, 2013 accounting. The October 31, 2013 content was 19,013.98 ac/ft and with the adjustment on November 1, 2013 the total content was 16,828.98 ac/ft.

Summary of Activities Coordinated through Operations Committee

The Operations Committee (Committee) met on one occasion during the 2013 Compact Year. This meeting was held in conjunction with the December 18, 2012 meeting of the Compact Administration. The Operations Secretary and the Assistant Operations Secretary, together with their staff members, met on November 14, 2012 in an effort to maintain open lines of communication related to operations pertaining to the current Compact Year and in keeping with recommendations approved by the Operations Committee. There was no spring meeting due to scheduling conflicts. Additionally there were numerous interactions throughout the year which included advisories, inquiries and explanations on various topics.

The Special Engineering Committee did not meet in 2013.

Respectfully Submitted,

Steven J. Witte
Arkansas River Compact Administration
Operations Secretary

Exhibit L

ARKANSAS RIVER COMPACT ADMINISTRATION

Lamar, Colorado 81052

For Colorado	Chairman and Federal Representative	For Kansas
James Eklund, Denver	Vacant	David Barfield, Topeka
Colin Thompson, Holly		Randy Hayzlett, Lakin
Scott Brazil, Vineland		Hal Scheuerman, Deerfield

December 1, 2013

Mr. Colin Thompson, Chairman
Mr. Hal Scheuerman, Member
Operations Committee
Arkansas River Compact Administration

Re: Compact Year 2013 Summary
Assistant Operations Secretary Report

Gentlemen,

In this letter 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, Kansas Reservoir Call, Pass-thru & Status Accounting, Water Issues Matrix, and Presumptive Depletion Factor 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.

Meetings: The Operations and Assistant Operations Secretaries met on November 14th. This meeting was attended by staff from each State. The issues discussed at this meeting were: reservoir and river operations for the year, the OS-AOS dispute resolution process, Colorado Irrigation Improvement Rules, the Water Issues Matrix, the Livingston transit loss implementation, the operations of the Pueblo Winter Water Storage Program (PWWSP), and Muddy Creek storage right.

Regular Communications: The States communicated throughout the year on a variety of topics including John Martin Accounting System (JMAS) data updates, PWWSP operational issues, JMR permanent pool deliveries, Offset Account operations, and runoff conditions within the Arkansas River Basin.

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 thru 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.

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 1st to November 14th period which reduce flows at that gage.

In 2009, we noted a drop in the Purgatoire River near Las Animas gage between November 14th and November 15th. 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 consistent and to varying degrees. Starting in November 2010, we have tried to visit the Consolidated Ditch to determine the amount of water returning below the Arkansas River at Las Animas gage.

A related issue 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.

Traditionally Colorado's accounting method has assessed a transit loss of 3.05% on PWWSP water from Arkansas River at Las Animas to John Martin Reservoir. During CY 2013, there were clearly periods when actual transit losses were significantly greater than 3.05%. There were minimal ungaged inflows, so the transit losses to JMR could be calculated based on gaged flows and the amount of water stored in JMR. We worked with the Division 2 staff and developed a method to estimate the transit losses being experienced between Las Animas and JMR. After evaluating several different evaluation periods, we agreed to employ a moving 21-day average to estimate these transit losses for CY2013. The transit losses applied varied between 0% and 18%. For CY2014, it is our understanding that the Livingston transit loss application program (TLAP) will be applied for this reach.

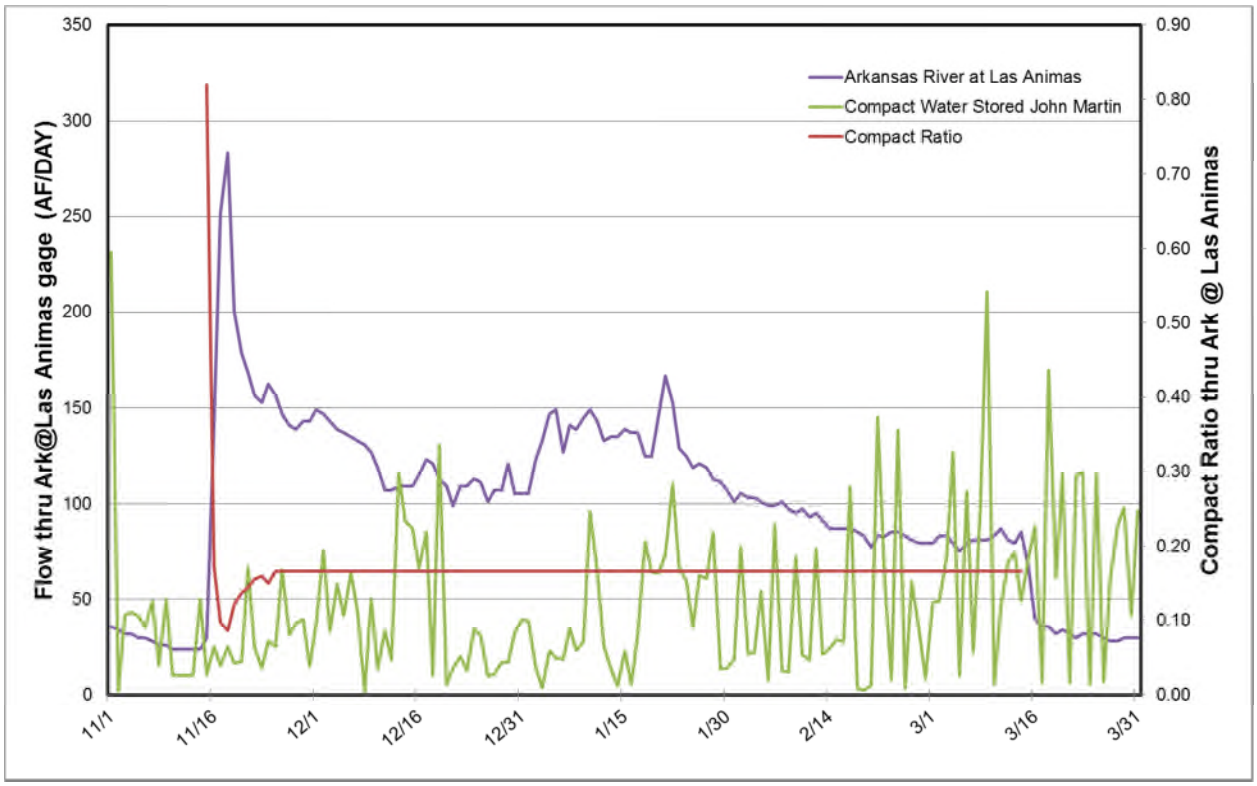


Figure 1 Arkansas River at Las Animas and Compact Conservation storage for the period of November 1, 2012 to March 31, 2013 and the Compact ratio of the Arkansas River at Las Animas flows for the period of November 15, 2012 to March 14, 2013

Figure 1 shows the Arkansas River at Las Animas flow, the Compact water stored in John Martin, and the Compact ratio from November 1, 2012 thru March 31, 2013. The PWWSP period is from November 15th through March 14th each year. The Compact share of the Arkansas River at Las Animas was unchanged at 16.17% after the initial transition period.

Although we scheduled a visit to the Consolidated on November 14, 2012, to review operations with Division 2 staff, we didn't visit given the hydrologic conditions: dry Purgatoire River at the USGS gage and no water being used east Purgatoire River under the Consolidated.

Kansas Reservoir Call

Kansas did not call for either Section II or Offset Account water in CY2013 due to the limited account water available to Kansas, continuing dry river conditions resulting in high expected transit loss on a reservoir release, and the lack of summer precipitation-runoff events.

Available Water Supply: This was the second year in a row that Kansas did not call for account water stored in John Martin Reservoir. By not calling in CY2012 the expectation was Kansas would have more water to call upon in the next year. However, due in large part to the

very low inflows to conservation storage, in April 2013 Kansas had approximately the same amount of water as in the previous year. See Table 1. It wasn't until August 2013 that conservation storage pushed the amount available over what was available in CY2012. The last column of this table shows the 1981 thru 2011 average available supply available to Kansas. The average available supply is the sum of the average Kansas Section II Account releases made during the month plus the average end of month content.

Table 1 Comparison of account water available to Kansas (conservation storage, KS Section II, and Offset)

	CY 2013 (AF)	CY 2012 (AF)	Difference	1981 to 2011 Kansas Section II average available supply
April 1st	12,718	12,330	389	47,655
May 1st	12,397	13,978	(1,581)	44,938
June 1st	11,512	13,234	(1,722)	47,854
July 1st	11,983	12,198	(235)	45,118
August 1st	10,644	11,080	(437)	35,380
September 1st	15,249	10,593	4,656	32,495
October 1st	14,310	10,080	4,230	32,934

Table 2 and Table 3 provide the monthly account information for the Kansas Section II Account in CY 2012 and CY 2013. Table 4 provides the Kansas Section II Account monthly averages for reference.

Table 2 Kansas Section II Account information for CY 2012

Month-Year	Contents Beg. Month	Inflow to Storage	Transfers -in	Transfers -out	Evapo-ration	Release	Contents End of month
Nov-2011	0	0	0	0	0	0	0
Dec-2011	0	0	237	0	0	0	237
Jan-2012	237	0	473	0	1	0	708
Feb-2012	708	0	426	0	13	0	1,121
Mar-2012	1,121	0	197	0	45	0	1,274
Apr-2012	1,274	0	9,306	0	322	0	10,258
May-2012	10,258	0	0	0	627	0	9,631
Jun-2012	9,631	0	0	0	909	0	8,722
Jul-2012	8,722	0	0	0	975	0	7,747
Aug-2012	7,747	0	0	0	757	0	6,990
Sep-2012	6,990	0	0	0	500	0	6,490
Oct-2012	6,490	0	0	0	250	0	6,240
Year Total		**0**	**10,639**	**0**	**4,398**	**0**	

Table 3 Kansas Section II Account information for CY 2013

Month-Year	Contents Beg. Month	Inflow to Storage	Transfers -in	Transfers -out	Evapo-ration	Release	Contents End of month
Nov-2012	6,240	0	0	0	145	0	6,095
Dec-2012	6,095	0	254	0	71	0	6,278
Jan-2013	6,278	0	328	0	2	0	6,603
Feb-2013	6,603	0	213	0	116	0	6,701
Mar-2013	6,701	0	97	0	242	0	6,555
Apr-2013	6,555	0	2,838	0	394	0	8,998
May-2013	8,998	0	0	0	613	0	8,385
Jun-2013	8,385	0	1,597	0	962	0	9,020
Jul-2013	9,020	0	0	0	985	0	8,035
Aug-2013	8,035	0	5,325	0	1,080	0	12,280
Sep-2013	12,280	0	294	0	1,126	0	11,447
Oct-2013	11,447	0	0	0	469	0	10,978
Year Total		0	10,945	0	6,208	0	

Table 4 Kansas Section II Account monthly averages CY1981-CY2011

Month	Average Inflow to Storage	Average Transfers-in	Average Transfers-out	Average Evapo-ration	Average Release	Average Contents End of month
November	(21)	1,604	0	241	0	34,478
December	0	199	0	163	0	34,514
January	0	121	523	102	0	34,010
February	0	84	809	133	72	33,079
March	3	626	865	409	725	31,709
April	0	17,782	1,150	687	3,051	44,604
May	125	7,449	6,178	1,062	2,074	42,863
June	30	9,001	2,802	1,238	7,315	40,539
July	0	7,916	2,284	1,054	16,727	28,391
August	17	8,324	624	728	6,650	28,730
September	0	4,374	0	608	2,298	30,197
October	5	4,044	0	411	833	32,100
Totals	158	61,525	15,234	6,837	39,747	

Table 2 and Table 3 show that the Kansas Section II Account over the past two years has suffered an evaporation loss of 49% (total evaporation divided by the total inflows). Even

though this is a significant amount of water, it was less than the expected transit losses that would have been incurred by a reservoir release to the Stateline.

River Condition: The primary reason for the significant expected transit losses on reservoir releases is the very limited amount of river flow that has occurred over the past two years. This is especially evident in the Stateline flows from July 2012 thru July 2013 as can be seen in Figure 2.

Another way to look at these limited river flows is by comparing the Stateline average monthly flows to a long term average as is done in Table 5. The 1981-2013 long term average includes both the 1980 Operating Plan operations and the recent extended period of dry river flows. The monthly flows are less than 25% in April thru August period for the past two years. For many these months, the monthly average flows are less than 7% of the long-term average.

The impact of the past two years on the long term average can be seen when comparing the last two columns of Table 5. The long term average Stateline flow drops between 6 cfs and 31 cfs when 2012 and 2013 are added into the long term average.

Table 5 Comparison CY2012 & CY2013 of Stateline monthly flows (cfs) to long-term average

	CY 2012 (cfs)		**CY 2013** (cfs)		**1981-2013 average** (cfs)	**1981-2011 average** (cfs)
November	57.5	39.3%	13.2	9.0%	146.3	153.4
December	67.5	47.0%	14.2	9.9%	143.5	150.1
January	91.7	59.7%	16.1	10.5%	153.7	160.1
February	83.8	57.5%	18.3	12.6%	145.8	151.8
March	64.2	41.9%	18.6	12.1%	153.3	160.5
April	50.6	22.5%	15.3	6.8%	224.7	237.1
May	32.4	10.4%	19.9	6.4%	311.8	330.3
June	24.1	6.0%	23.5	5.9%	399.1	423.3
July	13.5	2.8%	11.5	2.4%	488.2	518.9
August	4.9	1.5%	70.5	22.1%	319.6	337.8
September	1.1	0.6%	54.9	31.3%	175.6	185.2
October	13.0	8.4%	50.3	32.7%	154.0	161.9

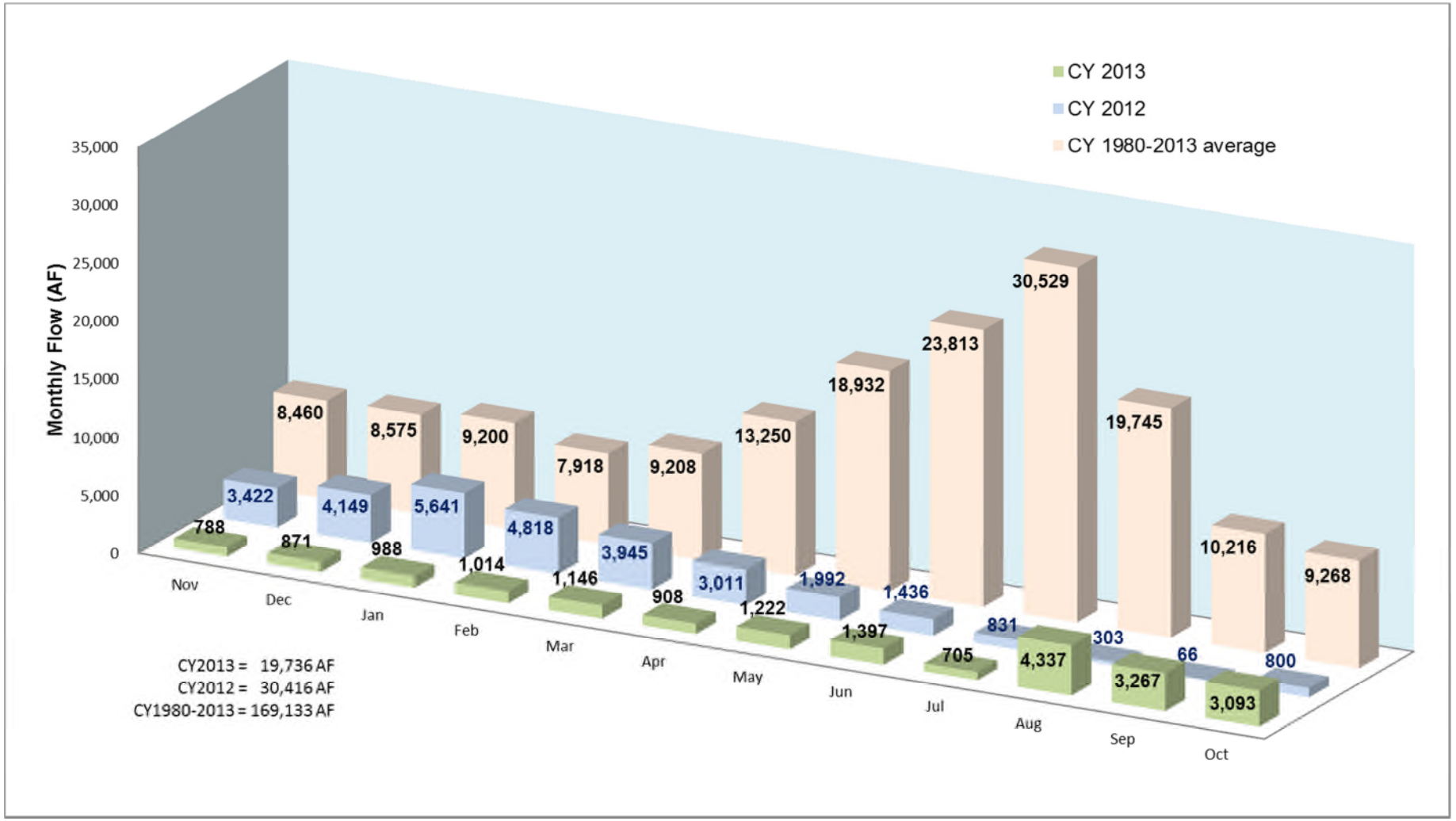


Figure 2 Comparison of Stateline monthly flows. Stateline flows are the combination of the Frontier Ditch and the Arkansas River near Coolidge flows.

Table 6 ranks the Stateline flows in three different ways for the period of 1951 through 2013:

- for *Compact Years* (November 1st through the next succeeding October 31st);
- for *July thru June* (July 1st through the next succeeding June 30th starting with the year shown on the line); and
- for *Jan thru Oct* (January 1st through the next succeeding October 31st).

Table 6 Ranking of Stateline flow for the period of 1951 thru 2013, with one being the least amount of flow and 63 (1965) being the most

Compact Year		Jan thru Oct		July thru June		
Year	**total (AF)**	**Year**	**thru Oct**	**Year**	**total (AF)**	**rank**
1979	19,804	2013	18,078	2012	10,335	**1**
2013	25,649	1979	19,400	2013	12,432	**2**
2012	30,416	2012	22,845	1978	25,860	**3**
1977	30,739	2003	28,877	1974	28,506	**4**
1976	32,344	1977	29,098	1976	29,734	**5**
2003	35,906	1976	29,504	1975	39,158	**6**
1978	43,491	1975	42,692	1977	40,297	**7**
1975	44,459	1978	42,987	2003	51,116	**8**
1974	61,714	1974	51,110	2002	51,501	**9**
1981	63,592	1981	56,431	2005	60,749	**10**

For the years shown in Table 6, Kansas did not call for account releases in 2003, 2012, and 2013. For the years prior to the adoption of the 1980 Operating Plan, Kansas called for conservation storage when it was available. The success of these pre-1980 Operating releases to the Stateline varied greatly based the ARCA Annual Reports for those years.

Expected Transit Loss: During CY2013, we looked opportunities to call for Kansas' account water by monitoring rainfall-runoff events and communicating with the Division 2 staff on various river conditions and/or operations that might improve conditions. On several occasions, we evaluated potential releases coordinating with Division 2 staff on the expected transit losses to the Stateline. The expected transit losses were significant. Two examples of the expected transit loss impact on a Kansas Section II Account release to the Stateline using a typical release rate of 450 cfs and fully exhausting both the Kansas Section II and Offset Accounts:

- On July 24th, the expected transit loss was from 70% to 80%. Using the 8,283 AF available, 1,700 to 2,500 AF may have been delivered to the Stateline. This would be a loss of 5,800 to 6,600 AF to the Stateline.
- On September 3rd, the expected transit loss was 65%. Using the 12,157 AF available, 4,250 AF may have been delivered to the Stateline. This would be a loss of 7,900 AF.

Had a release been made during this Compact Year, there was little expectation that account water would have made it to the ditch headgates given the significant losses expected to the Stateline. If it had, then it was doubtful that water could be put to beneficial use after be put into a ditch(es) that has not conveyed any surface water in over a year.

Precipitation-runoff: Summer precipitation-runoff events occurred this year, however, they did not dramatically improve the river condition. See Figure 3. Even with the runoff above Granada and tributary contributions between Granada and Coolidge, we continued to see significant transit losses in this reach.

We closely monitored rainfall-runoff events and changing river conditions across the basin. Coordination with Division 2 staff occurred throughout the summer and into the fall. Events on Fountain Creek, Purgatoire River, and Two Buttes were closely tracked to determine if it would improve flows below John Martin Reservoir.

The decision not to call for the account water available to Kansas was not made lightly. In the end, there was not any opportunity to call for the Kansas Section II and Offset Account water that would not have resulted in significant transit losses.

Pass-thru and Status Accounting

JMR daily inflow, storage, and outflow were tracked by the Garden City Field Office staff for CY2013. A pass thru spreadsheet was first provided to the Operations Secretary on November 7th for inclusion in the Operations Secretary's report. Due to corrections to the JMAS accounting, a final spreadsheet was provided on November 22nd. 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 John Martin Reservoir.

Water Issues Matrix

This 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, four (4) have been removed or suspended, and 19 have been resolved. The current versions of the matrix and issues summary table are attached to this report.

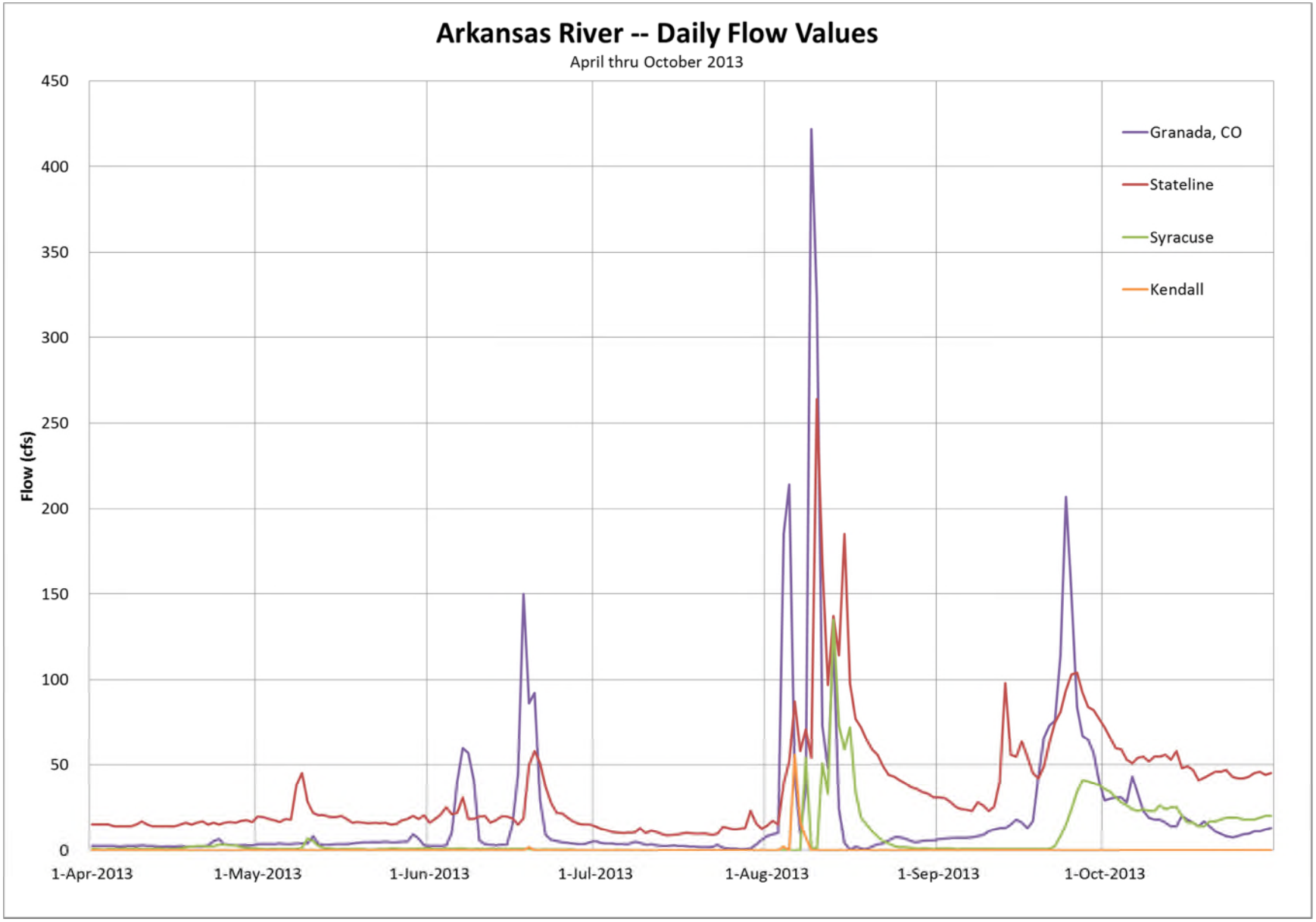


Figure 3 Arkansas River flows at various points for April 1 through October 31, 2013

During the November OS-AOS meeting, the matrix was reviewed and we set four meetings during the coming year to discuss water issues matrix and other issues:

- January 23, 2014 – focus on Water Matrix Issues
  - 22-Criteria for determining Section III storage under the Pueblo Winter Water Storage Program (PWWSP),
  - 25-Criteria for Summer storage event trigger – Section II. B 1, and
  - 44-City of Lamar regulating account
- April 23, 2014 – Spring OS-AOS meeting
- August 27, 2014
- November 14, 2014 – Fall OS-AOS meeting, will include inspection of Consolidated Ditch operations

The intent of setting these meetings is to make progress on the unresolved Water Matrix Issues. It may be beneficial for the Operations Committee to participate in some of these meetings.

Presumptive Depletion Factor Evaluation

Presumptive Depletion Factors (PDFs) are used to determine the amount of replacement water required under the Colorado Use Rules. Under the Colorado Use Rules, PDFs vary depending on the irrigation system type and whether or not the groundwater is supplemented with surface water. Appendix A.4 of the *Decree* lays out an annual PDF evaluation process to consider adjustments for the PDF for the supplemental flood/furrow irrigation. Colorado's PDF evaluation determined that the PDF will be set at 36.5% for supplemental flood/furrow irrigation to be used in replacement plan year 2014. Kansas has accepted the use of this PDF.

Kansas has recommended that prior to the 2014 PDF evaluation that the States discuss the evaluation methodology going forward. We specifically noted the following discussion topics:

- the annual efficiencies and PDFs determined for each user group beginning with 2011 should be applied going forward until they drop out of the 20-year period being considered;
- agree upon the set of years to be used to determine the "current conditions" used in the average calculation for the PDF and irrigation efficiencies applied to years prior to 2011; and
- whether an average or a weighted average is a better representation of the current conditions.

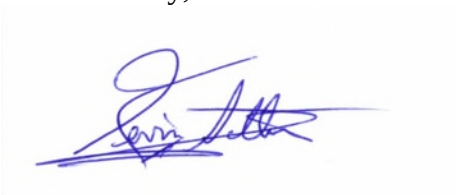
A meeting was tentatively set for February 25, 2014 to discuss these and other related issues.

Summary

Good communication is vital as the States work on these issues. For the upcoming Compact Year, we have set four meetings to work on Water Issue Matrix with the intent on bringing some of these issues to resolution. I look forward to working with the Operations Secretary and his staff on these and the day-to-day operations of the Arkansas River.

Finally, I want to note that Arkansas River Compact was signed 65 years ago on December 14, 1948.

Sincerely,



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

Attachments

Water Issues Matrix

Pending JMR Accounting Issues

10 – Resolved -- Permanent Pool evaporation charges calculated by pro rata volume vs. incremental area
11 – Removed -- Transfer of Account water to Permanent Pool during flood control operations in JMR

12 – Consideration of new sources for permanent pool water – remaining Muddy Creek Storage Right	
ARCA Committee	Engineering
Issue Category & Priority[1]	B – 8
Legal[2] – Policy[3] – Technical[4]	Policy
Kansas Staff Position	***Colorado Staff Position***
Kansas Staff Comments	***Colorado Staff Comments***

ARCA Committee or other general comment(s)

Related to transfer of the remaining **Muddy Creek Storage Right proposal**:

- In June 2012, Grady McNeill suggested that they would bring a proposal to transfer the remaining 8,425 AF to the JMR permanent pool
- In October 2012, Grady McNeill forwarded a proposed resolution to transfer the remaining portion
- On 14 November 2012, CO Div 2, John Tonko, and KS DWR staff visited the Muddy Creek Reservoir, Muddy Creek and Rule Creek gage sites
- December 2012: xxx

Related to the **Keesee proposal**:

- LAWMA made a conceptual proposal at the December 2005 ARCA Annual Meeting
- LAWMA provided additional detail for this proposal in February 2007
- Informal discussion between Kansas, LAWMA and Colorado
- A timeline for discussion between Kansas & LAWMA was established at 2007 ARCA Annual meeting.
- David Barfield letter (26 December 2007)
- Matt Heimerich letter (January 7, 2008)
- David Barfield provided a list of discussion items (email Jan 18, 2008)
- Discussion between Barfield & Heimerich on proposal (call Feb 5, 2008)
- Email form 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
- LAWMA withdraws its request by letter dated (letter July 1, 2008)
- LAWMA has an obligation to provide a source of water for the JMR Permanent Pool, so this issue remains active
- David Barfield provides to Matt Heimerich principles that would guide Kansas evaluation (letter dated Nov 25, 2008)

[1] 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)

[2] ***Legal*** is defined as an issue that is not resolvable at this time or within ARCA

[3] ***Policy*** is defined as an issue that needs to have input or guidance from either Operations Committee or ARCA

[4] ***Technical*** is defined as an issue that can be resolved by the respective State staffs

13 – Removed -- 1980 Operating Plan's Restriction on use of Section III related to Perm Pool
20 – Resolved -- Winter Water Account of convenience
21 – Resolved -- Timely distribution of Section III storage charge during Pueblo Winter Water Storage Program (PWWSP)

22 – Criteria for determining Section III storage under the Pueblo Winter Water Storage Program (PWWSP)	
ARCA Committee	Operations
Issue Category & Priority	A – 4
Legal – Policy – Technical	Legal 1st / Technical 2nd
Kansas Staff Position	***Colorado Staff Position***
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.

Kansas Staff Comments	*Colorado Staff Comments*
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 not include water that otherwise would have accumulated in conservation storage. In 2007, a snowpack covered SE Colorado that would have prevented direct irrigation. This snowpack may have impacted off-channel storage as well. In 2008, 2009, & 2010, drops in flow between November 14th and 15th on the Purgatoire River near Las Animas appear to be related to the Las Animas Consolidated operations were noted. In reviewing the flow history of this gage site, there appears to be other occurrences prior to 2008. In response to noting the flow drops, the Las Animas Consolidated was visited with Division 2 staff in Nov 2010. We didn't observe any significant returns to the Purgatoire above the USGS gage, nor did we note any other significant returns to the Ark River below the Ark River at Las Animas gage. Additional visits with Colorado Div 2 staff in November, 2011 & 2013 have occurred: we found returns below the Ark @ Las Animas gage consistent with irrigation operations and the wasteway above the Purgatoire River at Las Animas gage not being used during our visits. In November 2011, Salter developed a spreadsheet to gage impacts of changes to the Ark @ Las Animas split between the Compact and PWWSP. In November 2012, we scheduled a visit to the Consolidated but didn't visit given the hydrologic conditions, dry Purgatoire River at the USGS gage and no water being used east of the highway as noted as we traveled to the breached Muddy Creek Reservoir site.	Colorado consideration of changes may occur.
ARCA Committee or other general comment(s)	
The Operation Secretary and the Assistant Operation Secretary should continue to work on this issue (10 May 2002).	

23 – Resolved --Reporting of Winter Water vs. Winter Compact storage split calculation

24 – Utilization of "Summer storage season" as defined by the 1980 Operating Plan	
ARCA Committee	Operations
Issue Category & Priority	
Legal – Policy – Technical	
Kansas Staff Position	***Colorado Staff Position***
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."	
Kansas Staff Comments	***Colorado Staff Comments***
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.
ARCA Committee or other general comment(s)	

25 – Criteria for Summer storage event trigger – Section II. B 1	
ARCA Committee	Operations Committee
Issue Category & Priority	na
Legal – Policy – Technical	technical
Kansas Staff Position	***Colorado Staff Position***
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
Kansas Staff Comments	***Colorado Staff Comments***
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	
ARCA Committee or other general comment(s)	

26 – Section II limitations on use made of account water to irrigation only	
ARCA Committee	Operations Committee
Issue Category & Priority	na
Legal – Policy – Technical	policy &/or legal
Kansas Staff Position	***Colorado Staff Position***
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.
Kansas Staff Comments	***Colorado Staff Comments***
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.	
ARCA Committee or other general comment(s)	
xx	

27 – First reference to Section II in Section III (A)	
ARCA Committee	Operations Committee
Issue Category & Priority	na
Legal – Policy – Technical	Policy
Kansas Staff Position	***Colorado Staff Position***
The language in Section III.A is not consistent with other provisions of the 1980 Operating Plan. For example, Section II.G where water stored in Section III.A is called to spill specifically before the Section II account water.	The reference granting Amity permission to "store such water as it could otherwise divert for storage in the Great Plains Reservoir system in its account granted in **Section II"** (emphasis added) appears to be inappropriate and is contrary to longstanding practice.
Kansas Staff Comments	***Colorado Staff Comments***
xx	xx
ARCA Committee or other general comment(s)	
▪ Added to matrix at direction of Operations Committee in Dec 2009	

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

33 – Transit loss on reservoir-to-reservoir deliveries	
ARCA Committee	Operations Committee
Issue Category & Priority	na
Legal – Policy – Technical	Technical
Kansas Staff Position	***Colorado Staff Position***
Given Livingston's assumptions regarding the nature of the transit loss and other river operations that could consume "unconsumed" transit loss, the credited delivery for unconsumed transit loss to John Martin is too large. If there is an unconsumed transit loss portion that can be recovered, then the accounting for that portion should correspond with actual timing of when it is delivered to the JMR.	The 1978 Livingston Report provides a sound and reasonable basis for determining transit losses and should be relied upon until improved by a subsequent study.
Kansas Staff Comments	***Colorado Staff Comments***
Kansas' basis described in 12/1/07 AOS Report to ARCA Operations Committee, pg. 6-10. From that report: "The Livingston 1978 Report notes that the transit loss model simulates response during steady-state conditions and that during un-steady state condition the transit losses are approximations. Tributary inflows, canal diversions, or water table conditions are listed as factors that would affect transit losses (page 21 of Livingston 1978 Report). The report also notes that conditions that are significantly different from the conditions that existed at the time of the calibration release (Sept 1975) would also affect the accuracy of the transit loss estimation. In addition, Livingston 1978 Report noted an administrative decision was made by the Colorado State Engineer and the Southeastern Colorado Water Conservancy District for reservoir to headgate transit loss determinations. It was noted that some of the bank storage would return for an extended period, particularly for water that is temporarily stored in the river banks. This decision appears to reflect the difficulty in distinguishing water that was part of a release from natural flow soon after the end of the release." Based on the above, it appears that other river operations may result in the delay of the unconsumed portion return to the river, or in the diversion and/or consumption of the unconsumed transit loss. Beginning in CY 2011, the Operations Secretary appears to have ceased the practice of recovering transit loss attributable to bank storage. We are discussing how to bring this issue to closure.	Colorado's basis is described in a memorandum to the Operations Committee captioned: "Response to (2007) Assistant Operations Secretary's Report.

ARCA Committee or other general comment(s)
▪ Added to matrix at direction of Operations Committee in Dec 2008 ▪ An investigation to determine transit losses and travel times of reservoir releases from Pueblo Reservoir to John Martin Reservoir is being conducted by Russell K. Livingston, to update a similar report he developed under the auspices of the U.S.G.S. in 1978. This investigation was commissioned by the Colorado Water Conservation Board, the Colorado Division of Water Resources, the Lower Arkansas River Valley Water Conservancy District and the Southeastern Colorado Water Conservancy District and is scheduled to be completed at the end of December 2010. Further discussion of this issue has been suspended by mutual consent pending consideration of the results of this investigation. ▪ In CY 2011, Russ Livingston completed his transit loss study between Pueblo and John Martin Reservoirs.

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

44 – City of Lamar regulating account	
Kansas Staff Position	***Colorado Staff Position***
[Kansas is considering conditions that would allow the temporary regulation storage]	City of Lamar requested a permanent account at December 2006 meeting of ARCA. Matter referred to the Engineering Committee.
Kansas Staff Comments	***Colorado Staff Comments***
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.
ARCA Committee or other general comment(s)	
▪ 2006: City of Lamar renewed their request at the December 2006 ARCA Annual Meeting / ARCA referred to Engineering Committee / ▪ 2007: engineering report provided in December 2007 ▪ 2008: Colorado and Kansas provided comments on the City of Lamar's proposal in Dec 2008. This issue appeared to be dropped after these comments. ▪ 2013: With the river conditions experienced this year, the City through their attorney contacted Kansas about using a temporary account in John Martin Reservoir. Kansas is considering conditions that would allow the temporary regulation storage.	

50 – Commencement of a spill event	
ARCA Committee	Full ARCA
Issue Category & Priority	C – 6a
Legal – Policy – Technical	Policy
Kansas Staff Position	***Colorado Staff Position***
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).
Kansas Staff Comments	***Colorado Staff Comments***
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.
ARCA Committee or other general comment(s)	
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.	

51 – Resolved -- Spilling accounts

52 – Upstream storage during JMR spill events	
ARCA Committee	Administrative & Legal
Issue Category & Priority	B - 10
Legal – Policy – Technical	Legal
Kansas Staff Position	***Colorado Staff Position***
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.
Kansas Staff Comments	***Colorado Staff Comments***
Discontinue the practice until authorized by resolution of ARCA.	
ARCA Committee or other general comment(s)	
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.	

53 – Adjusted JMR inflows during times of spill	
ARCA Committee	ARCA
Issue Category & Priority	C – 6c
Legal – Policy – Technical	Policy*
Kansas Staff Position	***Colorado Staff Position***
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.
Kansas Staff Comments	***Colorado Staff Comments***
Discontinue the practice until authorized by resolution of ARCA.	Inappropriate accounting related to conservation storage balances jeopardizes entitlements afforded by Compact Article V (f)
ARCA Committee or other general comment(s)	
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.	

54 – Resolved -- Section II spill volume during summer storage season

60 – Section II(C) (2) compliance (Agreement B)	
ARCA Committee	Administrative & Legal
Issue Category & Priority	B - 9
Legal – Policy – Technical	Legal
Kansas Staff Position	***Colorado Staff Position***
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.
Kansas Staff Comments	***Colorado Staff Comments***
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.
ARCA Committee or other general comment(s)	
No further progress can be made at this time. 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. Operations Committee transferred this issue to the Administrative and Legal Committee by memo dated 8 October 2004. Moved to Special Engineering Committee pursuant ARCA 2005-01.	

61 – Resolved – Retroactive adjustments of accounting for prior years if accounting methods are revised
62 – Resolved -- OS Report status for 1994 through 2006
63 – Removed -- Status of Assistant Operations Secretary Reports: 1998, 1999, 2000, 2001 & 2002
64 – Resolved -- Assistant Operations Secretary Reports: purpose and timeliness
65 – Removed -- Consider Moving Date of Annual Meetings to January or February
66 – Resolved -- Need for definite process for introducing and resolving operational issues
67 – Resolved -- When issues are resolved, is it in the form of separate resolutions and /or revisions to the 1980 Operating Plan?

70 – Trinidad Reservoir: Passing of inflows exceeding 1,000 cfs	
ARCA Committee	Operations
Issue Category & Priority	
Legal – Policy – Technical	
Kansas Staff Position	***Colorado Staff Position***
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.
Kansas Staff Comments	***Colorado Staff Comments***
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.
ARCA Committee or other general comment(s)	
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.
- 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

Versions	***Modification Date***	***Description of Modification(s)***
		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 issue status based on Joint categorization document dated 5 Feb 2004; made formatting and grammatical changes.
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
2010issues_table11c.doc	17 September 2010	-- added Issue 27 (Section III.A language) -- updated Issue 33 positions & comments
2011issues_table11d.doc	25 November 2011	-- update 22 & 33 language
2012issues_table11d.doc	26 November 2012	-- update 12 language
2013issues_table11d.docx	14 November 2013	-- Modify language related to Kansas' positions on several pending issues

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Water Issues Matrix Summary Table

Version Date: 12/01/2013

Issue #	Description	April 2005	Pending	Suspended	Removed	Resolved	ARCA Resolution	Comment
35	Totals	***31***	***12***	***1***	***3***	***19***		
10	Permanent Pool evaporation charges calculated by pro rata volume vs. incremental area	X				X	2006-01	Special Engineering Committee Recommendation A
11	Transfer of Account water to Permanent Pool during flood control operations in JMR	X			X			
12	Consideration of new sources for permanent pool water	X	x					In 2012, CDOW has proposed using the remaining portion of the Muddy Creek storage rights
13	1980 Operating Plan's Restriction on use of Section III related to Perm Pool	X			X			Steve Witte will review this to determine if it is still an issue.
20	Winter Water Account of convenience	X				X	2006-02	Special Engineering Committee Recommendation B
21	Timely distribution of Section III storage charge during Pueblo Winter Water Storage Program (PWWSP)	X				X	2006-02	Special Engineering Committee Recommendation B
22	Criteria for determining Section III storage under the Pueblo Winter Water Storage Program (PWWSP)	X	X					
23	Reporting of Winter Water vs. Winter Compact storage split calculation	X				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	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
27	First reference to Section II in Section III A appears to be inappropriate		X					Placed on matrix December 2009 / not currently before the Special Engineering Committee
30	Determination of transit loss under Section II(E)(4)	X				X		Resolved pursuant to an Agreement between State & Chief Engineers (December 2006).

Water Issues Matrix Summary Table

Version Date: 12/01/2013

Issue #	Description	April 2005	Pending	Suspended	Removed	Resolved	ARCA Resolution	Comment
31	Sections II (E)(4) and III (D) are unclear as to where transfers to make up deficits should be made	X				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				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 / potentially resolved - pending documentation
40	Exchange of daily reservoir status accounting	X				X		See Joint Recommendations as transmitted by Operations Committee letter dated 19 August 2004.
41	Non-reporting of Section II(C)(1) determinations	X				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				X	2006-03	Special Engineering Committee Recommendation C
43	Winter storage period interruption of transfers from summer conservation storage to accounts	X				X	2006-03	Special Engineering Committee Recommendation C
44	City of Lamar regulating account	X	x					City of Lamar requested consideration in 2013 / Kansas considering
50	Commencement of a spill event	X	X					
51	Spilling accounts	X				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	X					
53	Adjusted JMR inflows during times of spill	X	X					
54	Section II spill volume during summer storage season	X				X	2006-04	Special Engineering Committee Recommendation D
60	Section II(C)(2) compliance (Agreement B)	X	X					
61	Retroactive adjustments of accounting for prior years if accounting methods are revised	X				X	2008-03	Special Engineering Committee Recommendation G

Water Issues Matrix Summary Table

Version Date: 12/01/2013

Issue #	Description	April 2005	Pending	Suspended	Removed	Resolved	ARCA Resolution	Comment
62	OS Report status for 1994 through 2006	X				X	2008-03	Special Engineering Committee Recommendation G
63	Status of Assistant Operations Secretary Reports: 1998, 1999, 2000, 2001 & 2002	X			X			
64	Assistant Operations Secretary Reports: purpose and timeliness	X				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				X		Moved from removed to resolved in recognition of By-laws change (Sept 2011) which allows meeting date changes
66	Need for definite process for introducing and resolving operational issues	X				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				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		X				

ARKANSAS RIVER COMPACT ADMINISTRATION

Audited Financial Statements

June 30, 2013

Randy Hayzlett

ARKANSAS RIVER COMPACT ADMINISTRATION

TABLE OF CONTENTS
June 30, 2013

ANDERSON & COMPANY P.C.

Members
NSA
PASC

Certified Public Accountants

Gary L. Anderson, C.P.A.
Cynthia S. Anderson, A.B.A., A.T.P.

INDEPENDENT AUDITOR'S REPORT

December 2, 2013

To the Representatives of
Arkansas River Compact Administration
Lamar, Colorado 81052

We have audited the accompanying statements of assets, liabilities and equity - cash basis - of the Arkansas River Compact Administration as of June 30, 2013, and the related statements of revenue collected and expenses paid for the year then ended. These financial statements are the responsibility of the Administration's management. Our responsibility is to express an opinion on these financial statements based on our audit.

Our examination was made in accordance with generally accepted auditing standards and accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

As described in Note 1a, these financial statements were prepared on the basis of cash receipts and disbursements, which is a comprehensive basis of accounting other than generally accepted accounting principles.

In our opinion, the financial statements referred to above present fairly, in all material respects, the assets and liabilities - cash basis - of the Arkansas River Compact Administration as of June 30, 2013 and its revenue collected and expenses paid during the year then ended, on the basis of accounting described in Note 1a.

Anderson & Company, P.C.

201 E. Parmenter ■ (719) 336-7785 ■ P.O. Box 1077 ■ FAX: (719) 336-7786 ■ Lamar, Colorado 81052

ARKANSAS RIVER COMPACT ADMINISTRATION

STATEMENT of ASSETS, LIABILITIES, and FUND BALANCE - CASH BASIS

		June 30 2013	June 30 2012	June 30 2011
ASSETS				
Cash in Bank		131,614	125,046	113,259
TOTAL ASSETS	**$**	**131,614**	**125,046**	**113,259**
LIABILITIES				
None		0	0	0
FUND BALANCE				
Unrestricted Fund Balance		131,614	125,046	113,259
TOTAL FUND BALANCE	**$**	**131,614**	**125,046**	**113,259**

See Accountant's Audit Report.

ARKANSAS RIVER COMPACT ADMINISTRATION

STATEMENT OF REVENUES and EXPENSES
with BUDGET COMPARISON
For the Budget Year July 1, 2012 to June 30, 2013

	ACTUAL	BUDGET	OVER (UNDER)
REVENUES			
Revenues from Assessments:			
Colorado 60%	$ 57,600	57,600	0
Kansas 40%	38,400	38,400	0
Interest	240	500	(260)
Miscellaneous	0	0	0
TOTAL REVENUES	96,240	96,500	(260)
EXPENDITURES			
Professional Service Contracts:			
Treasurer	2,000	2,000	0
Recording Secretary	2,000	2,000	0
Operations Secretary	6,105	6,100	5
Auditor Fee	0	700	(700)
Court Reporter	1,141	2,000	(859)
Gauging Stations & Studies:			
U.S. Geological Survey - Colorado District	49,163	50,000	(837)
U.S. Geological Survey - Kansas District	8,410	9,000	(590)
State of Colorado Satellite System	12,400	12,400	0
Weather Statation O&M, CoAgMet	7,000	5,000	2,000
Operating Expenses:			
Treasurer Bond	100	100	0
Printing Annual Report	0	500	(500)
Telephone	0	100	(100)
Miscellaneous Office Expense	0	100	(100)
Postage/Copying/Supplies	110	400	(290)
Meetings	643	500	143
Travel	0	0	0
Rent	600	600	0
Other:			
Equipment	0	0	0
Contingency (Colo Climate Center, CoAgMet)	0	2,000	(2,000)
Litigation	0	0	0
Special Projects & Studies	0	0	0
TOTAL EXPENDITURES	89,672	93,500	(3,828)
NET INCREASE IN FUND BALANCE	6,568	3,000	3,568
Fund Balance at Beginning of Year	125,046		
Fund Balance at End of Year	$ 131,614		

See Accountant's Audit Report.

ARKANSAS RIVER COMPACT ADMINISTRATION

CHANGES IN CASH BALANCE
STATEMENT OF RECEIPTS AND DISBURSEMENTS
For the Fiscal Year Ended June 30, 2013

CASH BALANCE - July 1, 2012		$ 125,046
RECEIPTS		
Revenues from Assessments	$ 96,000	
Interest	240	
Miscellaneous	0	
TOTAL RECEIPTS		96,240
DISBURSEMENTS		
Professional Service Contracts	$ 11,246	
Gauging Stations & Studies	76,973	
Operating Expenses	1,453	
Other	0	
TOTAL DISBURSEMENTS		(89,672)
RECEIPTS in EXCESS of DISBURSEMENTS		6,568
CASH BALANCE - June 30, 2013		**$ 131,614**

See Accountant's Audit Report.

ARKANSAS RIVER COMPACT ADMINISTRATION

NOTES TO FINANCIAL STATEMENTS
June 30, 2013

NOTE 1 Organization:

The Arkansas River Compact was formed in 1948 to settle existing disputes and remove causes of future controversy between Colorado and Kansas, concerning the waters of the Arkansas River and their control, conservation, and utilization for irrigation and other beneficial purposes.

NOTE 2 Summary of significant accounting policies:

a. The Arkansas River Compact Administration (the Compact) maintains financial records using the cash basis of accounting. By using the cash basis of accounting, certain revenues are recognized when received rather than when earned, and certain expenses are recognized when cash is disbursed rather than when the obligation is incurred.

b. The *Statement of Receipts and Disbursements* is shown only to reconcile the beginning and ending cash balances. It is not intended to reflect *income* and *expense* recognition. Income and expenses are reflected in the *Statement of Revenues and Expenses with Budget Comparison.*