

Rex Buchanan: My name is Rex Buchanan, and I'm the former Director of the Kansas Geological Survey. The date is April 30, 2021. I'm at my home in Lawrence, Kansas, interviewing Tracy Streeter, former director of the Kansas Water Office at his home in Lawrence. We're conducting this interview via Zoom.

A native Kansan, Tracy grew up on a diversified family farm in Brown County and graduated from Horton High School. He earned undergraduate degrees from Highland Community College and Missouri Western State University and a graduate degree from the University of Kansas. He served eight years on the Valley Falls Board of Education and is a private pilot.

During his 33 years of service to the State of Kansas, Tracy held key positions related to Kansas water resources management, including serving 14 years as Director of Kansas Water Office under Governors Sebelius, Parkinson, Brownback, and Colyer. He also served 10 years as Executive Director of the State Conservation Commission.

While at the Water Office, Tracy oversaw implementation of the Kansas Water Plan, served as Chairman of the Governor's Drought Response Team, and in 2013, was appointed to co-lead the development of a fifty-year water vision for the State of Kansas. Tracy also served as an ex-officio member of the Kansas Water Authority and as the Kansas representative to the seventeen-state, western states Water Council. During his service as Director, he also led the Natural Resources Sub-cabinet, working to increase efficiencies and interagency cooperation statewide. Tracy retired from state service in December of 2018 and now works for Burns & McDonnell Engineering, assisting communities and industry with water planning and water supply solutions throughout Kansas and across the country.

Tracy's interview today is part of the Kansas Oral History Project series examining the development of water policy during the late 20th century and early 21st centuries. In these interviews, we explore water policy through the eyes of water experts, administrators, legislators, farmers, environmentalists, and others who were involved in the development and implementation of that policy. Tracy, thanks for being with us today.

Tracy Streeter: My pleasure, Rex.

RB: So, let's start a little bit, let's go back to the Conservation Commission. How did you wind up in that position?

TS: Well, I came out of Missouri Western [State University] with an [agriculture] degree and had visions of being a farmer with my dad and brother, but the economic climate in 1985 wasn't so hot, and they told me to keep going, go find a job elsewhere. So, I had a friend that had an interview to work for the Soil Conservation Service within the federal government. He was unable to fulfill that interview. So, he said, "You ought to give those folks a call."

So, I did, and they redirected me to the State Conservation Commission and interviewed and got the job. I started out as a field coordinator there in '85 and just kind of worked my way up

through the ranks at the Conservation Commission and spent my last 10 years there as the Executive Director.

RB: The Conservation Commission at that point was part of—was it the State Board of [Agriculture] at that point? Does that sound right?

TS: No, they were a standalone agency during my entire tenure. They were governed by a commission of conservation district supervisors from across the state. They would select area commissioners, and then we had *ex-officio* [members] representing agencies. So, they were really governed by a commission, and then it was in the 2010-11 range when the Conservation Commission was reorganized underneath the [State] Department of Agriculture.

RB: That was a lot more recent than I remembered it being. I thought it was a longer time ago than that. So how many years were you basically head of the Conservation Commission?

TS: Ten years, from 1995 to 2004.

RB: Okay. So why the transition then—before we go to the Water Office? The Conservation Commission has a water connection clearly because of a lot of the work that they do with what are in effect soil and water conservation measures.

TS: Yes. The Conservation Commission kind of grew in its stature on water once the State Water Plan Fund, and the Water Plan was created in '84, then the Water Plan Fund was coming along in 1989, created the funding source. Over my tenure there, it was about 60 percent of the entire Water Plan Fund went to the Conservation Commission to do soil and water conservation, flood control, and even the Multi-purpose Small Lakes Program was housed within the Conservation Commission. So that, 1985 to current, was where the Conservation Commission saw their growth in implementing financial assistance programs that were to implement things that were in the State Water Plan.

RB: So, you came along at a kind of a propitious time in terms of Conservation Commission and funding that was suddenly out there that wasn't there before.

TS: That's correct.

RB: And again, what year was it that you moved to the Water Office, and why did you make that shift?

TS: July of 2004 was when I moved to the Water Office. Quite frankly, I wasn't interested in the job initially. Mike Hayden was Secretary of Wildlife and Parks at that time with Governor Sebelius, and [Hayden] was, I think, urging me to do it. Steve Irsik from Southwest Kansas was Chairman of the Water Authority for Governor Sebelius, and he was urging me to do it, and I was still resisting. And then Governor Sebelius called me and asked me to meet with her. I went

into the Governor's Office and met with her, and I couldn't tell her no. So that's how it happened.

My real reason for it wasn't anything against the Water Office or the Governor at that time. It was really, I didn't want to get into the political appointee arena. I was hesitant to do that. It wasn't an interest of mine. I wasn't a real politically motivated person and still really not, more so than I was then, but I did say yes, and I'm glad I did. It was a really great experience, and as you read in my bio, I ended up getting to work for four governors, and so that, it was a great experience, and I wouldn't trade it for the world.

RB: Remind me of who you followed in that position.

TS: So, under Governor Graves, Al LeDoux would have been the last Water Office Director, and then Clark Duffy took over as an acting [director], I believe. Then Clark was in the office for Governor Sebelius, and then they made a change, and then Joe Harkins came back in, made a return visit. He was on the Governor's staff, helping her in the Governor's Office. Then he came over and ran the Water Office for about a year and a half, and then I took over from Joe, and then finished out the Sebelius-Parkinson administration.

RB: In some respects, you bring a pretty different background than those previous folks to that job because Al LeDoux had an [agriculture] background but not necessarily any kind of technical background beyond that. Some of those other folks were more planning types like Clark and Joe Harkins. You come at this from a somewhat different perspective it seems like. Is that helpful? What are your thoughts about that?

TS: Well, I think it was. Being in the Conservation Commission for so long, I was on the implementation side and not the planning side. So, my tendency was to push the Water Office into more of an implementation, taking more of an implementation role rather than writing a water plan with a bunch of recommendations and then step back and look to everybody else to implement it.

So that's when we got more active in actually taking on some bigger roles and implementing policy such as the reservoir issues with the state's water marketing program within the Water Office. We had to be more active in securing that storage and make sure that we could protect that storage.

RB: Let's talk about that reservoir issue some. I'll come back to this water visioning process where the two big priorities that got identified in that process were reservoirs and then the Ogallala [Aquifer (Ogallala)] out west. Let's talk about that reservoir issue. Was that on your radar screen when you first show up at the Water Office? When does that arise to be the kind of issue that turns out to be?

TS: I think we were always aware of the reservoir sedimentation issue because during my Conservation Commission years, the water plan always spoke to targeting the dollars above the

reservoirs for conservation practices. So, the effort and the thought was there always, but I think what really pushed it to a higher level was the fact that we realized in some drought years that some of our reservoirs were really vulnerable and incapable of meeting demands in a multi-year drought. We started modeling the in-flows during a drought and the usage, and then we started doing bathymetric surveys in the reservoir to see how much sediment was actually in them, and we were crunching the numbers, and we were getting very concerned, particularly at John Redmond [Reservoir] because of the contract that the Water Office had to back up Wolf Creek's [Nuclear Power Station] water supply.

So, we started looking at a day when we'd get into a multi-year drought. We can't fulfill our obligation to Wolf Creek, and they're out of water, and we felt like that absolutely couldn't happen. So, they were the poster child, but there were many other reservoirs that were in a similar condition. Tuttle Creek comes to mind. Kanopolis. Then you get down into southeast Kansas [where] Fall River [Reservoir] has a lot of sediment in it. A number of them do.

That's really what elevated it was the fact that we were operating a wholesale water utility at the Water Office, selling raw water to municipal and industrial customers, and looking out long term, we could read the tea leaves and know that we're going to get a day when we didn't really have a reliable resource during a drought.

RB: In some respects, that didn't come as any surprise to anybody. I mean, the sedimentation. The [U.S. Army] Corps of Engineers [(Corp)] always talked about a life span on those reservoirs, right?

TS: Right. I think we wanted to do what we could, but it wasn't really elevated to like when we got into the water vision. That was elevated by Governor Brownback. In rolling out the water vision we wanted to address these two critical issues: the decline of the Ogallala and the sustainability of our reservoirs. We were, I think, giving it lip service. To be quite frank with you, Rex, we did spend a little money up there and try to encourage the federal government to target their moneys above the reservoirs, but it was all very voluntary. We were looking at protection.

But then we started to move in and say, "We're never going to be able to be able to do enough watershed treatment to sustain these things because there's so much storage lost already. We knew we were going to have to do remedial efforts in the reservoir itself and start focusing on non-cropland-type practices like streambank stabilization. There were some studies done that said most of the sediment coming into the reservoirs weren't coming off cropland. It was coming from streambank erosion.

So that's when we started taking more of an active role in trying to promote very targeted streambank stabilization immediately upstream of the lakes, and then ultimately start looking at the dredging project that we ultimately did at John Redmond.

RB: When it comes to trying to deal with that issue of sedimentation, there are a whole host of issues, but the two big issues it looks to me like are 1) sort of the technical issue of the best way to go about it is, and [2]) the other one is how you pay for it, right? It sounds to me like in terms of arriving, you know you've got a problem at several places. You arrive at priority based on that kind of energy-water nexus that comes together at John Redmond and Wolf Creek. How do you go about those two questions then of "What's the best way to deal with it, the silt that's already in there, and how you pay for it."

TS: Well, actually, a step before we got to the point where we felt like we needed to prove we could dredge a federal reservoir in Kansas, we looked at building new reservoirs, and we actually went back to the Corps of Engineers and looked at some sites that were planned back in the day but never built, and in fact, they were de-authorized. So, we started thinking about maybe bringing some of those sites back online and start planning them.

So, we put together an effort through the Water Authority and the Water Office. We tried to prioritize and look at those sites. We were even going so far to try to secure the land for those sites by maybe putting an easement, a conservation easement on it that would protect them as a potential reservoir site. And that got pretty dicey. Now, all of a sudden, we were looking at people's property well in advance of ever building a project. Quite frankly, we lost a lot of momentum from that from a lot of folks because they said, "We don't want to be going out and identifying anybody's property for a future reservoir."

Then the other thing is, building a reservoir is just a long haul. The dam-building days back when we were thinking about that were very much on the decline. You could hardly find a reservoir being built in the United States anymore. So, we felt like our best shot was to take the footprint that we already had and try to restore it through dredging.

So that's how we evolved to that. The other option, Rex, that I failed to mention is something that the Corps of Engineers will allow you to do, and that's re-allocating the reservoir storage. In other words, you might have—you have a huge storage capability for flood control, and we actually did one of those is re-allocating the storage where we raised the pool two feet and add storage. That's the easiest thing to do but very difficult and very costly, particularly when you start talking to people and talking to the Corps about maybe minimizing or reducing the level of flood protection. That's the expense. You lose the flood protection to gain that permanent storage with a pool rise.

So that actually happened at John Redmond as well. That lake was raised two feet, and we did that. We actually have others that we were looking at, but to my knowledge, there's been no further movement on trying to reallocate reservoir storage. So that took us back to dredging.

RB: To go back to the possibility of new dams, those were kind of—and I remember that. That would have been like in sort of southeastern, south-central Kansas, some of the locations, or at least one or two of the locations that you were looking at. But also sort of the thinking about big dams in general is different today than it would have been in the 1950s, 1960s, when some

of the dams and reservoirs that were built now, right? Dams are just not as popular as they used to be.

TS: No, very difficult. The environmental regulations have changed dramatically regarding dams. It got to the point where you'd very rarely even build a small flood control dam in Kansas City or anywhere anymore just because the environmental mitigation that you have to go through with the Corps of Engineers almost makes it cost prohibitive to mitigate the impacts of those streams by inundating them.

So that really had more to do with the dam-building era kind of coming to a close. That's the long and short. But you're right, most of those dams were located from Wichita east. There were a number of them scattered out through northeast, east-central, and southeast Kansas.

RB: It also seems to be like people—I know there's always been the ability politically for locals to organize and express opposition. Nobody's at all bashful about that nowadays, compared to what they might have been, right after the '51 flood, for example.

TS: No. Then the other issue is just private property rights. You're having property rights and environmental regulation that really made it a very tough road to go down. Quite frankly, back in the big dam-building days, there was a lot of condemnation. In the early days of the Small Lakes Program, when that was at the Conservation Commission, there was a small amount of eminent domain used. It was tough sledding, but I think most folks just didn't have an appetite for using eminent domain anymore. And we were relying on local governments to do that, cities or watershed districts to do that, and a lot of them just won't do it. And I get it. I understand why.

RB: I can see condemnation in the wake of the '51 flood, when everybody sort of has an altruistic “We've got to pitch in to solve the problem.” But today if you were to go to a local unit of government and ask them for condemnation for a dam, I can't even quite picture doing that. I think it would be really hard.

TS: Yes. I agree.

RB: Before we go back to the dredging project itself, one aspect of this, and you've talked about it some already, is that basically buying pool space in reservoirs. I went to a number of hearings over the years where I would hear you guys get up and talk about doing that. There was always a price tag associated. [Representative] Carl Holmes was always a big proponent of it. I never completely really understood what was going on. Was this just basically space that the Corps had available, the Corps in effect owned that space and thus access to the water? The State had to buy that access? Is that what you were doing when you were doing that process?

TS: Yes. But a very thorough environmental and economic impact review had to accompany that because you take a look at a reservoir and envision it being a measuring cup, you've got sediment storage at the bottom. You've got water supply in the middle, and then you've got

flood control storage on the top, if you're looking at it from a cross-section standpoint. So, every federal Corps reservoir had flood control storage, and that's primarily why they were built. So, if you're going to raise the pool two feet, say you're going to convert 100,000 acre-feet of storage from flood control to water supply, then you are going to lessen the flood storage capability. So, you would have to mitigate who would get harmed by that, by having that lack of flood control or that reduced flood control. Who gets flooded now because you made that change at the lake? And you had to come up with a compensatory plan to deal with that.

We never really had to do that at John Redmond on the first one, but that would have been tough. Then the second issue was pricing. When we purchased that reservoir storage over the years, we got a very favorable deal from the Corps of Engineers, frankly largely due to [U.S.] Senator Dole. At the time, we were able to buy that storage at construction-day prices.

Now the Corps of Engineers prices water supply very differently. Now they index that up to what would it cost to buy that storage today. We had numerous debates with the Corps of Engineers about pricing. Even if you got through the environmental hoops and found that you could do it and there was a possibility of approving the reallocation, then it was like, "How are you going to pay for that?" So, I can't even remember some of the price tags, but they were staggering.

RB: Yes. I remember in those legislative hearings that the sense was "We need to do this now because the price is just going to go up." But any time you go to the Kansas Legislature with a big-ticket item that they haven't seen before, you're in for a challenge even in good times, right?

TS: Yes.

RB: But it seemed like on the outside that you guys were pretty successful pulling that off.

TS: I'd say so. We didn't do much of it, but one thing we worked really hard on was trying to improve our relationship with the Corps of Engineers. It seemed like to me in the early days, it was more adversarial. So, then we tried to take a different approach in getting to know those folks and work closer with them and collaborate with them. We found the Corps of Engineers to be much more receptive. It probably wasn't so much because of our charisma and our ability to develop these stronger relationships. It probably had more to do with the fact that they finally understood that these lakes weren't just for flood control.

When [the Corp] used to talk about the reservoir silting in, they didn't care really. It wasn't their responsibility. Water supply was a non-federal responsibility in those lakes, and even if the lakes silted completely in, you still had your flood storage, and they were all about flood control. But we started showing them with Redmond and Wolf Creek, the water energy nexus there and just municipal water suppliers going without because of sedimentation, I think we

finally got their attention that this was a big national policy issue that they need to be more receptive to dealing with.

And you're seeing a lot more reallocations taking place across the country. In fact, southwestern Missouri has been pursuing a reallocation in Stockton Reservoir for a long time now. They're moving towards completion of that to convert some of that storage to water supply for the Springfield-Branson [Mo.] area, Joplin area, and there's a few more of them going around the country. To my knowledge, we don't have anything active going on in Kansas relative to that.

RB: In effect, the Corps built those things. They knew they were going to silt in, but in the meantime, everybody became extremely dependent on them for water supply and in John Redmond's case, for energy. They can't just go away, or you can't just shut them down. You can't just treat them [exclusively] as flood control because too many people depend on them at this point, right?

TS: That's right. And another sidebar is everybody really truly appreciates a big flood event and look to the reservoirs on the type of protections they provide. The other time when the public really understands the value of a reservoir is the recreation community when let's say for example, we had to draw Perry [Reservoir] down six feet for navigation on the Missouri River, and now all of a sudden, everybody has to pull their sailboats out of the lake. You get a huge political outcry, but it was from the recreation community that, quite frankly, didn't have financial skin in the game, or flood control.

We kept trying to use our graphics [illustrating future reservoir storage] and say, "In a fifties-style drought, this reservoir is going to be dry." But it's hard to resonate. It doesn't resonate with legislators or people very well because it's down the road. It's something that's going to happen twenty, thirty, forty years from now, and to try to get money to finance a solution to a problem that's not going to occur for thirty to forty years is kind of tough to sell.

RB: Especially in a political environment where people are looking at re-election every two years, or in some cases, every four years, as opposed to the longer-term water issues.

Hey, let's go back to John Redmond. So, in effect, you eventually arrive at a demonstration project for dredging. How did you decide, how did you settle on the project that you settled on?

TS: Well, we came to the conclusion we wanted to do John Redmond, and we had a prediction that we'd have to do a lot of dredging. Again, probably I've forgotten the numbers, but at John Redmond and even at Tuttle Creek, it's almost like you have to continually dredge to keep up with the amount of sediment that's coming in. Probably the thing to do would be to actually—and other states have done this—is actually have the state buy a dredge and just put it on the lake, and have an O and M [operation and maintenance] budget, and you just dredge every year. You dredge a little bit every year just to keep up.

Short of that, we obviously contracted with a company, a dredging company to do this pilot. At one point, we were looking at six phases to try to get us down the road with Wolf Creek at least through the end of our operating permit so that we would—how much dredging do we have to do to go through a fifties-style drought while the nuclear plant's operating permit was still in effect? That was our goal.

So, we were looking at Phase 1, which was a very small project. It ended up being just kind of a demonstration to show that we can go through all of the federal hoops that we need to do to have a state entity go on to federal entity and dredge a federal project. That was no small undertaking because that project was the first of its kind in the United States. It was really remarkable that we actually pulled it off, I think, considering everything we had to do to get there.

RB: What did it cost you? How did you pay for it?

TS: The total price tag for that project was 20 million dollars, and the way we paid for it is there were bonds issued by the Kansas Development Finance Authority on our behalf, and then through fees coming through water sales at the reservoirs and the Water Plan Fund, they combined to make the debt service payment that we're still making today.

RB: Where do things stand? By and large, based on what little I know, I think for the most part, that was considered a success, wasn't it? It did what it was meant to do.

TS: It was, but, you know, if you really look at the amount of sediment that was removed, which I believe—I'm going to forget the numbers, but I want to say three million in cubic yards of sediment was putting a small dent in a big car. And so, yeah, it was twenty million. It was a success because we proved we could do it, and that if we ever have to come back and do it, now we have the playbook. We know how to do it. We have precedent of being successful with the Corps. So, I think from that standpoint, it was a huge success.

But we didn't achieve the ultimate goal of making sure we would be able to get Wolf Creek through a fifties-style drought prior to the end of their operation permit. I still think that's an issue. Now having said that, if demands change at the nuclear plant, it changes the dynamics there. Let's just say maybe they don't renew a permit down the road. If they decide, "Well, we're not going to produce electricity there anymore," then there's no need to touch John Redmond again because there's really no demand for the water out of it anymore.

So, the Water Office now, and I'm kind of looking forward, before I even left the Water Office, we turned our attention to Tuttle Creek because it is a major, major player for the Kansas River water users to have a viable reservoir there. And so, the Water Office, they're still working on it. In fact, I was on a Water Authority virtual meeting the other day, they have some money appropriated right now to do a pilot project at Tuttle Creek called water injection dredging. And

what that does is stir up the sediment on the bottom, and then you pass it through the gates and let it go downstream.

That sounds like a real workable solution, except you've got water quality issues that you're creating by increasing the amounts of sediments that are in the water being released. It's probably not all that different than what the Corps would release during a flood event, but they're moving forward on that. They're looking at under what conditions can we make a release with sediment in it and not impact water quality to an unacceptable level for the water users downstream.

So, I'm glad to see they're moving forward on looking at that. Hopefully, if they can prove that that can work, then that might be a good long-term solution because that is a tool that will allow you to at least pass through what's coming in every year. If that was a goal to say we're not going to have Tuttle Creek's silted any more than it already is. If we can do this on the long term, then now we can pass it through and keep Tuttle Creek in terms of its sediment load right where it is today. I think that's the hope that we can find the way to do that safely from a water quality standpoint.

RB: So at least you're not getting any further behind.

TS: That's right.

RB: I will say, I can remember back when you could see a lot of water in that big, long bridge up there at Randolph, and today it's mudflats, just within the amount of time that've been back here.

So why didn't the State go in the direction of getting its own dredge and just make it part of the reservoir landscape that there be somebody going back and forth across that?

TS: It was certainly contemplated. But we looked at—South Dakota had a program that they tried to have a state-operated dredging program, and I think they found it wasn't very efficient. So, then they had a nonprofit organization that took control of the program, but they were doing all these small natural lakes and moving those dredges around. They could remove a lot of sediment on those small natural lakes in the Dakotas much easier than what we would have to undertake at a federal reservoir like Redmond or Tuttle Creek.

The other thing, and really it's a problem for whatever method you use, is disposal is the problem. That is absolutely the challenge, just to have the land and the infrastructure that's in close proximity to every year if you're going to remove that sediment, it's got to go somewhere. At Redmond, we were able to secure land below the dam, immediately below the dam, and so we didn't have to pump it down there. We really were able to let gravity take that sediment down for the most part, and that worked good, but again going back to property rights and getting those properties secured and under some sort of temporary contract to store sediment,

we changed some farms in the huge wetlands below John Redmond with that demonstration project.

So, I didn't really answer your question on why didn't we decide to just buy and do it, but part of the reasoning was I didn't think we were equipped to do it. Quite frankly, we would have had to gear up. There would have had to have been a major increase in operating budget to do that year in and year out. But if you think about the capital cost of buying a dredge, that was probably very easy to do, and hiring a crew to run it, probably pretty easy to do, but you're going to be continually having to secure land and do those types of things that I didn't think the Water Office was very well equipped to do, and I don't think the legislature was ready to go big time like that and go all in.

RB: I'm going to come back to that. I was going to say, when you were doing that at John Redmond because it was a demonstration project, you didn't have to worry about where to put silt for years and years and years and years. You only had to worry about it for a little while. If you'd had to do it for a lot of years, you wouldn't have been able to do what you did. Doing what you did is hard enough, I'm sure. I can't quite imagine really long term what you would have done down there.

TS: Yes. You know, the dredging company ended up buying one of the farms below the dam and built the biggest storage facility on land they purchased. They still own it today. But then we lease some, and the idea was is we would lease cropland in the flood plain, store sediment on it, and then let it dry out, and then reclaim it. I don't think that's happened yet at Redmond. I think we're towards the end of our projected timeframe to do that. I know the dredging company was trying to prepare the sediment holding facility so that it would dry out enough so that we could knock the berms down and reclaim it back to cropland. I think it can be done successfully.

We looked at a program in Ohio as part of our due diligence in trying to figure out how to do it. We learned in Ohio that they have a longstanding dredging program that's state operated. That's how they did it. They would go lease a piece of property, build a storage facility, fill it full of sediment, and then reclaim it to a soccer field, to a cornfield, what have you, and they did it very well. So, it's very much doable that you can use the land temporarily and then put it back to its original use or some other use that has some economic return to it. The only property below John Redmond, and again, I've been out of the Water Office now three years, but I don't think that the piece of property that we're leasing is back in crop production yet.

RB: You mentioned, so from the time you start with the Conservation Commission all the way up until when we leave the Water Office, the political climate in the state changes. I'm not trying to put you on the spot about that. The state legislature is always reluctant to get behind what they view as any kind of expansion in state government. Would they have been reluctant, do you think, to sign off on a state-run dredging project because it was a state-run, an additional sort of unit of state government that didn't exist before? By the time you came along with John Redmond, was that political attitude become an issue, do you think?

TS: I've got to tell you, we probably wouldn't have done the dredging project without [Gov.] Sam Brownback wanting to do something on water, and that was the impetus for the water vision, and it probably took his influence and his nudging and his recommendations to do it that allowed it to happen. I've got to give credit to Governor Brownback that probably without his leadership, we wouldn't have done it. That's not to say that others wouldn't have. Maybe it was just a timing where we were getting up close, ready to do it at the same time that he wanted to make water a priority in his administration. But that's what it took to get it done and get through the political aspect of getting the funding to do something like that.

Even back in the water vision, we were trying to raise additional funds to implement the water vision. So, let's go beyond the Water Plan Fund. We wanted to go from the \$20 million that it is today, or something short of that. We wanted to look at a \$50 million plus annual budget for water, which would have allowed us to do some more things. But that's been a struggle, and I think the Water Authority is struggling still today to get the Water Plan Fund fully funded back to its original state that it was in 1989.

RB: Yes. How that funding came about has been a topic of conversation of almost everybody that we've interviewed in this process. You come along a little bit after that so that you don't have to be part of that fight. By the time you come to the Water Office, the Water Office is in effect a coordinating, planning entity to bring together all of the disparate agencies, both state, federal, local, what have you, that are dealing with water in Kansas.

When you first start there, talk about how the Water Plan exists, and then let's talk about how you get to that water visioning process that you were involved with.

TS: So, the Water Plan had its cyclical process of being updated. We had local advisory committees across the state and we used that process to readdress priorities. Are things that are in the Water Plan still valid? Do we need to reprioritize them and do emerging issues out there that needs to be addressed that's not currently in the plan?

So, we were embarking on that, on updating it, and we were supposed to do it on a five-year cycle, and then that's when the water vision came in. So, when I'd go out and talk to people about water planning, I said, I talked to them about five-year cycles to say, "What's the next five-year priorities?" and then just keep renewing it.

It was the Governor's [Economic Advisory Council], we were presenting to them on water, and they go, "What's your long-term plan for water?" That's where the fifty-year vision was hatched was actually out of a conversation with some economic development advisors. So, from that day, that's when I was charged with trying to put together a process for developing a fifty-year plan, which that's when we got into the Ogallala and looking out, "What will the Ogallala look like in fifty years if we don't do anything? What will the reservoirs look like in fifty years if we don't do anything?"

That was very—very graphic. It changed the message, and I think allowed people to kind of resonate with, “This is a real issue.” We're probably hurting ourselves in looking at five-year increments because it was just—it seemed like we'd get off one plan, and then we were writing another one, and it was like *deja vu*. We were looking at the same issues and the same funding.

So, when we got folks and were able to show them what the water situation would look like fifty years from now, I think people—they were taken aback and saying, “Oh, my god.” Then we kind of restructured the advisory committees to kind of reflect, not so much surface hydrology, but we tried to match up the regions out West, so that they overlie the aquifers because that was the focus.

We did some turnover. We tried to freshen up the advisory groups and give them a little more horsepower and then take a longer look at our resources. I think that really was a good stepping—that was kind of a good springboard into getting a really good plan. We had so much feedback and energy around that vision. I don't think we would have ever seen with just rewriting the current Water Plan.

RB: I know what you mean about the Water Plan and every five years because I know in my experience, when I first started to get involved, I was sort of mystified. It seemed like you just got done with the Water Plan, and here you were starting again. I never quite understood. It felt like a perpetual motion machine. I understand it better now, but at the time, it really was hard to comprehend.

Does some of that then, you spoke to the issue of how some of the Water Plan funding, restoring Water Plan funding back to its original level. What happened to that money? Why did it go away? About when did that happen?

TS: Well, Rex, if you recall, it was a mix of fees and transfers that made up the fund. The fees were always solid. There was never any change to those. In fact, in—oh, gosh, I don't know what year it was, Rex, there was a clean drinking water fee that was added to it after the original \$16 million pot, which was \$6 million in the General Fund, \$2 million lottery, and then the rest were fees on both [agriculture] and municipal, stock water, those fees that you're familiar with.

And then the clean drinking water was added. That was another fee on municipalities. That money was supposed to go back to water supply restoration. It was always there, but it seemed like it kind of got homogenized with all the other funds. It was really difficult to track whether those dollars actually did what the law said they were supposed to do.

It's the [State] General Fund and the Lottery [revenue], what they call the EDIF, the Economic Development Initiatives Fund, it was those transfers, and they totaled \$8 million— \$6 million from the General Fund and \$2 million from EDIF. Those were the funds that were frequently redirected or not transferred to the Water Plan Fund because of a budget crisis.

It seemed like about—it didn't matter who was Governor or who was in the Legislature, when they got into revenue shortfalls, those were some of the first things that happened where those transfers were suspended. And it wasn't just the Water Plan Fund. There were a lot of demand transfers that didn't get done. Local government suffered as well.

It was in the Sebelius administration, we had started to see those dollars go away. It was when Kathleen Sebelius came in, and Joe Harkins was at the Water Office is when we had a successful effort to get those back. But when we had another budget crisis, and I think we actually lost a little bit of it before the Sebelius administration was over even. So, it was just the first place that folks went to solve a big budget crisis was to suspend the demand transfers. So, they're still today working on that in this administration, trying to get that wholly restored. I don't think they've got it fully restored today.

RB: You touched on this right at the beginning, but in effect, a lot of that takes place because of budget shortfalls, and you really quickly get into a political era about taxation and tax reduction and therefore budget reductions. It's a pretty difficult era in state agency times in Kansas, and it's all politically wound up. You may not have wanted to be in politics, but you were, right?

TS: Right. Yes. What made matters more difficult is working for a Governor that has a Governor's Budget that has to balance, and they do whatever they have to do to do that, and then I have a Water Authority that I'm Secretary to as Director of the Water Office that says, "This is unacceptable. We need to increase this and get it back," and I go, "I get it."

But when I go over to the Budget Committee [in the Legislature], I would come in with two messages. I would come in and say, "I'm here as the Director of the Water Office, and I support the Governor's budget recommendations because he or she is the boss." But then I said, "I also have another set of recommendations for you to consider from the Water Authority, and they want their money back." I was constantly balancing those all the time.

RB: But to a certain extent, and I saw you guys do this, over time, get the Water Authority more directly involved in that process such that they were going directly to the Legislature and taking on that role to a certain extent.

TS: Absolutely. We'd even bring in our local advisory committees. We got them involved in the budget process. So, there was some buy-in from the country, from across the state on what the priorities were and what we wanted to use the money for. I think that was successful. A very difficult thing to do is to get that many people on the same page moving in the same direction, but, yes, we would start bringing in our budget committee chair on the Water Authority and the Chairman of the Water Authority, they did a lot of the talking during my time there, and they probably still do because I always felt like they would be better received than me, not that they didn't like me, but I was the State guy, and if you could get somebody that's appointed by the League of Municipalities or the Governor or some water entity standing up, saying, "Dang it, this is important from my industry or from my constituents," that seemed to resonate with legislators.

RB: Let's go back to the water visioning process. You guys held what seemed to me to be just an incredible number of listening session meetings, whatever you want to call them, out across the state. Anything come out of that that surprised you that you weren't expecting from that process?

TS: I'm sure there was, Rex. Nothing's jumping out at me right now. There were some amusing moments on folks' ideas on how to solve some of our water problems. One was one way you can solve your water problem is to reduce your demand. One said we really need to stop population growth, and that will help solve the problem. We got that extreme.

But conservation came into the conversation all the time because, yes, you want money to increase your supply or maintain your supply. Why don't you look at reducing your demand? There's been a lot of communities that have done fantastic things. They've grown population wise but use less water than they do today. You know the Hays story as good as anybody. That was the only way to solve the problem in the Ogallala was to quit pumping as much. There was no way to buy your way out of it. There was no silver bullet. The only thing to do was to stop using as much as you're using today.

So, there was a lot of innovation that came out of the vision, particularly on the Ogallala. Today we've got some amazing technology out there now that really allows the farmers to know that I don't need to turn a sprinkler on. There's moisture sensors that are out there now, and they're very common now that they're able to look at their iPhone or their smartphone and look at the soil moisture condition of all of their center pivots and say, "I don't need to pump today." They learned how to save water, even if there's not [Local Enhanced Management Areas] LEMAs or water conservation areas, the technology I think is making a difference, even if we don't have any now.

We're obviously seeing some great success out in the Ogallala with the LEMA and Sheridan County. [Kansas Geological Survey] KGS, your former agency, does a fantastic job of measuring that. They've shown that actually aquifer levels have gone up a time or two in Sheridan County inside the LEMA compared to outside. K-State [Kansas State University] looked at the economics of that LEMA and said, "They saved a lot of water, and we really don't see that they took a real significant economic hit." So those were the things, the innovative things that came out of the water vision that I think were hugely successful and probably going to ultimately help us get to where we want to go, if it's not too late.

RB: One last question related to funding the water vision. There was a lot of conversation about various fee increases for additional money basically to help support the Water Plan as a result of those conversations of water vision, but none of them ever really took off, did they?

TS: No. And we put together a pretty high-powered committee to look at what's the best option to address these additional financial needs. They looked at fees first, but the municipal—you

got into a discussion, municipal versus agriculture in that committee. If you wanted to increase fees on municipalities, they said, "We'll listen to you, but we've got to see a fee on irrigation."

The [agriculture] community pays a fertilizer tonnage fee, and the stock water and the feedlots and dairies pay a water fee, but by and large, that—and then there's a pesticide fee. So, there is some [agriculture] fees, and the fertilizer fee is not insignificant, but if you looked at a fee increase, we couldn't get a consensus or any unanimous support for free increases because not everybody was willing to take them.

So, we then started looking at a dedicated sales tax, which is pretty common in other states to address natural resources. That's where we ultimately ended up was with a one-tenth of a cent piece of the State's sales tax. We wanted it to go on a referendum for a constitutional amendment, and we never got any traction on that, primarily because we have a very high sales tax in Kansas right now, and there's—if anything, there's an interest in trying to lower the sales tax or provide exemptions for things like groceries and things like that. There was a lot of competing interest for that idea. Everybody agreed with it because it was—it's not going to be a fee on me. It's going to be something that all Kansans share in, but we couldn't get any traction with that.

RB: As I think about this, and I was cognizant of it at the time, the political aspect of that job may not be paramount, but it's pretty close to it, of the Water Office job, it seems like.

Hey, to go back to the Ogallala, a couple of questions about that. I appreciate what you're saying about LEMAs, which look to me like a success story. They have been adopted a little more broadly, but still kind of sitting there, waiting to take off. I go out there and measure those water levels every year, and it varies year to year, how wet it's been, and people are far more efficient. There's no question. They're far more careful about how they put on water.

By the same token, for the most part, those water levels are still going down, maybe not quite as significantly as they were, but the problem hasn't gone away. Where does that leave us, I guess? I know that's an ill-defined question, but you see what I mean. We understand the problem. We've dealt with it in some fashion. Where are we going? The problem is still there, maybe in some respects, maybe not quite the same, but are we going to deal with it? Do we have the political stomach to go out and make those kinds of tough decisions? Or is it just going to play itself out the way it has been?

TS: I would have thought that we wouldn't choose the latter. We have the legal authority to do it. It's just the political aspects of doing it, and there is a corresponding economic impact to it in some places, even though we've shown that you can do it in Sheridan County, and there's really not the economic harm that many thought it would be. You give them flexibility to use their water in a reduced quantity over a five-year period, and they learn how to manage it better. They were taking these sensors, and it forced them to manage.

Now that they have a five-year bank account for their water in Sheridan County, their thought process changed. It looked like to me, they went, reduced their corn acres, went to wheat, went to sorghum, turned off a half a sprinkler, and dryland wheat on one half and irrigated corn on the other half. They figured out how to make it work.

I think there were some favorable commodity prices that fell in there that made that probably look better, but all that said is all these technology farms that have been created across the state since the water vision, I think they have proven to themselves that they can save a lot of water and really not hurt their yields. In fact, one of our technology farms north of Garden City, I think he reduced his pumping 15 percent on that technology farm off of his average use, and he put on different nozzle packages on his sprinkler, and put the moisture probes in, and his neighbors across the road—actually I think they were related, just kept pumping as they always did. That owner of the technology farm, Dwane Roth is his name, saved a ton of water, and his yields were higher than his neighbors who didn't reduce pumping at all.

So, we actually learned that in some cases, we were hurting our yields by watering too much. I'm still optimistic, Rex, but I really think there needs to be some more structure. I think GMD 1 has a LEMA in Wichita County now. I think there's interest in expanding that. They're looking at going to some other counties in [Western Kansas Groundwater Management District No. 1], but really the void where we probably could use some more formal management would be in [Southwest Kansas Groundwater Management District No. 3].

RB: It always felt to me like LEMAs were about as good an answer as we were ever going to get, but they kind of needed to be that thousand points of light. One of them in one county wasn't going to do it. Now, yes, you're right. They've expanded in northwestern Kansas districtwide, and Wichita County folks have gotten involved. But southwestern Kansas still looks to me like it's the one that has just decided not to embrace going in that direction. The problem is going to solve itself, one way or another. It's just a question of how you get to that solution, and what you look like when you do.

TS: Right.

RB: Let me ask you, finish up here with some big-picture questions. Some of them will be pretty easy, and maybe one of them won't. So, in that time you were head of the Water Office, what do you look back on and think was the accomplishment that you're most proud of during that process.

TS: I've got to look back to the things we've been talking about. I think the reservoirs and the pilot-dredging project was a big milestone in terms of—it was a tough thing to accomplish. Just accomplishing that was something that was laudable. I wish the impact would have been greater. But the fact that we did it, and we know that we know how to do it now, I hope the water-injection process that has not happened yet at Tuttle Creek, I hope that's successful because I think—I guess that water vision process and the things that came out of it that we have implemented and are trying to implement more of are the solutions.

So, I guess I'm proud of the fact in those fourteen years that those things happened during that timeframe, and certainly the Water Office and the Director of the Water Office can't take a lot of the credit for at least some of the policies. It takes a lot of people to make that happen, as you know. But the fact that we have these frameworks in place for a LEMA, for a water conservation area, for technology farms, and really, we've beefed up our watershed protection practices above the reservoirs, even beyond what they were years ago. I think the fact that we've got a lot of people buying into that, I'm pretty pleased that that happened while I was there.

So, I think those policy changes that were made were good ones. They work. We've proven they work. We just need more of them. We just need more implementation. I think we have the solution. We just need more of it.

RB: What didn't you get done that you would have liked to have gotten done? What would you have hoped would have been in place today that is not there?

TS: You know, I wish we did more on groundwater quality. We've got some pretty significant nitrate issues around Kansas. I wish we had something more robust in place to prevent that. They're trying to do that now. It wasn't that we weren't recognizing it. It was just doing it.

The other thing is, I thought our water education effort needed to be beefed up and more coordinated. It seemed very fragmented. Everybody was doing some good things, but it was very fragmented. So, we did put together a water awareness campaign that was kind of twofold. It was to try to raise everybody's level of awareness so that they would be more inclined to support funding for it, funding to implement the projects and the solutions. I wish that we would have gotten more done on that. Again, I think they're doing it now. I can't really speak to exactly what or how much, but I would have liked to have moved forward on that a little more aggressively.

RB: There's no question that issue of water quality came up in the visioning process a fair amount, too, at least in the meetings that I went to or things that I heard about. Let me ask you a question that I think you're kind of singularly equipped to answer. I don't know—let's see where you go with it.

It's pretty hard to look at water in Kansas and not look at all of these different agencies, state, local, federal, scattered all over the place. Kansans always say they don't like government, but when it comes to water, they must like something about it because they've got so many different entities to deal with it. If you could restructure the way we deal with water in Kansas as a state entity, what would you do differently? Surely you wouldn't create the kind of hybrid model that we seem to have come up with at this point. Would you? Is this the best of all possible worlds?

TS: At the risk of being criticized by a ton of people because I'm not even sure that we had a consensus within the agencies because there would be winners and losers or perceived winners and losers, but you know, during my introduction, you talked about the Natural Resources Subcabinet. You know, when Mike Hayden chaired that for Governor Sebelius, that was about as united as we ever were, not that we were adversaries, but we met weekly, and it was really because the Governor expected that. When you put a former Governor in charge of it, it's going to happen, especially one like Mike Hayden. It was really enjoyable from an agency standpoint to do that. There was leadership above us that gave us some marching orders that that was our expectation. That was his or her expectation to do that.

So, I think that showed us that it could work. I'm not sure you have to restructure. It probably is inevitable that it should happen, but you know, if you just put the word out to your agency heads that you are going to be united on water, I think that goes a long ways in terms of being more efficient because we've see how it can work where you've got agencies fighting with each other at a committee hearing because you've got a different philosophical approach to the issue that you might have KDHE sparring with the Department of [Agriculture] over something, and that didn't happen. And quite frankly, during the Brownback years, with the water vision, that brought all of the agencies somewhat together as well.

So, I've seen it work without going to an executive order or some sort of reorganization. But if you were to do it, I really do think that there's probably—I don't know that a DNR [Department of Natural Resources] that you gain a lot by having one water, one Secretary of the Department of Natural Resources, and everybody's in a division below, that person. I don't know that you gain, that's the best, but it looks like it makes a lot of sense for like all of funding to be under control of somebody appointed by the Governor, regulation maybe appointed by somebody under a Governor.

Oklahoma has something similar to that, but they don't have a perfect system either. But I think we could certainly, need to take a seven or eight, or however many we've got, and break it down into maybe two. It's still problematic. It's like, "Okay, who do those two get to be?" It's like if you really want to focus on water, which this series does, I don't think you need a DNR. I think you can do that with a couple of steps.

Water appropriations and [agriculture], that's going to be a tough place to move that out of because 85% of the water usage in Kansas is agriculture, and there's going to be a desire to keep it that way. But I think there's certainly an argument to take a look at that and say, "Is there a better home for all water users concerned to do that?" But I don't know whether we'll ever see that happen.

RB: Some of that is just the question of whether anybody would have the political appetite to take on that fight. It would be a real uphill battle. It would be pretty tough to do. By the same token, there is an element of the fox guarding the henhouse kind of a thing going on there that makes it problematic.

TS: It seems like every administration has taken a look at and has heard about there's too dang many water agencies. I've been in front of transition committees and groups that you go and talk to, and you talk about what you do and all that, and at the end of the day, nothing happened. So, I think that once you got to speaking about it in political terms, they said, "Yes, we understand where you're going," but we don't want to do that.

RB: I always told people that that system is there because that's how the Legislature wants it. There may be folks that disagree with that. I might. You might.

TS: Yes.

RB: It's not an accident that it's as divided up in as many different fiefdoms as it is.

TS: I think the other thing is, I don't think the agencies are doing a bad job. It's not like they're not very dedicated, sincere people doing the best they can. I think that absolutely. I think we have some really great people in state government, and I'm not saying that because I once was one. I still believe that today. There's some quality people over there—they don't need to move to another agency to do a better job. They're doing great today. And people know that.

So, it gathers a lot of them, and it's kind of difficult for the layperson to maneuver. Like, who do I go to? And you get the run-around, and you think you're going to eliminate that by having one agency. Well, maybe, but I don't think at the end of the day people are all that dissatisfied with the level of service.

RB: At least from my perspective, on the data side, it felt to me like we do pretty good. If we're not making difficult decisions in Kansas related to water, it's not because we don't know what's going on. I think there's no question we've got plenty of data. We may not have every single data point you want, but if we're not moving in a certain direction, it's not because we don't have information. It's because we've chosen for whatever reason not to do it.

TS: The fact that we have a water use program that not many Ogallala states have in terms of reporting our usage, and then the well measurement program. We have the best groundwater data in the world. I've heard many people say that. Your former colleagues at the [Geological] Survey will say that. I know that. So, we don't lack data. We know what the issues are.

RB: Yes. It's just a question of whether or not people have the stomach to deal with them. Like I said, they're going to have to deal with them one way or another. It's just a question of when and how they go about doing it.

TS: Yes. I thought that probably—I say this tongue in cheek, but when we started the water vision, there was a pretty good drought in Kansas in 2010 and [2011] and headed into [2012]. That's when we were really worried about John Redmond not being able to meet the needs. The Ogallala, there was over pumping taking place just to survive out there during that drought. If you wanted to see probably more attention provided to water, if 2014 or '15, if that drought

would have continued two more years, you'd see a different landscape right now. There would have been some drastic changes made.

I hate to ask for a multiyear drought, but it's almost like you have to show everybody how vulnerable we really are. The way to do that is just to show them a drought. Show them a bad one. We were showing them how bad it was after two years and predicting what it was going to be like next year if it doesn't rain. Well, it rained. Have you ever seen the cartoon called "The Hydro Illogical Cycle" where you go from panic to apathy? You're concerned and about ready to jump off the cliff. Then it rains, and everything's good again.

RB: One of the things that Joe Harkins talked about when I talked to him in this process was the arc of interest in water issues in the state. He talks about it, that arc really going up in the time when like [Mike] Hayden is in the legislature and that Water Plan funding is passed. And then we sort of begin to come back down. On the other side of that arc, it does feel like we take a bounce back up in terms of interest during the [Gov. Sam] Brownback administration, but in terms of actual funding to deal with the issue, we don't really get much of anywhere.

So in some respects, the level of interest is related to how wet and dry it is. Some of it is just the level of interest of people in charge at a given point, right?

TS: Yes. There is a lot of truth to that.

RB: But that arc is really dependent on who the person is at the top. Again, maybe one of the lessons is that a lot of this comes back to politics, it seems like.

TS: Yes.

RB: Maybe that's where it all winds up. Well, Tracy, I appreciate you taking the time to do this. This is a good conversation. You've been around long enough to know where the bodies are buried. That may not be the best phrase to use, especially when we're talking about sedimentation, but I appreciate you doing that. You've got the background to bring to bear. I think it's been a good conversation. Thank you for doing it.

TS: You bet. I enjoyed it. Thank you for having me, Rex.

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