

KANSAS - OKLAHOMA
ARKANSAS RIVER COMMISSION
2018
ANNUAL REPORT



Published 2020



Kansas-Oklahoma Arkansas River Commission

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July 25, 2019

The President
United States of America

The Honorable Laura Kelly, Governor
State of Kansas

The Honorable J. Kevin Stitt, Governor
State of Oklahoma

Dear Mr. President and Governors:

Pursuant to Article XI of the Kansas-Oklahoma Arkansas River Commission, submitted herewith is a copy of the report covering the activities of the Commission for 2018. The budget covering the anticipated expenses of the Commission for July 1, 2017 – June 30, 2018, and proposed budgets for FY2019 & FY2020 are included in the report.

The 2018 annual meeting was hosted by the State of Kansas and held in Hutchinson, Kansas. Reports of the Treasurer as well as the Engineering, Legal, and Finance Committees were presented, along with new committee assignments.

Sincerely,



Earnie Gilder
Chairman and Federal Commissioner

Kansas-Oklahoma Arkansas River Compact Commission

2018 Annual Report

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DIRECTORY AND
CREDENTIALS**

**KANSAS - OKLAHOMA ARKANSAS RIVER COMMISSION
2018**

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Oklahoma Water Resources Board

Governors

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The Honorable Jeff Colyer, M.D., Governor
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7/2018

Office of the Governor
STATE OF KANSAS
CERTIFICATE OF APPOINTMENT

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

Douglas Blex

as

**a member of the Kansas-Oklahoma Arkansas River
Compact Commission**

and authorize this appointee to discharge the duties of this office
upon fulfilling all legal requirements

Signed this 29th day of July, 2016





Governor



Secretary of State

State of Kansas
County of Montgomery }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-OKLAHOMA ARKANSAS RIVER
COMPACT COMMISSION**

So help me God.

C. Douglas Blex

Name

C. Douglas Blex
Signature

Subscribed and Sworn to, or Affirmed, before me this
9th day of August 2016



Charlotte A. Schmidt
Signature*

Montgomery County Clerk
Title

My notarial appointment expires 1-13-2017.

*Notary public or other officer authorized to administer oaths.

**2018 MEETING AGENDA
AND MINUTES**



Kansas-Oklahoma Arkansas River Commission

**MEETING AGENDA
KANSAS – OKLAHOMA ARKANSAS RIVER COMMISSION
Fifty-Fourth Annual Meeting
Kansas Department of Transportation Conference Center
1220 W 4th Ave.
Hutchinson, Kansas
Wednesday, July 25, 2018
9:00 a.m.**

- 1. Call to Order, Federal Commissioner and Chairman Earnie Guilder**
- 2. Chairman's Remarks – Introductions and Announcements**
- 3. Presentation of Credentials (New Appointments to the Commission)**
- 4. Reading, Revisions to, and Approval of the Minutes of the 53rd Annual Meeting**
- 5. Report of the Federal Chairman**
- 6. Report of the Kansas State Commissioner**
- 7. Report of the Oklahoma State Commissioner**
- 8. Report of the Secretary**
- 9. Report of the Treasurer**
- 10. Engineering Committee Report**
- 11. Legal Committee Report**
- 12. Finance Committee Report**
- 13. Regional Conservation Partnership Program report on application for funding**
- 14. Reports of the State and Federal Agencies and Others**
- 15. New Business and Committee Assignments, if any**
- 16. Adjournment**

KANSAS – OKLAHOMA ARKANSAS RIVER COMMISSION

MINUTES OF THE FIFTY-FOURTH ANNUAL MEETING

July 25, 2018

Kansas Department of Transportation Conference Center

Hutchinson, Kansas

1. Call to Order – Alternate Federal Commissioner and Acting Chairman Chuck Shively

Alternate Federal Commissioner and Acting Chairman Chuck Shively called to order the Fifty-Fourth Annual Meeting of the Kansas-Oklahoma Arkansas River Commission at 9:02 a.m. on July 25, 2018, in the Kansas Department of Transportation Conference Center in Hutchinson, Kansas.

2. Chairman’s Remarks - Introductions and Announcements:

Acting Chairman Chuck Shively welcomed everyone and stated he did not have any remarks. He asked that the state commissioners and the state representatives introduce themselves.

Commissioners Present:

Kansas:

David Barfield
Doug Blex
M. Bruce Falk

Oklahoma:

Julie Cunningham
Bryce Benson

Federal:

Chuck Shively

Commissioners Absent:

Earnie Gilder, Federal Commissioner and Chairman
J. Ross Kirtley, Oklahoma

Committee Members Present:

Kansas:

Chris Beightel, Kansas Department of Agriculture/Division of Water Resources
Kenneth Titus, Kansas Department of Agriculture/Division of Water Resources
David Engelhaupt, Kansas Department of Agriculture/Division of Water Resources

Jeff Lanterman, Kansas Department of Agriculture/Division of Water Resources
Michelle Probasco, Kansas Department of Health and Environment
Leo Henning, Kansas Department of Health and Environment

Oklahoma:

Jonathan Allen, Oklahoma Water Resources Board
Yohanes Sugeng, Oklahoma Water Resources Board
Mary Schooley, Oklahoma Water Resources Board

Others Present:

Travis See, US Geological Survey
Mark Rude, Southwest Kansas Groundwater Management District #3
Mike Abate, US Army Corps of Engineers, Tulsa, OK District

3. Presentation of Credentials (New Appointments to the Commission):

Acting Chairman Shively noted that there was one appointment of commissioner, Doug Blex. It was noted that Mr. Blex had been appointed prior to last year's meeting; but had not provided the credentials. A letter from the Governor was presented.

4. Reading, Revisions to and Approval of Minutes of the Fifty-Third Annual Meeting

Commissioner David Barfield noted that the agenda looked good, and he recommended a more in-depth water quality discussion. He proposed to add an agenda item (10.a.) to the Engineering Committee report for water quality. The KDHE (Kansas Department of Health and Environment) will present and expand the discussion. Also, Mr. Mark Rude with the Southwest Kansas Groundwater Management District #3 will present to the Commission on District activities under item #14.

The minutes of the 53rd KOARC meeting held in Ponca City, Oklahoma, were considered following the Kansas Commissioner report and prior to the Oklahoma Commissioner report. Commissioner Barfield moved to approve the meeting minutes, and Commissioner Benson seconded. The motion passed unanimously.*

5. Report of the Federal Chairman

Federal Chairman Gilder was absent. Alternate Federal Commissioner and Acting Chairman Chuck Shively did not present a report.

6. Report of the Kansas State Commissioners:

Commissioner Barfield presented the Commissioner's report for Kansas. Climate conditions started off fairly dry for 2018 statewide, including a dry winter, spring and early summer. Fortunately, conditions have improved over much of the state, especially the western portions. He provided a copy of the latest drought map, which shows various levels of drought; there are all levels of drought throughout

the state currently. The principle areas of extreme and little bit of exceptional drought are in central and northeastern Kansas, so there are still dry conditions over parts of the state.

Kansas statutes state minimum desirable stream flows when stream gages fall below certain values for a sustained period, with the values varying during the season, the state is required to regulate all surface water rights and ground water rights connected to the stream systems. The State has done quite a bit of Minimum Desirable Streamflow (MDS) regulation this year. Although a number of gages are located within the area regulated by the compact, none of them have been administered yet; however, some are very close and are being monitored carefully.

Legislation was dominated by taxation and budget issues again this year; therefore, it was a light legislation session for water issues. In 2012 and 2015, Kansas had significant water legislation, implementing additional tools to conserve water, and implementing different parts of the water vision process. Recent sessions clarified various issues related to these tools. House Bill 2312 clarified the procedures relating to administrative hearings conducted by the chief engineer, which basically conformed them to other changes related to state administrative hearings.

House Bill 2691 refers to a tool called a multiyear flex account that provides a certain amount of water for five years, but allows users to exceed their annual authorized quantity in any one year, which has been useful in very severe drought years where water rights were insufficient for demands. They moved the date by which users can apply for the account, allowing them more time.

Senate Bill 154 pertains to groundwater management districts funding. It allowed changing the fee amount that could be charged without a district-wide vote from \$1 per acre-foot to \$2 per acre-foot; the district board still has to make that action, no public vote is required. Other changes were also made to district funding.

As for Arkansas Basin matters, Commissioner Barfield noted that Mark Rude is present representing Groundwater Management District No. 3 (GMD). The District Board took action and promulgated rules on their behalf, to close the entire district to new appropriations from the Ogallala Aquifer. A small amount in the southern tier of counties were still open to new appropriations based on very restrictive criteria for meeting state yield, but the basin has been closed upon request. Regarding the Cimarron River, there was a series of 20-plus applications to appropriate groundwater along the Cimarron River in Colorado, just upstream of Kansas about 7-8 miles that caused concern. Essentially, a protest was issued with the Colorado Groundwater Commission, and Kansas is working with them and Colorado State officials to get more information and to understand the process and potential concerns.

Kansas has completed the removal and disposal of 3 million cubic yards of sediment from the John Redman Reservoir, and they have also been active in streambank stabilization above the John Redman reservoir to reduce sediments. That reservoir is the supply source for 19 communities and 6 industrial users, including the Wolf Creek Nuclear Power Plant. This project is the first of its kind, where a nonfederal entity has dredged sediment from a Corps of Engineers reservoir. It came at a significant cost; although Commissioner Barfield didn't have the exact figures, he said it was bonded for \$20 million to complete.

Commissioner Barfield provided updates on matters that he had presented the previous year. One of the tools that were provided in the 2012 legislature was the ability to create Local Enhanced Management Areas ("LEMAs"), as a way to address groundwater declines. Kansas has been increasing the use of this tool in various contexts. The first LEMA was about 100 sq. miles in Sheridan County, and was established for a 5-year period from 2013-2017, which they then extended last year for another 5 years. The same GMD, Northwest Kansas GMD No. 4, decided to do a district-wide LEMA, and looked at the rate of decline in each township within the district, and established proposed allocations based on those rates of decline; there were no allocations where there was no decline or very low rates of declines, and more aggressive/restrictive allocations in areas of greater decline. That LEMA went through two hearings, and had an active group who interjected themselves into the project and caused the Chief

Engineer expand its process. Ultimately, the LEMA was approved, but the LEMA has since been challenged, with two court challenges questioning the constitutionality of the LEMA provisions.

Groundwater Management District No. 1 is exploring the use of a LEMA tool in its district, as GMD No. 1 is the most highly depleted of the GMDs. The most highly depleted county in that district is Wichita County; they have an average of 20-25ft of saturated thickness left, and many wells are not producing anymore. Water is still important to that economy, and they want to extend the life of the economy that the water supports for decades longer through placing additional restrictions on pumping. Locals want a very aggressive plan, so they are talking about reducing allocations by 20% in the first five-year period, 30% in the second five-year period, and 40% in the third five-year period.

Water Conservation Areas (WCAs) were allowed in 2015, and that tool continues to be used in an expanding number of areas. Wichita County has a very aggressive WCA; if the LEMA noted above is approved, it would impose lesser restrictions but provide very little flexibility, or they could choose to enroll in the WCA that has more restrictive cuts, but more flexibility to move the water around.

Commissioner Barfield said they continue to work the Quivira National Wildlife Refuge impairment complaint. It has a similar status to last year, except that they continue working actively with GMD No. 5 as to develop a remedy for the impairment that would include an augmentation project as the cornerstone. This would allow them to put water into the river at times when the Refuge needs it and junior upstream pumping is interfering. The state is also requiring a means to reduce groundwater pumping on the order of 15% to stabilize stream flows. The GMD developed its latest version of the draft LEMA plan the week prior.

The City of Hays is going into the Arkansas Basin (Basin) for its future water supply, triggering approval under the Water Appropriation Act, and due to the amount and distance of the proposal, would trigger the water transport process. The KDA-DWR delivered detailed, draft proposal orders of approval to the Basin and the GMD for their recommendation. During late June a public meeting was held to discuss the application, as it is complex, and the KDA-DWR is waiting for the GMD to make its recommendation before making a decision on the change applications.

Regarding the Aquifer Recovery and Storage Project in Wichita, the City desires to repurpose the project. Instead of adding its suite of water supply options for normal periods, the City envisions the highest value for the ASR project to be to store water for a 1% drought scenario. Their repurposing and the recovery of the aquifer has spurred the City to request some changes to the permit conditions to reduce the bottom of the Basin storage area and to allow them to accumulate credits when the aquifer is full. They are allowed under that project to divert Little Arkansas River water excess, treat it, and inject it into the aquifer for credits. They can't do that when the aquifer is full, so they want to divert water from Little Arkansas, and take it to the City for credit as sort of a functional equivalence as they will be pumping less from the Equus Beds Aquifer. A public hearing will be held in October, and the GMD may have something to say on whether that works under Kansas statute.

Commissioner Cunningham mentioned that Oklahoma just promulgated new rules for ASR permitting, and asked Commissioner Barfield if water users in Kansas can divert excess stream flows without having a stream water permit or if that is already within their stream water permit. Commissioner Barfield explained that they have an existing project that's already been approved and it does that -- when flows in the Little Arkansas are above certain values, they can divert those surface flows, and they also have some bank storage wells that have a flow criteria. There are a series of new applications that only allow them to recover credits from additional wells, which is one piece of the proposal. Then there are two proposed modifications but no new ability to divert additional water, and no increase in quantities. Commissioner Cunningham asked whether other users downstream can capture the storm flows and if those users are restricted to a certain quantity. Barfield advised that they are limited to a specific amount. Commissioner Cunningham asked whether the permit is for a specific amount, but they can only take during the high flow times, and Commissioner Barfield answered, yes, that's the way it works.

Commissioner Barfield continued, stating that there was an established basin storage area, essentially a box that they can operate in for their ASR project that has lateral boundaries and a top and bottom. The bottom established, came from the lowest levels of the aquifer at the time of the initial application, which were the levels in 1993. There is over one-million acre-foot within the City of Wichita's well-field area, and the lowest level in 1993 was about a 120,000 acre-foot reduction, which was still 88% full. In the 2012 drought, during irrigation season, water levels fell below that line; they have recovered since then, but it drove the City's concern about putting credits in, and then not being able to recover them in a drought. So that was one of the questions, should the bottom be moved down? The City ran some modeling determined they need to go down lower in the 80's-percentage range for a new bottom, so that they don't have to take credits too early in the drought, and can wait until they really know they need it. That's one of their proposals.

Commissioner Blex added some comments about the legislative activities. In 2017, Kansas was facing some budget issues, and they separated the water and environment out of the Agriculture Committee, which has paid some dividends. The House passed \$2 million of additional funding for the State Water Plan, which was reduced down to \$1.2 million that year; \$8 million has already been swept from the State Water Plan over 8 years. The committee has good chemistry and is very supportive of water issues. This year committee members were successful in lobbying the leadership; the House passed \$4 million of additional funding for the State Water Plan, and the Senate then reduced it down to \$3 million, but they're making progress and are about \$5 million ahead of the game. However, Chairman Tom Sloan of Lawrence resigned, so it is unclear of what the leadership will do, if they will put the water and environment back in the Agriculture Committee or keep it separate. All of the House Committee members are up for reelection, but there currently is good chemistry and support to fund water issues, and Kansas should be financially set until about 2021/2022. Overall, it's been a significant achievement in what have been some low budget years, and they are hoping to continue to support that. They do have some East/West disputes--eastern representatives believe that since irrigation is a primary use in the West, those users should pay more, but the Western irrigation farmers assert they are already paying more through higher land taxes and valuation. As far as surface water protection, the cities don't want to pay additionally, so when the committee proposed something that just targeted those two, the farm groups got upset, and shut it down quickly. Now that they've put money in and supported it from the State fund, they have more of a leg to stand on down the road. The committee has also been pushing blue/green algae issues, as it speaks a common language for everyone, and they have already allocated some money for algae research. The committee hopes to keep the ball rolling to fund water issues although they are unsure of how many of the committee will be returning and whether it will be added back to the Agriculture Committee.

Commissioner Cunningham stated that Oklahoma could be giving the same report regarding legislation and budget issues, etc., and that despite this budget crisis, they still found money to support water. She asked if Kansas is seeing a large turnover in term-limited members and has to reeducate these new legislators or is there a fairly strong returning group. Commissioner Blex answered that it is not an easy job, but water conservation is his passion, and he feels that he was the right person for the job. He and the committee push water issues hard with the leadership because the economics of water is so important, water is essential to life and just as important as educating our kids. Taxes were raised in 2017, not to the level they were previously raised, but the economy is doing well and that is helping. The key is to not back up. When the leadership said no, the committee didn't accept it and kept pushing it, but it took two years --- they didn't get everything they wanted the first year, but they are making baby steps. He pushed for the 1/10 of 1% of the sales tax issue to position them to where it would fund water. He says that although he is in a very conservative district, his constituents are generally supportive because they understand how important water issues are once they are explained to them. He believes there is support for a potential constitutional amendment vote for water funding; he doesn't think the House would have put it through this year, but maybe down the road. He is also of the opinion that they need to pick up other

agencies and discuss a plan on how to share the dollars, and wait for two years of drought or blue green algae and push it, and the support should be there; it will be about timing.

Commissioner Barfield added that they have worked actively with legislators for the water vision process and with various stakeholder groups ahead of the session to work out the tools that they want. They have gotten good support from them, which has been very helpful. Funding the water plan has been more of a challenge than getting the new tools in place.

Commissioner Blex discussed the Kansas Blue Ribbon Task Force, which he stated was probably one of the best pieces for getting information out to the grass roots with over 20,000 people attending the public meetings across the state. Others kept suggesting doing something different, but he pushed to continue with the Blue Ribbon Task Force recommendations, to not waiver, and to keep hammering them home until they take effect; they're already done with the research, so why reinvent the wheel. On the House floor, water has a lot of bipartisan support, and it's just how you deliver it, whether it's blue green algae or quality or quantity, and just getting it all at the same table.

Kansas concluded its annual report to the Commission.

(*The Commissioners considered the draft minutes of the 2017 meeting held in Ponca City, Oklahoma. See item 4. Page 2)

7. Report of the Oklahoma State Commissioners:

Commissioner Julie Cunningham presented the Commissioner's report for Oklahoma beginning with expressing appreciation to the Kansas Delegation for its hospitality. She reported the Oklahoma legislation session was also dominated by budget, especially for education. But it was also a good year for water; several request bills and several bills that had been discussed with constituents throughout the state for several years were all highly supported. We are still in process of implementing the 2012 Comprehensive Water Plan, and the Water for 2060 Initiative, which focuses on conserving and finding new sources of water so that Oklahoma is using the same amount of fresh water in 2060 as in 2010. Water for 2060 is continuing to catch on; people are talking about it and promoting it.

Potable water reuse rules were promulgated during 2017 and 2018 with both Oklahoma Water Resources Board (OWRB) and Oklahoma Department of Environmental Quality (ODEQ) on the regulatory side. Several cities are interested, so the discussion is out there. House Bill 3405 this year was one of the marginal water quality-related request bills that changes the definition of waters that are permitted. Typically, the OWRB permits up to 5000ppm tds as fresh waters, but now have marginal water subset from 5,000-10,000ppm tds. We have been talking with the oil and gas industry and the ability to use this water. Until now, if a well-driller encounters water with 5000ppm + they had to cap the well, so now they will be able to use those marginal waters with an additional set of well construction rules to ensure the upper zones aren't contaminated by those lower quality, higher tds zones, as they withdraw water.

Senate Bill 1294 changed the maximum annual yield process to allow the OWRB to phase in or delay the implementation of maximum annual yield determination if the basin is not fully utilized to slowly lower a landowner's equal proportionate share.

The Produced Water Working Group, (PWWG) appointed by the Governor, is chaired by OWRB, and is looking at the earthquake dilemma, recognizing the USGS survey, the state is ratcheting down on injection and the Oklahoma Corporation Commission is overseeing the effort by oil and gas companies to monitor their injection to reduce the earthquakes. We are also looking at real ways to use that produced water, rather than injecting it, as it is not being used and is not a part of our water supply, but oil and gas companies could potentially reuse and treat that water, which would add to our quantity of water available.

Oklahoma's climate has been similar to Kansas, but Oklahoma has also had to deal with major wildfires; the Governor declared a 52-county emergency for fires in April as 200,000 acres were burned. Several waves of rain have helped, so much less of the state is in the extreme drought, but it is coming back; the good news is, the reservoirs are still holding and have filled up with good storage for at least this year.

Regarding the Aquifer Storage and Recovery, the OWRB is moving forward with promulgated rules, which will become effective in September for the permitting of those projects, both from the DEQ and OWRB.

Commissioner Cunningham said water right permitting has seen a ramp up in provisional temporary permits, which means there is an increase in oil and gas production. That's direct bellwether for tracking oil and gas production, as a vast majority of temporary 90 day permits are oil and gas related.

As for floodplain management, we have new course material, and we are working with the Oklahoma Floodplain Managers Association (OFMA) and National Oceanic and Atmospheric Administration (NOAA) to provide low-water crossing mapping for over 400 "Turn Around Don't Drown" (TADD) sign locations to be synchronized with the NOAA weather prediction system and the Oklahoma public alert system. The TADD signs have been installed along with OFMA, and now they are being tied into the alert system. Also, we have been working with state universities, for the first time, in underwriting announcements for flood safety.

The Dam Safety team has been conducting workshops for realtors regarding dam safety, floodplain and well-drilling, which have been very successful and well-received. In November 2017, the Dam Safety team worked with the Real Estate Commission to add two questions on residential property disclosure form about the residents' knowledge about dams on their property and upstream.

Regarding water infrastructure financing, the OWRB has reached the \$4 billion mark this year. Of note, in the Compact area, the City of Enid is moving forward on a \$315 million water pipeline project that would deliver water approximately 60 miles from Kaw Reservoir. The City has its water rights on the reservoir and is working with the Corps of Engineers to get the permitting and contracting in place and working to move the intake structure. They have easement and other issues that they are working through, but it seems supported by the citizens, and the City has a sales tax or rate increase in place. The OWRB has provided financing for Phase 1 design work and they City of Enid has recently submitted applications through the Drinking Water State Revolving Fund and State Revenue Bond Fund programs totaling \$65 million to complete Phase 2 of the project, which includes water line easements, storage contracts, engineering design and program management. Phase 2 is scheduled to go to OWRB Board in August. The City is looking at installing a 36-inch pipe and adding pump stations to boost that MGD in the future.

Regarding Water Quality Monitoring and Standards, Commissioner Cunningham said the OWRB continues the BUMP (Beneficial Use Monitoring Program), and has added a groundwater component including several hundred water-wells to the river and lakes that are being monitored every year. The BUMP report is available online. Commissioner Cunningham said the agency is conducting a Water Quality Standards triannual revision this year, and promulgated rules on reuse last year. She asked Jonathan Allen to present the update on legal issues in Oklahoma.

Mr. Allen informed the Commission that the lawsuit between the Chickasaw and Choctaw Tribes and the State of Oklahoma has been settled, as they were able to find a framework to deal with the water rights and economic concerns of the Tribes. As a result of the settlement, the City of Oklahoma City's application to transfer water from Sardis Lake in southeastern Oklahoma to Oklahoma City for municipal use was allowed to move forward. Oklahoma City has another lake and an existing pipeline and plans to release water from the Sardis Lake, the water will flow down the Kiamichi River to be recaptured later and construct a new pipeline to connect to the existing pipeline out of Atoka Lake, for use by Oklahoma City. It is a large project and will take years to complete. The Tribes did not protest the application, but other residents who were able to present evidence, but the Board determined that Oklahoma City met the requirements and the permit was granted. The application was then appealed down to Pushmataha Co. in

Southeastern Oklahoma. The appeal of the OWRB's order is still with the District Court of Pushmataha County, and the litigation is focused on procedural matters at this time. Some of the residents in Southeastern Oklahoma would like to present evidence that was not presented before, and the City and the OWRB object to that request. Once the District Court of Pushmataha County makes its decision, they case may be appealed to the Oklahoma Supreme Court.

The other case discussed by Mr. Allen was *OFBLF v. OWRB and CPASA*. A statute passed in 2003 recognized the interconnectivity of stream water and groundwater in Oklahoma for the first time, in a very narrow setting, but was challenged. As a result of the new procedures to grant permits and determine maximum annual yields and annual limits of withdrawal of groundwater, the new withdrawal rate was 0.2 acre-feet per acre. The default rate statewide, unless OWRB orders otherwise, is 2 acre-feet per acre. Large landowners were upset as they felt like 90% of their ability to withdrawal groundwater was taken. Last year, the District Court of Oklahoma City ruled in OWRB's favor, but the decision was appealed to the Oklahoma Supreme Court, who assigned it to the Court of Civil Appeals. Both the Supreme Court and the Courts of Civil Appeals affirmed the OWRB and District Court's decision, and that case is now closed.

Commissioner Cunningham concluded its annual report to the Commission, noting the OWRB will be hosting the annual meeting of the Interstate Council on Water Policy in October in Oklahoma City, and the annual Governor's Water Conference will be December 5 and 6, 2018.

8. Report of the Secretary

Commissioner Cunningham currently serves as Secretary, and indicated that she had no report.

9. Report of the Treasurer

Mr. Chris Beightel presented the Report of the Treasurer. He reviewed the written report, stating that regarding the financial audit/review of the Commission activities, at last year's meeting the change in the cost of the audit was discussed and it was determined that a review would meet the obligations of the Compact, and a full audit would be conducted every five years. A review for FY2017 was conducted at a cost of \$650. Regarding a criminal activity bond, it has been determined that a bond is not required unless the bank balance exceeds \$50,000.00; the current balance is \$43,000.00.

Mr. Beightel stated assessments have been out of sync for a couple of years and he had sent two invoices recently and all assessments are current and back on schedule. He will be sending invoices for the 2019 assessment which is \$2,900 per state. Page Two of the report reflects expenditures and revenue since July 2012, and beginning next year he will only show a two-year ledger. On page three, he said there were no water quality project funds disbursed in FY2018, so the line item has been moved to the proposed FY2019 budget, which he will present under agenda item #12.

Commissioner Barfield asked about the balance if the \$10,000 is spent, and Mr. Beightel said the balance will be \$48,000 if it is not spent and \$38,000 if it is spent; regardless, the balance will remain under \$50,000. There will be further discussion under the Finance Committee report.

10. Engineering Committee Report

Yohanes Sugeng presented the Engineering Committee Report. On the Oklahoma side of updates, we conducted the Probable Maximum Precipitation (PMP) updates with Arkansas, Louisiana, and Mississippi. These studies will cover the Oklahoma-Kansas Compact area and the data is being used for dam safety to design a spillway. The last time this data was updated was in 1978.

He reviewed the written report provided that contained water data for both states. Compared to WY2016, all gages were higher for WY2017, except Arkansas River at Arkansas City, KS. As for mean flow, two gages were below, both in Oklahoma-- the Cimarron River and the Salt Fork Arkansas River in Tonkawa--while the remaining three were slightly above historical means. In WY2017, two storage structures were built in Oklahoma in the Compact area, both above the 100acre-foot capacity. One is located in Rogers County, and the other is in Osage County.

Chris Beightel added that a running total of storage of allocations was requested at last year's meeting; however, that did not happen this year, but they will endeavor to present that next year.

Chris Beightel said that sharing of information is a primary purpose of the compact, and other interstate compact. The Commission had expressed a desire to hear about water quality issues in the basin, and he had discussed with the Kansas Department of Health and Environment about what water quality data should be presented to the Commission. He introduced Mr. Leo Henning and Ms. Michelle Probasco who agreed to attend this year's meeting, and after following a short break, used a PowerPoint presentation discussed the water quality data. Ms. Probasco presented a written report, displayed a map of monitoring stations that are sampled four times a year and many have a period of record from July 1967 for some measures. She reviewed in detail the water quality data and the report containing the Kansas 303(d) listing in the compact area, and charts depicting maximum and minimum values, total dissolved solids, median stream hardness, median specific conductance, median total suspended solids concentrations, median total phosphorus concentrations, mean stream temperature, total nitrogen concentrations mean bacteria levels, and median chloride concentrations, all by decade. Commissioner Cunningham sated she would be interested in success stories, and advised that the Oklahoma BUMP reports are available online.

Discussion followed about what information/data should be presented at these meetings. Commissioner Cunningham suggested that the states present a high level summary report with some notable activities happening in the watershed and an update on all the non-point source projects ongoing, as well as regulatory issues, water quality declines would be of interest, and also how the monies are being spent. It was suggested that there be sharing of information with the Natural Resources Conservation Service and its projects across the state lines, including watershed restoration and protection projects. The Commissioners agreed that sharing information about coordinating data and what each state is doing is important, so an assignment for the engineering committee will be to look at what the Compact states regarding water quality (see Article I) and to work with their respective state water quality agencies to determine what information is beneficial -- what is already being compiled by the states -- to the Compact and to bring the data to exchange and information sharing at the yearly meetings.

11. Legal Committee Report

Mr. Kenneth Titus presented the Legal Committee Report. Two changes were made last year to the rules regarding the bond. If the account balance gets to \$50,000 the treasurer would need to be bonded for \$50k or the least amount that they could be bonded for would be satisfactory; this language needed to be corrected and added to the rules. In their research, they found the most up to date rules and regulations were from 1999, and last year was the first new version since then. They did not print the final version, as they would like comments before finalizing the rules and putting them online. He also asked whether the Commission wanted to include language for the record explaining why the change had been made. There was discussion regarding whether there is a specific amount should be included, or an amount that is "satisfactory." Commissioner Barfield stated he wasn't sure that they know now better than what the amount should be in the future.

Commissioner Barfield made a motion to add the language to the rules and make it a footnote. Commissioner Cunningham seconded. The motion passed unanimously.

Mr. Titus advised the Committee will make the change, and distribute a copy digitally once it is finalized. It was agreed to potentially revisit the \$50,000 number next year because the budget will not reach \$50,000 this year.

There were no other assignments for the Legal Committee.

12. Finance Committee Report

Mr. Chris Beightel stated that in FY2018, the Commission stayed within the budget. He noted the meeting expenses of \$377 -- \$100 for the Marland Mansion in Ponca City, and \$277 on the Salt Mine admissions. There were no incidentals, except \$4 in interest. The Commission did not disperse any money for the water quality project, so that is in the budget for FY2019. The Commission did catch up with assessments by paying for two years of assessments in one year, but the assessments are on track now. The audit amounts for FY2019 and FY2020 stayed the same. No bond was budgeted for FY2019, as the budget should not reach the \$50,000 threshold. He budgeted for expenditures for the water quality project, and he reviewed the footnotes in the report.

Commissioner Cunningham moved to approve the proposed budget, and Commissioner Barfield seconded. The budget was unanimously approved.

There were no other matters of business by the Finance Committee.

13. Regional Conservation Partnership Program Report on Application for Funding

Mr. Yohanes Sugeng advised that there is a resolution signed for this water conservation project. Jonathan Allen added that it was 2016-1 resolution that was passed, putting specific conditions on the funds. The funds are to be used to support the education and outreach efforts of the Middle and Lower Neosho Regional Conservation Partnership Program (RCPP) project. Funds would be used to provide travel scholarships for teachers from Kansas and Oklahoma for project WET and Grand Lake water quality focused training. Funds would also be used to provide travel stipend for educators to attend outreach meetings, produce and circulate outreach material, and support demonstration farms utilized in outreach meetings and trainings. Another condition that was added at the end that an RCPP person to deliver a report to this Commission to show the manner in which these funds were used, reporting what was accomplished, and if the funds were used successfully to promote the purposes of this Compact. The funds have not been used, so no one from the RCPP is at the meeting, but hopefully next year. Commissioner Cunningham advised that they have spoken with Shanon Phillips from the Oklahoma Conservation Commission and she provided the project proposal (scope of work provided at the meeting), outlining how they are planning to spend the funds; the Commission has approved the use, and the RCPP can begin using the funds and billing the Commission. Commissioner Blex updated the Commission on the Kansas RCPP project and expressed he was not aware that the funds could be used for education, although the project is being promoted through several different programs and organizations in Kansas. He said the program is unstaffed, and he said the Oklahoma Conservation Commission is supervising the grant to Kansas. Chris Beightel asked and Yohanes Sugeng advised that his understanding was that any projects not eligible for USDA funds can apply to use these funds. It was decided Kansas will contact Shannon Phillips with the Conservation Commission and apply for funding for workshops, etc. Commissioner Cunningham said that Ms. Phillips is aware the Commission has approved the funding and is ready to participate.

14. Reports of the State and Federal Agencies and Others

Mr. Travis See, Chief of the Wichita Field Office, presented for the USGS. He advised that they are in charge of looking at all the gages on the Kansas side, and coming up with the numbers for the Commission's decision-making. The focus is mainly on real-time data, with a big emphasis on technology and innovation. The USGS is always striving to get better numbers. They measure streamflow using acoustic Doppler current profilers, and are now incorporating high accuracy GPS units on those to make better measurements. He has been training on and using drones, getting near Lidar-type accuracy over river channels for taking indirect measurements and making state discharge models more accurate as well as investigating the use of drone technology to make real time maps of harmful algal blooms. The USGS is also incorporating redundant sensors at their sites; current sites have instrumentation using water pressure and radar sensors measure from a fixed point on a bridge down to the water surface to make the gages more reliable -- this is used as a backup in case the water pressure sensors fail. The USGS received an increase in federal funding, which will be used on meteorological parameters. Eighteen new real-time temperature sensors will be installed across the state by 2020, and they are possibly reinstating real-time rain gages. The USGS received an update to its software used to compute discharge, allowing them to use more tools and have a better visual representation of the rain models that they create. Mr. See is in charge of water quantity, and while he is aware of what the others are doing and there is often talk of new real-time water quality stations which are recorded every 15 minutes and within the hour are populated to the web. There are two new proposed sites in the Little Arkansas Basin that might be installed if approved. Mr. See concluded his report saying if there are ever any questions about USGS data or measurements or how their instrumentation works to please contact him.

Mr. Mike Abate, Chief of Civil Works in Programs and Project Management Division of the Tulsa District, presented for the US Army Corps of Engineers (COE). He stated that the Civil Works boundaries for the COE are governed by watersheds, which he illustrated on slides in a PowerPoint presentation. The COE Tulsa District has over 50 water management projects, with 15 in the Red River Basin (shown in the red on the slide), and 35 in the Arkansas River Basin, including 12 "Section-7s," which are projects owned by someone else. However, if they go into Congressionally-authorized flood operations, the COE takes control; Grand Lake is one example. Focusing on the Arkansas River system, there are 35 COE managed projects, and 30 of them are owned by the COE, while 5 are Section-7s. Of these projects, 8 are in Kansas and the other 22 are in Oklahoma. Of the COE lakes, they cover about 3.78 million acre-feet of conservation storage and almost 12 million acre-feet of flood control, including the 5 Section-7s. As for the value to the nation in flood risk management, in the Arkansas system alone over \$18 billion, and total over \$23 billion, of damages have been prevented since the projects have been online. As for navigation, the COE in the Oklahoma portion ships 3.2 million tons. Most of that freight is agriculture products, and the majority originates in Kansas. As for recreation, the COE is actually larger than the National Parks Service. The COE Tulsa District in 2016 had over \$18 million visitors to COE parks, bringing over \$611 million into the local economy. Regarding water supply, the Tulsa District has the most water supply contracts in the COE, generating over \$11.7 million. He then discussed the COE budget (illustrated on the slides), explaining the President's Budget, the FY 2018 Budget Authority, and the funding received through the Bipartisan Budget Act -- which is 100% federally funded, no cost-share. Under investigations, there is \$3 million allotted to the Tulsa/West Tulsa Project, to perform the feasibility study over this project to identify the repair for the levee safety issues, and once that is done, they can move right into construction instead of waiting like for most projects. The report from the feasibility study recommends constructing a low water structure around Sand Springs. This project will create a great habitat for sustainable flows on the Arkansas River.

Mr. Abate discussed the Planning Assistance to the States program. This program has supported the Oklahoma Comprehensive Water Plan significantly. Late last year, they received \$285,000; \$200,000 went to the Grand River Comprehensive Water Plan study and \$85,000 went to McPherson, Kansas, to

study Dry Turkey Creek. For FY2018, the Corps received over \$1 million in funding request, and the two projects in green (on the slide) have funding, including continuing the Grand River Comprehensive Water Plan and doing a hydrologic study, a yield study, in Oklahoma, which also supports the comprehensive water plan. The one in yellow (on the slide) is with the Kansas Water Office and is part of the Kansas Reservoir Sustainability Initiative, and is looking at a sediment study on the Cottonwood/Neosho; it is in yellow because it is currently at headquarters waiting approval.

The last project is with the Chickasaw and Choctaw Tribes. Congress has expanded this authority to include Tribes, and this is also a yield study for six small reservoirs in their area. He presented a picture of the drought monitor of Arkansas Red White watershed, and discussed the state of drought and the outlook, the three different pools of reservoir allocation: the flood control pool, which they like to keep empty in case of a flood, is above the conservation pool. The conservation pool is where the water supply, hydro power and water quality storage is, and below that is an empty pool designed to fill with sediment. Every one of the COE projects has an independent drought contingency plan, and he discussed the four levels of drought and their actions at each level. Mr. Abate concluded his report noting the Memorandum of Understanding with the Kansas Water Office and Oklahoma Water Resources Board allowing withdrawals under drought emergencies. There were no questions by the Commission.

The US Bureau of Reclamation was not in attendance; however, a written report was provided for distribution to the members.

Mr. Mark Rude, Kansas Groundwater District #3, provided a written report of the district updates. He discussed how surface water and groundwater are connected and the challenges faced trying to tie those together. In SW Kansas, they have been successful in recognizing that groundwater is fully appropriated to existing water rights, and so the area is closed to new groundwater appropriations, but they are still seeing declines in the aquifer. Recently, there has been concern with continued development, particularly of groundwater in the Cimarron alluvium in Colorado, and a developer acquired a ranch and is looking to further develop the resources. This has created a concern in the Basin, for the basic question of, is there any water left to be appropriated. In their District, they saw no alternative but to engage in a Colorado's administrative process to challenge the proposed development. They have had ongoing discussions with those concerned with the continued development in Colorado, Kansas and Oklahoma. His concern that he presented to the Compact regards how groundwater development can affect the rare surface flows in the Cimarron River. The handout showed about 30 wells proposed for new appropriations for 7,000 acre-feet, and the Colorado process is currently working through that hearing process; GMD No. 3 will also work with the county folks to talk to legislators in Colorado. If the developer continues, he expects applications on ranchland purchased in Oklahoma before the OWRB. Two sources of water are the High Plains Aquifer and the Alluvium of the Cimarron. The alluvium is the main water supply other than for small wells. Their main concern is the mining of the Cimarron alluvial groundwater and what that would do to the activities of the Cimarron National Grasslands and other local water users. The Elkhart USGS gage was disconnected in about 2007, but he provided data for Kenton, OK, and the available data for the old Elkhart site. They are currently evaluating how they could work with USGS to reinstall the Elkhart site, but it is very expensive for the flow in the Cimarron because it does not have continuous flow, but it does have a direct effect on the alluvial groundwater supply. The District is also funding a state line groundwater gage on the Kansas Colorado border, so that they can better gage cause and effect of groundwater supply, which has a direct effect on surface water flows when they do occur. In 2015 a letter was provided to Oklahoma by GMD No. 3, looking at two things; under the Oklahoma water plan, another 6 million acre-feet of available Ogallala High Plains water to be developed. If that occurs, that would have a profound effect on any surface flows. Not necessarily something for this Commission, but it is supposed to be a forum for these issues and he wants them to be aware of what is happening, as it may come up politically, if not administratively. Mr. Rude stated they

partner with the National Water Resources Association, supports the RCPP program and the new farm bill, and are proponents of WRDA and the COE/PAS funding. He believed that one of these days, maybe long down the road, there will be a project to move surface water across the high plains to the West, and he would like to see Kansas, Oklahoma or both as a good host(s) for the infrastructure to move that water appropriately. Mr. Rude concluded his report.

Commissioner Barfield asked about the map provided in Mr. Rude's report, which he explained a ranch at Keyes purchased by a developer is on the state line between Oklahoma and Colorado upstream to the west. He said 7,000 acre foot of water for irrigation is to be produced, it is poor soil and the speculation is to develop water to sell. Commissioner Cunningham asked and Mr. Rude spoke to the local effort to engage in water planning.

Commissioner Doug Blex updated the Commission on activities near Coffeyville, KS, regarding a potential location for a Tyson chicken processing plant, about 2 miles north of the border of Oklahoma. This would provide about 1,600 jobs and about 400 grower houses, which could significantly impact issues. Tyson has made a commitment that it will not expand to the Edna area, the Grand Lake watershed, and the middle Neosho, because of the blue-green algae outbreak. Many of the barns will potentially be in Oklahoma in order for Tyson to stay out of that watershed. Criteria have already been developed for on-the-farm poultry litter storage to try to use best management practices on each individual farm, and Kansas State University has assisted with nutrient monitoring devices demonstrating that it is working to reduce phosphorus and nitrogen outputs. The Elk City Reservoir could conceivably handle both the processing plant and the Coffeyville water resources, which is used by a refinery, the largest user in the Verdigris watershed. The problem may be with outlying grower houses; there are many rural water districts in that area of Kansas, and they may not be sufficient to sustain water for the houses. Tyson is planning to have 6-8 growing houses per farm unit. Financially, they plan to pay off the loan in about 8 years if they do 8 houses and 10 years if they do 6 houses. Nothing is for sure, but if it happens, it will have an impact in Kansas and Oklahoma. Commissioner Shively said his involvement regarded the infrastructure aspect, what improvements are needed and water quantity, i.e., distribution to the site. The Coffeyville water treatment plant will be able to handle the quantity. Commissioner Blex explained new legislation regarding management of animal waste, and the waste management of the facility. Mr. Rude also commented about the possibility of locating at Garden City; it is a good company. Commissioner Blex reiterated that having adequate quantity and quality of water is an economic heartbeat for organizations and communities.

15. New Business and Committee Assignments, if any

Commissioner Barfield said the current staff will continue to serve: Chris Beightel as Treasurer and on the Finance and Engineering Committees, and Kenny Titus will serve on the Legal Committee.

Commissioner Cunningham advised that Mary Schooley will serve as Secretary, Yohanes Sugeng will remain on the Engineering Committee, Kent Wilkins will serve on the Budget and Finance Committee (removing Julie), and Jonathan Allen will remain on the Legal Committee.

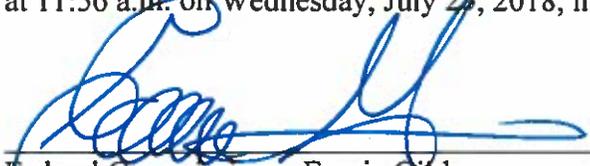
The Engineering Committee will coordinate on the water quality reporting issue.

Other

There were no other items of business for the Commission's consideration.

16. Adjournment

There being no further business, Alternate Federal Commissioner and Acting Chairman Chuck Shively adjourned the Fifty-fifth Annual meeting of the Kansas-Oklahoma Arkansas River Commission at 11:56 a.m. on Wednesday, July 27, 2018, in Hutchinson, Kansas.


Federal Commissioner Earnie Gilder

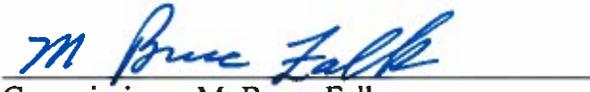

Alternate Federal Commissioner Chuck Shively

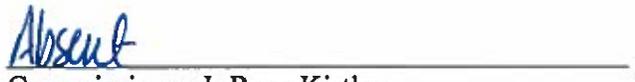

Commissioner David Barfield


Commissioner Bryce Benson


Commissioner Doug Blex


Commissioner Julie Cunningham


Commissioner M. Bruce Falk


Commissioner J. Ross Kirtley

List of Exhibits

Agenda

Attendance List

Credentials

Kansas Commissioner Report

Oklahoma Commissioner Report

Report of the Treasurer

Engineering Committee Report

Finance Committee Report

Regional Conservation Partnership Program Report

Reports of State and Federal Agencies and Others

**2018 MEETING
ATTENDANCE**

ATTENDANCE

Please turn off your cell phone

MEETING: Kansas-Oklahoma Arkansas River Compact Commission
 1220 W. 4th Avenue
 Hutchinson, KS

DATE: July 25, 2018

TIME: 9:00 a.m.

PLEASE WRITE CLEARLY AND FURNISH COMPLETE MAILING ADDRESS

Please indicate if you intend to make a presentation to the Commission

Name	Representing	Mailing Address	Email Address
Royce Benson	Oklahoma	518 2 nd Ave, OK	bs-benson@sbcglobal
JULIE CUNNINGHAM	Oklahoma	3800 N. Classen BLVD. OKC OK 73118	julie.cunningham@owrb.ok.gov
chuck Shively	USA	808 W. 8 th St. Coffeyville, KS 67337	cshively1@cox.net
David Barfield	Kansas	KDA-DWR 1320 Research Park Dr Marquette, KS 66702	david.barfield@ks.gov
Doug Blex	Kansas	3131 CR 2600 Independence, KS 67301	dblex@totalcs.com
Bruce Falk	Kansas	33 NE 75 th Ave Stafford KS 67578	bs-falk@sbcglobal.net
Chris Beightel	Kansas	KDA-DWR	chris.beightel@ks.gov
David Engelhaupt	Kansas	KDA-DWR	david.engelhaupt@ks.gov
Kenneth Titus	KS	KDA-DWR	Kenneth.titus@ks.gov
Yohanes Sugeng	DWRB	3800 N. Classen Blvd	yohanes.sugeng@owrb.ok.gov
Mary Schaefer	OWRB	3800 N. Classen	Mary.Schaefer@owrb.ok.gov

ATTENDANCE

Please turn off your cell phone

MEETING: Kansas-Oklahoma Arkansas River Compact Commission
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DATE: July 25, 2018

TIME: 9:00 a.m.

PLEASE WRITE CLEARLY AND FURNISH COMPLETE MAILING ADDRESS

Please indicate if you intend to make a presentation to the Commission

Name	Representing	Mailing Address	Email Address
Jeff Lanterman	KDA DWR		jeff.lanterman@KS.Gov
TRAVIS SEE	USGS SW KS		tsee@USGS.GOV
MARK RUDÉ	GMD3		MRUDE@GMD3.ORG
Leo Henning	KDHE		Leo.Henning@KS.Gov
Michelle Probasco	KDHE		michelle.probasco@KS.Gov
Jonathan Allen	DWRB		jonathan.allen@dwr.ko.gov
Mike Abate	COE		mike.R.Abate@USACE Army.mil

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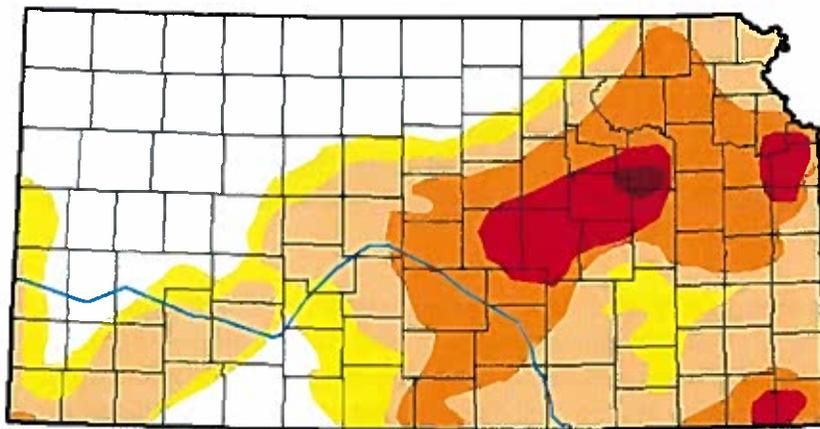
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**Report of the Kansas Commissioners
to the
KANSAS-OKLAHOMA ARKANSAS RIVER COMMISSION
Annual Meeting – Hutchinson, KS
July 25, 2018**

Climate Conditions – Water supply conditions during the 2018 growing session started off very dry over large parts of the state but have since improved over much of western Kansas. Significant portions of central and northeastern Kansas remain very dry.

**U.S. Drought Monitor
Kansas**

July 17, 2018
(Released Thursday, Jul. 19, 2018)
Valid 8 a.m. EDT



Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

Curtis Riganli
National Drought Mitigation Center

Minimum Desirable Streamflows: MDS were established to protect ecological, water quality, and domestic needs. Under MDS, when prescribed gages fall below statutorily defined values, all surface water and connected groundwater rights junior to MDS (1984) are to be regulated. Statewide 2018 has been an active year for administration of MDS. While there has been no MDS administration in the portions of the Arkansas River basin regulated by this compact, MDS gages on the South Fork Ninnescah, the Cottonwood, the Neosho River and Spring Rivers are all being actively monitored as they are close at this time.

Legislation: Once again, this year's legislature session was dominated by issues related to taxation and budget, esp. enhanced funding for public schools. The Legislature did agree to a \$3.4 million enhancement to the State Water Plan Fund to implement portions of the Kansas Water Vision.

It was a relatively light session related to water issues. Water legislation included:

House Bill 2312 clarified procedures related to certain administrative hearings conducted by the chief engineer.

House Bill 2691 moves the deadline to apply for a Multi-Year Flex Account (MYFA) from October 1 to December 31 to take current year water usage into account.

Senate Bill 194 permits groundwater management district (GMD) boards to increase the maximum water withdrawal charge from \$1.00 for each acre-foot to \$2.00 for each acre-foot. The charge would continue to be used to finance the operations of the GMD. In addition, the bill eliminates a provision of current law that permits the boards of GMD to assess a greater annual water withdrawal charge if more than 50 percent of the authorized place of use of the water is outside the district.

Arkansas Basin Matters

Southwest Kansas Groundwater Management District No. 3

- Closing of the District - Effective May 13, 2016, the entire district is closed to new appropriations from the Ogallala Aquifer. Prior to 2016 most of the district was closed, except for certain townships in the southern portions of the district where new appropriations were allowed based on safe yield.
- Cimarron River – In response to a series of 29 applications to appropriate groundwater along the Cimarron River in Colorado approx. 7-10 miles upstream of the Colorado-Kansas stateline, GMD No. 3 has lodged a protest with the Colorado Ground Water Commission. KDA has worked with GMD No. 3 and Colorado state officials to gather more information about the project and to understand the process and potential concerns.

John Redmond Dredging - The state has completed its removal and disposal of 3,000,000 cubic yards of sediment from John Redmond Reservoir and streambank stabilization projects above Redmond to reduce incoming sediment loads at a cost of approx. \$20,000,000. The reservoir is a supply source to 19 communities and six industrial users, including Wolf Creek Nuclear Operating Station. The project is the first of its kind in the nation with a non-federal entity dredging sediment from a U.S. Army Corps of Engineers (USACE) reservoir. The removed sediment was placed in confined disposal facilities on USACE land and private property. These disposal sites will be returned to the preferred use of the respective landowners after dewatering.

Other Water management activities - (for information visit <http://www.agriculture.ks.gov/dwr>)

- **Local Enhanced Management Areas (LEMAs).** In 2012, the Kansas Groundwater Management Districts was amended to allow GMDs to initiate the creation of these special management area in over-appropriated areas, providing a two-hearing process for their consideration.
 - At the request of the Northwest Kansas GMD No. 4, after the required public hearings, the Sheridan 6 LEMA was extended for another 5 years, for the period 2018-22, under the same terms as the 2013-2017 LEMA, except for allowing carryover of a portion of any unused allocations from the first 5 years.
 - During June 2017, GMD No. 4 requested a new District-wide LEMA, which provided for allocations based on the rate of decline in the aquifer by township. For township of low decline, no restrictions were proposed. For rates of decline in saturated thickness of 0.5% - 1

%/year, a 5-year allocation of 90 inches/acre is provided. For rates of decline of 1 % - 2 %/year, a 5-year allocation of 5 times the 80% net irrigation requirement for corn is provided. For rates of decline of greater than 2 %/year, a 5-year allocation of 5 times the 50% net irrigation requirement for corn is provided. The LEMA was opposed by a group of intervenors who sought to delay of the second hearing and requested additional due process. While the hearing was not delayed, additional process was added, resulting in an improved record for decision. On February 23, 2018, I issued an order of decision, returning the LEMA plan to the GMD with proposed modifications based on the hearing record. The GMD accepted the proposed modifications and the order of designation for the modified plan was issued on April 13, 2018. On June 13, 2018, a petition for judicial review and a notice disputing the validity of the LEMA were filed in Gove County District Court to challenge the LEMA orders and the validity of K.S.A. 82a-1041 (the LEMA statutory provisions). On June 26, 2018, a petition for judicial review was filed in Thomas County District Court seeking review of the LEMA order related to setting allocations for particular plaintiffs within the LEMA area.

- Western Kansas GMD No. 1 is actively exploring the use of the LEMA tool in the District, starting with a plan for the highly depleted Wichita County.
- **Water Conservation Areas (WCAs)** – In 2015, the Legislature amended our Water Appropriation Act to allow for the development of WCAs, which allows a water right owner or group of owners the opportunity to develop a management plan to reduce withdrawals to extend the usable life of the Ogallala-High Plains Aquifer, typically with increased flexibility to manage the reduced use. We now have 15 approved WCAs with more actively being considered. The most significant is the Wichita County WCA, a plan that covers the entire county which is highly depleted, with over 15% of the eligible acres of the area enrolled in the WCA.
- **Quivira National Wildlife Refuge Impairment Complaint** - The U.S. Fish and Wildlife Service (Service) owns and operates the Quivira National Wildlife Refuge (Quivira), a wetland of international significance and part of the central U.S. flyway. Water is a critical component its operations with a water right priority date in 1957. After decades of voluntary efforts to resolve its concerns were unsatisfactory, the Service filed an impairment complaint with KDA-DWR in April of 2013. KDA-DWR published its final impairment investigation report during April 2016 finding that upstream junior groundwater pumping is regularly impairing the Service’s senior water right. GMD No. 5 is developing a plan for an augmentation project as the cornerstone of the remedy of the impairment. They are also developing a LEMA proposal to reduce groundwater pumping to decrease the rate of increase in depletions.
- **Cities of Hays and Russell / R9 Ranch Water Right Changes and Water Transfer** - The Cities of Hays and Russell purchased the approximately 7,000-acre R9 Ranch and its thirty water rights in southwestern Edwards County in 1995 with the intention of someday using the water as part of the city's water supply. During June 2015, the Cities submitted applications to KDA-DWR to change the use made of water from irrigation to municipal use for the R9 Ranch water rights. As these proposed changes envision moving greater than 2,000 acre-feet more than 35 miles, during January 2016, the Cities submitted an application to transfer water from Edwards County to the Cities pursuant to the Water Transfer Act (K.S.A. 82a-1501, et seq.). The change applications and detailed proposed orders to approve the change applications have been sent to GMD No. 5 and the public for review. If

the change applications are contingently approved this fall, the water transfer process would then begin.

- **Aquifer Storage and Recovery Project, City of Wichita** – The City of Wichita has requested changes to the permit conditions of its ASR project to meet the City’s current objectives for the project (as a source of water for long-term drought). The changes include reducing the bottom of the “basin storage area” and allowing for a new means to accumulate credits when the aquifer is full, called aquifer maintenance credits (AMCs). The public hearing has been set for October 22-23, 2018 to consider the City’s proposals.

OKLAHOMA COMMISSIONERS' REPORT

Kansas-Oklahoma
Arkansas River Compact Commission
Hutchinson, Kansas
July 25, 2018



IMPLEMENTATION OF WATER FOR 2060

Since completion of the Water for 2060 Final Report in November 2015, the Oklahoma Water Resources Board (OWRB) has shifted focus to an implementation phase in relation to several of the recommendations found within the report. This work has included laying the necessary legislative and regulatory framework to expand the State's options for both reuse of treated waters and the use of marginal waters in the state.

Potable Reuse - The OWRB and ODEQ, during 2017 and 2018, promulgated rules necessary for indirect potable reuse. Efforts are expected to continue on a framework for *direct* potable reuse over the coming years.

Marginal Quality Water - Use of marginal or brackish waters was authorized by **HB 3405** give the OWRB authority to permit water well drillers to complete their wells in the brackish zones. Such waters could be substituted in the O&G industry for hydro-fracking wells. This practice should save millions of ac-ft of fresh water over the next decade. Additionally, as demand rises and technologies bring down the cost of desalination, brackish water will transition to a more realistic option for WTP upgrades in the future. Updating the state's base of treatable water maps with more detailed information on the 3,000 and 5,000 ppm TDS zones could assist both O&G as well as local communities to find suitable water.

Supply Reliability - Part of the Water for 2060 initiative was to promote conservation of water while still growing the state's economy. Across Oklahoma, as the OWRB steadily completes its statutorily required groundwater basin studies, the resulting allowable withdrawal rate, or "Equal Proportionate Share" (EPS), calculated on a "fully developed" scenario, often goes down by 50% or more. Such results can be seen as burdensome in most basins where actual overall development is only 5% to 10%. **SB 1294**, enacted during the past year, will allow landowners to *phase-in* their EPS or continue using their default EPS until development within the basin reaches a certain percentage. SB 1294 further provides that the OWRB's well spacing regulations will apply statewide, regardless of whether the Maximum Annual Yield (MAY) and EPS have been determined for the various groundwater basins of the state.

Regional Water & Drought Planning - In addition to policy related work, the OWRB's Planning & Management Division has continued efforts to foster increased regional water planning in portions of Oklahoma where Regional Water Plans or similar guiding documents have yet to be developed. Drought contingency and drought resilience is a key part of water planning and fits well with the Water for 2060 platform as communities develop strategies for using, conserving, and sharing resources in concert to better meet future demands. WestFAST, a collection of federal environmental agencies, are working closely with Oklahoma and the Southwest Water Action Team around Altus, OK, to find ways they can assist the region. WestFAST representatives along with state and local officials held a Water Summit in August of 2017 and derived 8 action items for the partners to pursue. More groups such as this have formed and more are expected to begin in the near future throughout Oklahoma.

Produced Water Working Group - The Governor's Water for 2060 Produced Water Working Group (PWWG) has continued its efforts in support of the Governor's goal of reducing the amount of produced water injection through the establishment of other economically viable solutions. The group completed its phase 1 high level study to determine the nexus between produced water generation and potential large-scale end users, as well as report and summarize the current status of all the challenges related to produced water in the State. Findings from this study that may be relevant

Also in 2017, the State legislation was approved allowing for Limited Scale Pilot studies. OWRB and ODEQ recently promulgated rules for the permitting of ASR facilities, which will become effective on September 14, 2018. This innovative water-management tool will offer alternate options to increase storage capacity in the state and secure reliable water supplies for decades to come.

GROUNDWATER STUDIES

Consistent with state law, the OWRB continues to focus on several ongoing hydrologic studies across the state to determine amounts of water that may be withdrawn from Oklahoma's groundwater basins by permitted water users. Several projects are beginning later in 2018 including the Salt Fork of the Arkansas River and the Boone/Roubidoux aquifer system in northeastern Oklahoma.

WATER RIGHTS PERMITTING

In 2017, as the state's designated water management agency, the OWRB issued 118 regular permits (65 groundwater & 53 surface water) for a total of 256,231 acre-feet (32,632 groundwater & 223,599 surface water). In addition, the OWRB has issued 1,829 Provisional Temporary (90-Day) permits (372 groundwater & 1,457 surface water). OWRB staff currently track water use and maintain more than 13,000 permits for approximately 2.9 million acre-feet of surface water per year and 3.8 million acre-feet of groundwater per year.

Newly enacted **HB 3089** authorizes the Oklahoma Turnpike Authority to sever groundwater rights when acquiring property. The legislation does not authorize a right to access the property or to install water wells or other equipment.

FLOODPLAIN MANAGEMENT

Floodplain staff continues to conduct Community Assistance Visits, Community Assistance Contacts, and public outreach through various field visits, conferences, technical assistance, and workshops. Floodplain staff also developed new course material for Oklahoma's Floodplain Administrator Accreditation Program. OWRB staff coordinated with the Oklahoma Floodplain Managers Association (OFMA) and NOAA to provide Low Water Crossing mapping of over 400 Turn Around Don't Drown Sign locations to be synchronized with NOAA Weather Prediction system and the Oklahoma Public Alert System enabling emergency alerts to Oklahoma residents. OWRB partnered with OFMA to distribute an additional 110 new Turn Around Don't Drown Signs across 15 Oklahoma communities. OWRB delivered mapping products in three watersheds as part of FEMA's RiskMAP, bringing critical protection and planning tools to a total of eight Priority Watersheds through the Cooperative Technical Partners Program. Floodplain staff leveraged GIS technology to develop mobile data collection surveys to facilitate field work and automate reporting, and published a new and improved interactive flood hazard map for the agency website. Finally, OWRB Floodplain staff partnered with OFMA, KGOU and KOSU for radio underwriting announcements which provide flood insurance and flood safety information to a statewide audience.

DAM SAFETY PROGRAM

The Oklahoma Water Resources Board Dam Safety program hosted a Dam Safety Exhibition and Workshop in April, 2018 at UCO Outdoor Adventure Recreation Boathouse in Arcadia Lake. The workshop was attended by nearly eighty participants representing dam owners, engineering firms with dam safety experience, local and regional dam safety officials and vendors offering services/instruments with dam safety applications.

Representatives from the Federal, State, and private engineering firms shared their expertise with participants. The workshop was wrapped up by a tour to the Arcadia Lake Dam where engineers from Army Corps of Engineers conducted an inspection of the embankment and its appurtenances. OWRB Dam Safety program also hosted a series of dam safety workshops in multiple locations throughout 2017 and 2018 for the licensed realtors to provided information to their clients about the responsibilities of owning a dam. Effective as of November 1st 2017, Oklahoma Real Estate Commission added two questions to the Residential Property Condition Disclosure form which requires sellers to state

if dam(s) and well water(s) are located on their property. OWRB is also working with Arkansas, Mississippi, and Louisiana dam safety programs to update the 40 years old Probable Maximum Precipitation (PMP) data for all 4 states.

WELL DRILLER AND PUMP INSTALLER PROGRAM

In January, the WDPI program supported the Oklahoma Ground Water Association (OGWA) at their annual conference and tradeshow, to assist more than 150 certified operators meet their continuing education licensing requirements. The OGWA and the WDPI programs have partnered up again this year to present nine continuing education workshops across the state to support industry licensing requirements. In cooperation with Oklahoma Real Estate Commission (OREC), several workshops were conducted for real estate agents regarding dam safety, floodplain, and well driller program, with a very positive response and more workshops to come. In cooperation with the Well Driller's Advisory Council and the International Ground Source Heat Pump Association, program staff drafted updates to the minimum standards for constructing heat exchange wells, potentially making Oklahoma the first state to incorporate recommendations from the state-of-the-art C448 Series 2016 ANSI international standard.

Since January, OWRB staff responded to more than 15 public and industry generated complaints, and performed nearly 30 inspections of groundwater wells across the state. As of the June Board meeting, licenses have been issued to eight new firms, and certificates have been issued to 29 new operators, and a new member from the industry was appointed to serve on the Well Drilling and Pump Installation Advisory Council. Program staff completed the digitization of all licensing and certification records into a document management database, and has integrated a new digital complaint management tracking system. The WDPI program is currently working with OWRB Records Management staff to refine a digital workflow that will be used to guide staff and licensees seamlessly through the licensing process.

WATER INFRASTRUCTURE FINANCING

The OWRB administers the State Financial Assistance Program, backed by the Statewide Water Development Revolving Fund, which awards loans and grants for the construction and improvement of public water and sewer facilities. Through five loan and grant programs, over \$4 billion in financing has been provided for water and sewer projects in Oklahoma with a total estimated savings of more than \$1.3 billion to Oklahoma communities. In 2017, 37 loans were approved totaling over \$276 million 14 grants totaling over \$1.3 were approved by the Board.

PROGRAM	NUMBER AND AMOUNT
FAP Loans	387 for \$1,079,880,000
CWSRF Loans	323 for \$1,585,894,377
DWSRF Loans	198 for \$1,250,308,800
REAP Grants	681 for \$60,362,051
Emergency Grants	578 for \$34,366,720
Drought Response Grants	6 for \$418,848
Special Purpose	8 for \$2,625,000
TOTAL (as of 07/19/18)	2,181 for \$4,013,855,795

Of note, within the Compact area, the Enid Municipal Services Authority (Authority) is moving ahead on a \$315 million water pipeline project which would deliver water approximately 60 miles from Kaw Reservoir and allow the city to diversify its sole groundwater supply. The OWRB has provided financing for Phase 1 design work and Enid has recently submitted applications through the Drinking Water State Revolving Fund and State Revenue Bond Fund programs totaling \$65 million to complete Phase 2 of the project, which will include water line easements, water storage contract, engineering design, and program management.

WATER QUALITY MONITORING, MAPPING AND WATER QUALITY STANDARDS

The OWRB water monitoring staff announced the release of the agency's 2017 Beneficial Use Monitoring Program (BUMP) reports providing detailed physical, chemical, and biological water data from approximately 1,300 stream, lake, and groundwater well sites across Oklahoma. Created in 1998, BUMP provides data necessary for water quality management decisions by identifying impairments to the "beneficial uses" of Oklahoma's water resources, as well as determining causes for those water quality impairments. The water data contained in the OWRB's annual BUMP report

is collected from about 130 lakes and 100 stream segments at approximately 600 sites throughout Oklahoma. For additional information, visit www.owrb.ok.gov/bump.

The Groundwater Monitoring and Assessment Program, added to BUMP in 2012, consists of a network of approximately 750 wells in Oklahoma's 21 major aquifers, where the OWRB monitors both water levels and water quality. Groundwater assessment is achieved through both a baseline monitoring network and a long-term (trend) network within each of the state's 21 major aquifers. This provides information on individual aquifer characteristics as well as a more general assessment of the Oklahoma's groundwater.

Revision topics for the 2017-2018 Interim Rulemaking included changes to Oklahoma's anti-degradation policy and implementation rules (785:45-5; 785:46-13), implementation rules for Sensitive Water Supply—Reuse Waters (785:46-13), implementation policies for the Oklahoma Groundwater Quality Standards (OGWQS) (OAC 785:45-7), and site specific copper criteria for Mud Creek in southeastern Oklahoma. Amendments will become effective in September 2018. For information visit http://www.owrb.ok.gov/util/rules/wqs_revisions.php. Changes of note include:

- Revisions and updates to the OGWQS (OAC 785:45-7). The revision included the addition of an updated anti-degradation policy for groundwater, revisions to classifications of fresh groundwater, development of a new Domestic Untreated Water Supply beneficial use, and promulgation of numeric and narrative criteria for recharge projects to groundwater.
- Development of rules outlining how a waterbody is re-classified from a designation of Sensitive Water Supply to a Sensitive Water Supply-Reuse. Language outlining the water quality data required to justify the new designation was approved and work will continue on the detailed technical guidance documents to continue to move the Indirect Potable Reuse (IPR) process forward.

Work is completed on the 2017 National Lakes Assessment Study. Sampling on numerous lakes across Oklahoma provides data to assess environmental integrity of the waters of the nation. In 2018 work began on the National Rivers and Streams Assessment Study to assess wade able and non-wade able streams over a two year cycle.

The OWRB's groundwater monitoring team assessed Licensed Managed Feeding Operations compliance in an additional 550 wells through a continuing partnership with the Oklahoma Department of Agriculture, Food and Forestry. Staff continues data migration into the AQUAMS database and enhancement to allow greater public access and to provide tools that streamline the in-house data assessment process.

LEGAL MATTERS

Jackson v. OWRB and Oklahoma City, Case No. CV-2017-32, District Court of Pushmataha County – Pursuant to the state's tribal water rights settlement in August of 2016, the City of Oklahoma City applied to the OWRB for a stream water permit to divert water from Sardis Lake and the Kiamichi River in southeastern Oklahoma for municipal uses. After a week-long water rights hearing process, the OWRB approved Oklahoma City's application. The OWRB's decision approving that application was appealed to the District Court of Pushmataha County pursuant to Oklahoma's Administrative Procedures Act, and a briefing schedule has been set for that appeal.

OFBLF v. OWRB and CPASA, Oklahoma Supreme Court Case No. 114,379 – The OWRB's first implementation of SB 288, which required the OWRB to set a MAY and EPS for the Arbuckle-Simpson groundwater basin which would not impair the "natural flow" of springs and groundwater-fed streams emanating from the basin. The OWRB set groundwater use limits in 2013, and those were challenged unsuccessfully in the District Court of Oklahoma County. The District Court's opinion was appealed in 2016, and on September 15, 2017, Court of Civil Appeals affirmed the decision of the OWRB and of the District Court. Appeal was taken by a petition for certiorari to the Oklahoma Supreme Court, but was summarily denied on January 22, 2018.

**2018 TREASURER
REPORT**

**KANSAS-OKLAHOMA ARKANSAS RIVER COMPACT COMMISSION
TREASURER'S REPORT
FY 2018 Expenditures and Summary
(July 1, 2017 to June 30, 2018)**

July 25, 2018

The Kansas-Oklahoma Arkansas River Compact Commission continues to operate as described in the Resolution signed by the Commissioners on July 27, 2011. Chris Beightel of Kansas serves as compact treasurer.

The compact commission continues to meet its financial obligations through an account established with Bank of America pursuant to Resolution 2012.1 signed by the commission in January of 2012, and opened in February of 2012. When the account was opened, an amount of \$9,920.39 was transferred from U.S. Bank.

In consideration of the increased cost for a full financial audit and of the relative simplicity of the commission's financial activity, at the 2017 annual meeting the commission decided that it would be adequate to have the fund fully audited every five years and conduct financial reviews in the intervening years. The commission directed that the next full audit would be of FY2020 activity.

The review of fiscal year 2017 activity was conducted from October 31, 2017 through February 1, 2018 by the firm Cummins, Coffman & Schmitdlein, CPAs, P.A. The cost to the commission fund was \$650.

The commission also decided at the 2017 annual meeting to require a criminal activity insurance bond for the treasurer only when the commission fund exceeded \$50,000. Because the current balance of the fund is about \$43,000, the compact bank account is currently not insured against criminal activity by the treasurer.

Invoices for FY2017 compact assessments were sent to Kansas and Oklahoma on July 20, 2017 and are therefore reflected as cash revenue in FY2018. Compact assessments for FY2018 were sent to Kansas and Oklahoma on March 9, 2018 and are therefore also reflected as cash revenue in FY2018. All compact assessments have been paid, and the revenue and annual budget cycle is back on schedule.

Below is a ledger of the cash transactions since July of 2012 followed by estimates of the outstanding expenses for FY2019 and anticipated revenue.

Kansas-Oklahoma Arkansas river commission fund

Check#	Date	Description	Amount	Balance	Note
	7/1/2012	Beginning Balance		\$15,503.46	
1002	8/9/2012	B&B Country Dream	(\$34.53)	\$15,468.93	2012 mtg. space
1003	8/9/2012	Elgin Hotel	\$0.00	\$15,468.93	check lost in the mail
1004	8/9/2012	Peggy Blackman	(\$139.09)	\$15,329.84	2012 mtg. expenses
1005	10/3/2012	Elgin Motel	(\$125.00)	\$15,204.84	2012 mtg. space
	2/6/2013	Kansas 2013 Assessment	\$2,900.00	\$18,104.84	
	2/11/2013	Oklahoma 2013 Assessment	\$2,900.00	\$21,004.84	
1006	4/23/2013	M&M Insurance	(\$180.00)	\$20,824.84	CRIM bond
1007	6/19/2013	OKC Courtyard	(\$400.53)	\$20,424.31	2013 mtg. space
		Interest	\$2.13	\$20,426.44	
1008	9/18/2013	Cummins and Coffman	(\$1,500.00)	\$18,926.44	audit
	3/4/2014	Oklahoma 2014 Assessment	\$2,900.00	\$21,826.44	
1009	3/12/2014	M&M Insurance	(\$180.00)	\$21,646.44	CRIM bond
	5/5/2014	Kansas 2014 Assessment	\$2,900.00	\$24,546.44	
		Interest	\$2.09	\$24,548.53	
1010	8/8/2014	Cummins and Coffman	(\$550.00)	\$23,998.53	audit
1011	10/15/2014	Peggy Blackman	(\$204.79)	\$23,793.74	2014 mtg. expenses
1012	3/3/2015	M&M Insurance	(\$180.00)	\$23,613.74	CRIM bond
	3/13/2015	Kansas 2015 Assessment	\$2,900.00	\$26,513.74	
	3/27/2015	Oklahoma 2015 Assessment	\$2,900.00	\$29,413.74	
		Interest	\$2.75	\$29,416.49	FY2015 ending balance
1013	7/14/2015	Cummins and Coffman	(\$650.00)	\$28,766.49	audit
		Interest and Refund	\$7.31	\$28,773.80	FY2016 ending balance
	10/21/2016	Kansas 2016 Assessment	\$2,900.00	\$31,673.80	
	11/8/2016	Oklahoma 2016 Assessment	\$2,900.00	\$34,573.80	
	1/10/2017	Cummins and Coffman	(\$666.35)	\$33,907.45	audit
		Interest	\$3.23	\$33,910.68	FY2017 ending balance
1014	6/30/2017	Marland Mansion	(\$100.00)	\$33,810.68	2017 mtg. Space
	8/11/2017	Kansas 2017 Assessment	\$2,900.00	\$36,710.68	
	8/11/2017	Oklahoma 2017 Assessment	\$2,900.00	\$39,610.68	
1015	2/9/2018	Cummins and Coffman	(\$650.00)	\$38,960.68	financial review
	4/20/2018	Kansas 2018 Assessment	\$2,900.00	\$41,860.68	
	6/1/2018	Strataca (Salt Museum Tour)	(\$277.11)	\$41,583.57	
	6/25/2018	Oklahoma 2018 Assessment	\$2,900.00	\$44,483.57	
		Interest	\$3.96	\$44,487.53	FY2018 ending balance

Kansas-Oklahoma Arkansas river commission fund

<u>Anticipated expenditures for FY2019</u>	<u>Estimate</u>
2019 Annual Meeting costs	(\$400.00)
Incidentals	(\$400.00)
Water Quality Project	(\$10,000.00)
Audit of FY2017 activity	(\$650.00)
Total	(\$11,450.00)

Anticipated Revenue Projection for FY2019

State Assessments (FY2019)	\$5,800.00
Total	\$5,800.00

Balance at the end of FY2018	\$44,488.00
Projected Balance at the end of FY2019	<u>\$38,838.00</u>

KANSAS – OKLAHOMA ARKANSAS RIVER COMMISSION

**FINANCIAL STATEMENTS
AND
INDEPENDENT ACCOUNTANT’S REVIEW REPORT**

As of and For the Year Ended June 30, 2017

**Cummins, Coffman & Schmidlein, CPA’s, P.A.
3706 S. Topeka Blvd., Suite 302
Topeka, Kansas 66609-1246**

KANSAS – OKLAHOMA ARKANSAS RIVER COMMISSION
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INDEPENDENT ACCOUNTANT'S REVIEW REPORT

To the Commissioners of
Kansas – Oklahoma Arkansas River Commission

We have reviewed the accompanying financial statements of Kansas – Oklahoma Arkansas River Commission (the Organization), which comprise the statements of assets, liabilities, and net assets – cash basis as of June 30, 2017, and the related statements of support, revenues, and expenses – cash basis for the years then ended, and the related notes to the financial statements. A review includes primarily applying analytical procedures to management's financial data and making inquiries of management. A review is substantially less in scope than an audit, the objective of which is the expression of an opinion regarding the financial statements as a whole. Accordingly, we do not express such an opinion.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles general accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Accountant's Responsibility

Our responsibility is to conduct the review engagement in accordance with Statements on Standards for Accounting and Review Services promulgated by the Accounting and Review Services Committee of the American Institute of Certified Public Accountants. Those standards require us to perform procedures to obtain limited assurance as a basis for reporting whether we are aware of any material modifications that should be made to the financial statements for them to be in accordance with accounting principles generally accepted in the United States of America. We believe that the results of our procedures provide a reasonable basis for our conclusion.

Accountant's Conclusion

Based on our review, we are not aware of any material modifications that should be made to the accompanying financial statements in order for them to be in accordance with accounting principles generally accepted in the United States of America.

KANSAS – OKLAHOMA ARKANSAS RIVER COMMISSION
STATEMENTS OF ASSETS, LIABILITIES,
AND NET ASSETS – CASH BASIS
Year Ended June 30, 2017

ASSETS

Cash	\$ <u>33,911</u>
Total Assets	\$ <u>33,911</u>
Net Assets, Unrestricted	\$ <u>33,911</u>
Total Liabilities and Net Assets	\$ <u>33,911</u>

The accompanying notes are an integral part of the financial statements.

KANSAS – OKLAHOMA ARKANSAS RIVER COMMISSION
 STATEMENTS OF SUPPORT, REVENUES,
 AND EXPENSES – CASH BASIS
 Year Ended June 30, 2017

UNRESTRICTED NET ASSETS

SUPPORT AND REVENUE

Kansas Department of Agriculture	\$ 2,900
Oklahoma Water Resources Board	2,900
Interest revenue	3
Other revenue	-
Total support and revenue	<u>5,803</u>

EXPENSES

Audit	<u>666</u>
Total expenses	<u>666</u>

Change in unrestricted net assets	5,137
Unrestricted net assets, beginning of year	<u>28,774</u>
Unrestricted net assets, end of year	<u>\$ 33,911</u>

The accompanying notes are an integral part of the financial statements.

KANSAS – OKLAHOMA ARKANSAS RIVER COMMISSION
NOTES TO FINANCIAL STATEMENTS
June 30, 2017

NOTE 1 ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Organization

Kansas – Oklahoma Arkansas River Commission is an interstate administrative agency organized under the Arkansas River Basin Compact in 1965. Its primary purpose is to administer the water apportionment agreed to in the Compact.

Basis of Accounting

The Organization's policy is to prepare financial statements on the cash basis of accounting. Under that basis, the only asset recognized is cash, and no liabilities are recognized. Revenues are recognized when collected rather than when earned and expenses are recognized when paid, rather than when incurred.

Cash and Cash Equivalents

The Organization considers all investments with a maturity of three months or less to be cash equivalents. The Organization maintains its cash in bank accounts of local financial institutions. At both June 30, 2017 and 2016, the Organization's cash balance was not in excess of the insured limits.

Net Assets

The Organization's net assets and revenues are classified based on the existence or absence of imposed restrictions. Accordingly, net assets of the Organization and changes therein are classified and reported as follows:

Unrestricted net assets-net assets that are not subject to imposed stipulations.

Temporarily restricted net assets-net assets that are subject to imposed stipulations that may or will be met either by actions of the Organization and/or the passage of time.

Support and Revenues

Support and revenue are reported as increases to unrestricted net assets unless use of the related assets is limited by imposed restrictions. Expenses are reported as decreases in unrestricted net assets. Assessments are reported in the period received.

NOTE 2 SUBSEQUENT EVENTS

Subsequent events were evaluated through the date of the accountant's report, which is the date the financial statements were available to be issued. No events were found requiring disclosure in these financial statements.

**2018 ENGINEERING
COMMITTEE REPORT**

**KANSAS-OKLAHOMA ARKANSAS RIVER COMPACT COMMISSION
ENGINEERING COMMITTEE REPORT
July 25, 2018
Kansas Department of Transportation Conference Center
Hutchinson, Kansas**

This report covers October 1 1, 2016 through September 30, 2017. The report contains the standard updating of streamflow data, water quality data and construction of reservoir conservation storage capacities in the compact basin areas.

The 2017 water year (WY) mean flows at the five Oklahoma gaging stations were higher than WY2016. The Salt Fork Arkansas near Tonkawa which was 193% of last year's mean flow. The other four gages showed mean flows between 111% and 148% of what they were last year.

The Verdigris River at Independence, Kansas was up 12% with a mean flow of 2,568 cfs in WY2017 compared to 2,301 cfs in WY2016. The Arkansas River at Arkansas City, Kansas was down 29% with a mean flow of 2,373 cfs in WY2017 compared to 3,333 cfs in WY2016.

Annual mean flows in the Chikaskia (115%), Caney (123%) and Neosho (130%) rivers in Oklahoma were slightly above their historical means. The Salt Fork Arkansas River was slightly lower at 94%. The Cimarron River was moderately low at 56%.

The engineering committee reports that two new water storage structures were completed in the Kansas or Oklahoma compact areas during October 1, 2016 through September 30, 2017 that exceeded the 100-acre-foot conservation storage minimum requirement as set forth in the compact. The new storage is shown below.

Pond #1

Normal storage: 241 AF

Section 03 Township 20 N Range 16 EI

Rogers Co. OK

Kourtis Lake

Normal storage: 138 AF

Section 06 Township 22 N Range 12 EI

Osage Co. OK

Respectfully submitted by the engineering committee:


Chris Beightel, Member


Yohanes Sugeng, Member

Water Flow Data

Water Year 2017
Oklahoma and Kansas

Station	Description	Years of Record	Mean Flow Period of Record (cfs)	Mean Flow WY 2016 (cfs)	Mean Flow WY 2017 (cfs)
07175500	Caney River near Ramona, OK	34	1555	1294	1912
07152000	Chikaskia River near Blackwell, OK	81	608	573	700
07158000	Cimarron River near Waynoka, OK	80	265	99	149
07185000	Neosho River near Commerce, OK	78	3817	4468	4973
07151000	Salt Fork Arkansas River at Tonkawa, OK	76	907	442	854
07170500	Verdigris River at Independence, KS	50	2198	2301	2568
07146500	Arkansas River at Arkansas City, KS	98	1953	3333	2373

Source: United States Geological Survey National Water Information System – waterdata.usgs.gov

Water Quality Data

Fall, 2016 through Fall, 2017
Stations in Kansas

Station Number	Station Description	Total Dissolved Solids (mg/L)		Hardness (mg/L)		Specific Conductance (µOhms/cm)		Water Temperature (degrees Celsius)	
		Min	Max	Min	Max	Min	Max	Min	Max
000215	Verdigris River near Coffeyville	140	280	93	240	210	510	5	31
000218	Arkansas River near Arkansas City	380	1100	180	420	640	1900	1	34
000529	Chikaskia River near Corbin	350	510	230	360	610	840	2	34
000566	Neosho River near Oswego	140	390	99	320	240	680	5	30
000214	Neosho River near Chetopa	120	380	82	310	210	660	4	30

Source: Kansas Department of Health and Environment, Stream Chemistry Monitoring Program, July 6, 2018.

Fall, 2016 through Fall, 2017
Stations in Oklahoma

Station Number	Station Description	Total Dissolved Solids (mg/L)		Hardness (mg/L)		Specific conductance (mS/cm)		Water temperature (deg C)	
		Min	Max	Min	Max	Min	Max	Min	Max
621100000010-002RS	Chikaskia River at Tonkawa	348	771	132	496	330	1521	0.51	27.1
121500020260-001AT	Verdigris River at Inola	151	224	89	154	247	366	7.1	30.1
121600010280-001AT	Neosho River at Chouteau	144	190	94	164	167	394	7.91	28.86
620930000010-001AT	Cimarron River at Mocane	2560	3130	416	1425	3951	5983	10.82	25.89
621010010160-001AT	Salt Fork of the Arkansas River at Ingersoll	1450	2030	896	1004	1911	2783	8.6	28.16

Kansas – Oklahoma Arkansas River Compact: Water Quality Update



July 25, 2018

Our Mission: To Protect and Improve the Health and Environment of all Kansans

2017 Maximum and Minimum Values

KDHE Station	Stream Name	Total Dissolved Solids (mg/L)		Hardness (mg/L)		Specific Conductance (uOhms/cm)		Temperature (degrees Celsius)		Total Phosphorus (mg/L)		Total Suspended Solids (mg/L)		Total Nitrogen (mg/L)		Chloride (mg/L)		E. coli (mpn/100 mL)	
		Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
SC529	Chikaskia River near Corbin	350	420	240	290	610	730	10	19	0.14	0.26	30	70	1.67	2.36	32	39	10	650
SC218	Arkansas River near Arkansas City	380	780	180	310	640	1400	12	19	0.43	0.61	29	96	2.75	3.26	83	230	10	481
SC215	Verdigris River near Coffeyville	160	280	120	240	270	510	10	23	0.06	0.22	10	160	0.92	1.38	5.1	19	10	161
SC566	Neosho River near Oswego	190	390	140	320	310	680	15	21	0.09	0.26	19	110	0.78	1.83	7.4	17	10	98
SC214	Neosho River near Chetopa	190	380	140	310	310	660	15	22	0.09	0.26	20	110	0.74	1.75	6.8	17	10	52
SC213	Spring River near Baxter Springs	150	280	100	210	270	500	14	26	0.12	0.21	10	23	1.83	2.68	7.2	21	10	231

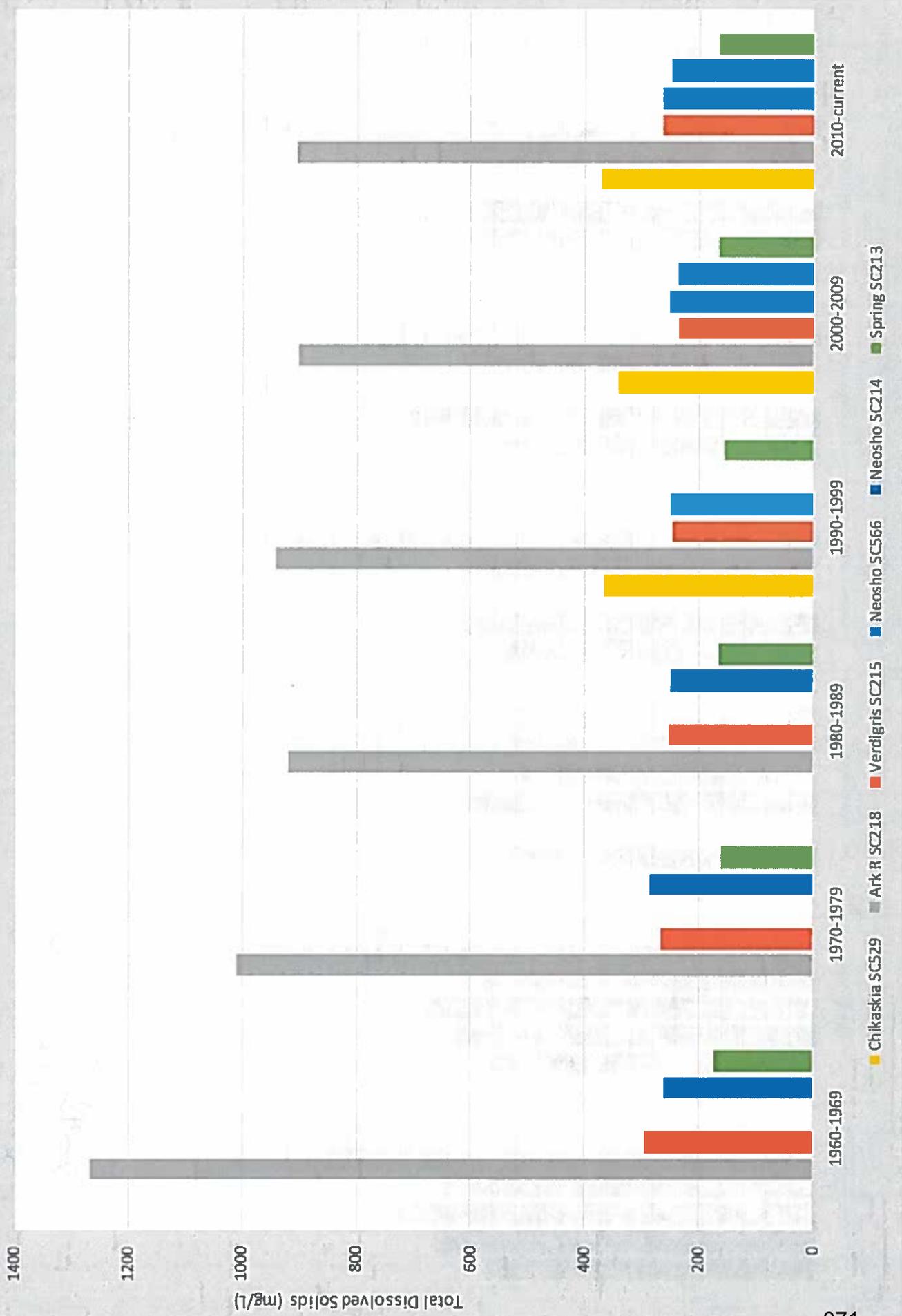
2018 303(d) Stream Impairments in Kansas – KS-OK Arkansas River Compact Area
7/25/2018

Category 5: Impaired but no TMDL established.
Category 4a: Impaired with approved TMDL.
Blank: Not listed as impaired for parameter on the 2018 303(d) List.

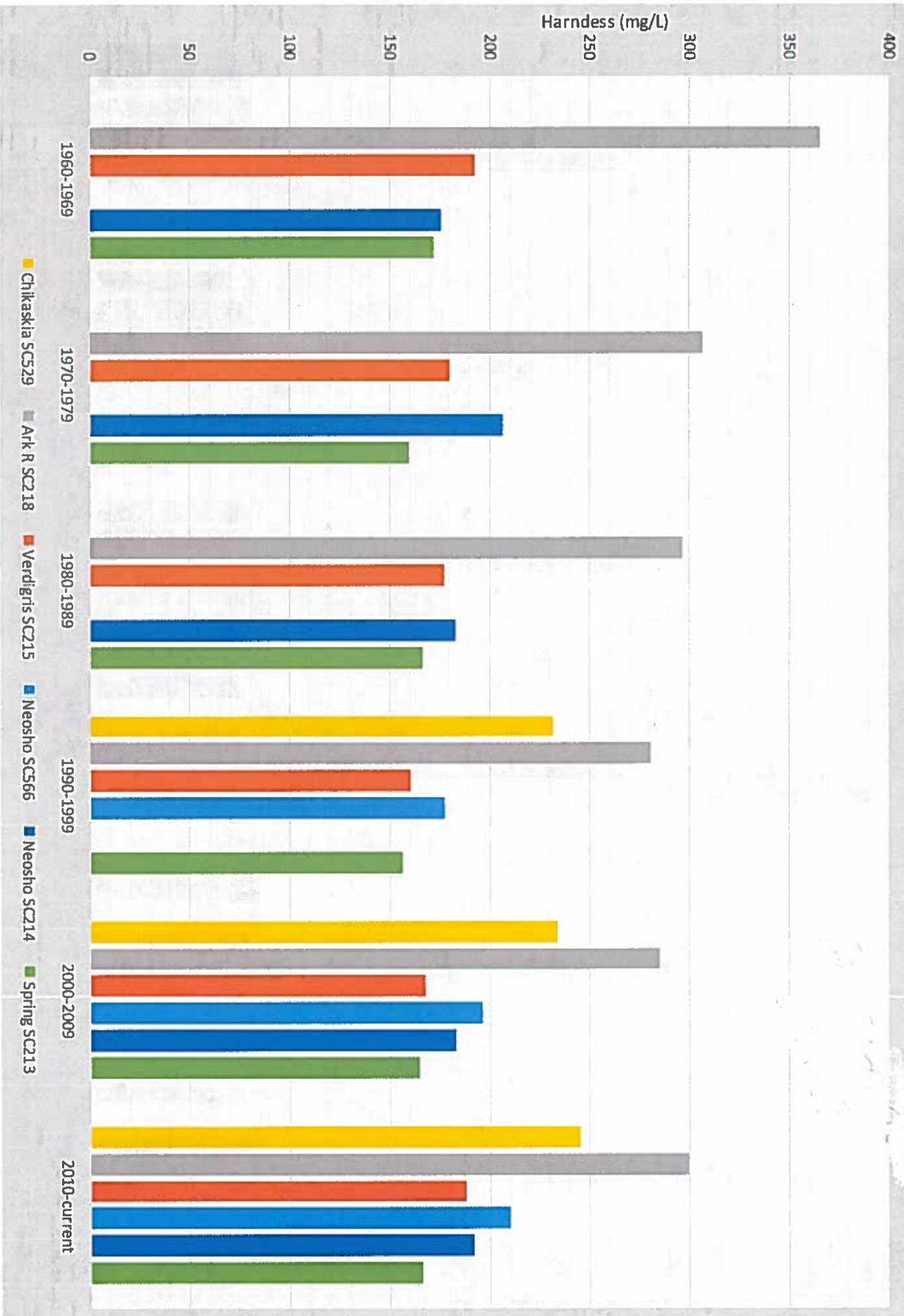
Stream Chemistry Station	Stream Name	303(d) Listing Parameter										
		Atrazine	Biology	Cl	DO	Bacteria	pH	Se	TP	TSS	Temp.	Metals
SC222	Cinnarron River near Forgan, OK			4a	5		4a	5	5			
SC592	Cinnarron River near Protection			4a								
SC591	Salt Fork Arkansas River near Hardner			4a							5	
SC529	Chikaskia River near Corbin					4a						
SC218	Arkansas River near Arkansas City	5	4a	4a			5	5	5			
SC215	Verdigris River near Coffeyville		4a			4a		5				
SC214	Neosho River near Chetopa		5									
SC566	Neosho River near Oswego											
SC213	Spring River near Baxter Springs		4a									4a

Cl: Chloride
DO: Dissolved Oxygen
Bacteria: E. coli or Fecal coli
Se: Selenium
TP: Total Phosphorus
TSS: Total Suspended Solids
Temp: Temperature
Metals: Cadmium, Copper, Lead, and Zinc

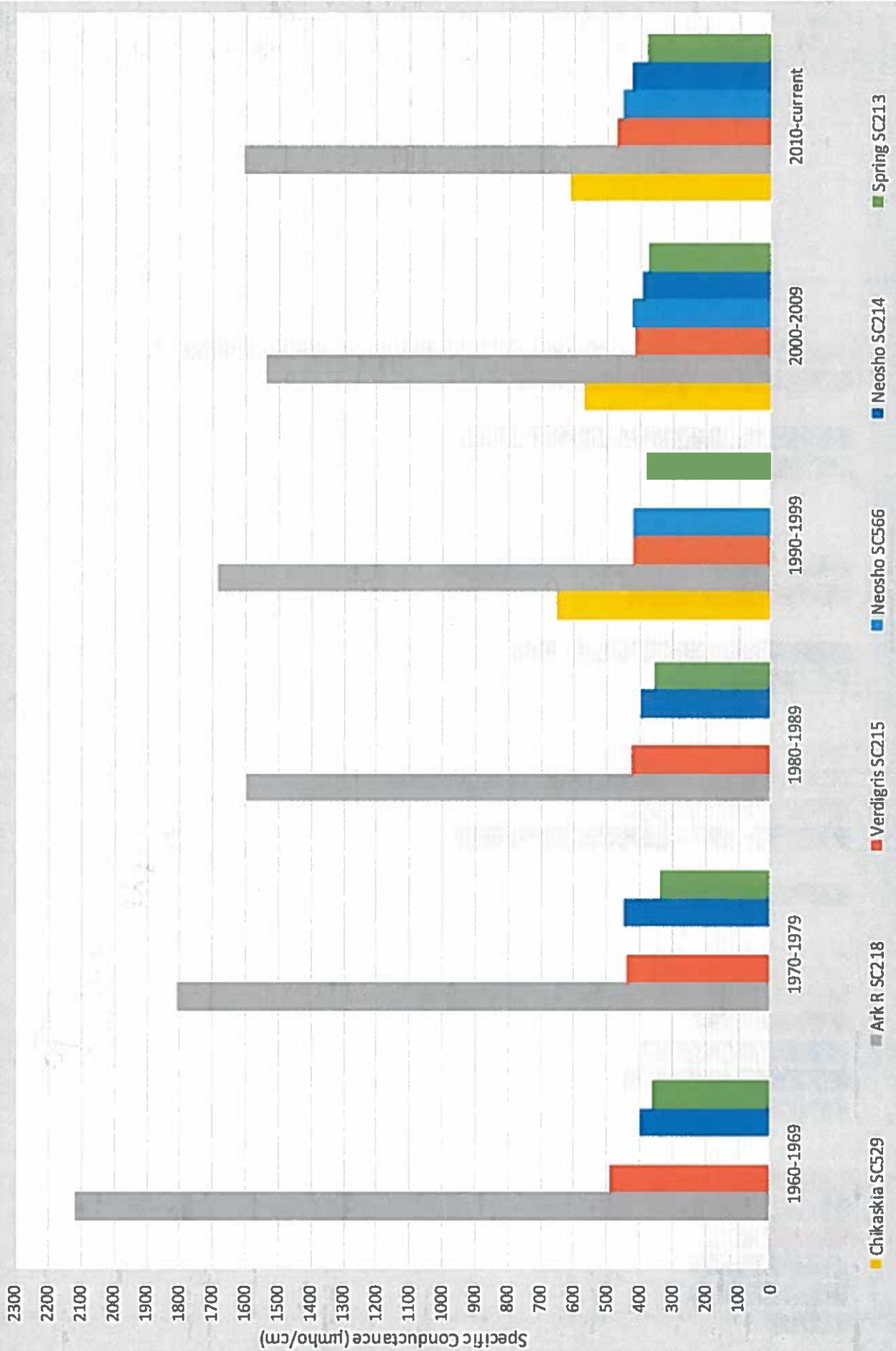
Median Total Dissolved Solids by Decade at State Line



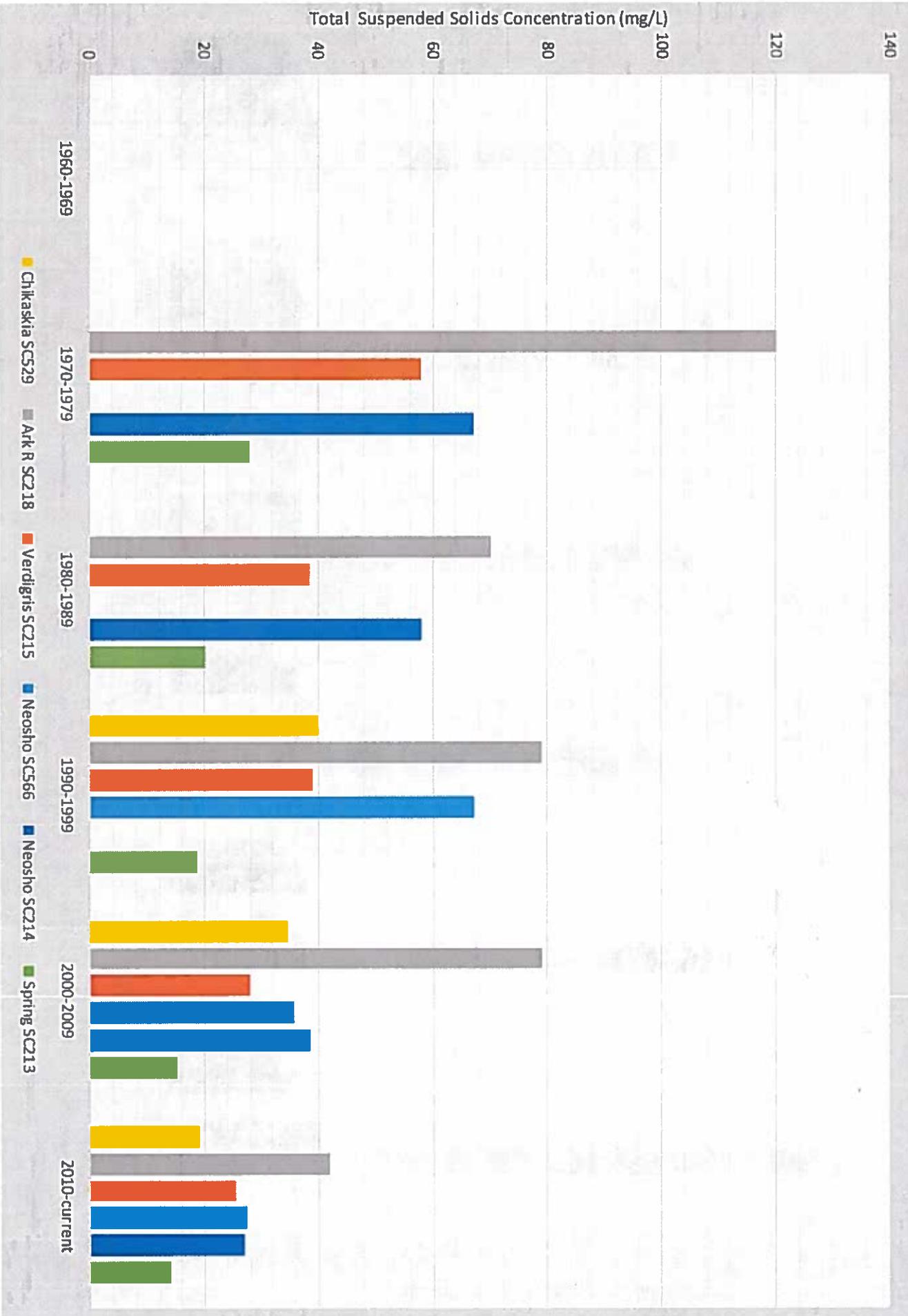
Median Stream Hardness by Decade at State Line



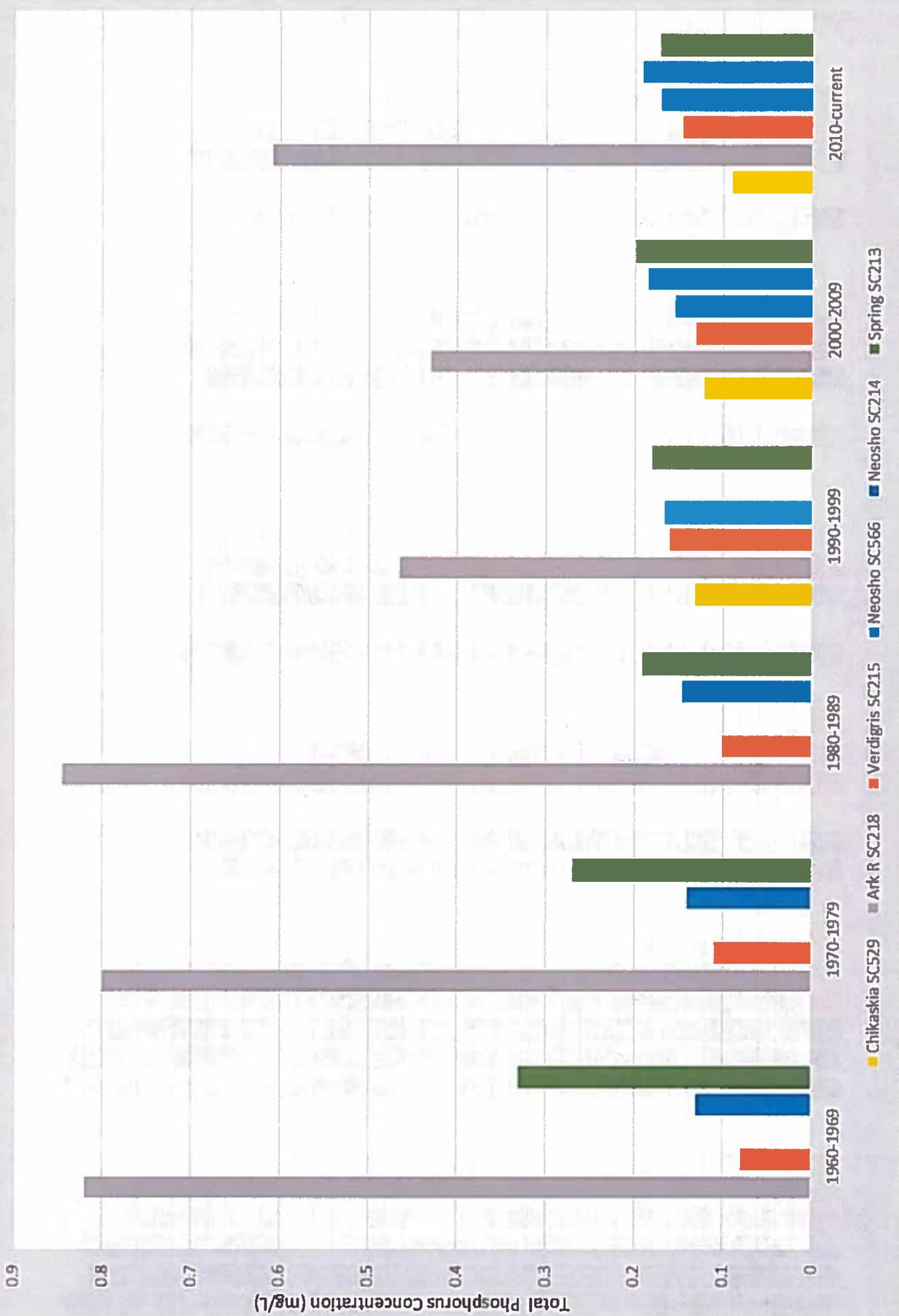
Median Specific Conductance by Decade at State Line



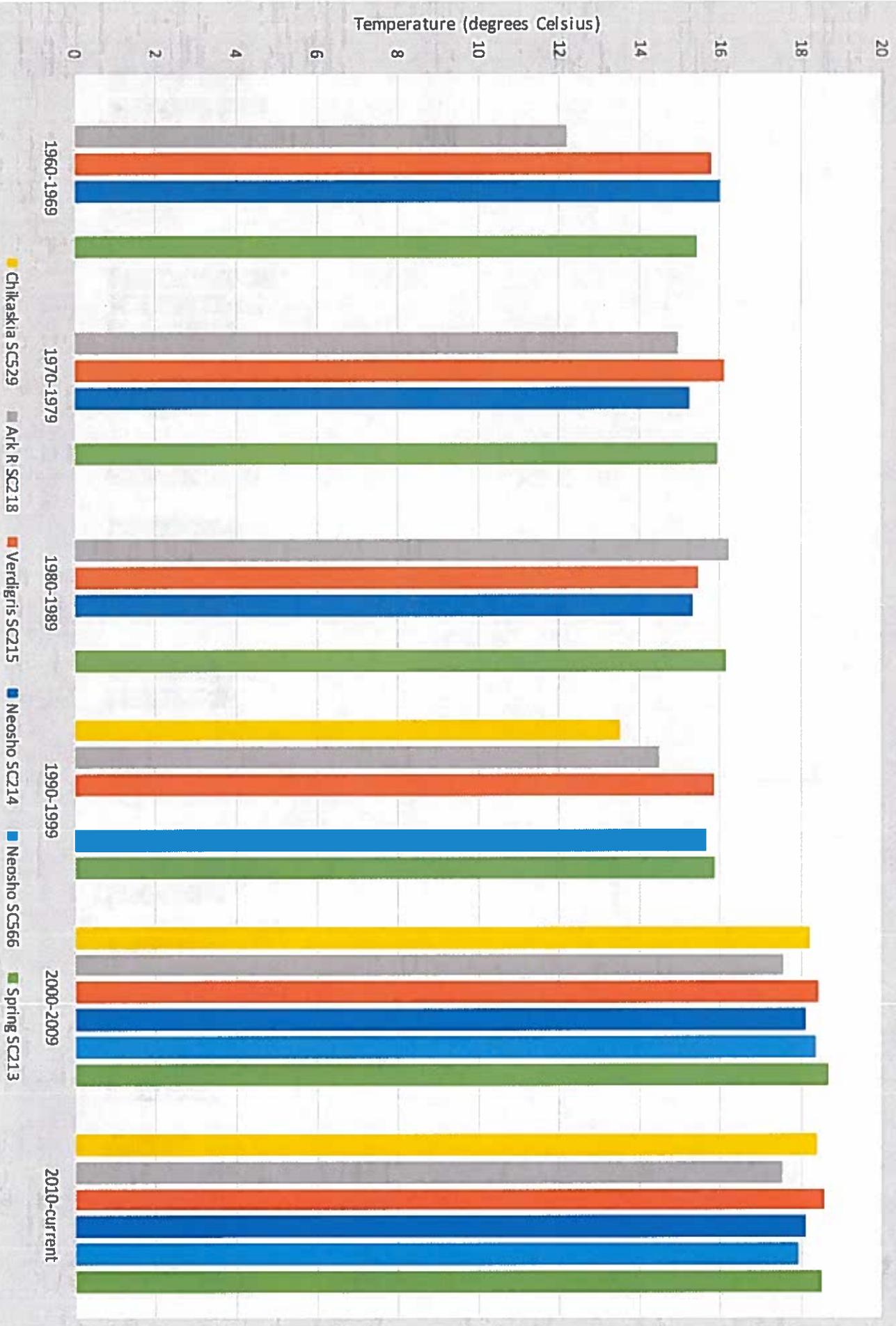
Median Total Suspended Solids Concentrations by Decade at State Line



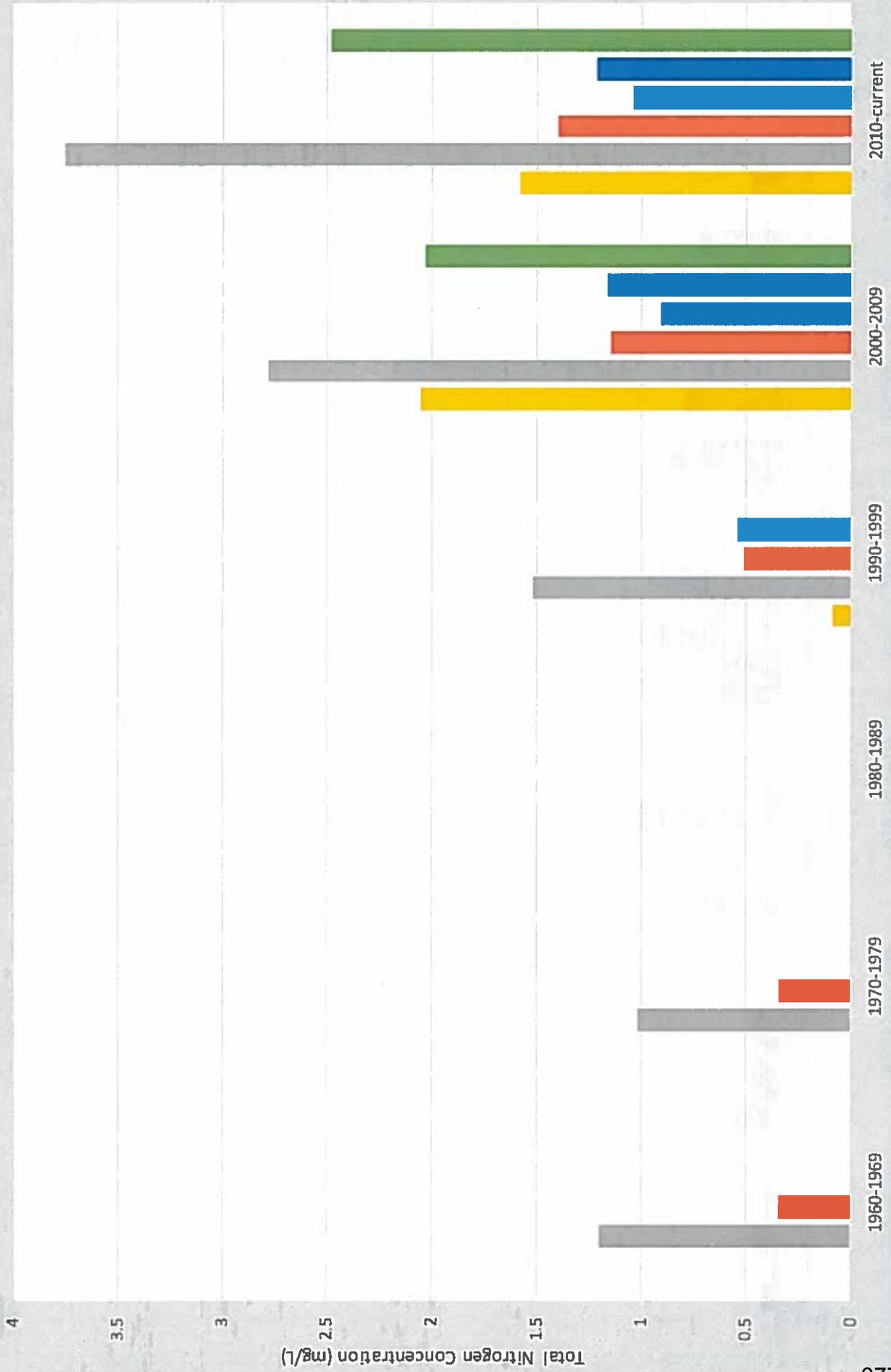
Median Total Phosphorus Concentrations by Decade at State Line



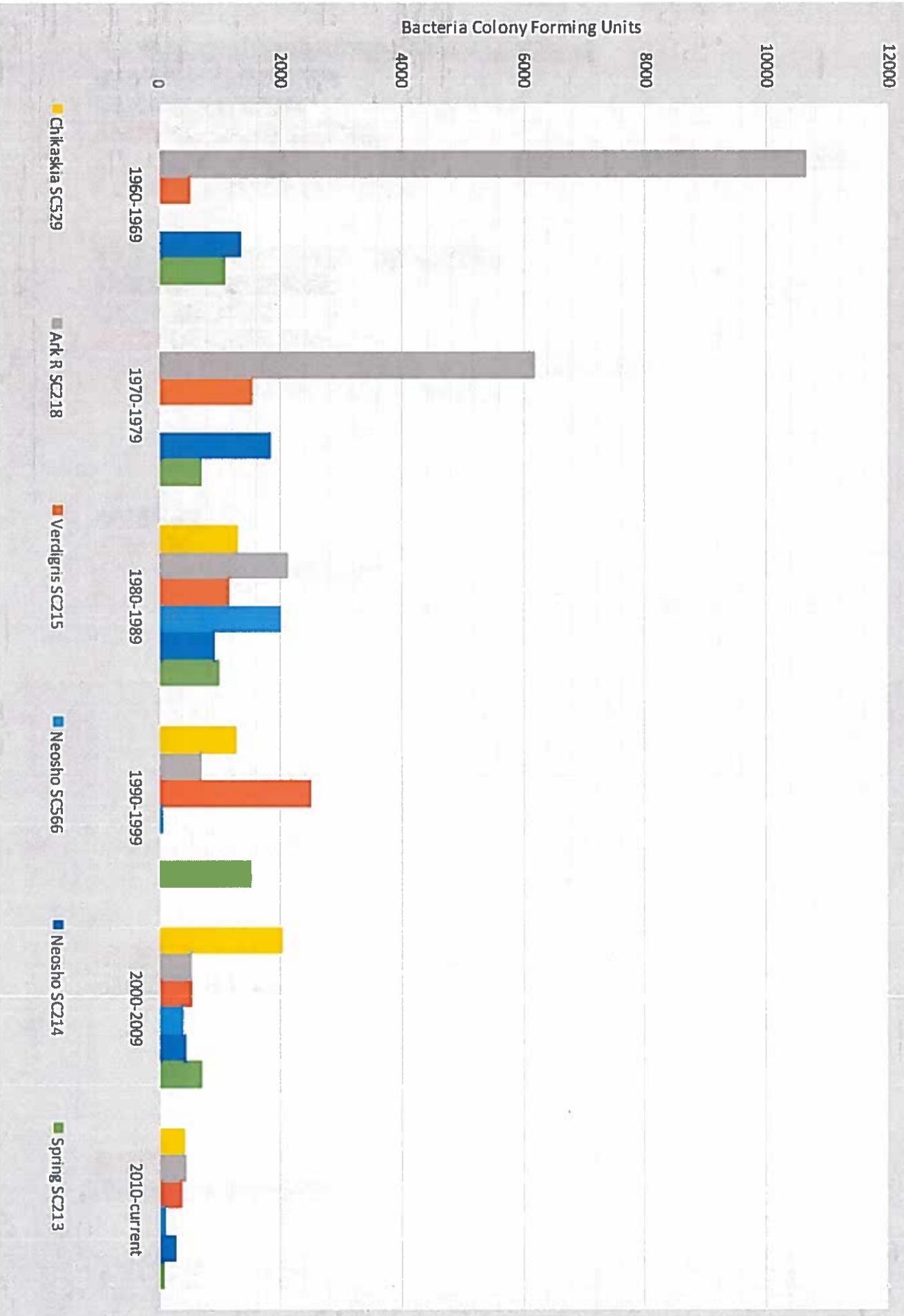
Mean Stream Temperature by Decade at State Line



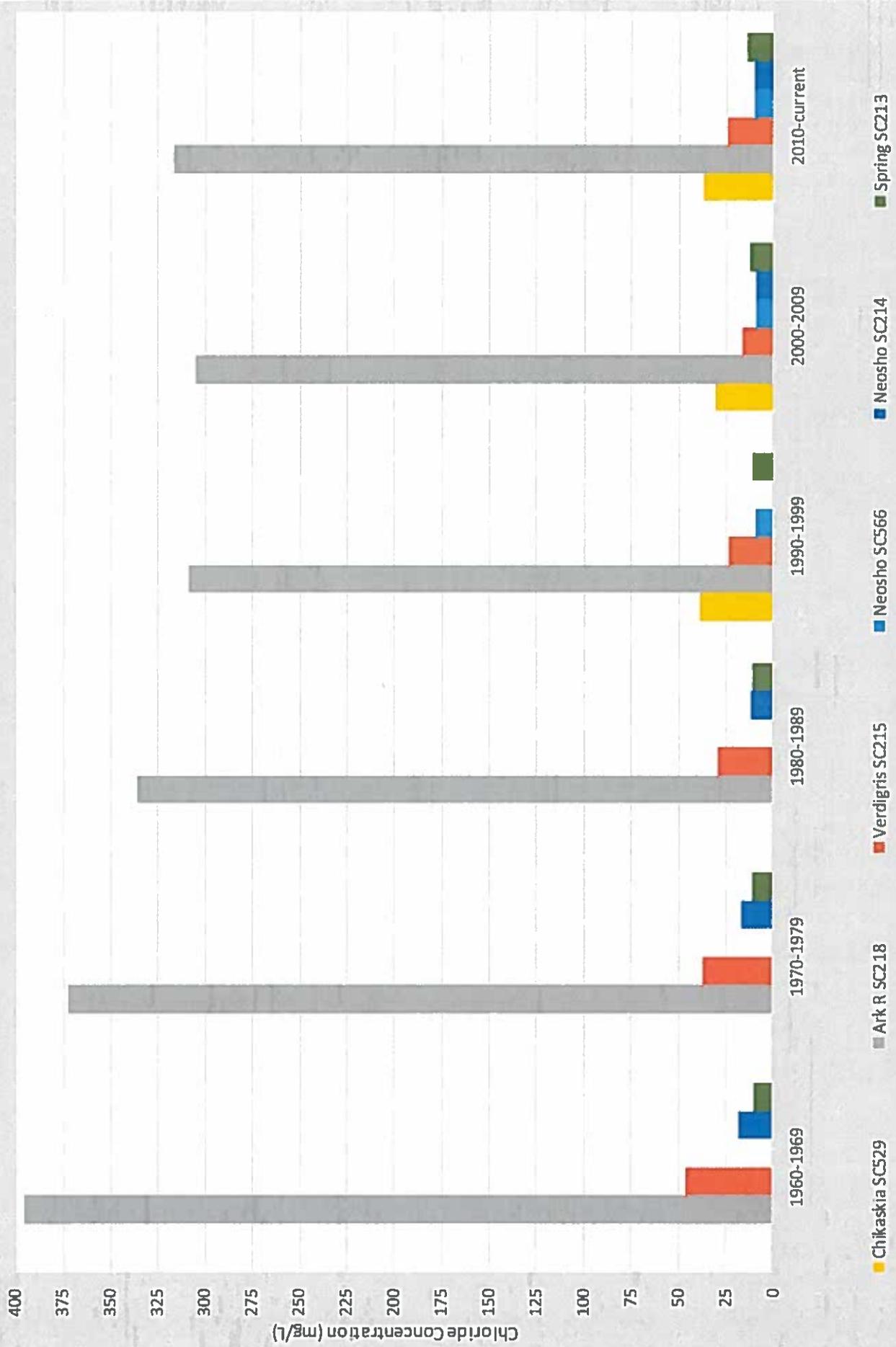
Median Total Nitrogen Concentrations by Decade at State Line



Mean Bacteria Levels by Decade at State Line



Median Chloride Concentrations by Decade at State Line



**2018 FINANCE
COMMITTEE REPORT**

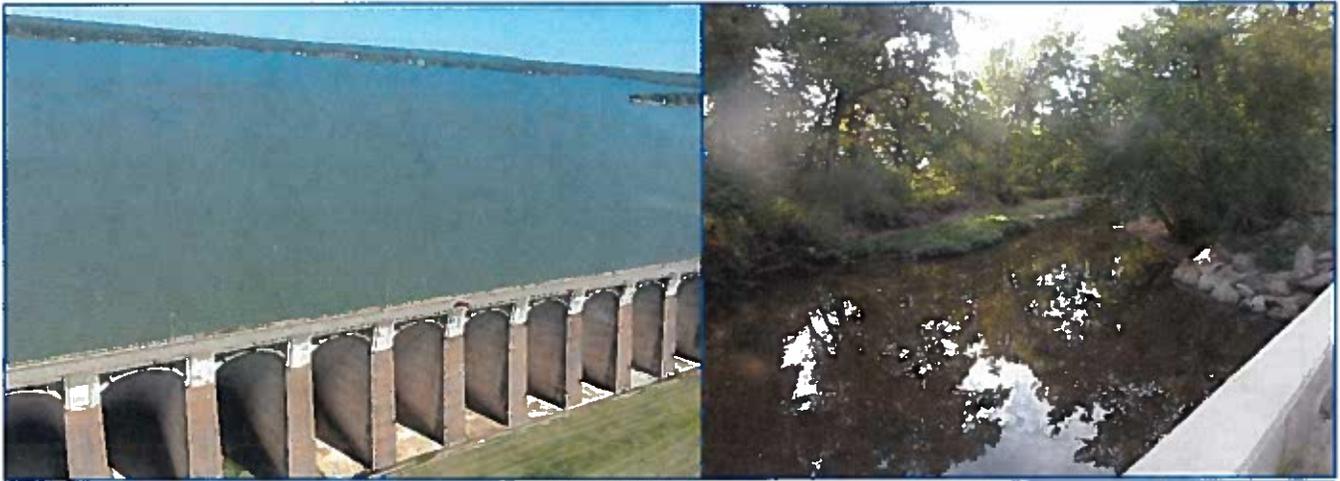
Kansas – Oklahoma Arkansas River Commission
Proposed Budget – FY 2019
 (July 1, 2017 through June 30, 2018)

Kansas-Oklahoma Arkansas River Commission
 Budgets for Fiscal Years (July - June) 2018, 2019 & 2020

Kansas Oklahoma Arkansas River Commission Fund Balance at the end of FY2017			\$33,910.68	
	Fiscal Year 2018		Fiscal Year 2019	Fiscal Year 2020
	Approved	Actual	Proposed	Proposed
Audit of Previous Fiscal Year	(\$650)	(\$650)	(\$650)	(\$650)
Treasurer's Bond	(\$300)	\$0	\$0	\$0
Annual Meeting	(\$400)	(\$377)	(\$400)	(\$400)
Incidentals (inc. bank interest)	(\$400)	\$4	(\$400)	(\$400)
Water Quality Project	(\$10,000)	\$0	(\$10,000)	\$0
Assessments \$2,900 KS; \$2,900 OK	\$11,600	\$11,600	\$5,800	\$5,800
Total Annual	(\$150)	\$10,577	(\$5,650)	\$4,350
Year End Balance	\$33,760	\$44,488	\$38,838	\$43,188

Notes:

- No assessments were paid in FY2016. FY2016 assessments were paid by the states in FY2017. FY2017 assessments were invoiced in FY2018. FY2018 assessments were also invoiced in FY2018.
- No water quality project funds were disbursed in fiscal year 2018, so this line item was moved to the proposed fiscal year 2019 budget
- Annual meeting expenses for the 2017 and 2018 meetings were incurred in fiscal year 2018



Grand Lake and Horse Creek are examples of the waterbodies targeted for improvement in this collaborative effort between Kansas and Oklahoma, working with landowners to install conservation practices that protect water quality.

Middle and Lower Neosho River Basin Resource Conservation Partnership Project

Project Purpose:

Project partners in Oklahoma and Kansas are working with landowners to install conservation practices that reduce nutrient, sediment, and bacteria runoff to nearby streams. USDA Natural Resources Conservation Service, Kansas and Oklahoma state agencies, and local Kansas and Oklahoma Conservation Districts are working with landowners to provide technical and financial assistance to help landowners make management changes such as conversion to no-till cultivation, cover crops, reducing livestock access to streams, conversion of cropland to grasslands, and other practices.

Proposed uses of Kansas-Oklahoma Compact Funds:

In addition to the installation of conservation practices, Kansas and Oklahoma are also supporting educational programs such as farm tours and demonstration farms that help educate area agricultural producers about the need for and value of these management changes. The conservation practices generally focus on reducing pollutant runoff by improving soil health. USDA funds are not eligible for these education programs so states have been funding them with state and U.S. EPA



Demonstration farm tours and field days in the area help show area landowners how they can solve management challenges in ways that benefit their operation, as well as downstream waterbodies.

program funds.



Examples of items which compact commission funds could be used for to further support these efforts include: outside speaker travel and fees, soil health measuring equipment (i.e. temperature and moisture probes, Brix-refractometer, etc.) for demonstration farms, catering fees or other costs that are associated with education events. The funds would be equally split between Kansas and Oklahoma and each state would make determinations for how the funds would be used to support the education programs. If awarded, states will make an annual report to the compact commission on use of funds and progress toward project goals. States will also extend invites to compact commission members for events related to the program.

Handheld Sugar Meter



A Brix Refractometer measures sugar content in plants. It can help cattlemen study when to rotate their cattle in a managed grazing system for optimal weight gain and best health of the vegetation.

A soil moisture probe helps demonstrate the benefits of a cover crop in cultivated land or healthier, more diverse vegetation in grazed areas as compared to more conventionally managed systems.



**FEDERAL, STATE, OTHER
REPORTS**

FEDERAL UPDATE: TULSA DISTRICT US ARMY CORPS OF ENGINEERS

KANSAS – OKLAHOMA ARKANSAS RIVER COMMISSION FIFTY-FOURTH ANNUAL MEETING

Mike B. Abate, RPM
Chief Civil Works Branch, PPMD
Tulsa District Corps of Engineers
25 July 2018

Military



Multipurpose Reservoirs



Hydroelectric



Interagency and International Support



ARKANSAS



The views, opinions and findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy or direction, unless so designated by other official communication.



Civil Works Mission Areas

Water Supply

- 60% of Corps water supply contracts
- 27 lakes, 140 water supply customers
- 2.2 million people served



Tenkiller Lake

Water Quality

- Enhances municipal, industrial, irrigation usage
- Protects endangered species
- Improves degraded streams



Red River Chloride Area VI

Hydroelectric Power

- 8 power plants produce 585,000 kw capacity
- Generates power to 8 million customers



Denison Dam Turbine

Recreation

- 267 recreation areas at 33 projects
- 22.5 million visitors



Hawthorn Bluff Beach, Oologah Lake

Flood Risk Management

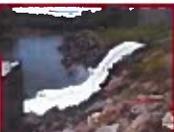
- 38 Corps dams • 12 others
- 15,950,000 acre feet of flood storage
- Arkansas River Basin: \$18.4B in cumulative flood damage reductions
- Red River Basin: \$5.2B in cumulative flood damage reductions



Denison Dam, Lake Texoma

Environmental Stewardship

- 1.1 million acres of Federal land
- 660,000 acres of wildlife management areas



Tenkiller Lake Low Flow Pipe and SDOX

McClellan-Kerr Arkansas River Navigation System

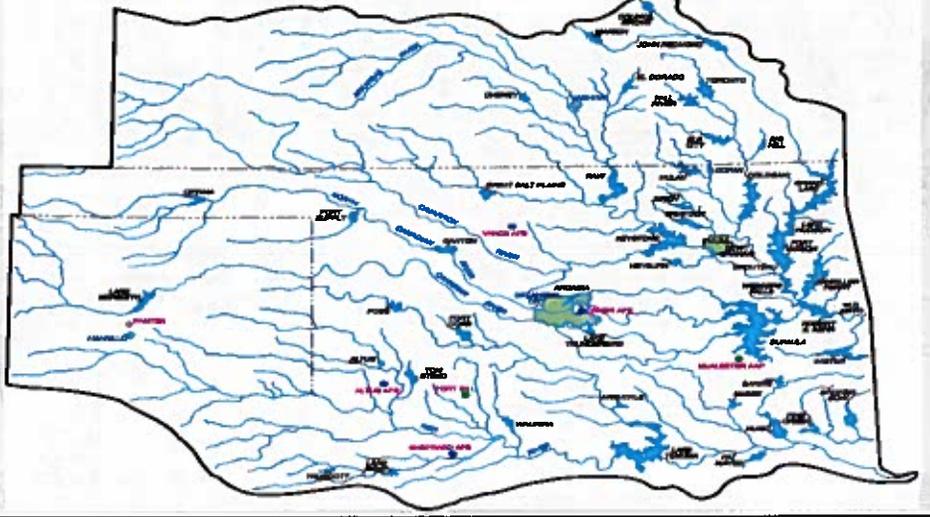
- 5 locks & dams
- 3 major ports



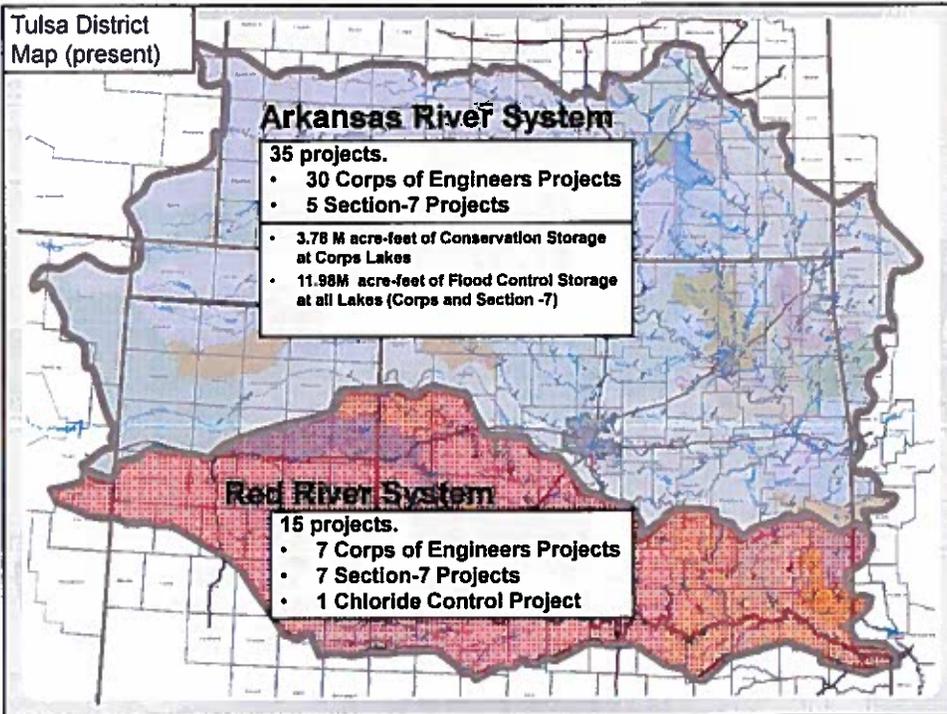


Tulsa District Water Management

- 50 Projects
 - 15 in the Red River Basin
 - 35 in the Arkansas River Basin
- 12 Section-7 lakes (owned by others)
- 23 lakes with gated spillways
- 8 COE Hydropower
- 5 Navigation Locks
- 1 Chloride Control Project



Tulsa District Map (present)



Tulsa District Value to the Nation

Flood Risk Management

- Projects have provided more than \$17B in flood damages prevented through FY2016
- \$403,527,000 in additional flood damages prevented during May-June 2015 flood event alone

Navigation

- 5 locks and dams on the McClellan-Kerr Arkansas River Navigation System (high use system)
- \$153M maintenance backlog (\$139M critical)
- Tonnage estimate (OK portion only): 3,259,437 short tons
- NED benefit estimate: \$49,999,700

Recreation

- 18,283,000 recreation visits (4th in USACE)
- \$611,287,000 visitor trip spending (4th in USACE)
- 38 lake projects (2nd in USACE)
- 1,129,858 fee owned acres (2nd in USACE)
- 510 recreation areas (238 leased – 1st in USACE)

Water Supply

- 27 of 37 O&M projects have water supply as a project purpose
- More than 140 active WS contracts (1.7M acre-feet under contract)
- Provide 35% of potable water supply for Oklahoma, 20% for Kansas
- \$11.7M in revenue
- \$1.39B NED benefit estimate



All data from FY2016 unless otherwise noted

Tulsa District FY 2017 – FY 2019 Civil Works Budget

FY 2017 Allocation

- Investigations - \$415,000
- Construction - \$2,833,000
 - Work Plan: \$1,933,000
 - Flood Supplemental: \$900,000
- O&M - \$117,750,000
 - Regular Appropriation: \$111,040,000
 - Flood Supplemental: \$6,295,000
 - Obligated \$26,000,000 on non-routine maintenance (22% of allocated funds)

Ark River Basin total O&M \$83,660,000

FY 2018 Budget Authority

- Investigations - \$3,235,000
 - Bipartisan: \$3,000,000
 - Regular Appropriation: \$235,000
- Construction - \$0
- O&M - \$139,968,000
 - Regular Appropriation: \$127,723,000
 - Work Plan: \$11,595,000
 - Bipartisan: \$650,000
 - Plan to obligate \$39,369,000 on non-routine maintenance (28% of allocated funds)

Ark River Basin total O&M \$113,384,000

FY 2019 President's Budget

- Investigations - \$0
- Construction - \$0
- O&M - \$90,314,000
 - Regular Appropriation: \$90,314,000
 - Plan to obligate \$22,682,000 (includes \$15.4M from FY18) on non-routine maintenance (21% of budgeted funds)

Ark River Basin total O&M \$68,196,000

The addition of Work Plan amounts by Congress to the fiscal year appropriation allows the Corps of Engineers to fund activities that have become more important or critical since submission of the budget request. Tulsa District received an additional \$1.6M in the FY 2017 Work Plan, and a total of \$6.7M in emergency and flood supplemental funding in FY 2017 and additional \$11.6M in the FY 2018 Work Plan, and a total of \$3.65M in Bipartisan Budget Act authority in FY 2018.



Planning Assistance to States (PAS)

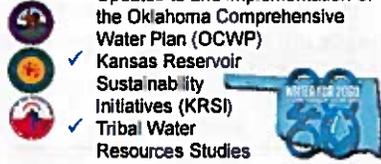
Purpose

- ✓ Section 22, Water Resources Development Act (WRDA) of 1974, as amended, authorizes the Corps of Engineers to assist Tribes, States, local governments, and other non-federal entities with preparation of comprehensive water resources development plans
- ✓ Section 208, WRDA 1992, amended WRDA 1974 to include Native American Tribes as equivalent to States

Tulsa District PAS Program

SWT Leverages funds to support:

- ✓ Updates to and implementation of the Oklahoma Comprehensive Water Plan (OCWP)
- ✓ Kansas Reservoir Sustainability Initiatives (KRSI)
- ✓ Tribal Water Resources Studies



FY 2017 Study Efforts

Oklahoma Comprehensive Water Plan

- ✦ Grand River Comprehensive Water Plan (\$200k)

State of Kansas

- ✦ Dry Turkey Creek, McPherson, KS (\$85k)

FY 2018 PAS Funding Request \$1.04M

OKLAHOMA:

- OCWP: Grand River Comprehensive Water Plan (\$225k)
- OCWP: Hydrogeologic Study (\$200k)

KANSAS:

- KRSI: Cottonwood/Neosho River Sediment Study (\$180k)

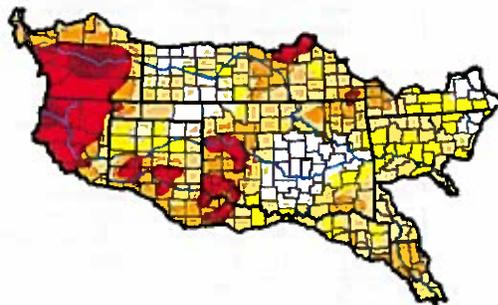
TRIBAL NATIONS:

- Chickasaw and Choctaw Water Study (\$455k)



U.S. Drought Monitor Arkansas-White-Red Watershed

July 17, 2018
(Released Thursday, Jul. 19, 2018)
Valid 8 a.m. EDT



	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	13.56	86.42	83.65	38.83	16.06	2.05
Last Week 07-10-2018	12.73	87.27	64.11	36.12	16.78	2.89
3 Months Ago 04-17-2018	26.33	64.67	80.83	58.52	42.09	14.37
Start of Calendar Year 01-01-2018	0.30	89.70	66.26	29.57	0.00	0.00
Start of Water Year 09-30-2017	63.75	36.25	2.36	0.23	0.00	0.00
One Year Ago 07-18-2017	72.87	27.33	8.20	0.83	0.00	0.00

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

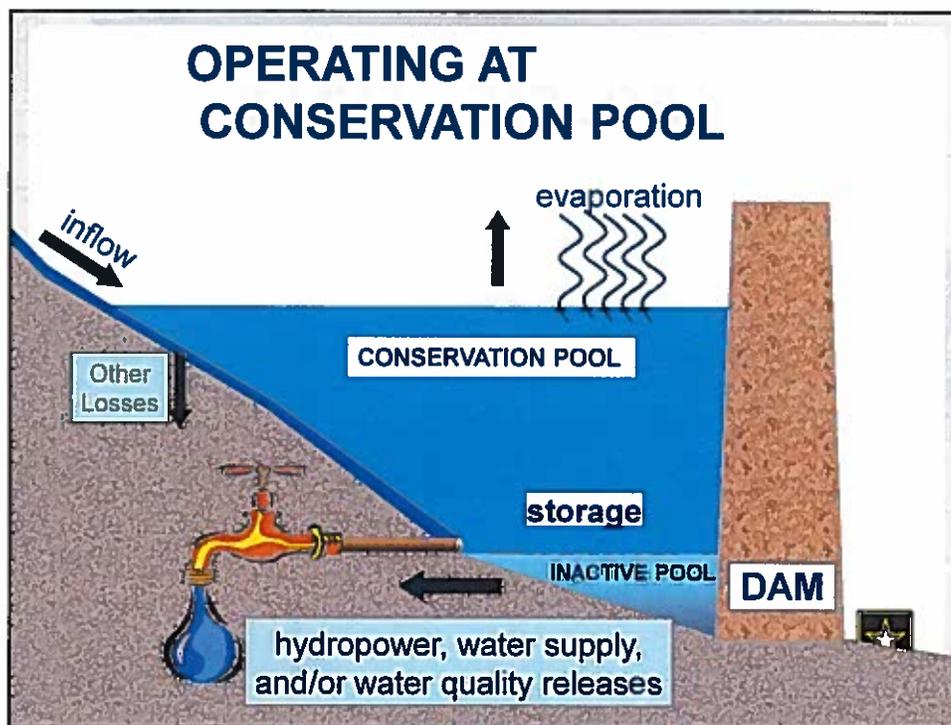
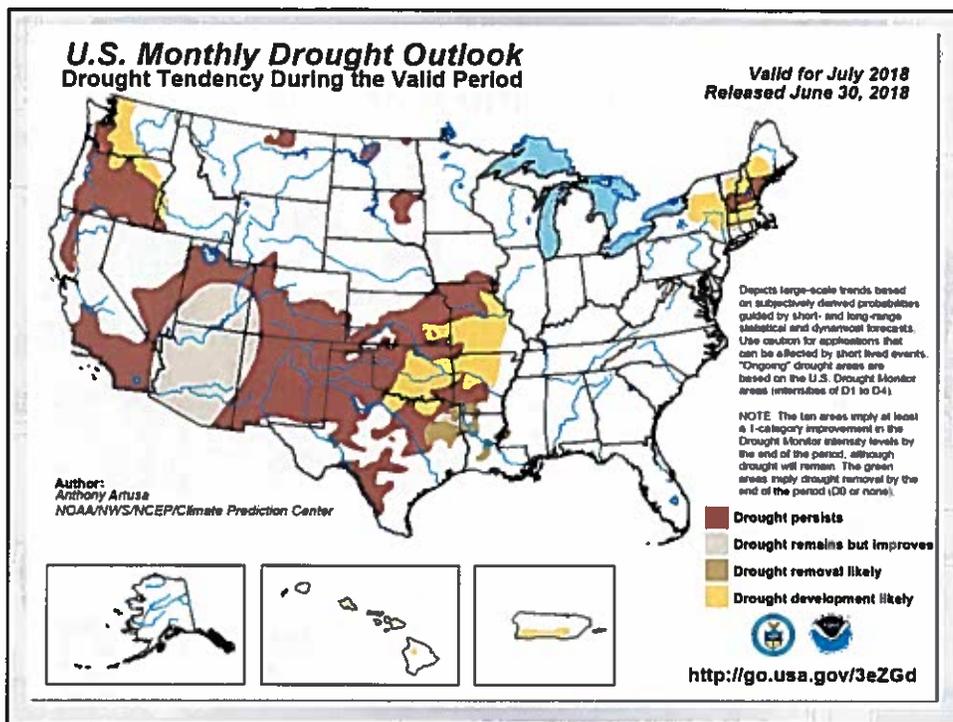
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

Curtis Rigant
National Drought Mitigation Center



<http://droughtmonitor.unl.edu/>

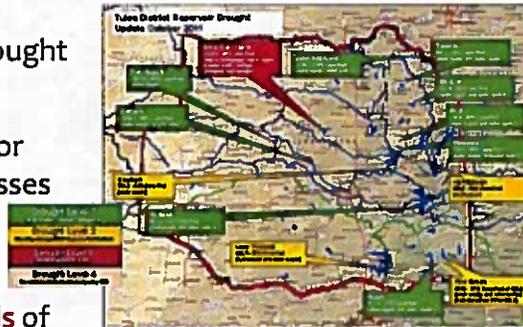


Drought Contingency Plans

Each Corps project has a drought contingency plan

Provides a basic reference for water management processes during a water shortage induced by drought

The plans provide **four levels** of response that are progressively initiated as the drought intensifies



DROUGHT LEVELS

Level 1 - 100% to 75% of Conservation Pool

Level 2 – 75% to 50% of Conservation Pool

Level 3 – 50% to 25% of Conservation Pool

Level 4 – 25% and below of Conservation Pool



DROUGHT LEVEL 1 - (100-75% FULL)

ALERT PHASE-NORMAL OPERATIONS

- Monitor storage, withdrawals, and low flow releases and disseminate status reports as needed within USACE and other parties
- Monitor Basin and Lake Conditions
- Evaluate seasonal pool plans, deviations, etc and meet with shareholders to discuss drought-related impacts
- Normal data collection



DROUGHT LEVEL 2 (75-50% FULL)

MONTHLY STORAGE ACCOUNTING

- Begin monthly water storage accounting for users at 75% conservation pool
- Activate the Corps Drought Management Committee (CDMC)
- Notify the CDMC, Southwestern Division, and storage users of current and projected reservoir conditions
- Assist PAO in making news releases alerting the public of boat ramp closures and boating hazards. Lake manager should post warnings on lake property
- May schedule AD Hoc meeting of Interagency Drought Management Committee
- Ensure weekly and monthly hydropower drawdown limits are being followed (if applicable)
- Minimize any releases for testing procedures



DROUGHT LEVEL 3 (50-25% FULL) **EXPANDING ACTIONS - IDMC**

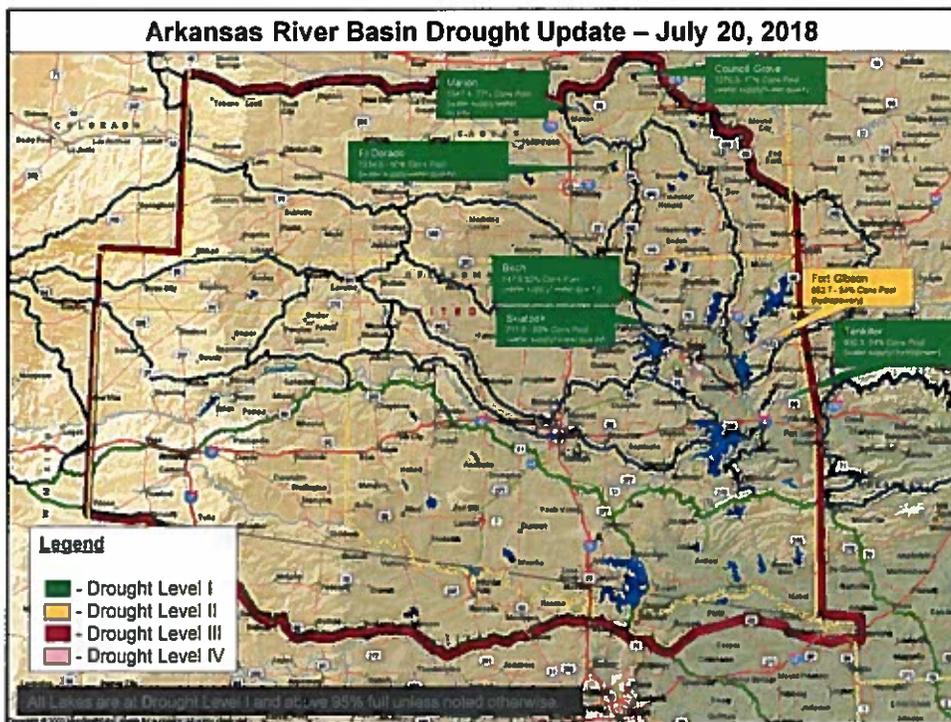
- Activate the Interagency Drought Management Committee (IDMC)
- Post warnings, closings, and boating hazards
- Increase frequency of water supply accounting as needed
- Comments are sought by the CDMC from interested individuals and groups.
- Schedule more frequent meetings of CDMC as necessary
- Evaluate water intakes of contracted in-lake water users
- Identify surplus water supply for municipal and industrial use and costs
- Minimize special event releases



DROUGHT LEVEL 4 (25% AND BELOW) **NO RELEASES/CONTRACT EMERGENCY WS**

- Continue to notify conservation storage users weekly as needed of their remaining storage
- Continue assisting PAO in drought-related news releases
- Begin planning priorities of usage for inactive storage in coordination with IDMC
- Activate the Emergency Operations Center as needed to deal with requests for emergency water supplies
- Contract emergency water supplies if available





Drought Memorandum of Understanding

Tulsa District has an MOU with both Kansas Water Office and Oklahoma Water Resource Board allows withdrawal of water supplies from certain named federal reservoirs under drought emergencies declared by the Governor's.

Memorandum of Understanding
Between Tulsa District, Office of Support
and Kansas Water Office

The purpose of this memorandum of understanding is to provide for the withdrawal of water from certain named federal reservoirs in the State of Kansas under drought emergencies declared by the Governor of Kansas. This memorandum of understanding is intended to provide for the withdrawal of water from certain named federal reservoirs in the State of Kansas under drought emergencies declared by the Governor of Kansas.

1. The purpose of this memorandum of understanding is to provide for the withdrawal of water from certain named federal reservoirs in the State of Kansas under drought emergencies declared by the Governor of Kansas.
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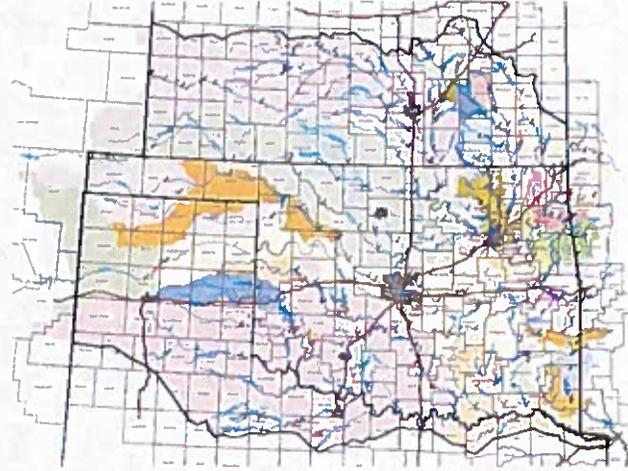
Memorandum of Understanding
Between Tulsa District, Office of Support
and Oklahoma Water Resource Board

The purpose of this memorandum of understanding is to provide for the withdrawal of water from certain named federal reservoirs in the State of Oklahoma under drought emergencies declared by the Governor of Oklahoma. This memorandum of understanding is intended to provide for the withdrawal of water from certain named federal reservoirs in the State of Oklahoma under drought emergencies declared by the Governor of Oklahoma.

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Questions?



RECLAMATION

Managing Water in the West

Summary of Current and Recently Completed Activities

**Planning, Construction Assistance, and Grant Programs
Oklahoma-Texas Area Office**

Mission Statements

The mission of the *Department of the Interior* is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the *Bureau of Reclamation* is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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Introduction

The Bureau of Reclamation (Reclamation) is an agency within the Department of the Interior with a primary mission designated to manage, develop, and protect water and related resources in an environmentally and economically sound manner within the 17 western states. The Oklahoma-Texas Area Office (OTAO) is responsible for administering 11 reservoir projects and associated water distribution systems in southern Kansas, Oklahoma, and Texas. The combined water delivery is more than 680,000 acre-feet (ac-ft) of Municipal and Industrial (M&I) water annually to approximately three million water users, providing additional fish and wildlife, recreation, and flood control benefits. The OTAO supports two Irrigation Districts, one in Oklahoma and one in Texas.

Reclamation works in conjunction with other Federal and state agencies, Indian Tribes, and local entities in performing these responsibilities. Significant areas of activity include providing oversight of operations and maintenance of existing facilities and water resources planning along with construction assistance.

The purpose of this activity report is to provide a summary of current and recently completed activities under the Planning, Construction Assistance, and Grant Programs.

Native American Affairs Program

The Native American Affairs Program, which is a formal program funded through the Native American Affairs line item in Reclamation's budget, is small but integral part of the overall Native American Program. The Native American and International Affairs Office in the Commissioner's Office serve as the central coordination point for the Native American Affairs Program and lead for policy guidance for Native American issues in Reclamation.

Four new projects were recently awarded in FY 17 totaling \$277,900 in Federal funding:

- **Cherokee Nation**
Hydraulic and Water Loss Assessment of Cherokee Rural Water District #2
- **Chickasaw Nation**
Davis to Sulphur Pipeline Feasibility Study
- **Kickapoo Tribe of Oklahoma**
Establishing Reference Conditions for the Northern Cross Timbers EcoRegion Using Macroinvertebrate Assemblages
- **Miami Tribe of Oklahoma**
Water Assessment of Tribal Land

Two projects were awarded in FY 16 totaling \$55,000 in Federal funding:

- **Muscogee Creek Nation**
Groundwater Study
- **Cherokee Nation**
Cherokee Rural Water District #8 Hydraulic and Water Loss Assessment

Three projects were initiated in FY 15 (one already completed) totaling \$180,000 in Federal funding:

- **Cherokee Nation**
Hydraulic and Water Loss Study of Adair County Rural Water District #1
- **Cherokee Nation**
Viability Assessment for Regionalization of Rural Water Systems in Western Cherokee County, OK
- **Peoria Tribe of Indians of Oklahoma**
Potential for Utilization of Contaminated Portions of the Boone Aquifer

Water Conservation Field Services (WCFS) Program

One new project was awarded in FY 17 totaling \$100,000 in Federal funding:

- **Central Oklahoma Master Conservancy District (COMCD)**
Evaluate the Effectiveness of Floating Wetland/Breakwater Unit Designs to Reduce the Energy of Wave Action before Contacting the Lake's Shoreline

Two projects were initiated in FY 16 totaling \$432,504 in Federal funding:

- **City of Norman, OK**
Test-Pilot Hexavalent Chromium (Cr6) Removal Technologies to Address Cr6 Groundwater Occurrence and Potentially Reduce Stress on Lake Thunderbird (COMCD) Water Supply and Improve Drought Resiliency
- **City of Garden City, KS**
Installation of a Subsurface Drip Irrigation System at Clint Lightner Field
Subsurface Irrigation to Demonstration Effluent Reuse

Two projects were initiated in FY 15 (both scheduled to be completed by end of September 2017) totaling \$115,433 in Federal Funding

- **City of Wichita Falls, TX**
Implement Water and Energy Conservation Measures for the Operations, Management, and Use of Water within the District
- **Texas Water Development Board**
Development of Methodologies to Evaluate the Environmental, Financial and Social Benefits of Water Reuse Projects

WaterSMART Program

Reclamation's WaterSMART (Sustain and Manage America's Resources for Tomorrow) Program aims to leverage Federal (up to 50 percent cost-share) and non-Federal funds to improve water management, increase energy efficiency in water delivery, facilitate water marketing projects, protect threatened and endangered species, and carry out activities to address potential climate-related impacts on water resources. Eligible entities include irrigation and water districts, river authorities, tribes, states and other entities with water or power delivery authority.

Basin Study Program

This program addresses water needs on a basin-wide scale through development of future supply/demand projections that include state-of-the-art data on climate variability; an analysis of how infrastructure and operations will perform in the face of changing realities; and development of mitigation strategies and management solutions. Studies are cost-shared on a 50/50 basis with willing state, tribal, and local partners and generally take two years to complete. Reclamation's share of study costs are used to support work done by Reclamation or its contractors.

Upper Washita Basin Study

A Basin Study on the Upper Washita Basin in Oklahoma was awarded \$350,000 in FY 12 Federal funds to partner with the Oklahoma Water Resources Board (OWRB) and Fort Cobb and Foss Reservoir Master Conservancy Districts to identify sustainable solutions to infrastructure issues and existing and projected imbalances between water supply and demand. To date, including both Federal and non-Federal cost-share contributions from partners, the total cost is \$1,260,660 and is expected to be completed in late 2018.

OWRB is in the process of completing a groundwater-flow model on the Rush Springs Aquifer and a surface water allocation model (SWAM) on the Washita River. Completion of these models is critical toward being able to evaluate the reliability of existing infrastructure and options under current and future climate conditions, as well as evaluating adaptation and mitigation strategies. The Fort Cobb Reservoir Master Conservancy District has been working closely with Reclamation to develop conveyance alternatives to address aging infrastructure issues. Designs and cost estimates are under development.

Upper Red River Basin Study

A Basin Study on the Upper Red River Basin in Oklahoma was awarded \$640,000 in FY 14 Federal funds to partner with the OWRB, Lugert-Altus Irrigation District, and Mountain Park Master Conservancy District to identify sustainable solutions to infrastructure issues and existing and projected imbalances between water supply and demand. The study will evaluate infrastructure and permitting options that help ensure long-term reliability of water supplies during critical drought periods. To date, including

both Federal and non-Federal cost-share contributions from partners, the total cost is approximately \$2,511,762. The study is expected to be completed in late 2018.

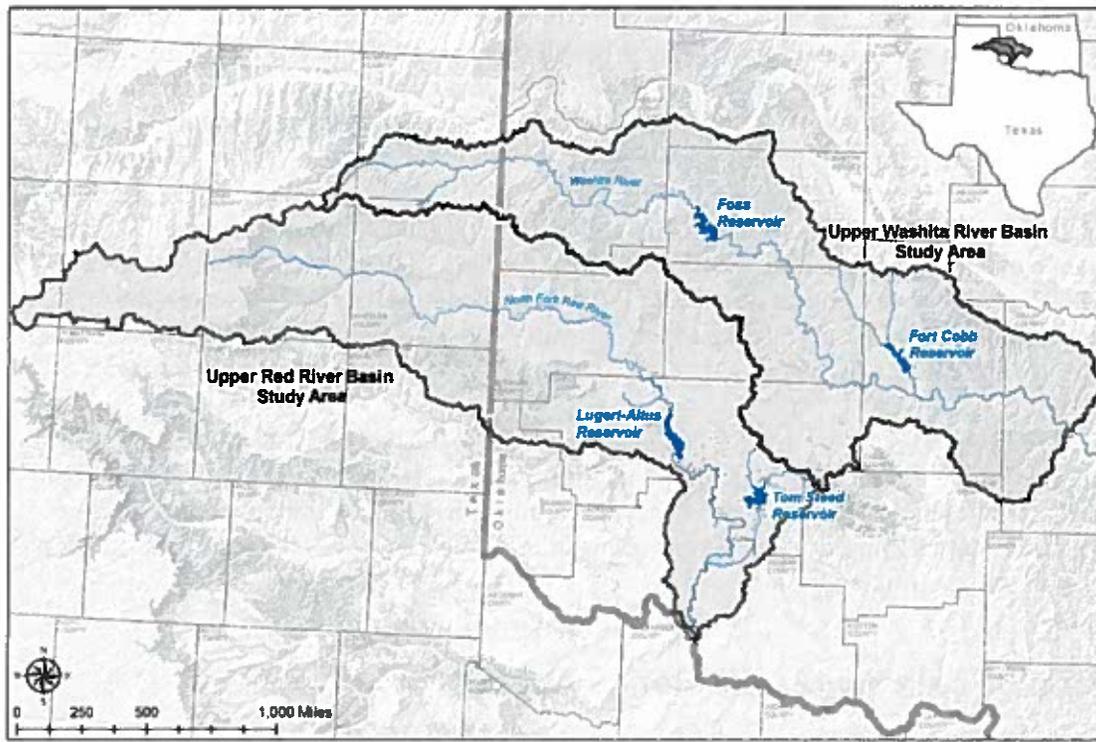


Figure 1: Upper Washita and Upper Red River Basin Study area map.

Water and Energy Efficiency Grants

This program seeks to conserve and use water more efficiently, increase the use of renewable energy, improve energy efficiency, benefit endangered and threatened species, facilitate water markets, carry out activities to address climate-related impacts on water or prevent any water-related crisis or conflict. Since 2010, Reclamation has awarded about \$7.3 million to 32 projects in Texas and Oklahoma with a cumulative project cost of \$25.5 million. The estimated total amount of water saved or better managed is about 26,863 acre-feet per year.

Cameron County Irrigation District #2 (CCID2)

CCID2 in Texas was awarded a total of \$1,049,999 in FY 17 comprised of four separate projects.

CCID2 Canal F was awarded \$299,973 in FY 17 for the conversion of Lateral “F” from an open canal to a pipeline. The proposed project consists of approximately 7,000 liner feet (lf). These improvements are expected to improve water deliveries by conserving

approximately 542.60 acre-feet per year of water and an estimated 25,865 kilowatt hours per year in energy efficiency.

CCID2 Lateral JN-1 was awarded \$173,311 in FY 17 for the conversion of Lateral “JN-1” from an open canal to a pipeline. The proposed project consists of approximately 3,900 liner feet (lf). These improvements are expected to improve water deliveries by conserving approximately 621.50 acre-feet per year of water and an estimated 25,015 kilowatt hours per year in energy efficiency.

CCID2 Canal E was awarded \$299,674 in FY 17 for the conversion of Canal “E” from an open canal to a pipeline. The proposed project consists of approximately 4,900 liner feet (lf). These improvements are expected to improve water deliveries by conserving approximately 802.81 acre-feet per year of water and an estimated 32,312 kilowatt hours per year in energy efficiency.

CCID2 Lateral 8 was awarded \$299,731 in FY 17 for the conversion of Lateral “8” from an open canal to a pipeline. The proposed project consists of approximately 6,800 liner feet (lf). These improvements are expected to improve water deliveries by conserving approximately 915 acre-feet per year of water and an estimated 36,827 kilowatt hours per year in energy efficiency.

Small-Scale Water Efficiency Grants

In FY 17, new small-scale water efficiency projects funding opportunities for small improvements that have been identified through previous planning efforts were created. Eligible projects include installation of flow measurement or automation in a specific part of a water delivery system, lining of a section of canal to address seepage, small rebate programs that result in reduced residential water use, or other similar projects that are limited in scope.

Locust Grove Public Works Authority

Locus Grove Public Works Authority in Oklahoma was awarded \$74,395 in FY 17 for a project to improve approximately 2,175 Linear feet (LF) of inefficient water line comprised of asbestos cement, steel, and schedule 40 PVC to NSF61 recommended C900 pipe in District Metering Area (DMA) #1 to address the 70% water loss as confirmed by the Locust Grove Water Loss Study completion 2017. Estimated water saved (ac-ft/yr) is 705.

Thomas Public Works Authority

Thomas Public Works Authority in Oklahoma was awarded \$75,000 in FY 17 for a project where all of the current mechanical residential and commercial meters will be replaced with electronic smart meters which will provide more accurate readings and more efficient use of public works employee' time. Estimated water saved (ac-ft/yr) is 625.

City of Purcell

The City of Purcell in Oklahoma was awarded \$59,480 in FY 17 to install a floating pump in the lake and construct a 6" line to supply water to the little league complex.

Brownsville Public Utilities Board

The Brownsville Public Utilities Board was awarded \$74,868 in FY 17 in collaboration with Brownsville Independent School District to install water efficient shower head kits and faucets at Hanna Early College High School and Porter Early College High School. Efforts will result in quantifiable and sustainable water savings by approximately 11.4%.

Hidalgo County Irrigation District #2

Hidalgo County Irrigation District No. 2 was awarded \$74,978 in FY 17 for the automation of the Lateral B and C Canal Gate.

Cameron County Irrigation District #6

Cameron County Irrigation District #6 in Los Fresnos, Texas was awarded \$300,000 in FY 15 for a project that will enclose 3,800 feet of open canal with pipe, replace an existing pump station with a new aerial crossing, and install a solar powered lift pump. The project is expected to result in annual water savings of 275 acre-feet through reduced seepage losses, which will help to alleviate shortages due to drought in the Lower Rio Grande Basin. In addition, the solar powered lift pump is expected to generate 53,000 kilowatt-hours per year. The project also includes the construction of an outlet that will facilitate supplying water to the Lower Rio Grande Valley National Wildlife Refuge. Conserved water will be allocated to District customers and the Wildlife Refuge.

Santa Cruz Irrigation District No. 15

The Santa Cruz Irrigation District No. 15 in southern Texas was awarded \$300,000 in FY 15 to: line 7,265 feet of the existing N-Canal, install a variable frequency drive at the existing Pump-15 Lift Station, and construct a wind powered pump to provide auxiliary power to the Pump-15 Lift Station. Annually, the project is expected to result in water savings of 955 acre-feet by eliminating seepage in the canal and provide wind power generation of 1,733 kilowatt-hours. Conserved water will be left in the system.

Title XVI - Water Reclamation & Reuse Program

Title XVI of P.L. 102-575, as amended (Title XVI), provides authority for Reclamation's water recycling and reuse program, titled "Title XVI." Through the Title XVI program, Reclamation identifies and investigates opportunities to reclaim and reuse wastewaters and naturally impaired ground and surface water in the 17 Western States and Hawaii. Title XVI includes funding for the planning, design, and construction of water recycling and reuse projects, on a project specific basis, in partnership with local governmental entities. In FY 17, Reclamation announced three separate categories of funding opportunities including Authorized Project, Feasibility Studies and Research Studies. In previous years Reclamation has had sufficient funding for two categories: up to \$150,000 for relatively small studies and up to \$450,000 for larger, regional scale studies.

To date, approximately \$2.5 million has been awarded to 17 studies within the Oklahoma-Texas Area Office (OTAO).

In FY 17, six entities from all three states (Kansas, Oklahoma and Texas) within OTAO were awarded federal grants totaling over \$786,000 to conduct both feasibility and research studies.

Oklahoma Water Resources Board

The Oklahoma Water Resources Board was awarded a \$150,000 grant in FY 17 for a feasibility study of potential impacts of select alternative produced water management and reuse scenarios. This study responds to both of Oklahoma Governor Mary Fallin's recent mandates to the OWRB to search for ways to use produced water as a benefit to the state as part of the Water for 2060 Initiative and to find solutions that deep-well injection volumes and thereby reduce the threat of seismicity within the state.

City of Ada, OK

The City of Ada, Oklahoma was awarded a \$136,193 grant in FY 17 for a feasibility study within the "Assessment of the Potential for Recycled Water Development to Offset Potable Water Demands with Non-Potable Supply and Reducing Negative Water Quality Impacts in the Receiving Streams within Tribal Territory" Phase II Reuse Study. This study will provide the City with the means to continue down the path of a sustainable water supply future.

City of Bartlesville, OK

The City of Bartlesville, Oklahoma was awarded a \$150,000 grant in FY 17 for a feasibility study to augment Bartlesville water supply with drought-resilient reclaimed water. This feasibility study will determine the environmental, technical and cost viabilities of reclaiming wastewater effluent by relocating the existing Caney River effluent discharge approximately 5 to 7 miles upstream, which places the effluent

City of Garden City, KS

The City of Garden City, Kansas was awarded a \$65,369 grant in FY 17 for a feasibility study to gather information regarding the current state of the fragile water supply and long-term supply outlook with eminent reuse opportunities. The scope of the study will provide the City with information to develop or enhance several policies including enhancing the most cost effective method to reuse the maximum quantity of water with the lowest cost impact and maximum benefit for long-term water availability.

North Alamo Water Supply Corp. (NAWSC)

North Alamo Water Supply Corporation in Texas was awarded a \$90,000 grant in FY 17 for a feasibility study of energy-effluent alternatives for brackish groundwater desalination. This study will build on work recently completed by Reclamation, the Lower Rio Grande Regional Water Planning Group (region M), the Texas Water Development Board and the Rio Grande Regional Water Authority.

Kansas Water Office

The Kansas Water Office (KWO) was awarded a \$199,175 grant in FY 17 for a research study to pilot test produced water near Hardtner, Kansas. The project will involve the

treatment of produced oil field water to a quality standard acceptable for agricultural irrigation and the watering of livestock.

Projects awarded in FY 15:

City of Lubbock, Texas – Potable Water Reuse Implementation Feasibility Study

The City of Lubbock, Texas was awarded a \$150,000 grant for a feasibility study of Potable Water Reuse. The following potable reuse options to be evaluated in this study will focus on the three main categories of potable reuse identified in their 2013 Strategic Water Supply Plan:

1. Indirect potable reuse (IPR) – surface water augmentation;
2. Indirect potable reuse (IPR) – groundwater augmentation; and
3. Direct potable reuse (DPR).

City of Hudson Oaks, Texas – Feasibility of Water Reclamation and Reuse in Hudson Oaks

City of Hudson Oaks, Texas was awarded \$147,600 to exam the feasibility of three potential alternatives for water reclamation and reuse, including: 1) Constructing a wastewater treatment plant in the City of Hudson Oaks to treat and reuse local effluent; 2) Collecting and utilizing stormwater runoff for reuse and distribution in the community, as well as for an added environmental habitat and recreation amenity; and 3) Pumping treated wastewater from the City of Weatherford Wastewater Treatment Plant to Hudson Oaks for reuse.

City of McAllen, Texas – Water Reuse Study

The City of McAllen, Texas was awarded \$150,000 to perform a comprehensive feasibility evaluation of brackish and wastewater to develop a strategic plan that provides the best and highest use of the available water sources for McAllen Public Utility. The study will build on previous efforts and will consider indirect potable reuse via surface water and groundwater augmentation, direct potable reuse, and use of brackish groundwater. As appropriate, this study would coordinate with regional water supply studies and initiatives.

Drought Response Program

Reclamation's Drought Response Program aims to provide competitive grants for drought contingency planning, as well as mitigation actions that build long-term drought resiliency. This program focuses on leveraging Reclamation funds to avoid drought-related crises in the short term, while laying a foundation for climate resiliency in the long term. Over the last three fiscal cycles, over \$3.1 million in funding was provided to support four drought contingency plans and eight drought resiliency projects in Oklahoma and Texas.

Drought Resiliency

Projects awarded in FY 18:

Mountain Park Master Conservancy District was awarded \$300,000 in FY 18 to build a well field and tie in directly to existing infrastructure to pipe directly to a water treatment plant. This project will increase the amount of water available to District customers during all-to-frequent episodes in southwest Oklahoma. This supplemental and redundant supply, acquired through proposed development of alluvial groundwater immediately below Mountain Park dam, will be relied upon during drought, thus slowing inevitable lake level declines and augmenting yield.

Projects awarded in FY 16:

Altus City Reservoir East Basin Improvements for Drought Preparedness

The City of Altus in Oklahoma was awarded \$300,000 in FY 17 to redirect available raw water from Tom Steed Reservoir, a Reclamation project and the City's principal source of supply, to Altus City Reservoir, a largely unused municipal supply originally constructed in 1940. This two-year project also includes the installation of sluice gates and weirs and renovation of the original pump station, built almost 80 years ago but currently unused.

Little Elm Improvements for Drought Preparedness

The Town of Little Elm, Texas was awarded \$200,000 in FY 16 to construct a 100,000-gallon water reuse storage tank adjacent to their wastewater treatment plant. This two-year project will provide a consistent supply of treated wastewater available for irrigation and other uses during times of drought, saving the imported potable water supply for culinary purposes. This project is also supported by the city's drought plan, which specifically identifies the expanded reuse of treated effluent as a drought mitigation action.

Projects awarded in FY 15:

City of Duncan, Clear Creek Lake Improvements Project

The City of Duncan, Oklahoma was awarded \$300,000 to install 1,520 linear feet of pipeline to allow the City to access up to 1,596 acre-feet per year from Clear Creek Lake to prevent water shortages during drought. The City will also upgrade the existing pump station with pumps having variable frequency drives and a Supervisory Control and Data Acquisition System. The City, which provides treated water to approximately 30,000 people, experienced severe drought conditions in 2015 and is in one of 12 basins identified in the Oklahoma Comprehensive Water Plan as having the most significant water challenges over the next 50 years. The City has reduced water consumption by 40% from 2011 to 2014 through mandatory and voluntary conservation measures. This project is supported by the City's drought plan and was identified by the City Council as a top priority to build resiliency to future droughts.

Waurika Lake Master Conservancy District, Waurika Lake Water Intake Channel Improvement Project

The Waurika Lake Master Conservancy District in southwestern Oklahoma was awarded \$300,000 to install an extension intake pipe to the lowest point in Waurika Lake and add a floating intake to access water at more points, including the lake's lowest elevations. It will also improve its intake gates to reduce entry of debris and protect fish. The lower intake will enable the District to access an additional 25,000 acre-feet during drought conditions. The District provides water to 6 cities and 250,000 people in an area that had been in drought for 5 years prior to 2015.

Southmost Regional Water Authority, Well Field Monitoring Project

Southmost Regional Water Authority, a consortium of six water conservation and reclamation entities in Brownsville, Texas, was awarded \$300,000 to develop a monitoring and management program for brackish groundwater wells that are part of a desalination treatment facility which provides a reliable supply of water for approximately 50,000 people, decreasing dependence on the Rio Grande River. This project will: (1) implement a system for monitoring water levels and water quality in the local aquifer; (2) develop a groundwater flow model to forecast responses and changes in the aquifer; and (3) upgrade the pump in one well within the existing brackish wellfield. This project will build drought resiliency by increasing the reliability of water production during stress periods, monitoring aquifer health, and increasing production capacity in an area that is drought-prone and where brackish groundwater provides an important alternative to fluctuating surface water supplies. This project is supported by the Lower Rio Grande Basin Study that identified brackish groundwater desalination as the best option for meeting long-term water needs and deficits exacerbated by climate change.

Texas Water Development Board, Early Warning Drought Tool

The Texas Water Development Board was awarded \$144,763 to modify their existing drought prediction tool to provide more accurate probabilistic forecasts of average May-July rainfall, reservoir levels, and reservoir storage, by county, for the State of Texas. Water user groups in Texas are required to have a strategy for reducing Final Draft water use when water sources reach certain drought response trigger levels. By providing early warning of drought probability, early response measures may be taken to mitigate the impacts of drought and to reduce the need for more severe use restrictions. The forecasts will be updated on a bi-weekly basis and made accessible to water managers across the state through the Water Data for Texas website. Texas has recently come out of a four-year drought, which is described as the second worst on record.

Drought Contingency Plans

Projects awarded in FY 16:

Gulf Coast Water Authority Drought Contingency Plan Update

The Gulf Coast Water Authority was awarded \$148,250 in FY 16 to prepare a Drought Contingency Plan.

Projects awarded in FY 15:

Chickasaw and Choctaw Nations, Regional Drought Contingency Plan for the Arbuckle Simpson Aquifer Region

The Choctaw and Chickasaw Nations were awarded \$187,081 to prepare a Regional Drought Contingency Plan for their homeland in south-central Oklahoma. The Arbuckle Simpson Aquifer covers approximately 500 miles and is the principal source of water for more than 100,000 people, supplies water for mining and irrigation, and is the source for nearly 100 known springs that are culturally important and generate approximately \$100 million in tourism revenues per year. The area experienced an exceptional drought from 2010 until the spring 2015, causing significant economic hardship and requiring emergency actions, such as hauling water and drilling emergency wells. A wide range of regional stakeholders, representing numerous sectors supported the drought planning process that wrapped up in the fall of 2017 with the completion of the Plan that the plan identified mitigation and response actions to be implemented at the local and regional levels.

Foss Reservoir Master Conservancy District, Drought Contingency Plan

The Foss Reservoir Master Conservancy District was awarded \$200,000, to develop and implement a drought contingency plan for west-central Oklahoma that focuses on the water supply needs of communities that rely upon the Foss Reservoir Master Conservancy District, a Bureau of Reclamation project. Reclamation's Foss and Fort Cobb Reservoirs provide 90-percent of the surface water supplies for the region, including municipal water to 40,000 people and two power generation facilities. The Drought Contingency Plan that was completed in the fall of 2017 built on the existing Upper Washita Basin Study and evaluated several additional sources of water supply not evaluated in the Basin Study to address drought. The area recently came out of experiencing a five-year extended drought, with Foss Reservoir being declared "effectively out of water". Recent climate studies predict future droughts will be longer-lasting and more severe.

McLennan County, McLennan County Drought Contingency and Water Supply Resiliency Plan

McLennan County, Texas was awarded \$75,000 to prepare a regional drought contingency plan that addressed drought impacts to the Trinity Aquifer, including intensified arsenic contamination in the aquifer and problems created by zebra mussels in certain surface waters. The County partnered with the McLennan County Water Resources Group (Group) to conduct the plan. The Group included cities, water supply corporations, the Brazos River Authority, a groundwater conservation district, and local citizen and business interests. The Trinity Aquifer is the primary source of water for many of the towns and cities in the planning area, and also provides water for industrial, agricultural, manufacturing, and mining operations. Recent drought conditions resulted in historically low water levels in the aquifer. As a result, pumping costs increased, water supplies declined, and the demand on surface sources expanded. The drought plan incorporated a "conjunctive use" approach to improve the efficient use of both groundwater and surface water sources.

Research and Development Program

Reclamation's R&D Program provides technical and financial assistance to internal and external research projects that help Reclamation accomplish its mission of developing water supplies in a sustainable manner.

Science and Technology Program

Internal research is funded under Reclamation's Science and Technology (S&T) Program. Through S&T, Reclamation can investigate new and innovative solutions on important issues where there may be a unique or unknown risk and for which capital investment may not occur otherwise. Recent research priorities have focused on addressing challenges associated with climate change, invasive zebra/quagga mussels, and advanced water treatment. Over the last seven years, the R&D program has awarded \$50 million to more than 800 research projects. To date, about nearly \$1 million has been awarded to research activities in Texas and Oklahoma. Active projects are listed below:

Cost Modeling of Membrane Desalination Process (Foss Reservoir

This project will focus on improving Reclamation's Water Treatment Estimation Routine (WaTER) so that it can be used to better understand the costs associated with implementing water treatment technologies and to be able to quantify the cost/benefit of R&D advancements in the field of water treatment. Partnering with Texas A&M and the OTA0 on a recent DWPR project that evaluated the fouling control and water quality improvements of an electrocoagulation (EC) and microfiltration (MF) process compared to MF alone as pre-treatment to Nanofiltration (NF) on brackish surface will further enhance this project.

Investigating Biochar as a Water Treatment Filtration Media for Adsorption and Biological Reduction of Dissolved Metals and Fluoride

As climate change and drought continue to negatively impact freshwater availability and quality in the western US, impaired water sources are becoming more attractive to supplement existing freshwater supplies. However, these water sources can be expensive to treat, highlighting the need for more economical forms of treatment. Biochar is gaining attention as a less expensive and more sustainable alternative to granular activated carbon (GAC) for use as an adsorbent and biological filtration (biofilter) media. This project will focus on three case studies in the Mid-Pacific and Great Plains Regions and the use of biochar for the treatment of waters within these Regions contaminated by selenium, metals, and fluoride. Partners include Reclamation Regional Offices. Please use the following link for additional

information: <https://www.usbr.gov/research/projects/detail.cfm?id=1785>

Research Opportunities to Treat Impaired Water Sources Associated with Reclamation Projects: A Case Study in the Great Plains Region

By using a survey-based approach to gather information on water quantity and quality challenges associated with Reclamation projects, can we better inform future investments under programs such as the Title XVI and Research & Development that address core, mission-related needs involving treatment of impaired water sources? This activity has been identified as a high-priority need by the Regional Director for the Great Plains Region. Please use the following link for additional information:

<https://www.usbr.gov/research/projects/detail.cfm?id=1715>

Beneficial Reuse and Waste Minimization of Hexavalent Chrome Ion Exchange Brine

Hexavalent chromium occurrence in potable water sources is of concern to water utilities due to undetermined human carcinogenicity and toxicological effect. EPA is currently reviewing health assessments to determine if new federal standards need to be set for chromium. Minimizing the brine waste generated by ion exchange processes for beneficial purposes through membrane filtration with and without additional chemical addition allows for simpler regeneration processes and decreased operator expertise requirements. The research question to be answered is: Can a system that is simple to operate and inherently contains multiple barriers to chrome release be used to address chromium contamination in potable water sources? Please use the following link for additional information: <https://www.usbr.gov/research/projects/detail.cfm?id=9085>

Refining Interpretation Techniques for Determining Brackish Aquifer Water Quality

This project will define specific research areas required to support geophysical log interpretation for water quality in brackish aquifers. The project will build on the state of practice and methods outlined in the previous scoping level effort by delineating the confounding factors identified by that work and presenting research topics to resolve those factors. This work will be a collaborative effort supported and enhanced by key stakeholders identified in the scoping level effort, including the USGS, Texas Water Development Board, Brackish Water Work Group, and other state and federal agencies. The report produced by this project is intended to supplement the Reclamation S&T Advanced Water Treatment Roadmap and to aid stakeholders in securing funding for and directing future research efforts. Please use the following link for additional information: <https://www.usbr.gov/research/projects/detail.cfm?id=2924>

Development of Methodologies to Evaluate the Environmental, Financial and Social Benefits of Water Reuse Projects

The TWDB's Texas Water Reuse Research Agenda (2011) identified "triple bottom line" analyses as a top priority research area for Texas. Both water providers and rate payers alike often question whether reuse is worth the financial investment relative to other strategies. In fact, many water reuse projects in Texas have been halted due to a lack of funding or inability to justify the required capital expenditures. Reclamation is coordinating with TWDB and other state and local water suppliers to evaluate the state-of-the-science of TBL analyses, and to develop a clear, well-defined economic and financial evaluation approach that can be used by entities to evaluate the merits of water reuse projects. Please use the following link for additional information: <http://www.usbr.gov/research/projects/detail.cfm?id=4180>.

Concentrate Management Toolbox and Selected Case Studies

Concentrate management is an important component driving the cost and feasibility of desalination. The understanding necessary to optimize inland desalination facilities and associated concentrate management solutions is still being improved through detailed assessments, especially as technology advances and provides more flexibility in treatment. A wide variety of concentrate management methodologies exist, and many water purveyors are overwhelmed when considering which technology is the best for their situation. This Concentrate Management Toolbox will inventory existing technologies and identify practical and economical strategies to optimize concentrate management based on various feed water quality parameters, so water planners can more rapidly assess concentrate management options. Reclamation is partnering with the North Texas Municipal Water District in Texas and the Eastern Municipal Water District in California to then apply the Toolbox to a set of site-specific saline source waters and recommend an optimal array of concentrate management technologies. Please use the following link for additional information:

<http://www.usbr.gov/research/projects/detail.cfm?id=5239>.

Desalination and Water Purification Research

External research is funded under Reclamation's Desalination and Water Purification Research Program (DWPR). DWPR was established to facilitate partnerships with academia, private industry, and local communities to develop more cost-effective, technologically efficient means by which to desalinate water. Over the past three fiscal cycles (FY 15-17), six new research projects totaling nearly \$500,000 dollars were funded.

Pilot Testing a Fixed-Bed Biological Treatment System for Efficient Hexavalent Chromium Removal

Carollo Engineers, Inc. in partnership with City of Norman to pilot tested a fixed-bed biological treatment system for efficient hexavalent chromium removal. A potential also exists for this method to be cost-effective in removing arsenic and other metals.

Advanced Pretreatment for Nanofiltration of Brackish Surface Water: Fouling Control and Water Quality Improvements

Texas A&M University in partnership with Foss Reservoir Master Conservancy District performed a research/laboratory study evaluating the use of electrocoagulation as an advanced pretreatment method for nanofiltration of brackish surface water for fouling control and water quality improvements. This technology may help the District reduce high TDS levels at Foss Reservoir.

Fouling-Resistant, Self-Decontaminating Membranes for Effective Desalination of Oily Saline Wastewater

The University of Kansas Center for Research will be conducting the research.

Thermoplasmonic Membrane Desalination

The University of Tulsa will be conducting the research.

Development of Inorganic Membrane Systems for Treatment of Produced Water

Oklahoma State University will be conducting the research.

Emerging Ion Concentration Polarization for Brackish Desalination

Texas Tech University will be conducting the research.

Summary of Programs and Funding Opportunities

All Reclamation program Funding Opportunity Announcements (FOAs) for Grants or Cooperative Agreements to utilize Reclamation funding are posted on the Grants.gov website: <http://www.grants.gov/>

The following is a list of specific weblinks for each of the Reclamation programs mentioned above:

Native American Affairs Program: <http://www.usbr.gov/native/>

Water Conservation Field Services Program: <http://www.usbr.gov/waterconservation/>

WaterSMART Program:

Drought Response Program: <http://www.usbr.gov/drought/>

Water and Energy Efficiency Grants: <http://www.usbr.gov/watersmart/weeg/>

Title XVI: <http://www.usbr.gov/watersmart/title/index.html>

Basin Studies: <http://www.usbr.gov/watersmart/bsp/>

Research and Development:

Science and Technology Program: <https://www.usbr.gov/research/st/index.html>

Desalination and Water Purification Research Program:
<https://www.usbr.gov/research/dwpr/>

Water Prize Challenges: <http://www.usbr.gov/research/challenges/>

Contact Information

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Cell: 512-922-0525

RECLAMATION
Managing Water in the West

Oklahoma, Kansas & Colorado Water Meeting

**Concerning the appropriation of 7000 acre feet
of water from the Cimmaron River area.**

To be held at Keyes, OK - School Cafeteria

Thursday, May 31, at 7:00 PM CST

**Hosted by
Wes McKinley, Dan Caldwell,
Senator Casey Murdock**

Flow measurements at USGS stream gauges along the Cimarron River

The locations of USGS stream gauges along the Cimarron River are shown in Figure 1.

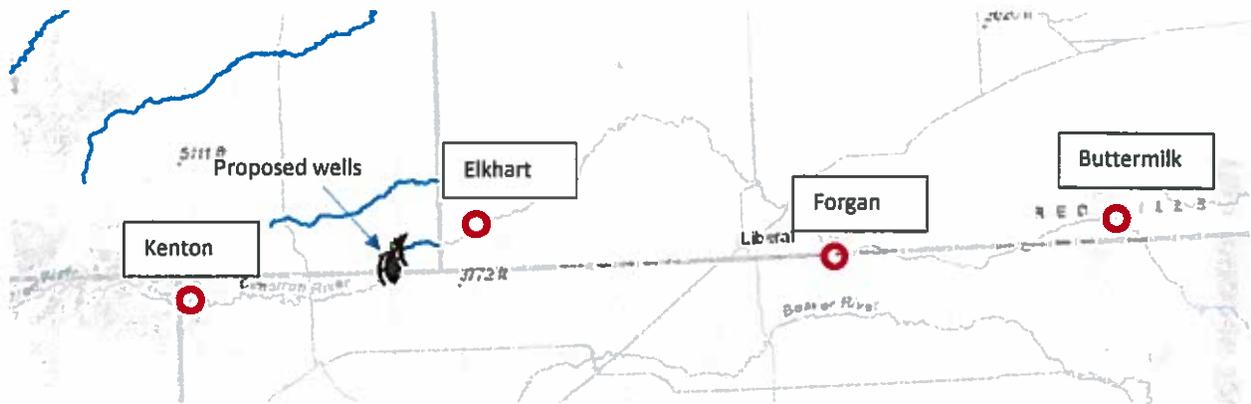


Figure 1. Locations of USGS stream gauges

The discharge records for the Kenton and Elkhart gauges are shown in Figures 2 and 3.

Notes:

- The USGS refers to the section of the river upstream of Kenton as the Dry Cimarron River.
- The measurement of flows at the Elkhart KS station was discontinued in 2007.
- The available data suggest only occasional flow in the Cimarron River as it enters Kansas

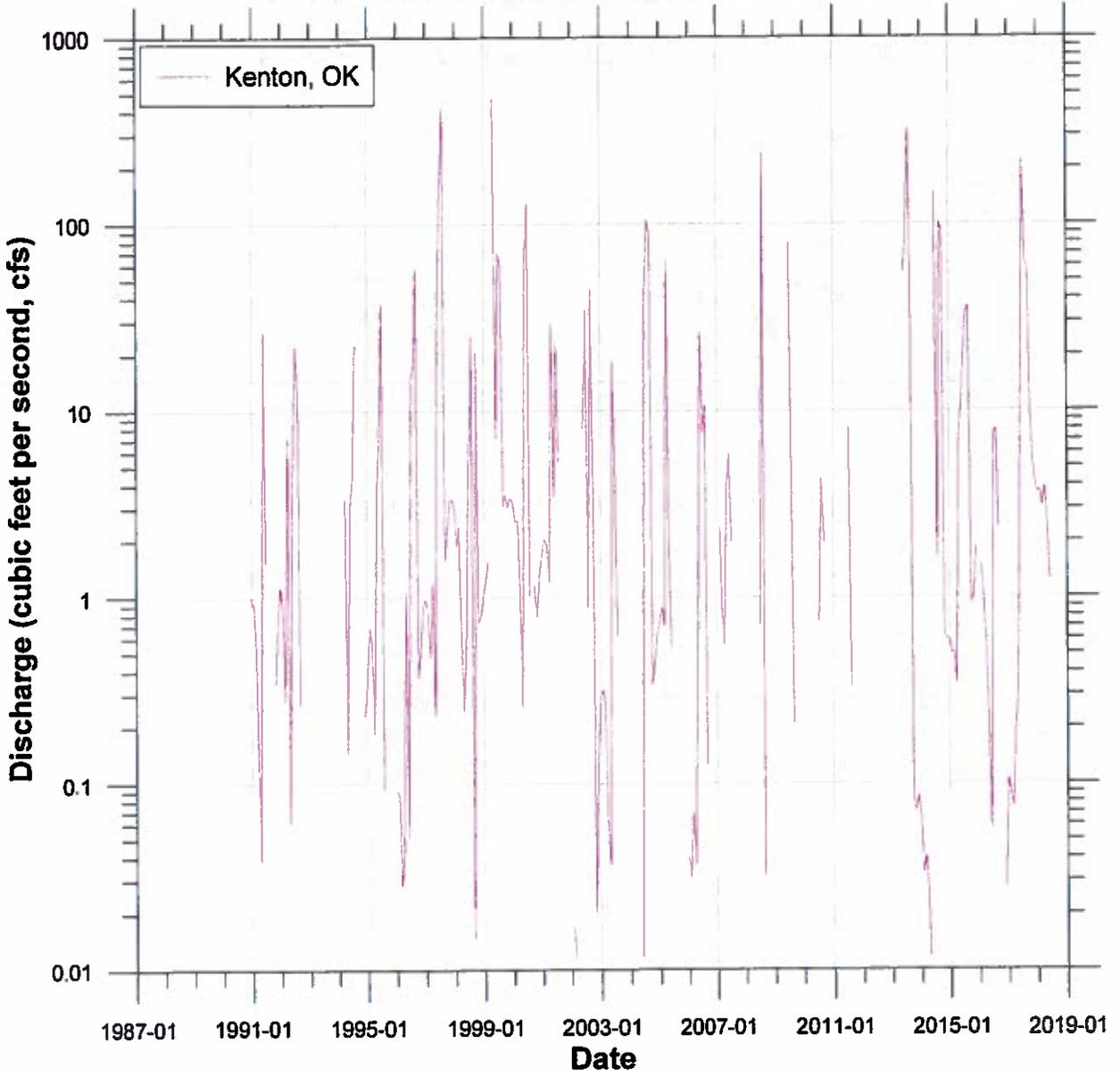


Figure 2. Discharge at the Kenton, Oklahoma station

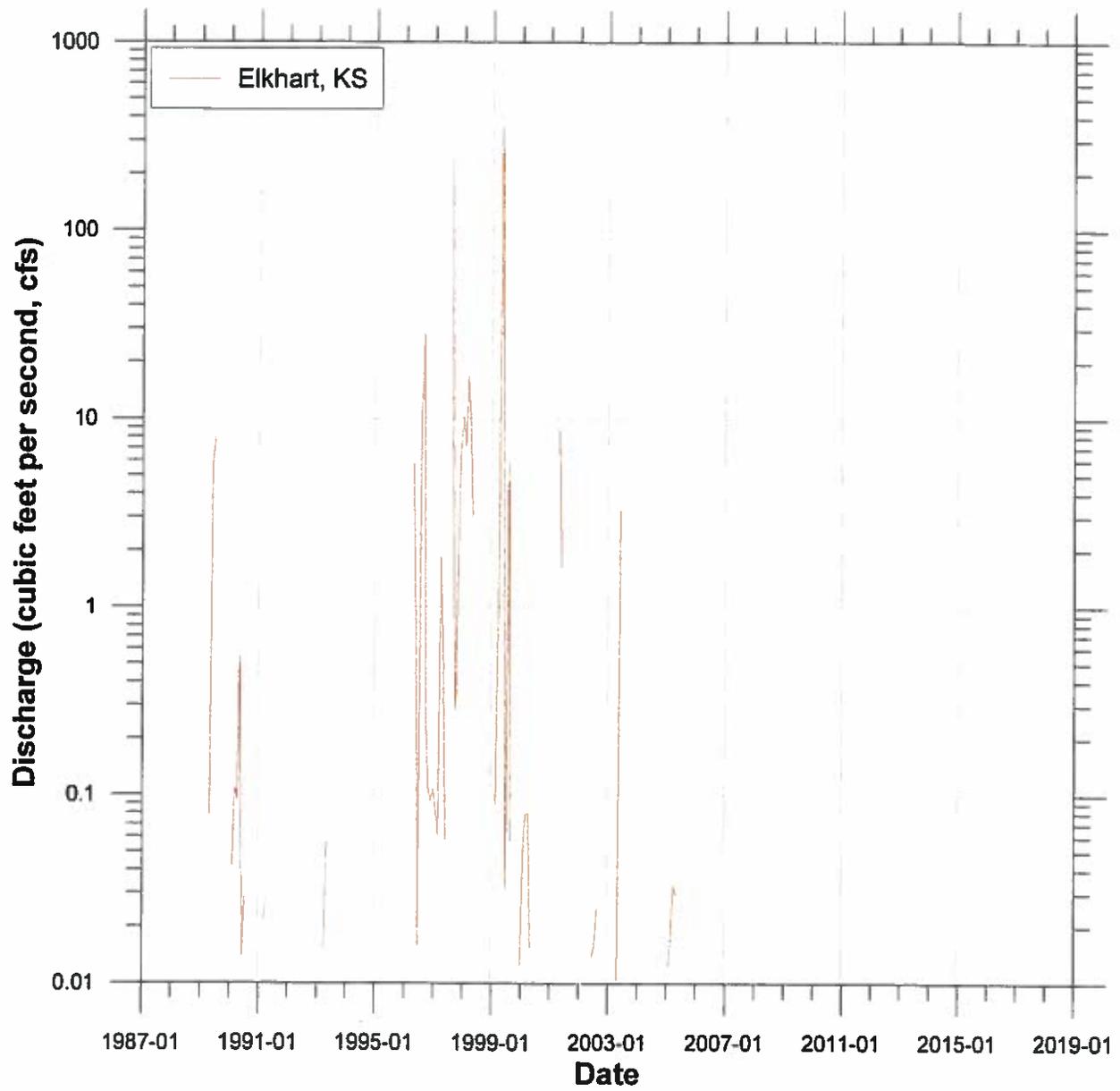


Figure 3. Discharge at the Elkhart, Kansas station



File Code: 0000
Route To:

Date: July 10, 2018

Subject: Ground Water Development

To: Southwest Kansas Ground Water Management District 3

This letter is to express concern about proposed ground water developments that are proposed to take place up stream of the Cimarron River and National Grasslands in Colorado. The southwest part of Kansas has a rich history. And the Cimarron River has played a role in that history.

Regardless of the size, or flow of a river, it is a barometer of landscape health. Right now the Cimarron supports one of the few riparian ecosystems in southwest Kansas. Peak flows and draught severity have already affected the channel and peak flow of the Cimarron (VanLooy and Martin 2001) as stated in their paper "although field observations in 2001 showed little riparian vegetation in northwestern Seward County, local ranchers reported that cottonwood trees grew along the river between 1953 and 1991. Many of the same ranchers mentioned that irrigation in the northwestern part of the county since the 1970s had lowered the water table, killing most of the woody riparian vegetation. Dead trees were scattered on the flood plain there in 2001, lending support to the ranchers' account. Ranchers also noted that the decline in the water table had resulted in a dry riverbed part of the year".

Though I have concerns with more water development up stream of the Cimarron National Grasslands and the effect that might have on the riparian systems. I think monitoring the amount of water that is available in the river bed and having a good baseline is an excellent place for us to start.

/s/ Kevin Taylor
KEVIN TAYLOR
District Ranger

Cc:



Southwest Kansas
Groundwater Management District No. 3
2009 E. Spruce Street
Garden City, Kansas 67846
(620) 275-7147 phone (620) 275-1431 fax
www.gmd3.org

July 21, 2015
(Hand delivered)

KANSAS – OKLAHOMA ARKANSAS RIVER COMMISSION
Fifty-First Annual Meeting, July 22, 2015
Grand River Dam Authority Ecosystem and Education Center, Grand Hall
420 E. Highway 28, Langley, Oklahoma 74350

RE: Oklahoma Panhandle Water supply and
management strategies

Dear Compact Commissioners,

The local efforts to develop adoptable strategies to conserve and extend the available groundwater supplies of the Southwest Kansas Groundwater Management District No. 3 (GMD3) may be significantly hampered in the perceptions of no regulation or management criteria governing further development of the Oklahoma Panhandle aquifers. The area covered by GMD3 is either closed to new appropriations of groundwater from the High Plains Aquifer, or is under a moratorium for new appropriations pending new rules from the Chief Engineer, Kansas Department of Agriculture. Recent modeling efforts indicate we are only about 9% sustainable District wide under the current rate of consumption and irrigation water supplies are now drying up in some areas.

Local efforts to manage and conserve groundwater have been on the agenda of GMD3 as a purpose for its creation in 1976 and in the monthly board meetings and operating programs to date. The current state planning process to develop a "Long-Term Vision for the Future of Water Supply in Kansas" includes work by regional leadership committees. These committees are developing goals to assist the state and the GMD in developing strategies to conserve and extend the depleting groundwater supply to the Oklahoma Stateline.

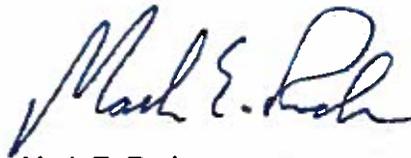
The open development policy in Oklahoma is a favorite topic of concern raised in Kansas water visioning meetings and groundwater management discussions of the GMD3 Board and water right owners. The current projection in the Oklahoma Comprehensive Water Plan (OCWP) Panhandle Watershed Planning Region appears to be a 21% increase in demand by 2060; mostly Irrigation use. The OCWP informs there are about 1.5 million acre feet appropriated and an additional 6.1 million acre feet available for new appropriations in the Oklahoma Panhandle bedrock supply.

Perhaps now is an appropriate time to invite a dialog between Kansas and Oklahoma water officials to look at interstate aquifer system management strategies for the High Plains that may be in the common interests of both states. With local demand for water in GMD3 already exceeding long term supplies in nearly all areas of GMD3, options for water importation is being actively considered to sustain and grow the economy. The Arkansas River Compact appears to be the appropriate forum for these discussions and we are requesting that the High Plains groundwater management concerns be placed on the agenda. Some of the goals that Kansas local leadership teams have identified for water supply may be governed in part by surface water storage limits under this compact.

GMD3 is looking at aqueducts, pipelines and other water transportation concepts that may even span the Stateline with Oklahoma. GMD3 water management strategies to sustain what has already been developed may want to factor in sustainable water needs in the Oklahoma panhandle. If water import considerations by GMD3 can aid Kansas and Oklahoma in developing a sustainable water management program, we would like to begin discussion of the interests and concerns as soon as is practicable ahead of any applications or project initiatives that could affect future water supplies on either sides of the Stateline.

Please make this request for the Oklahoma panhandle groundwater management discussion a matter of the compact meeting record. We thank you for your consideration and look forward to finding the supply and management strategies that meet the future High Plains water needs in both states.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark E. Rude". The signature is fluid and cursive, with a large initial "M" and "R".

Mark E. Rude
Executive Director

Pc Kent Dunn, President, GMD3
 Kirk Hager, Vice President
 Mike McNiece, Secretary
 Mike O'Brate, Treasurer

**KANSAS-OKLAHOMA
ARKANSAS RIVER
COMPACT**



Title 82. Waters and Water Rights

Oklahoma Statutes Citationized

Title 82. Waters and Water Rights

Chapter 20 - Kansas-Oklahoma Arkansas River Basin Compact, 1965

Section 1401 - Approval of Compact - Text

Cite as: O.S. §. ___

The following Interstate Compact is hereby approved and ratified.

ARKANSAS RIVER BASIN COMPACT KANSAS-OKLAHOMA, 1965

The State of Kansas and the State of Oklahoma, acting through their duly-authorized Compact representatives, Robert L. Smith and Warden L. Noe, for the State of Kansas, and Geo. R. Benz and Frank Raab, for the State of Oklahoma, after negotiations participated in by Trigg Twichell, appointed by the President as the representative of the United States of America, and in accordance with the consent to such negotiations granted by an Act of Congress of the United States of America, approved August 11, 1955 (Public Law 340, 84th Congress, 1st Session), have agreed as follows respecting the waters of the Arkansas River and its tributaries:

ARTICLE I

The major purposes of this Compact are:

- A. To promote interstate comity between the States of Kansas and Oklahoma;
- B. To divide and apportion equitably between the States of Kansas and Oklahoma the waters of the Arkansas River Basin and to promote the orderly development thereof;
- C. To provide an agency for administering the water apportionment agreed to herein;
- D. To encourage the maintenance of an active pollution-abatement program in each of the two states and to seek the further reduction of both natural and man-made pollution in the waters of the Arkansas River Basin.

ARTICLE II

As used in this Compact:

- A. The term "state" shall mean either state signatory hereto and shall be construed to include any person or persons, entity or agency of either state who, by reason of official responsibility or by designation of the Governor of that state, is acting as an official representative of that state;
- B. The term "Kansas-Oklahoma Arkansas River Commission" or the term "Commission" means the agency created by this Compact for the administration thereof;
- C. The term "Arkansas River" means that portion of the Arkansas River from a point immediately below the confluence of the Arkansas and Little Arkansas Rivers in the vicinity of Wichita, Kansas, to a point immediately below the confluence of the Arkansas River with the Grand-Neosho River near Muskogee, Oklahoma;
- D. The term "Arkansas River Basin" means all of the drainage basin of the Arkansas River as delimited above, including all tributaries which empty into it between the upstream and downstream limits;
- E. The term "waters of the Arkansas River and its tributaries" means the waters originating in the Arkansas River Basin;
- F. The term "conservation storage capacity" means that portion of the active storage capacity of reservoirs, including multipurpose reservoirs, with a conservation storage capacity in excess of one hundred 100 acre-feet, available for the storage of water for subsequent use, but it excludes any portion of the storage capacity allocated to flood and sediment

control and inactive storage capacity allocated to other uses;

G. The term "new conservation storage capacity" means conservation storage capacity for which construction is initiated after July 1, 1963, and storage capacity not presently allocated for conservation storage which is converted to conservation storage capacity after July 1, 1963, in excess of the quantities of declared conservation storage capacity as set forth in the storage table attached to and made a part of the minutes of the Twenty-fourth meeting of the Compact Committee dated September 1, 1964, and as filed and identified to this Compact in the offices of the Secretaries of State of the respective states:

H. The term "pollution" means contamination or other alterations of the physical, chemical, biological or radiological properties of water or the discharge of any liquid, gaseous, or solid substances into any waters which creates or is likely to result in a nuisance, or which renders or is likely to render the waters into which it is discharged harmful, detrimental or injurious to public health, safety, or welfare or which is harmful, detrimental or injurious to beneficial uses of the water.

ARTICLE III

The physical and other conditions peculiar to the Arkansas River Basin constitute the basis for this Compact, and neither of the states hereby, nor the Congress of the United States by its consent hereto, concedes that this Compact establishes any general principle with respect to any other interstate stream.

ARTICLE IV

A. For the purpose of apportionment of water between the two states, the Arkansas River Basin is hereby divided into major topographic subbasins as follows:

- (1) the Grand-Neosho River Subbasin;
- (2) the Verdigris River Subbasin;
- (3) the Salt Fork River Subbasin;
- (4) the Cimarron River Subbasin; and
- (5) the mainstem Arkansas River Subbasin which shall consist of the Arkansas River Basin, excepting the Grand-Neosho River, Verdigris River, Salt Fork River, and Cimarron River subbasins.

B. The two states recognize that portions of other states not signatory to this Compact lie within the drainage area of the Arkansas River Basin as herein defined. The water apportionments provided for in this Compact are not intended to affect nor do they affect the rights of such other states in and to the use of the waters of the basin.

ARTICLE V

The State of Kansas shall have free and unrestricted use of the waters of the Arkansas River Basin within Kansas subject to the provisions of this Compact and to the limitations set forth below:

- A. New conservation storage capacity in the Grand-Neosho River Subbasin within the State of Kansas shall not exceed six hundred fifty thousand (650,000) acre-feet plus an additional capacity equal to the new conservation storage in said drainage basin in Oklahoma excepting storage on Spavinaw Creek;
- B. New conservation storage capacity in the Verdigris River subbasin within the State of Kansas shall not exceed three hundred thousand (300,000) acre-feet plus an additional capacity equal to the new conservation storage in said drainage basin in Oklahoma, excepting navigation capacity allocated in Oologah Reservoir;
- C. New conservation storage capacity in the mainstem Arkansas River Subbasin within the State of Kansas shall not exceed six hundred thousand (600,000) acre-feet plus an additional capacity equal to the new conservation storage in said drainage basin in Oklahoma;

D. New conservation storage capacity in the Salt Fork River Subbasin within the State of Kansas shall not exceed three hundred thousand (300,000) acre-feet plus an additional capacity equal to the new conservation storage in said drainage basin in Oklahoma;

E. New conservation storage capacity in the Cimarron River Subbasin within the State of Kansas shall not exceed five thousand (5,000) acre-feet, provided that new conservation storage capacity in excess of that amount may be constructed if specific project plans have first been submitted to and have received the approval of the Commission.

ARTICLE VI

The State of Oklahoma shall have free and unrestricted use of the waters of the Arkansas River Basin within Oklahoma subject to the provisions of this Compact and to the limitations set forth below:

New conservation storage capacity in the Cimarron River Subbasin within the State of Oklahoma shall not exceed five thousand (5,000) acre-feet provided that new conservation storage capacity in excess of that amount may be constructed if specific project plans have first been submitted to and have received the approval of the Commission.

ARTICLE VII

A. The Commission shall determine the conditions under which one state may construct and operate for its needs new conservation storage capacity in the other state. The construction or utilization of new conservation storage capacity by one state in the other State shall entitle the state whose storage potential is reduced by such construction to construct an equal amount of new conservation storage in a subbasin agreeable to the Commission.

B. New conservation storage capacity constructed by the United States or any of its agencies, instrumentalities or wards, or by a state, political subdivision thereof, or any person or persons shall be charged against the state in which the use is made.

C. Each state has the unrestricted right to replace within the same subbasin any conservation storage capacity made unusable by any cause.

D. In the event reallocation of storage capacity in the Arkansas River Basin in Oklahoma should result in the reduction of that state's new conservation storage capacity, such reallocation shall not reduce the total new conservation storage capacities available to Kansas under Article V; provided that a subsequent reinstatement of such storage capacity shall not be charged as an increase in Oklahoma's new conservation storage capacity.

ARTICLE VIII

A. In the event of importation of water to a major subbasin of the Arkansas River Basin from another river basin, or from another major subbasin within the same state, the state making the importation shall have exclusive use of such imported waters.

B. In the event of exportation of water from a major subbasin for use in another major subbasin or for use outside the Arkansas River Basin within the same state, the limitations of Articles V and VI on new conservation capacity shall apply against the subbasin from which the exportation is made in the amount of the storage capacity actually used for that purpose within the exporting subbasin, or in the event of direct diversion of water without storage on the basis of five (5) acre-feet of conservation storage capacity for each acre-foot of water on the average so diverted annually.

C. Any reservoir storage capacity which is required for the control and utilization of imported waters shall not be accounted as new conservation storage.

D. Should a transbasin diversion of water of the Arkansas River Basin be made in one state for the use and benefit of the other state or both states, the Commission shall determine a proper accounting of new conservation storage capacities in each state in accordance with the above principles and with the project uses to be made in that state.

ARTICLE IX

The States of Kansas and Oklahoma mutually agree to:

A. The principle of individual state effort to abate man-made pollution within each state's respective borders, and the continuing support of both states in an active pollution-abatement program;

B. The cooperation of the appropriate state agencies in Kansas and Oklahoma to investigate and abate sources of alleged interstate pollution within the Arkansas River Basin whenever such matters are called to their attention by the Commission;

C. Enter into joint programs for the identification and control of sources of natural pollution within the Arkansas River Basin which the Commission finds are of interstate significance;

D. The principle that neither state may require the other to provide water for the purpose of water-quality control as a substitute for adequate waste treatment;

E. Utilize the provisions of the Federal Water Pollution Control Act in the resolution of any pollution problems which cannot be resolved within the provisions of this Compact.

ARTICLE X

A. There is hereby created an interstate administrative agency to be known as the "Kansas-Oklahoma Arkansas River Commission". The Commission shall be composed of three Commissioners representing each of the States of Kansas and Oklahoma who shall be appointed by the Governors of the respective states and, if designated by the President, one Commissioner representing the United States. The President is hereby requested to designate a Commissioner and an alternate representing the United States. The Federal Commissioner, if one be designated, shall be the presiding officer of the Commission, but shall not have the right to vote in any of the deliberations of the Commission.

B. One Kansas Commissioner shall be the state official who now or hereafter shall be responsible for administering water law in the state; the other two Commissioners shall reside in the Arkansas River basin in Kansas and shall be appointed to four-year staggered terms.

C. One Oklahoma Commissioner shall be the state official who now or hereafter shall be responsible for administering water law in the state; the other two Commissioners shall reside in the Arkansas River Basin in Oklahoma and shall be appointed to four-year staggered terms.

D. A majority of the Commissioners of each state and the Commissioner or his alternate representing the United States, if so designated, must be present to constitute a quorum. In taking any Commission action, each signatory state shall have a single vote representing the majority opinion of the Commissioners of that state.

E. The salaries and personal expenses of each Commissioner shall be paid by the government which he represents. All other expenses which are incurred by the Commission incident to the administration of this Compact shall be borne equally by the two states and shall be paid by the Commission out of the "Kansas-Oklahoma Arkansas River Commission Fund". Such fund shall be initiated and maintained by equal payments of each state into the fund. Disbursements shall be made from said fund in such manner as may be authorized by the Commission. Such funds shall not be subject to the audit and accounting procedures of the states; however, all receipts and disbursements of funds handled by the Commission shall be audited by a qualified independent public accountant at regular intervals, and the report of such audit shall be included in and become a part of the annual report of the Commission.

ARTICLE XI

A. The Commission shall have the power to:

- (1) Employ such engineering, legal, clerical and other personnel as in its judgment may be necessary for the performance of its functions under the Compact;
- (2) Enter into contracts with appropriate state or federal agencies for the collection, correlation, and presentation of factual data, for the maintenance of records, and for the preparation of reports;
- (3) Establish and maintain an office for the conduct of its affairs;
- (4) Adopt rules and regulations governing its operations;

(5) Cooperate with federal agencies in developing principles, consistent with the provisions of this Compact and with federal policy, for the storage and release of water from all-federal capacities of federal reservoirs, both existing and future within the Arkansas River Basin, for the purpose of assuring their operation in the best interests of the states and the United States;

(6) Permit either state, with the consent of the proper operating agency, to impound water, for such periods of time deemed necessary or desirable by the Commission, in available reservoir storage capacity which is not designated as conservation or new conservation storage capacity for subsequent release and use for any purpose approved by the Commission;

(7) Hold hearings and take testimony and receive evidence at such times and places as it deems necessary;

(8) Secure from the head of any department or agency of the federal or state government such information, suggestions, estimates and statistics as it may need or believe to be useful for carrying out its functions and as may be available to or procurable by the department or agency to which the request is addressed;

(9) Print or otherwise reproduce and distribute all of its proceedings and reports.

B. The Commission shall:

(1) Cause to be established, maintained and operated such stream, reservoir, or other gaging stations as may be necessary for the proper administration of the Compact;

(2) Collect, analyze and report on data as to stream flows, water quality, conservation storage, and such other information as is necessary for the proper administration of the Compact;

(3) Perform all other functions required of it by the Compact and do all things necessary, proper or convenient in the performance of its duties thereunder;

(4) Prepare and submit an annual report to the Governor of each signatory state and to the President of the United States covering the activities of the Commission for the preceding fiscal year, together with an accounting of all funds received and expended by it in the conduct of its work;

(5) Prepare and submit to the Governor of each of the States of Kansas and Oklahoma an annual budget covering the anticipated expenses of the Commission for the following fiscal year;

(6) Make available to the Governor or any state agency of either state or to any authorized representative of the United States, upon request, any information within its possession.

ARTICLE XII

A. Recognizing the present limited uses of the available water supplies of the Arkansas River Basin in the two states and the uncertainties of their ultimate water needs, the States of Kansas and Oklahoma deem it imprudent and inadvisable to attempt at this time to make final allocations of the new conservation storage capacity which may ultimately be required in either state, and, by the limitations on storage capacity imposed herein, have not attempted to do so. Accordingly, after the expiration of 25 years following the effective date of this Compact, the Commission may review any provisions of the Compact for the purpose of amending or supplementing the same, and shall meet for the consideration of such review on the request of the Commissioners of either state; provided, that the provisions hereof shall remain in full force and effect until changed or amended by unanimous action of the states acting through their Commissioners and until such changes are ratified by the legislatures of the respective States and consented to by the Congress in the same manner as this Compact is required to be ratified to become effective.

B. This Compact may be terminated at any time by the appropriate action of the legislatures of both signatory states.

C. In the event of amendment or termination of the Compact, all rights established under the Compact shall continue unimpaired.

ARTICLE XIII

Nothing in this Compact shall be deemed:

A. To impair or affect the powers, rights or obligations of the United States, or those claiming under its authority, in, over and to the waters of the Arkansas River Basin;

B. To interfere with or impair the right or power of either signatory state to regulate within its boundaries the appropriation, use and control of waters within that state not inconsistent with its obligations under this Compact.

ARTICLE XIV

If any part or application of this Compact should be declared invalid by a court of competent jurisdiction, all other provisions and applications of this Compact shall remain in full force and effect.

ARTICLE XV

This Compact shall become binding and obligatory when it shall have been ratified by the legislatures of each state and consented to by the Congress of the United States, and when the Congressional Act consenting to this Compact includes the consent of Congress to name and join the United States as a party in any litigation in the United States Supreme Court, if the United States is an indispensable party, and if the litigation arises out of this Compact or its application, and if a signatory State is a party thereto. Notice of ratification by the legislature of each state shall be given by the Governor of that state to the Governor of the other state and to the President of the United States and the President is hereby requested to give notice to the Governor of each state of consent by the Congress of the United States.

In Witness Whereof, the authorized representatives have executed three counterparts hereof each of which shall be and constitute an original, one of which shall be deposited in the Archives of the Department of State of the United States, and one of which shall be forwarded to the Governor of each state.

DONE at the City of Wichita, State of Kansas, this 31st day of March, A.D., 1965.

Approved: For Kansas:

/s/ TRIGG TWICHELL /s/ ROBERT L. SMITH

Trigg Twichell Robert L. Smith,
Representative of the Committee Member
United States of America

/s/ WARDEN L. NOE

Warden L. Noe,
Committee Member

For Oklahoma:

/s/ GEO. R. BENZ

Geo. R. Benz,
Committee Member

Attest:

/s/ I.D. YOST /s/ FRANK RAAB

I.D. Yost, Secretary Frank Raab,
Committee Member

Historical Data

Laws 1965, SB 234, c. 167, § 1.

Citationizer® Summary of Documents Citing This Document

Cite Name **Level**

Oklahoma Attorney General's Opinions

Cite

Name

Level

Cite Name

Level

1997 OK AG 107,

Question Submitted by: The Honorable Owen Laughlin, State Senator, District 49

Cited

Citationizer: Table of Authority

Cite **Name Level**

None Found.

APPENDIX H

RULES AND REGULATIONS AND MODE OF PROCEDURE FOR THE KANSAS-OKLAHOMA ARKANSAS RIVER COMMISSION (As Amended to July 26, 2017)

ARTICLE I

THE COMMISSION

1. The Commission shall be that Commission referred to in Article X of the Arkansas River Basin Compact, Kansas-Oklahoma.
2. The credentials of each Commissioner shall be filed with the Chairman of the Commission.
3. Each Commissioner shall advise in writing the office of the Commission as to his address to which all official notices and other communications of the Commission shall be sent to him and shall further promptly advise in writing the office of the Commission as to any changes of such address.

ARTICLE II

OFFICERS

1. The Officers of the Commission shall be:

 Chairman
 Secretary
 Treasurer
2. The Commissioner, or in his absence his Alternate, representing the United States shall be the Chairman of the Commission. The Chairman shall preside at the meetings of the Commission. His duties shall be such as are usually imposed upon such officer and such as may be assigned to him by these rules or by the Commission from time to time provided, however, that the Commissioner representing the United States shall not have the right to vote.
3. The Secretary need not but may be a Member of the Commission. The Secretary shall be selected by the Commission. He shall serve for such term and receive such salary and perform such duties as the Commission may direct. In the case of vacancy in the Office

of the Secretary, the Commission shall proceed as expeditiously as possible to select a new Secretary.

4. The Treasurer shall receive, hold and disburse all funds of the Commission which come into his hands. In the event that the Kansas-Oklahoma Arkansas River Commission Fund exceeds Fifty Thousand (\$50,000.00) Dollars, the Treasurer shall furnish a fidelity bond in an amount satisfactory to the Commission. The Treasurer shall not be required to furnish a fidelity bond when the Fund does not exceed Fifty Thousand (\$50,000.00) Dollars. The cost of such bond shall be paid by the Commission.
5. The offices of the Secretary and Treasurer may be held by the same person.

ARTICLE III

PRINCIPAL OFFICE

1. The principal office of the Commission shall be the office of the Secretary.
2. The principal office shall be open for business at such hours and on such days as the Commission from time to time directs.
3. All books and records of the Commission shall be kept in the principal office of the Commission. All records of the Commission shall be open to inspection by the public during the hours the principal office is open for business.

ARTICLE IV

MEETINGS

1. The annual meeting of the Commission shall be held on the fourth Wednesday of July each year, provided, the Commission may, by unanimous agreement of all Commissioners, select and designate an alternate date for holding the annual meeting.
2. Special meetings of the Commission may be called by the Chairman at any time. Upon written request of a majority of the Commissioners of either of the signatory states setting forth the matters to be considered at such special meetings, it shall be the duty of the Chairman to call a special meeting.
3. Notice of all special meetings of the Commission shall be sent by the Secretary, to all members of the Commission by ordinary mail at least ten days in advance of each meeting and such notice shall state the purpose thereof.

4. All meetings of the commission shall be held at such place as shall be agreed upon by the Commission.
5. Minutes of the Commission shall be preserved in a suitable manner. Minutes until approved shall not be official and such unofficial minutes shall be furnished only to members of the Commission, its employees and committees.
6. A majority of the Commissioners of each state and the Commissioner of his alternate representing the United States, if so designated, must be present to constitute a quorum. For purposes of a quorum and participation in meetings, any person properly acting on behalf of the State official responsible for administering water law in the State of Kansas shall be considered a Kansas Commissioner, and any person properly acting on behalf of the State official responsible for administering water law in the State of Oklahoma shall be considered an Oklahoma Commissioner. Credentials showing that such persons are properly acting on behalf of the State officials shall be filed with the Chairman of the Commission prior to each meeting in which such persons attend.
7. Each signatory state shall have a single vote representing the majority opinion of the Commissioners of the State, in any deliberations of the Commission. The Commissioner representing the United States shall not have the right to vote.
8. A majority of the Commissioners present of each signatory state must concur in any action taken by the Commission.
9. At each meeting of the Commission, the order of business, unless agreed otherwise, shall be as follows:
 - Call to Order
 - Introductions and Announcements
 - Readings of the Minutes of the Last Meeting
 - Correction and Approval of Minutes of the Last Meeting
 - Report of Chairman
 - Report of Secretary
 - Report of Treasurer
 - Report of Committees
 - Unfinished Business
 - New Business
 - Adjournment
10. All meetings of the Commission, except executive sessions, shall be open to the public. Executive sessions shall be open only to Members of the Commission and such advisories as may be designated by each member and employee as permitted by the

Commission provided, however, that the Commission may call witnesses when in such session.

11. Any meeting of the Commission may be recessed from time to time from the place set for the meeting to another place at the sole discretion of the Chairman.
12. Special meetings may be conducted by long-distance telephone conference call or other electronic means. Unless a different location is designated in the notice of the meeting, the public may attend such meeting at the offices of either of the Commissioners who are the State officials responsible for administering water law in the States. Any such long-distance telephone conference call or other electronic communication shall be recorded and made available for public inspection in accordance with the laws of the respective state.

ARTICLE V

COMMITTEES

1. There shall be the following standing committees:
 - Engineering Committee
 - Legal Committee
 - Budget Committee
2. The committees shall have the following duties:
 - a. The Engineering Committee shall advise the Commission on all engineering matters that may be referred to it.
 - b. The Legal Committee shall advise the Commission on all legal matters that may be referred to it.
 - c. The Budget Committee shall prepare the annual budget and advise the Commission on all fiscal matters that may be referred to it.
3. Members of standing committees shall be appointed by the Commission. The number of members of each committee shall be determined from time to time by the Commission. Each state shall nominate the member or members representing that state to serve on each committee.
4. The Chairman shall be Ex-Officio Member of all committees and may appoint additional Ex-Officio Members to committees.

5. The Chairman of each committee shall be designated by the Commission.
6. The Commission may from time to time create special committees, composed of such members and others, and assign such tasks as the Commission may determine.
7. Formal committee reports shall be made in writing and filed with the Commission.

ARTICLE VI

RULES AND REGULATIONS

1. So far as is consistent with the Kansas-Oklahoma Arkansas River Compact, the Commission may adopt additional rules and regulations.
2. Rules and regulations of the Commission may be compiled and copies may be prepared for distribution to the public under such terms and conditions as the Commission may prescribe.
3. Amendments to the rules and regulations and mode for procedure of the Commission may be made at any meeting of the Commission.

ARTICLE VII

FISCAL

1. All funds of the Commission shall be deposited in a depository, or depositories, designated by the Commission under the name of the Kansas Oklahoma Arkansas River Commission Fund. Such funds shall be initiated and maintained by equal payment of each State into the fund.
2. Disbursements of funds in the hands of the Treasurer shall be made by check signed by him upon voucher approved by the Budget Committee Chairman. The Budget Committee Chairman may authorize expenditures above the budget not to exceed \$200.
3. At the annual meeting each year the Commission shall adopt and transmit to the Governors of the two States, the budget covering an estimate of its expenses for the following fiscal year.
4. The payment of expenses of the Commission and of its employees shall not be subject to the audit and accounting procedure of the States.
5. All receipts and disbursements of the Commission shall be audited every fifth (5th) year by a qualified independent public accountant, to be selected by the Commission. In years

where no audit is conducted, a review of the Commission's finances shall be conducted by a qualified independent public accountant, to be selected by the Commission. The report of the audit or the report of the review, whichever is conducted, shall be included and become part of the annual report of the Commission.

6. An up-to-date inventory of all the property of the Commission shall be kept at the principal office of the Commission.
7. The fiscal year of the Commission shall begin July 1 of each year and end June 30 of the next succeeding year.

ARTICLE VIII

ANNUAL REPORT

1. The Commission shall make and transmit annually on or before the last day of September to the Governors of the signatory states of the Kansas Oklahoma Arkansas River Compact and to the President of the United States, a report covering the activities of the Commission for the preceding fiscal year.
2. The annual report shall include among other things, the following:
 - a. The estimated budget
 - b. Report of annual audit of the Kansas-Oklahoma Arkansas River Commission Fund
 - c. All Hydrologic data which the Commission deems pertinent
 - d. Statements as to cooperative studies of water supplies made during the preceding year
 - e. All findings of facts made by the Commission during the preceding year
 - f. Such other pertinent matters as the Commission may require

ARTICLE IX

MISCELLANEOUS

1. The Commission shall on request make available to the Governor of each of the signatory states any information within the Commission's possession at any time.

2. All contracts or other instruments in writing to be signed for and on behalf of the Commission, except matters relating to the receipt or disbursement of funds, shall be signed by the Chairman when authorized by the Commission.
3. The Commission shall have the power to employ such engineering, legal, clerical and other personnel as in its judgment may be necessary for the performance of its functions under the compact.

ARTICLE X

HEARINGS

1. The Commission may hold hearings, and take testimony and receive evidence at such times and places that it deems necessary. Such hearings may be held to determine violations of the Kansas-Oklahoma Arkansas River Compact or to collect, analyze and report on data as to stream flows, water quality, conservation storage, and such other information as is necessary for the proper administration of the compact. Such hearings may also be conducted for the purpose of securing information, suggestions, estimates and statistics as the Commission may need or believe to be useful for carrying out its functions and as may be available to or procurable from witnesses before the hearing.
2. All interested parties shall be afforded an opportunity for hearing after reasonable notice. Such notice shall include:
 - a. A statement of the time, place, and nature of the hearing
 - b. A statement of the legal authority and jurisdiction under which the hearing is to be held
 - c. A reference to a particular matter and any statute and/or rules involved
 - d. A short and plain statement of the matters asserted

If the Commission or any other interested party is unable to state the matters in detail at the time the notice is served, the initial notice may be limited to a statement of the issues. Thereafter, upon application a more definite and detailed statement shall be furnished.

3. Opportunity shall be afforded to all interested parties to respond and present evidence and argument on all issues involved in a hearing by the Commission.
4. The record in a proceeding shall include:

- a. All pleadings, motions and intermediate rulings
 - b. Evidence received or considered
 - c. The statement of matters officially noticed
 - d. Questions and offers of proof, objections, and rulings thereon
 - e. Proposed findings and exceptions thereto
 - f. Any decision, opinion or report by the officer presiding at the hearing
 - g. All staff memoranda or data submitted to the Commission in connection with their consideration of the matters before such hearing
5. Findings of facts shall be based exclusively on the evidence and on the matters officially noticed by the Commission.
 6. In the case of a hearing on a violation of the Kansas-Oklahoma Arkansas River Compact, oral proceedings or any part thereof shall be transcribed on request of any party charged with such violation and the cost of transcription shall be paid by the requesting party.

ARTICLE XI

PROCEDURES BEFORE COMMISSION

1. The Commission may admit and give probative effect to evidence which possesses probative value commonly accepted by reasonably prudent men in the conduct of their affairs. It shall give effect to the rules of privileged communications recognized by law.

No greater exclusionary effect shall be given any such rule or privilege than would be obtained in an action in court. The Commission may exclude incompetent, irrelevant, immaterial and unduly repetitious evidence. Objections to evidentiary offers may be made and shall be noted in the record. Subject to these requirements, when a hearing will be expedited and the interest of the parties will not be prejudiced substantially, any part of the evidence may be received in written form.

2. Documentary evidence may be received in the form of copies or excerpts, if the original is not readily available. Upon request, the parties shall be given an opportunity to compare the copy with the original.
3. A party may conduct cross-examination required for a full and true disclosure of the facts.

4. Notice may be taken of judicially recognizable facts. In addition, notice may be taken of generally recognized technical or scientific facts within the Commission's specialized knowledge. Parties shall be notified either before or during the hearing, or by reference in preliminary reports or otherwise, of the material noticed, including any staff memoranda or data, and they shall be afforded an opportunity to contest the material so noticed. The Commission's experienced, technical competence and specialized knowledge may be utilized in the evaluation of the evidence.
5. Apparent violations to the Compact shall be handled as follows:
 - a. If there is an apparent violation to the Compact, it should be made known to the Commission.
 - b. Apparent violators submit an explanation for said violation to the Commission within 30 days of receipt of written notification of said violation from the Commission
 - c. That the Commission refer the apparent violation to the Engineering and Legal Committees for investigation
 - d. After due investigation has been made, the Engineering and Legal Committees refer the matter to the Commission with recommendations concerning the action to be taken
6. Any party shall at all times have the right to counsel, provided that such counsel must be duly licensed to practice law in one of the States of the United States.

ARTICLE XII

FINDINGS

1. When the Commission finds that a violation of the Compact has occurred in a hearing held by the Commission itself, it shall transmit its findings to the appropriate state agencies in Kansas and/or Oklahoma to investigate and abate sources of the alleged violations.
2. In the case of a hearing held to collect, analyze and report on data as to stream flows, water quality, conservation storage, and such other information as is necessary for the proper administration of the Compact, and the gathering of information, suggestions, estimates and statistics as it may need or believe to be useful for carrying out its functions and as may be available to or procurable from witnesses, the information together with the Commission's final determination shall be forwarded to the proper agency of each

state charged with enforcement of pollution control and water supervision, and a copy shall also be maintained in the permanent office of the Commission. Said final determination shall include suggestions to the various states as to action to be taken by them to aid in the enforcement of this Compact.

ARTICLE XIII

PUBLICITY

1. Prior to the close of each meeting, the Chairman shall draft a press release as directed by the Commission and submit it to the Commission for approval. All approved releases may be made available to the press by any member of the Commission.
2. All other press releases, if there be any, shall be released by and through the Chairman.

