

Rex Buchanan: I'm Rex Buchanan, the former director of the Kansas Geological Survey. The date is November 24, 2020. I'm at my home in Lawrence, Kansas, interviewing former Groundwater Management District Manager, Mike Dealy, who is in Wichita. We are conducting this interview over Zoom.

Mike is a graduate of Wichita State and Fort Hays State Universities. He's a professional geologist licensed to practice in Kansas. Mike began his career in groundwater management in 1979 as State Hydrologist for the Southwest Kansas Groundwater Management District No. 3 in Garden City. From 1984 to 2006, he served as manager of the Equus Beds Groundwater Management District No. 2 in Halstead. Mike is currently manager of the Wichita office of the Kansas Geological Survey.

Mike's groundwater management experience includes assisting individual water right owners, managing the state and federal cooperative groundwater studies, advocating groundwater mediation, and developing and implementing groundwater management and protection policies. He was an advocate for groundwater management and worked with local, state, and federal agencies on such groundwater management issues as water metering, plugging abandoned wells, wastewater prevention, groundwater protection education, remediation, reclamation, and groundwater recharge. His specialty interests include aquifer storage and recovery, delineation of well-hit protection areas, groundwater modeling, and remediation of oil field brine contamination.

During his career, Mike expanded his statewide perspective on groundwater management and related issues through membership and service of professional organizations, committees, and task forces. He is the author and co-author of several reports on the Ogallala, Equus Beds, and Dakota aquifers and has addressed national and international conferences on groundwater management issues.

Mike's interview today is part of the Kansas Oral History Project series, examining the development of water policy during the 1970s, '80s, and '90s. In these interviews, we explore water policy through the eyes of administrators, legislators, farmers, environmentalists, and others who were involved in development and implementation of that policy.

The Kansas Oral History Project is a nonprofit corporation created to collect and preserve oral histories of Kansans who were involved in shaping and implementing public policy during the last half of the twentieth century. Recordings of transcripts of these oral history interviews are accessible to researchers and educators throughout Kansas at the Kansas Historical Society and the State Library of Kansas. The Kansas Oral History Project is supported by donations from individuals and from grants from Everygy and Humanities Kansas.

Good afternoon, Mike, and thank you for agreeing to contribute to this oral history session.

Mike Dealy: Good afternoon, Rex. I'm happy to do that. I just would like to make one caveat. The views and my opinions here are my own and don't represent the Kansas Geological Survey.

RB: That's a good point. Mike worked for me a while when I was Director of the Geological Survey, actually probably even before I was Director, even prior to that. Mike and I go back a way in terms of the Geological Survey, but we worked together when you were at the [Groundwater Management District] GMD.

With that, Mike, let's start a little bit about what brought you—you went basically from school to the Southwest Kansas GMD [Southwest Kansas Groundwater Management District No. 3], as I understand it, right?

MD: I think there was a little precursor there. When I got out of the military, I went back to school. I went to WSU [Wichita State University] and graduated. Then from there, my wife and I moved out to Ulysses, Kansas, and I worked for the [U.S.] Soil Conservation Service as a soil technician. It was not really what I really wanted to do. I really wanted to get back into geology. That's when I took a leave of absence from the Soil Conservation Service and went and got a degree from Fort Hays State [University] in geology. I was going to go back and work for the Soil Conservation Service on their drill crew, but during the time that I was in school, they dismissed the drill crew and got rid of it in Kansas. I started looking for another job, and that's when I came on staff with the Southwest Kansas Groundwater Management District there in Garden City as their staff Hydrologist and then later as their Assistant Manager, too.

RB: Who was the Manager during that period?

MD: Dave Pope had just left, and a gentleman named Rick Illgner, he was with DWR [Kansas Department of Agriculture, Division of Water Resources] and came back out and was the Manager there for I think maybe four years. I think that's how long. He was the Manager, and I was the staff Hydrologist, and then I was appointed Assistant Manager as well as staff Hydrologist before I left.

RB: So, you were there during a pretty early period of the GMD. Were you not the first Manager of the Equus Beds GMD [Equus Beds Groundwater Management District No. 2]?

MD: No, that was Tom Bell. He was there for about, maybe a little less than ten years, and I took over in '84 and was there until 2006. I was able to get a flavor of what was happening in southwest Kansas and in western Kansas as well as come back in and work in south central Kansas.

RB: What compelled you to make that change at that point? Was it just the opportunity to be the head person at the GMD?

MD: Quite honestly, when I was working for the Southwest Kansas Groundwater Management District, I kind of saw the handwriting on the wall because groundwater development had outstripped groundwater recharge out there. They were in a groundwater mining situation, not all the [counties in the] district because it was a big district, but a lot of the [counties], Finney County, Grant County, Stanton County, Gray County, and Haskell County were all seeing the groundwater levels [decline] three to five foot a year, no matter how much rainfall they got out there.

To me, the handwriting was on the wall. Plus, their key management program to limit groundwater development was a groundwater mining-type philosophy in that they would allow 40 percent of the aquifer to be depleted in twenty-five years. That's when I kind of said, "You know, I don't want to be part of this. I want to be where we can impact and have a management program that we're actually managing the aquifer and not just planned depletion."

RB: I was going to say planned depletion was the way that that generally got referred to and not just in southwestern Kansas, but in some respects all three of those—Ogallala-based GMDs, right?

MD: Yes, that's correct, Rex. You're absolutely right. The other thing that I saw out there was, and I don't know if you remember this, but it was a big deal for me and my career as a staff Hydrologist was the involvement in two lawsuits out there because we had denied permits to two irrigators, and they felt that we did not have the authority as a Groundwater Management District to prevent them from developing their land for irrigation.

So those two were in play when a third irrigator in Finney County applied for water rights, and we denied his applications for water rights because the area he wanted to develop in was grossly over appropriated. So, after he got the staff decision and recommendation, he appealed to the Board of Directors, and the Board of Directors denied his appeal, and at that point, and I don't know long afterwards, a local driller came in, basically telling us that he had drilled two irrigation wells in that area for that farmer that we had denied his permit applications.

To make a long story short here, that case hit the courts in Finney County and then ultimately hit the Kansas Supreme Court. The Supreme Court ruled that, yes, the Groundwater Management District did have the right to make recommendations to the Chief Engineer to deny water rights, and the Chief Engineer certainly had the authority to follow that recommendation and deny those water rights under the authority of the Chief Engineer and the Division of Water Resources. The Supreme Court ruled against that farmer. After that ruling came down, the other two lawsuits were dismissed. They evaporated.

To me, I was part of that case and those activities that really set the water right law into place in a black-and-white situation because before then, it was a gray area, and the water user was

saying, no, the [Groundwater Management] District didn't have the right to deny them the use of water on their property. After that ruling, it just cleared the way, and the air was clear on, no, the Groundwater Management District did have the right to manage the groundwater as long as they did it fairly and equitably and within their management program.

RB: Just to be clear, they ultimately were making that recommendation to the Chief Engineer. They weren't making that determination unilaterally, the GMDs.

MD: No, the management program gave them [GMD directors] the right to develop a management program to manage their groundwaters within their boundaries. They had a right to make recommendations if they had adopted a groundwater management program, which Groundwater Management District #3 did. It was that planned depletion management program, but the wells that the irrigator wanted to drill and to develop his land in the sandhills over-appropriated the planned depletion, and we made a recommendation to the Chief Engineer that those permit applications be denied. The Chief Engineer denied that. The applicant had the right to have the Board of Directors look at that and overturn, if they would, the staff decision and then make a recommendation back to the Chief Engineer, which they did, and which it was a denial. That pretty much ended those two applications.

RB: So, you go from that Ogallala-based southwestern Kansas setting to the Equus Beds, pretty different, both part of the High Plains Aquifer, but a pretty different geologic setting and different precipitation rise, a different kind of farming, a pretty different location, right?

MD: Yes, politically, socially, and economically, it was completely different. The thing I liked about it was the management program was a safe yield or a sustainable management program where the district, the Board of Directors basically, adopted a program that said, "We are not going to overdevelop this aquifer. We will allow development up to the natural recharge of the aquifer.", We were able to keep the aquifer from being overdeveloped.

Now, there were a couple of areas that got overdeveloped, and those basically were put into intensive groundwater use control areas. In fact, the first one established in the state was around the city of McPherson. It was like a thirty-six square mile area that was shut in to any further development. This was back, I think, in 1975, '76, in that range there.

That was in place when I took over, as Manager. We went ahead, and I think adopted maybe another area—actually, what we did is go on and change the recharge rate for McPherson County. Instead of expanding the intensive control area, we reduced the recharger rate to what it actually was, which then reduced the withdrawal amounts in McPherson County.

RB: In some respects, the settings are different just simply because it's a much more humid area. It gets much more precipitation.

MD: The water use is different.

RB: The water table is shallower. In some places, it's pretty sandy. Recharge is a much different situation than it is out in southwestern Kansas, which allows for that—in some respects, it allows for that sustainable mindset to take hold much easier than it might, say, in southwestern Kansas, right?

MD: Exactly. Politically and socially, it was driving from one part of the world into another, but it was the same High Plains aquifer.

RB: Yes, the Equus Beds portion versus the Ogallala. The distance is not huge, but the difference is huge.

MD: Vast. It is vast.

RB: A couple of other things about that district that are very different. One is, it's got a big municipality in it, the biggest city in the state, right? So, you're dealing with Wichita.

MD: You're right. That was one of the things that intrigued me was the fact that the water users were not 98 percent irrigation and 2 percent everybody else. It was like a third, a third, and a third—a third irrigation, a third industrial, and a third municipality in general, and I liked that. Our nine-member Board of Directors reflected that in that we had municipal representatives, industrial reps, and agriculture reps on the Board, which made it a very balanced board. I liked working with them.

RB: In some respects, was Wichita like the 600-pound gorilla in the room?

MD: I never felt that. In fact, Rex, there's actually four cities that we dealt with there: The City of Wichita, the City of Newton, the City of McPherson, and the City of Hutch[inson]. We expanded the district boundaries. When I took over as manager, we expanded them over into essentially the eastern half of Reno County, which took in the City of Hutchinson.

Working with municipalities, they were to me very, very easy to work with. They had engineers that basically looked at numbers. They were very easy to, what I would say, discuss the numbers and the nuts and bolts of a policy, a proposed policy, or a proposed formula.

RB: By the same token, during that time period, folks throughout the state were always concerned about Wichita because Wichita is a big municipality. At times, it had water issues. There were concerns throughout the state about where Wichita might go to satisfy its water needs, even concerns about cross-basin boundaries to move water from reservoirs farther away. But that didn't impinge on what you all did at the GMD is in effect what you're saying.

MD: Rex, I never felt that. I worked there for twenty-two years, and the majority of that time, the City of Wichita was very supportive as well as the City of Newton, McPherson, and Hutchinson. The industries there were supportive, and the irrigators got along, and agriculture got along with them on the Board. I had a very professional Board, a nine-member Board. For the majority of my time there, it was great to work with. They were constantly pushing me to say, "We need to look at this. We need to look at that." Not only were they concerned about overdeveloping the aquifer, they were concerned about water quality. That expanded, in new area for me.

RB: That was actually the next thing I was going to point out. Another difference about that district, as opposed to the three out west is you dealt with water quality issues, but particularly water quality issues related to oilfields brines up in the Burrton area [Burrton, Kansas is in Harvey County east of Hutchinson]. Is that probably the biggest water quality challenge you dealt with?

M: Exactly. That's what started it. Back in the '30s through the '50s, the way they disposed of oil-field brine or salt water was by evaporation pits. If you look at the old '30s, '40s, and '50s aerial photos in that area, it looked like areas had measles. There were so many pits.

So, that was one of the things that basically brought up water quality to the forefront. One of the first Intensive Groundwater Use Control Areas [IGUCA] that were established in the state was the Burrton Water Quality Control Area. That got into place about six months before I got there. So, my job was to basically manage that area. So that was a learning lesson for me in working with the Chief Engineer.

Also, we created a Burrton Task Force, which included the oil and gas industry. I wanted the water users on the task force and also state agencies on board. We would meet in Council Grove about every other month to go over the corrective measures of the Chief Engineer who established the control area. Our task was to carry out water quality—the corrective provisions that were established by the Chief Engineer, and that's what we did for almost three years, I think.

RB: Another difference in your GMD was that artificial recharge projects, storage, and recovery recharge project in the Equus Beds, talk about that a little bit.

MD: You were right in that the City of Wichita as well as the other cities were looking for future water supplies because that's what they do. They want to make sure that the city populations have enough water into the future. So, the City of Wichita began a study after forgot what they called it, but it was a project to bring water down from Milford Reservoir all the way down to southcentral Kansas, and Wichita would be the end of the line for that pipeline.

After the Milford project evaporated and wasn't going any further, the City of Wichita commissioned another study to say, "What have we got here locally? Instead of trying to do a water transfer, let's see what we have to do locally."

In the meantime, when they were doing that study, I had been installing observation wells along the Little Ark[ansas] River, and we would go out and take measurements of those observation wells because we wanted to see what effect the Little Arkansas River was going to have on groundwater levels nearby.

So, to make a long story short on that, we begin to see that bank storage was occurring along the Little Ark[ansas] River. Once the river returned to the base flow conditions, then the water and bank storage would then begin to seep back out and flow on down the river.

We were doing that because another study that we had done with the USGS, the Bureau of Reclamation, and I think KGS along the Little Ark[ansas] River and the Big Ark River found that the Little Ark[ansas] River was a base-flow river, and the Big Ark[ansas] River was a steady-state river, which we kind of figured all along. What threw us a curve was the Little Ark[ansas] River was a base-flow river, which means that during normal flows, water was basically discharging out of the aquifer, and moving on down the river, and flowing on out of the system.

One of the things that set off the red flags with me was that river was nothing more than a line of wells discharging from the Equus Beds aquifer on a day to day, 24 hours, seven days a week, 365 days a year. In our management program, we only accounted for the discharge of wells and not natural conditions like base flow.

What we did was—that's why we developed those observation wells. We were trying to get a handle on base flow, how much it was, how much we should figure in to look at an average loss of water in order to figure into our safe yield formula. So, we had two things going there: base flow nodes, which we later developed and assigned to the river for withdrawals along the Little Ark[ansas] River, and then we stumbled across bank storage.

The City of Wichita sent up their engineers to talk to us about what we were doing as far as groundwater management. We shared our bank storage data that we'd been collecting for a couple of years with them. From that, they took that back to the city and began to develop a study to look at bank storage usage and aquifer storage. The water, bank storage, was going to be fairly good quality for recharge directly into the aquifer.

Over a course of about five years, the aquifer storage and recharge project begin to take shape within the Groundwater Management District. The Board of Directors and the City of Wichita developed a plan as to what they needed.

RB: So that project has been underway for quite a while. By and large, it takes water out during high-flow times and has been pretty successful except when there isn't any high flow in the river. Is that a fair statement?

MD: The City looked at that and began to modify that. They saw that there was an ample amount of surface water during above base flow conditions or when the river was flooding. They filed for water rights to withdraw, certain flows out the Little Ark[ansas] River as well as to utilize bank storage.

I left there when they were just putting together Phase 2 of the construction. But Phase 1 pretty much proved that they could capture bank storage and recharge it. They were also looking at skimming surface flows, treating it through a water treatment plant, and then recharging it through recharge wells.

In fact, I wrote for the Board of Directors, I drafted our aquifer storage and bank storage recovery regulations. The draft went to the Chief Engineer for adoption within Groundwater Management District #2. The next thing I know, the state had taken about 75 percent of what the Board had sent them for regulations for the District, and the Chief Engineer adopted most of those for the entire state. That's where the state's aquifer storage rules and regs and recharge came into effect.

RB: As I understand now though, that's really the only one of those artificial recharge projects of scale that's taken place in Kansas, right?

MD: That's correct. In fact, I don't know of any other place, maybe out around the Stafford area. They may be able to do something like that, but the further west you get, and there's no bank storage. There's no live streams out there.

RB: There's currently conversation about a similar kind of an augmentation program in the Big Bend [Ground]Water Management District to make up some of the water that's not going into Quivira the way that it's supposed to. Any other big differences between the Equus Beds district and those three western districts that I haven't touched on so far?

MD: The water quality aspect of it started out as oil field brine, but then basically we began to look at nitrate contamination around the City of Pretty Prairie and did a co-operative study with KDHE [Kansas Department of Health and Environment]. We found that nitrates from mostly ag fertilizer were causing the problems, and more specifically from dryland farming. In periods of drought, they had already applied nitrogen and fertilizer to the soil, and didn't get rain, the crop wouldn't do well and die out, leaving fertilizer in the soil profile. Then next year, they would plant another crop and fertilize it again, loading up the soil zone above the water table, which may be at five to ten feet, with fertilizer. It would go down into the groundwater and start causing pollution for water users in the area, particularly the city and domestic water users

We also looked at abandoned wells. When I took over out there, in Southwest Kansas Groundwater Management District #3, we came across an irrigation well that had been abandoned. It was within the Garden City city limits, and it was just across the street from an apartment building. It was sixteen inches in diameter.

From that, I got an education experience on how that well could be there and not be plugged. Coming back to the Equus Beds, one of the concerns that everybody had was abandoned wells not being properly plugged or rendered to an inactive status. The Board of Directors adopted an abandoned well policy to either plug it or render it inactive. We worked with KDHE and through a memorandum of understanding to take over that responsibility in the District because the [Kansas] Department of Health and Environment had two people to cover the whole state to deal with abandoned wells. The Board decided to handle that on a local basis. We would conduct abandoned well inspections, send out notices to plug the well, and keep KDHE informed on a monthly basis of plugging activities.

RB: So clearly a variety of issues going on in that District, a little bit of everything and very different from the other districts. I would also say that particularly in your time there that your GMD dealt with all of those issues in a more aggressive manner than the other GMDs. Is that a fair statement?

MD: I would say, and when you compare it, it's all kind of relative, but one of the things I noticed about the Equus Beds Board when I took over and for a good portion of my time there, they were a board that when an issue was brought to them by another Board member or by the public, they directed staff to look into it and bring the issue back, with information and data, and make recommendations to them on what should be done or what shouldn't be done, but give them options to look at that issue.

That kept us hopping. I had the smallest district with a hydrologist, a hydro tech on board, and an administrative assistant to help, and we still were running back and forth. There just were a lot of things to look at in that District. There was a lot of concern on groundwater protection and to prevent the aquifer from being overdeveloped. That came from everybody. That came from the city, industries, and ag. They saw the aquifer was the source of well-being of southcentral Kansas politically, socially, and economically, and they didn't want to screw it up.

RB: You could say that same thing about all the other GMDs, that certainly water is the source of economics. An awful lot of thought goes on in western Kansas, and yet a lot of times, the attention of those GMDs turns toward how to increase water supply as opposed to dealing with the range of issues that you talked about.

In some cases, some of those water quality issues, the other GMDs didn't have those issues, but they certainly have the quantity issues in spades, and yet, and they understand the

importance of water, and yet not quite the same. Why is your Board so much more willing to go out there and be aggressive in dealing with it?

MD: I saw them as just concerned individuals that wanted to do the right thing and to manage a resource that was vital to that area of Kansas. I found myself going out and investigating a Board member who I received a waste-of-water complaint on that Board member. I went out there and followed the Board of Directors' policy on waste of water and conducted an investigation and found that it was a waste of water, although he didn't realize it, but it was occurring. I issued a waste-of-water violation on a Board member.

Did I get pressured? Did I get chastised? Did I get threatened? No. He mostly wanted to know what he needed to do in order to avoid that in the future. He just felt bad that I had to go out and investigate that. That's the type of people we had on that Board back in the '90s.

RB: I've always been interested in—we've talked to other folks about this process. Groundwater Management Districts were founded, I think, with the principle that local control is the best way to deal with a lot of issues, but in this case, particularly water. And looking back together, we're fifty years past the time that the GMDs were created. There was a long track record there, and you could argue about whether or not local control as manifested in GMDs was successful.

You would probably make the argument, based on what I've heard so far, that for your district, it was a successful manifestation of local control.

MD: I saw it as that. Yes, I saw it as that until about the last three years of being Manager there. Then I began to have some concerns because we were losing Board members that in my mind were very professional, very concerned individuals, and I began to see people elected to the Board that didn't share the same ethics and professionalism and just generalized caring. They had their own agenda.

To give you an idea, we got into an issue on—I'm sure you're aware of this—groundwater pits.

RB: Yes, I'm aware of it.

MD: Remember that?

RB: Yes.

MD: That issue was brought to the Board by a farmer that we issued a plugging notice on for his sixteen-inch diameter irrigation well that he had to plug because it was an abandoned well, and it wasn't being used and it was a safety hazard, a pollution hazard. He said, "Yes, I'll plug it." We always inspected those pluggings. I was out with my staff, looking at it. He was it plugged, and

he asked, "Mike, you might be able to explain this to me, but I don't understand this.", "I understand why you're making me plug this well," "because water contaminated or stormwater run-off can get down it, or somebody can throw stuff down it and can contaminate it." I said, "You're absolutely right." He said, "Well, explain to me how that over there is not considered a groundwater quality threat."

I turn around and there was an eighty-acre groundwater pit that you could see where stormwater run-off was running into it. That was my first awareness to the groundwater pit issue as far as quality. But from that sprang the fact that in that eighty acres of the aquifer that had been exposed, you were looking at evaporation coming off of that in excess of what the rainwater was falling in it.

So that raised another issue with the Board. Why don't those pits have to be permitted to get a water right to remove or discharge water from the aquifer? We now had two things going there. Those were issues that nobody ever went looking for. They were just brought to our attention by people that are affected by our regulations. And to me, they were a good point.

RB: Just to be clear, those are sand quarrying operations that basically—when I was a kid, we referred to them as sand pits, but basically people are in some cases using dredges to take out sand mostly for aggregate purposes.

MD: That's right. We've got that all around southcentral Kansas. I mean, they're all over the place. We weren't looking at shutting them down. We just wanted to manage them so things would not get out of hand.

RB: Is that change that you're talking about, is that a reflection of just the issues that you happen to be dealing with? Was it a change of larger political climate in the state and the country? What changes in that time period that you're talking about?

MD: In the last three years as manager issues began to develop.

RB: In that timeframe when those issues developed, it sounds as if it's just a different environment. Is it different politically? If it's different politically, why is it different politically?

MD: You know, I go back and think about that. The only thing I can come up with is lobbyists. I have never seen so many lobbyists come out of the woodwork and know so much about water management when testifying before the energy committees in the Legislature.

In working with the oil and gas industry for all those years, I found them to be a very reasonable and intelligent group. If you brought an issue to them, such as oil field brine contamination, you could present the facts to them. They could take a look at it. They may modify some stuff, but overall, they were just as protective of the groundwater as my Board was. In fact, I was chair of

a meeting, and we were developing the regulations for [the Kansas Corporation Commission] (KCC) to manage oil and gas field pits, which included about five different types of pits. After one meeting that was pretty lengthy and pretty intense, one of the oil producer guys got me aside and said, "Mike, keep doing what you're doing because you're on the right track. I will never say that publicly, but I want you to know that you do have support there for what you're doing in order to protect the aquifer,".

I never saw that except for one person in the sand and gravel industry say, "I think what you're doing is right." Mostly I saw a lot of lobbyists saying we were doing things wrong.

RB: And just to be clear, those pits that you were talking about with the regulation there, those are not saltwater disposal pits like you were talking about in the Burrton area from the '30s to the '50s. Those were the pits that people dig maybe to dispose of cuttings, to put water—

MD: That was statewide. It was a far-reaching regulation that really had never been looked at. It took us about a year to go through and develop recommendations back to the Oil and Gas Commission.

RB: What's your perspective? Dave Pope went from a GMD to being the Chief Engineer. You basically lived in that GMD world for all of your career until you left the GMD to go to the [Kansas Geological] Survey. What's your perspective on state agencies and how effectively they deal with the water issues that they're charged to deal with?

MD: I'm going to talk about where I was, during those years. Starting out, Rex, Groundwater Management Districts were the new kid on the block. We didn't know how to interact, with state agencies. They didn't know what to do with us. We were kind of bumping heads against each other. By that, I mean, [Kansas Department of Agriculture, Division of Water Resources] (DWR) because that was really the first state agency to work with us.

We sort of got thrown into a marriage that both sides didn't really know what to do. So, we had to learn as time went on. I would say in the first five years, it was contentious between the Division of Water Resources [and the GMD] in southwest Kansas. One of the most, important issue or event that brought it to a head was an irrigator that drilled two illegal irrigation wells because the then Chief Engineer, which wasn't Pope. He came in after that. He did not want to take action against that irrigator even though he had drilled, constructed the wells, and put in the irrigation units, and operated them, growing 160 acres or 130 acres of corn under each pivot.

It took various meetings, not only with the GMD Board and the Chief Engineer, but the GMD Board and, the other western Kansas GMD boards met with the Secretary of Ag[riculture] to sort this out and that we needed to begin to enforce what the District Management Programs are all about because if we don't enforce them, we're just kind of a paper tiger.

The matter took several years to go through, but after the Supreme Court ruled that the GMDs had the right under the law to manage the Groundwater Management District within their legal boundaries, within the law. That changed things dramatically with the Division of Water Resources.

RB: Did it also help when Dave Pope took that job? He goes from the GMD in southwestern Kansas to the Chief Engineer's job. In effect, you've got one of your own in the most important water position in the state in terms of quantity.

MD: I would agree with that. Dave was an Extension Agent or an Extension Engineer. He worked out there, and then he took over the job in the Groundwater Management District #3. He was the one that really was there to develop it and go through all the hoops to get one established and in effect.

He then was Assistant Chief Engineer. He was the Assistant Chief Engineer when this illegal well situation took over. He was not the Chief Engineer, but he went through all of that and saw that. We learned from the local level what we needed to do. I felt to a certain degree that the districts made their mistakes. I think they could have been a little bit more, how should I say, understanding because the Division of Water Resources for decades, their mission was to develop groundwater resources in order to develop farming and irrigation in order to develop the economy. That was part of the mission of the Division of Water Resources did to develop those resources.

The problem was that they did it so well., They went past what was the safe yield of the aquifers in western Kansas. It began to deplete the aquifers. This is in the late '50s, early '60s that this started happening.

RB: That went on for quite a while. My memory of that time in the late '70s and early '80s and then on through the eighties is the GMD managers always struck me as a pretty cohesive bunch. They seemed to talk to each other a lot. At least my perspective, when I would watch them at meetings, they tended to be on the same page. I was always kind of impressed at the unified front that they exhibited. Is that right?

MD: That's a fair assessment. They were. The initial ones were on the same page. They would meet. They had what's called a Groundwater Management District Association that they formed for Kansas. They would meet. As the Assistant Manager, I would go to some of those meetings. You're right. They wouldn't agree on things initially, but then they would talk about it, and then they would reach a consensus.

So, when they went into the state meetings, you did view that as a consensus among the districts. That carried on for years. Even when those initial managers left, the other managers

came in and there was always that kind of discussion. I think near the end, my last three years there, things began to change.

RB: Right. I sort of had that same sense, too. There was a period there in the '80s that when the GMDs walked in, you knew that they were going to be united, and they had a real presence. People listened, and in a lot of cases, decisions were driven by what that united front felt like.

MD: That was helpful in carrying out what they had to do because again they were the new kids on the block. Nobody really knew where they fit in, not even them, until they got going and began to look at the issues and deal with them on a day-to-day basis.

RB: By the same token, I think everybody throughout this state and throughout the state agencies wanted them to be successful, too. I think there was a sense that there was a little bit of an experiment, and people were feeling their way through it, but everybody wanted them to achieve what they had set out to achieve.

Mike, let's talk a little bit, one of the topics that's come up here throughout almost all of these conversations have been the State Water Plan. We've talked about DWR. We've talked about some of the water quality issues that you faced. We have really not talked about the Water Office or the water planning issues so much. What's your perspective on how effective water planning has been for the state of Kansas? An awful lot of time and effort and money has been spent on it. Does it work?

MD: That's a "damned if you do, damned if you don't"—I think there have been times. Looking back, the Water Office was in charge of developing recharge projects. I don't know if you remember those. They were back in the early '80s. The Equus Beds had one that Tom Bell was managing. I had one project for GMD 3. Ed Jenkins was helping me out. He was our consultant.

I kind of learned a lot about that, and from that, I carried that back to the Equus Beds, and from that, we began to look at ways of recharging the aquifer, which from that, one of the things that we developed was the—how shall I say this—we worked very closely with the City of Newton in order to turn a sewage treatment plant into a water reclamation plant, and then, take that water and recharge it back into the aquifer for later reuse.

In cooperation with the [U.S.] Bureau of Reclamation of the Oklahoma City Office, we were able to get several grants. I think the last grant was close to a million to develop a pilot plant to basically turn a city municipal sewage plant into a reclamation plant, treat the water, bring it up to water quality standards, and then recharge it into the aquifer.

Unfortunately, the City Commission that we were working with, there was a political upheaval in the city. They got voted off, and the new City Commissioners weren't really all that interested in water supply or, water reclamation. They turned the \$1.2 or \$1.4 million grant back to the

Bureau of Rec[lamation] and thus ended that attempt to recharge the aquifer. The next one was the Aquifer Storage and Recharge Project.

Overall, to answer your question, I think that State Water Fund planning and funds helped out a great deal for the districts. There were other funding programs that came out of the Water Office and the State Water Planning System that helped the districts immensely in the early days and then later on. We received -- I think it was a grant -- from KDHE in cooperation with the Water Office to study nitrate contamination in southeastern Reno County. That was a big help to us, as well as to the people in that area. Well-head planning, that was a big push by the Water Office and the State Water Plan to protect municipal water supplies. The efforts that the Water Office did to come up with what is a municipal usage—is it high? Is it low? Are they excessive? Are they under? They're the ones that developed all that data. So, I think in that respect they were doing very, very well. I relied on them quite a bit.

After I left, I don't know. I know that the Water Plan process was changed and renamed into different types of regions or areas. I'm not sure if they're just having meetings to have meetings or what. I got out of the Water Management when I left the GMD.

RB: You were head of the GMD when dedicated water plan funding passed [during] the Hayden administration that basically made a pretty large amount of money available that previously hadn't been available, probably that resulted in some things that you just talked about. That fund's been chipped away over the years, and it's significantly less than it was, but you were there maybe at the high-water mark of putting money where your mouth is in terms of concerns that people had. I think that's a fair statement.

MD: I agree. I think there was a good association between water planning, the Water Office, the Water Authority, which was a thirteen-member board, but I think now it's got like twenty-six on it.

RB: Joe Harkins talked in terms of sort of the arc of interested water issues in the state. There's always been an underlying interest, of course, for example, among the irrigation community or municipalities or industries that rely on water. But politically we went through a period where there was really an increase in interest in the seventies and up through the mid-eighties. Maybe the peak of it is during that water plan funding increase. And then it begins to sort of go down the other side of the arc. You eventually leave.

One of the things that's abundantly clear as we have talked here is the job you did at the GMD was not just a technical job, that is, you were not just carrying out the orders that the Board had. You were also maneuvering through a political world, an extremely political world because consequences of decisions, the economic consequences, the social/political consequences are so big.

I'm not quite sure where I'm head with all that.

MD: I think I know where you're heading. During my career as a manager of the Equus Beds, I always had a sense, felt secure that the senators and house members in southcentral Kansas were for water management, and I could always depend on their support. I mean, I would have to present a case to them, present the issue. They just didn't rubberstamp anything, but I could develop essentially a whitepaper from what the Board wanted and take it to them, present it to them, and basically it would go through the legislative process. There would be debate, but ultimately it may be modified a little bit, but there was support from a legislative standpoint.

The questions that those legislators asked were very intelligent, on the mark, technical, and relevant. And testifying before a committee, I felt was a privilege that I could go before those lawmakers and do that, provide them that information and let them go through the political process to come up with what they do and make a law to basically deal with the issues and satisfy the people they represent.

My last three to five years as manager in going up there, I did not get a sense of that. It just seemed like things were devolving. Some of the statesmen and women that I'd worked with up there retired, and that's when I began to see things devolve.

RB: That's something that we've talked about throughout this process is the difference in legislative experience that some of the legislators had from when they started out in the eighties compared to say a decade or two later. So, you've been out of that water world since 2006.

MD: Right.

RB: Do you miss it?

MD: Honestly, I don't. I mean, I have people come to me. I just about got subpoenaed to give testimony. I said, "I'm not going to. I do not want to. I'm out of the game." I spent a lot of my time and effort and energy to do what I did, and after a while, you just have to say, "It's time for somebody else to take over and do this." I've had people come up to me through the years and say, "Things are not looking well. Things are going differently."

To give you an example, I was asked by John Peck to give a presentation on how the Groundwater Management District #2 is measuring up. One of the things that I came up with was if we're being—by "we," I mean the district is being funded adequately, that they can raise their limits to fund their operations and have the money to do that locally, that's a positive thing. Two, if the Board of Directors represents the landowners and water users of that district, if the board make-up is representative of the interested parties and the water users in the district, which would have been their municipal, industrial, and ag users, that's a positive thing.

Then the last thing was how a board is selected for the election process. Is that fair and equitable?

Those three things basically I always would go through and look each year that I was manager at the annual meeting to just kind of say, "These things are okay" or "They're not okay." For nineteen of my twenty-two years there, I always came back with, "Yes, everything's looking good" for those nineteen years. But my last three years I was there, I began to see, we were not getting the ability to raise our caps on water use and land use funding, and it was a struggle. We finally did get a bill through at the end. But then our board make-up began to change. We began to see municipality board members being voted off. And then lastly, the election process came into question.

When I left and resigned as manager of the district, I did have concerns. My biggest concern was board representation. I felt that as time went on, you would begin to see one certain party, one certain interest, begin to take over the board, and then you would have a monolithic board representation. I think if you look at the representation of the boards today, it would concern you as a water user in the state and also your knowledge and your experience with water. I think it would concern you. It does concern me.

RB: In effect, over time, I'm a little hesitant to use this phrase, but I guess I'll use it anyway, special interest groups figured out how to involve themselves in that system to get what they wanted as opposed to maybe earlier on.

MD: That's possible, but I would say, yes, special interest groups, yes. Several come to mind that basically begin to take over the process of the election, not take over the process, but begin to understand that there was a big gap in how to elect a board.

RB: Yes, they figured out how the system works, and they began to use it to their own advantage, which I don't think there's any huge surprise there. Anything else that I haven't brought up here that we ought to talk about that fits into the conversation, Mike?

MD: I found during my career that managing groundwater was just not knowing hydrology, that you also had to be knowledgeable in sociology. You had to be knowledgeable in political science, and, believe me, in my early days, I made a lot of mistakes. That's for sure. As time goes on, you begin to realize the whole picture, water weaves its way through everything, through social, political, and the economics. Once you understand that, that is sort of a aha moment.

The other thing that I also realized, and I've used this as an example in presentations, was that if I took ten reasonable and sane people and put them in this room together and said, "Okay, here's a pound of gold. Here's a pound of diamonds, and here's a gallon of water," and said, "Which one do you feel is the most valuable?"

Initially you know where everybody is going to go to. It's going to be gold or diamonds. But if I locked them in that room for seventy-two hours, didn't give them anything to drink, guess what's going to happen with the worth of that commodity in there? It's going to swing right over to water every time. That was sort of an epiphany for me to realize as a manager of a district.

RB: I have said repeatedly that water affects everything everybody in this state does. It's where they live, what they do for a living, where cities are. It affects everything. As a result, it shouldn't be too big a surprise then that everybody affected by water tends to have an interest, and they tend to come at it from their perspective. The upshot is that it is a highly political, highly legal, very fraught area, and rightfully so in a state that has got very different water situations in it from one end of the state to the other.

MD: I will leave you with this parting shot here. After you called and we talked, I was like, "I've got to think about this," decades of going back. One of the things that concerns me now, and if John Peck was to ask me again, "Mike, do you think that the Groundwater Management District concepts are working locally?" I would say no. Not in this day and age, no. And the reason why I would say that is when you look at the fairness of selecting and electing board of directors, a large part of the users or the people of the state are left out. You can only have a certain water user vote in those elections, and you can only have a certain landowner vote in those elections.

If you look to California's Groundwater Management Districts, those elections are held in general elections. Everybody votes on the Board of Directors because water out there is everybody's concern, like you said. I think right now that's one of the weaknesses of our Groundwater Management Districts in the state. The eligible voters are limited to a select few.

RB: I don't remember the exact wording of the statute, but in some respects statutorily, people in the state don't own water. They own the right to use water.

MD: It's a public resource.

RB: Exactly. In fact, the water belongs to the people of the State of Kansas. But as a citizen of Kansas, it's pretty hard for me to influence how water is used in an awful lot of the state, even though in theory, it belongs to me the same way it belongs to you and everybody else. It's a little bit of bifurcation.

MD: That's my parting shot.

RB: I appreciate you taking the time to do this. It's been a good conversation, and I've enjoyed it. I think you've got a different perspective from where you've been and sat over the years, and I appreciate your willingness to doing this. Thank you very much, Mike.

Interview of Mike Dealy by Rex Buchanan, November 24, 2020

MD: Thank you, and, Mary, thank you. I appreciate it.

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