Dr. Ken Kramer

Interviewed by Dr. Jen Brown
December 14, 2021

Transcribed by Kenya Zarate and Alyssa Lucas

[Dr. Jen Brown]: Okay, we are recording. It is December 14, 2021. This is Jen Brown. I'm in Chappell Hill, Texas, talking to Dr. Ken Kramer about his work with Texas water in the Lone Star Chapter of the Sierra Club and some Texas water issues in general. Before we begin, do I have your permission to record?

[Dr. Ken Kramer]: Yes.

[Brown]: Okay. Well, since this is an oral history, a great starting point, can you tell me a little bit about your background?

[Kramer]: I grew up in Houston. I'm a native Texan, born in Brenham. Brenham is a small city about seventy miles from Houston. I had the pleasure of having the farm experience and the city experience growing up. I grew up in Houston, but my parents were from Austin and Washington Counties, in Central East Texas, and they both grew up on farms. And so, my grandparents still lived on farms when I was a kid, and I spent a lot of my summers and many weekends on the farm. So, I had the benefit of understanding sort of the out of doors from the perspective of people living out in a rural area, but also had the benefit of growing up in a large city like Houston with a lot of opportunities, and I think that helped shape my background, my interest in both urban environments and rural environments.

[Brown]: Is there a spot in your childhood where you knew that's what you wanted to study or that you wanted to get involved in environmental issues?

[Kramer]: Not really. I really didn't have a specific interest in environment as I understand it, or as we think about it today, until I was in the Army, and then later in graduate school at Rice University. I think that growing up, I had a natural affinity to the outdoors, from spending a lot of time on my grandparents' farms and the farms of other relatives. But in terms of actually understanding that, oh, the environment is something I want to work on as a career, that really didn't occur to me until probably I was in the Army, and I was doing a lot of hiking and backpacking on weekends. And then in graduate school, I became especially interested in urban issues and pollution issues. But I already had an inkling that those things were of interest to me, but they do seem to grow organically. There wasn't one particular moment when I knew this is what I wanted to do. I do recall reading Rachel Carson's *Silent Spring*, in the early 1960s, and was very concerned about the impacts on the environment of the use of pesticides and things like that, but it took a while to realize that's really what I want to do on a career basis.

[Brown]: Um-hm. So, uh, when you went to college, what did you study?

[Kramer]: Originally, I was a history major with a government minor as an undergraduate, and I was interested in American government but also interested in international affairs and comparative government and that was really my orientation initially. But when I was in graduate school, first at Stephen F. Austin [University], working on a master's, I did come to be a little more interested directly, perhaps, in state or local government here in Texas, and that, you know, helped shape my thinking later on in terms of going into more direct government advocacy.

[Brown]: Um-hm. And can you tell me, where you were stationed at and where you went backpacking and hiking?

[Kramer]: When I was in the Army, I was stationed after my initial training and advanced training at Fort Bliss in El Paso and that was a totally different environment from where I ever lived before—the desert environment, the Chihuahuan desert of course. And I did a lot of exploration on weekends, in the countryside around El Paso, and then eventually in southeastern New Mexico, in the Gila Wilderness area. That's where I did my initial backpacking and really got to love that kind of environment and enjoying the outdoors in that way. My parents were not into camping when I was a kid, and so I didn't have that type of outdoor experience. But the Army provided me an opportunity to really enjoy the outdoors in a little bit different way from the restrictiveness of an army base, to be able to get out into, witness, and just experience that type of really open environment, natural environment.

[Brown]: Um-hm. It's interesting because you have the wilderness side and the urban side. So, can you tell me more about your graduate school experience and how you got interested in urban issues?

[Kramer]: It was actually while I was in the Army. I was doing a fair amount of reading in my off time, and I began reading various things, including a book by Chandler Davidson, a professor at Rice [University], about majority-minority coalitions working on urban issues, a wide range of urban issues. But it occurred to me that in El Paso for example, at the time, there was a lot of concern about a lead smelter in El Paso. Right across the border from Juarez was a plant called the ASARCO plant, I think American Smelting and Refining Company, and really major air pollution issues came from that plant. And so, that was a very stark direct experience of understanding that problem of urban pollution, air pollution, and of course, I was there at a time in the early 1970s. This was 1971 through '73 when you had a major explosion, if you will, of environmental legislation that was in the news every day. And so, it was a time in which I think a lot of people got energized to work in the environmental field and really focus on environmental issues.

[Brown]: Um-hm. And when you were in graduate school, can you talk more about your training and how you learned about environmental policy and administration?

[Kramer]: Yes, when I was in graduate school at Rice, there really wasn't a lot of course structure on the environment. It was still a relatively new field of study in political science, environmental policy, and I had the benefit of having graduate advisor who tended to specialize in environmental policy administration. I did a lot of my own research, especially when working on my dissertation, which was on the implementation of federal air and air water pollution control policy in Texas. And I had a lot of great courses. They gave me the background for understanding government and policy and implementation of public policy, but I really had to do the research on my own and do a lot of readings off the course reading list in order to really grasp the topic and get into it in a big way.

[Brown]: And can you tell me how you got involved with the Sierra Club?

[Kramer]: I got involved with the Sierra Club because during my graduate work at Rice, as part of my research, I started going to meetings that were just getting underway at the time of a water quality planning process in the Houston-Galveston area, especially focused on a so-called nonpoint source pollution, as opposed to point source pollution from industrial plants and wastewater treatment plants. In the course of that activity, became active as a citizen in the planning process itself, as well as studying it. In that process, I met a couple of Sierra Club activist from the Houston area who are also participating in the process. I was aware of the Sierra Club, but I had not been a member or involved in it, and they [the Sierra Club activists] encouraged me to become very involved. And so, I joined the Sierra Club and they eventually encouraged me when I was finishing my on-campus graduate work and moving to San Angelo to run for the state executive committee. And I did and I got elected. And there I was. My first activity was being a member of the State Executive Committee, which I really never had any involvement with before.

[Brown]: Oh, wow. Can we go back to that water planning process? Can you tell me more about what that process looked like and what was involved with it?

[Kramer]: Sure. There was a section of the Federal Water Pollution Control Act, later known as the Clean Water Act more informally: it's called Section 208. And that was a specific section that required the development of water quality plans more on a regional basis, especially to address nonpoint source pollution like the pollution from stormwater runoff and from agricultural fields and things of that nature, as well as focusing a little bit on point source pollution. The focus of the planning was to come up with a long-term plan that would help to meet some of the water quality standards set by the state under the requirements of the federal law and, eventually, the goal was to make every stream in the United States, through pollution control activity, both able to sustain fish and aquatic life and also to be susceptible, or at least healthy, for people to swim and enjoy contact recreation. The Section 208 planning process was part of that overall effort to try to achieve those so called fishable and swimmable goals of the Clean Water Act.

[Brown]: Were there particular streams or problem areas in Houston?

[Kramer]: Yes, I think that the major concern in Houston at the time was with the bayous and the Ship Channel, and the ship channel was a very heavily polluted, industrial body of water by that time. A bayou had been developed into the Ship Channel back in the early 1900s by the US Army Corps of Engineers. Especially once all the petrochemical refineries were built along the Ship Channel, there began to be a lot of industrial water pollution problems, and so that was a big focus. But in terms of the Section 208 planning, it was more focused on the impact on the bayous of runoff from stormwater and concerns like that.

[Brown]: Um-hm. And so eventually, you kind of transitioned into the Sierra Club. Was there something that attracted you to water, specifically, or was it just something that evolved over time as you said?

[Kramer]: I think it just evolved over time. You know, I've actually thought about this question a lot (laughs) over the years. I'm not sure exactly what it was that attracted me to water as my major environmental interest, and I dealt with a lot of other environmental issues over the years. It may go back to the fact that growing up in Houston, my parents did spend time on the coast. We were only fifty miles from Galveston, for example. We went to Galveston fairly often. I do remember that, as a young kid, my dad was especially into fishing, and I also have very early memories of being with my parents one night on the coast somewhere when they were going crabbing with some of their friends. And so, maybe water imprinted on me early, before I even realized that that was the case. But other than that, I'm not sure exactly what it was that attracted me to water in the first place. Although, later on, I think, in part as a policy issue, one of the things I find fascinating about water is that it cuts across political lines, and there are nonpartisan and bipartisan groups and approaches to water policy. For me that was important later on in life.

[Brown]: Um-hm. Well, when you first started with the Sierra Club, were there certain water issues in Texas that you wanted to address?

[Kramer]: Yes, I think that one of the things that really impacted on me early in my graduate work, and this was graduate work at Stephen F. Austin for my master's, was that I started my graduate work around the time at Texans were voting on a major constitutional amendment defined as what was known as the 1968 Texas Water Plan. And that Texas Water Plan was, among other things, proposing to bring water from the Mississippi River across Louisiana to East Texas, and then send it by pipeline or canal to different parts of the state of Texas – like the Panhandle, El Paso, South Texas, and Corpus Christi. It was considered to be a major environmental boondoggle that would cost way too much money, way too much energy, impact natural habitats and environments, and really be an environmental disaster. And so one of the things that I remember very vividly was I was in a class with a professor who was a real proponent of a publication called the *Texas Observer*, which was, and is, a liberal magazine or newspaper in Texas that covers a lot of very important stories, including environmental, social justice, and other stories. He encouraged and offered his students an opportunity to be part of a group subscription to the *Texas Observer*. And the first *Texas Observer* that I saw was an issue dated August 1, 1969, that was devoted almost entirely to the proposed vote on these bonds to

implement part of the Texas Water Plan, and the cover of the newspaper [*Texas Observer*] had a picture, a caricature, of the major state officials water skiing. The inside of the publication had several stories about the background to the water plan and the proposed bonds, and that was quite, uh, interesting to me. There was a great satirical piece in that issue of the *Texas Observer* about this so-called Texas Mountain Plan. The premise of that satirical piece was that Texas didn't have any ski mountains and we needed to import ski mountains into Texas, so that we'd have the opportunity to offer snow skiing. I thought that was the perfect parody of trying to bring all this water from the Mississippi River to Texas so that Texas can grow regardless of whether or not the people along the Mississippi River wanted to give up their water for that purpose. So, that was probably the first water issue, in a policy way, that I was interested in: the aftermath of the Texas Water Plan and how to come up with a better water plan for Texas.

[Brown]: Um-hm. So, how did you approach that of trying to develop a better water plan?

[Kramer]: Well, it was a few years before I actually got directly involved in it, because in the meantime, I finished my graduate work on my master's and was trapped in the Army and was in the Army for almost two years and then went back and started graduate school again. By that time there were other water projects and proposed plans that were being developed and one of them came out in 1977. It was not—it was not, I don't think, titled a water plan per se, but it was basically the successor to the 1968 Texas Water Plan. There was an opportunity to comment on the publication as a citizen, and I took that opportunity and attended some meetings with other people about it. But it really wasn't until I got involved most directly in the Sierra Club, about a year later or so, that I really began to focus more attention on that, and one of the things was that I became the volunteer legislative chair for the state chapter of the Sierra Club. One of the big issues that we dealt with during the 1981 legislative session was another very grandiose proposal by then Speaker of the [Texas] House, Billy Clayton, to set up a mass water financing mechanism, sometimes called the Clayton Water Trust Fund, that would fund major reservoir projects and things like that which could have serious environmental impacts of a negative nature. I got involved that legislative effort. We were not able to defeat it in legislature, but it was a proposed constitutional amendment that went to the voters in the fall of 1981, and the Sierra Club, along with many other groups, were active opponents of that proposal. And so, that was my next major adventure into working on policy in regard to water supply, was trying to defeat that [constitutional amendment], which we did.

[Brown]: How did you defeat it?

[Kramer]: We had a very diverse coalition. We also had what some people might call a front group, if you will, called Citizens Against Water Taxes. I would say that a good part of the fight against the water trust fund proposal was based on economic grounds on financial issues, not necessarily on environmental issues. We felt and I think rightly so that you'd have a broader constituency opposed to the proposal if you focus on the financial aspects of what it could cost taxpayers and ratepayers, for example. And we had, actually, a number of fiscal conservative legislators and others who joined in that effort and even the Lieutenant Governor, Bill Hobby, who was a fairly moderate politician was against it as well, and that, I think, was the winning

formula because the environmental groups were against it on environmental grounds, but we had a broader set of opponents because of the financial concerns as well.

[Brown]: Um-hm. So, this is ‘80–‘82?

[Kramer]: ‘81.

[Brown]: ‘81.

[Kramer]: 1981.

[Brown]: Okay, and so then the next big project that you worked on was the water package that passed in ‘85?

[Kramer]: Yes, there was an interim step though as an outgrowth of the 1981 defeat of the Clayton Water Trust Fund at the polls with voters turning down the constitutional amendment that would have set up the trust. That actually was a continuation of defeats that the water developers, sometimes referred to as the water hustlers had suffered at the polls in 1969 with the water plan financing, and then in 1976 there was another bond proposal for water development. Those three proposed constitutional amendments in 1969, 1976, and 1981 all went down to defeat large measure because the opposition of environmental groups and fiscal conservatives. One of the responses to that was in 1982, Lieutenant Governor Hobby wanted to come up with a more, I think, compromise-oriented water proposal, used a group that was then in existence called the Texas Energy and Natural Resources Advisory Council, or TENRAC, which was sort of a coordinating mechanism among the different state agencies working on natural resource issues along with some of the state officials like the Attorney General and the Lieutenant Governor and others. That group, TENRAC, set up some stakeholder advisory committees to work on different aspects of water policy. But Lieutenant Governor Hobby was really sort of the driving force behind the TENRAC at the time. He basically encouraged people to come together with a consensus of water policy for the state that would include financing and more of what I would term management aspects to water policy, not just building new reservoirs or new water supplies, but more actively managing our existing water supplies for conservation and for environmental protection and things like that. That process through TENRAC produced a set of recommendations (and I was involved with one of those stakeholder committees very actively). That set of recommendations turned into what was known as the 1983 Senate water package: a package of several pieces of legislation, a couple of constitutional amendments in several bills that would have done various things like provide new money for water development, but also set in place some conservation requirements for people getting financial assistance from the state for water projects. It would have required some specific provisions for protecting freshwater inflows to bays and estuaries to protect the sea life in our bays, and it would also promote agricultural water conservation and some things of that nature like groundwater management. That 1983 water package made it through the Senate, but eventually it was passed in a different form by the House, but a much weaker version, and went to a conference committee at the end of the 1983 legislative session. They could not reach

agreement on a compromise between the House and Senate versions. That basically, however, laid groundwork for the 1985 water package, which many of us were heavily involved in during the legislative interim, trying to fashion a new water package and eventually were able to do so.

[Brown]: Um-hm, can you tell me a little bit more about that stakeholder advisory committee and some of the issues you worked—worked on?

[Kramer]: Yeah. The intention of the Lieutenant Governor was to try to bring to the table in advance of the legislative session more of the diversity of groups interested in water. I think up to that time most of the water policy of the state had been driven by entities like river authorities and other water development interests, trying to come up with new water supply projects, that would make sure that we had sufficient water now and in the future, but also, in the minds of many people, water projects that perhaps were going to be built way in advance of the need, so that those water projects themselves were driving growth and, , maybe bringing more people and more industry and businesses to the state than otherwise would be the case, and perhaps at the cost of the environment and other social costs. And there hadn't been very much, if any, attention to managing our existing water supplies, much less managing any future supplies that were developed in a way that protected the environment. And not very much interest or focus at all on conserving water, just making sure that people had all the water they want, whether or not they really needed that water. So, I think what Lieutenant Governor Hobby and others were striving to do was to bring more balance to the water policy issues and to incorporate actual conservation and environmental protection management resources with whatever money might be needed for legitimate water projects to truly meet needs. And so, they made a determined effort to invite representatives of environmental groups, like myself on behalf of Sierra Club, and others on the Sierra Club and other conservation organizations to the table to be part of advisory committees that come up with recommendations that would then go to the Texas Energy and Resources Advisory Council [TENRAC] for them to approve or disapprove or refashion as they saw fit. so that's the process that unfolded. We had these committees. We came up with recommendations. They went to [TENRAC], and then TENRAC sifted through those recommendations and came up with a set of proposals which were in turn put into several pieces of legislation called the 1983 Senate water package.

[Brown]: Okay, and in terms of the advisory committees and the Sierra Club, what specific issues for water and the environment did you want to see?

[Kramer]: Uh, the main thing that Sierra Club was interested in that stakeholder process was to make sure that there was state policy encouraging or requiring water conservation, more efficient use of water so that we weren't building water projects way in advance of the need for those water projects since those projects have oftentimes negative environmental consequences on fish and wildlife habitat, for example. We were also interested in making sure as part of the conservation push there was a focus on agricultural water conservation, because at the time, and it still is the case today, the largest single user of water in the state of Texas is irrigated agriculture. We can't continue to depend upon our existing water supplies to provide the level of irrigated agriculture we have in the state, especially in the panhandle because of

the declining levels in the Ogallala Aquifer. So, we're very interested in trying to find more efficient ways for irrigated agriculture to use less water and still you know produce good yield, looking at the potential for converting irrigated agriculture to dryland farming where that was feasible, things of that nature. Probably the thing that the Sierra Club and other environment groups were most interested in pushing was for some specific protections for maintaining freshwater inflows to bays and estuaries so that there would be the proper mixture of freshwater and saline water to have a productive nursery for shrimp and oysters and fin fish, which is important not only for the environment, but also for the coastal economy through our recreational and commercial fishing industries, and the tourism industry that depends largely on the coast on those types of availabilities, of recreational, and other fishing opportunities. And so, we wanted to see, for example, Texas Parks and Wildlife department given a greater role in determining how projects were fashioned to protect freshwater inflows and also instream river flows, and give them the right, for example, to hold a water right to protect water from being developed so it could be maintained for fish and wildlife habitat, things of that nature. So, I think a combination of conservation, both municipal and agricultural, and then protections for freshwater inflows were the biggest pieces that the environmental groups were interested in at the time.

[Brown]: Thank you. So, after the House and Senate couldn't reach an agreement in '83, can you tell me like what did you do? Like what was your reaction? I mean, what was going on in your head at the time and then what were you working towards?

[Kramer]: Well, the most obvious thing, I think, from that defeat or failure was the fact that there had not been a consensus reached in advance between the House and the Senate. And the water package of 1983, you know, it was really a creation in many ways of Lieutenant Governor Hobby and the Senate, granted with input from all the different interest and things. But the House of Representatives' leadership had not really been directly involved in that. I think whenever you have a situation where—in a two-house legislature like the Texas Legislature—you have one house that is doing their own thing and coming up with a set of proposals and then sending it to the other house with a "here you are" attitude, I think the house receiving proposals probably is a little bit hesitant just to embrace what the other house has done, because they weren't involved in the fashioning of it in the first place, and the 1983 senate water package actually went to the House fairly late in the game in the session. And so, I think one of the things that was pretty obvious at the end of the '83 session was that both the House and the Senate had to get together and come up with something that was a consensus or a compromise between the views of different people of both houses. There was a joint committee on water resources set up by the Lieutenant Governor and the Speaker of the House after the end of the session in '83 to study the water issue during the interim before the next regular session of the legislature to take water legislation as it had evolved in the '83 session and as a basis and then try to build a consensus from that legislation with various groups as to what could or should be done. So, our focus, really, after the end of the 68th session [the regular session of the 68th Texas Legislature] once that joint study committee was established was to try to fashion and shape the views of the members of that committee with information

about what we thought was important to be in the water package to make it comprehensive and supportable by a wide diversity of people.

[Brown]: What sort of arguments did you make to them and were they receptive to your message?

[Kramer]: Uh, one of the things that was a very strong argument was based upon the ability of environmental groups and allies to defeat those bond proposals in 1969, 1976, and 1981, and that was that you will not be able to pass a water project bond proposal to finance these projects at the polls unless you have either our support or our neutrality. If we oppose it, it's going to go down in flames. And so, you need to address some of the things we're concerned about, like conservation and bay and estuary protection, if you want to pass additional money for a water bill. So, that was really, I think, the most effective thing that we had going for us on the environmental side: we had proven our ability to defeat these bond proposals at the polls and without some concessions to us about the things that we cared about to bring more management as a balance into the whole water plan. They were not going to be able to pass new water bond proposals, and if they wanted to finance new water projects, they're going to have to get our support, or at least our neutrality. And so, we had, long story short, some political leverage to get some of the things that we wanted in the water package.

[Brown]: Did you get everything you wanted in the package?

[Kramer]: No, certainly not. And—No, that did not bother me, per se, because I'm a student of government and politics, and I understand that legislation and public policy, I think, if done appropriately is a matter of compromise of viewpoints. I mean, you don't want to just set aside your own values to make some compromise that goes against your values, but I think that there's almost always two sides of an argument. There's almost always something legitimate about the views of different people on the same subject, even if they are at odds, and the way to move forward best from my perspective, is to try to address everybody's concerns and their issues, to the extent that you can. The fact that we didn't get everything we wanted out of the 1985 water package, but we did get a lot and other people had to compromise things that they didn't particularly want to compromise on, I think, indicated that it was legitimate path forward.

[Brown]: Um-hm. So, what happened after '85?

[Kramer]: Well, the first thing to know is that when the 1985 water package was passed by the House and Senate, and again it was a compromise, the constitutional amendments still had to be approved by the voters in the fall of 1985 to adopt the new funding mechanisms, and the legislation dealing with conservation, bays and estuaries, and all that was dependent upon that constitutional amendment passing because in effect, the separate bills from the previous session had been molded into one bill, and the bill was really only to be effective if the constitutional amendment passed. So, there was a lot of initial flurry of activity about whether or not the environmental groups had gotten enough out of the compromise that they were willing to either support or not oppose the constitutional amendment, and some of the

different environmental groups went separate paths. The Sierra Club decided to be neutral. We felt that we had gotten a lot out of the water package, but we weren't in love with it to the extent (laughs) that we were willing to go out and push for the passage of the constitutional amendment. Some of the other groups like the Audubon Society, a group called Texas Committee on Natural Resources, it's now called Texas Conservation Alliance, actually opposed the proposed constitutional amendment, but they did not have the organization or the sort of experience that Sierra Club and others had in opposing the constitutional amendments before, and so the constitution amendment actually passed fairly handily. Once that happened, then a lot of new requirements went into place. For example, at the Water Development Board, which is our major water financing and planning agency in the state, if a city or another political subdivision wanted to go to the Water Development Board for a loan or some other type of financial assistance above a certain monetary level, that applicant had to come up with a conservation plan of how they were conserving water, what they're going to do to conserve water, as well as get money for a new water project. That was a requirement of the 1985 water package, and once the constitutional amendment passed, that requirement went into effect. So, a lot of our focus then, for example, was start looking at the water conservation plans that were submitted as a result of that requirement. Also, for bays and estuaries and freshwater inflows and instream flows, Parks and Wildlife Department was given the right to be a party at the Water Commission in opposing or at least trying to shape a proposed new water right or water project to make sure that bays and estuaries or instream flows were addressed in the conditions placed on that permit. So, those kinds of things went into effect. But one of the things that's been clear to me both as an academic and political scientist and as an advocate in the policy arena is that just because you pass a piece of legislation, and it goes "into effect" doesn't mean that it actually gets implemented, carried out in the way that it was intended, and in a way that it achieves the potential of what was anticipated to do. You have to continually monitor, advise, and, at times, litigate on the implementation of legislation, make sure that the effect of that legislation is what the people who designed it, and passed it, and pushed it intended it to be. So, I think that what we really did after the 1985 water package and continue to this day to do, was to make sure that to the extent possible that the legislation is being implemented in a way that meets its folks.

[Brown]: Um-hm. So how would you evaluate or grade, if you're an academic (laughs), how would you grade the implementation of that '85 law?

[Kramer]: I think I would give it a B minus or a C plus. I think that several aspects of it have turned out well. I think the conservation plan requirements, although they were not as strong as we would have liked, began to impress bond water managers and other interested parties that conservation is a legitimate way of trying to address water supply issues: that the more efficient we can be in the use of our water, the better we have the ability to control our water security for the future. And so, the plans themselves may not have been perfect from our perspective when they were initially drawn up, and they're still not perfect today, but they have achieved making conservation a real goal for many water suppliers around the state. And as a result, our per capita water consumption in Texas has dropped enormously over the past several decades. So, that's an example of one of the things that I think has been implemented

fairly well out of that 1985 water package. Other things may be better, may be worse. It was a pretty diverse package so it's hard to give an overall grade because it's really a set of, I think, different grades, different components of it, but overall if I had to give it a grade, I'd give it a B minus or C plus. It definitely moved the ball forward.

[Brown]: Um-hm, okay. So how can you get from the '85 bill to the more comprehensive water planning acts in '97 and 2001 and 2007?

[Kramer]: I think a lot of it was the assertion of agencies like Texas Parks and Wildlife Department and General Land Office, but especially Parks and Wildlife Department in trying to make sure that all of the major state agency players had a seat at the table and a role in developing the water plan. The 1997 State Water Plan, for example, was seen as a consensus plan in large measure because the Texas Water Development Board, what was then the Texas Natural Resource Conservation Commission, now TCEQ [Texas Commission on Environmental Quality], and Texas Parks and Wildlife Department all hammered out provisions in the water plan that addressed water development, protection of instream flows and freshwater inflows, agricultural water conservation, and a wide variety of things. And so, the 1997 water plan, while it may not have been perfect from an environmental standpoint, was very much a legitimate compromise among all those different state agency players with input from the various diverse groups that follow water policy in the state. The interesting thing, of course, is that that 1997 plan came out the same year that the legislature totally revised the water planning process in the state. Whereas it [the water planning process] had been what would be termed a top down planning process with the state agencies doing the planning, granted with public input in the plan, the 1997 legislation passed by the House and Senate with the strong support and the urging of then Lieutenant Governor Bob Bullock, made the water planning process a bottom up process, where you established sixteen regional planning areas with a regional water planning group in each of the sixteen regions, and they develop regional plans. Those regional plans went to the Water [Development] Board for review and eventual revision or approval, and then they all got aggregated into a state water plan, the first one being in 2002. So, the water planning process has dramatically changed as of 1997, and as a result of this bottom-up process, we have a very different water plan than we used to have before. Each of the regional water planning groups has to have representation from environmental interests, municipal interests, agricultural interests, and a wide variety of groups, and so it is intended to be a consensus document at the regional level that gets aggregated into a state consensus plan. Again, that doesn't mean that it's everything that environmentalists want or everything the water development community wants, but I think it has elements that show how the water policy of the state has evolved over the last few decades to understand that we have to address a wide variety of management issues, not just development of usefulness.

[Brown]: Um-hm. Can you talk about your role, um, at the Sierra Club? Did you lobby for the legislation or what was your role in all of the—

[Kramer]: In the 1997 legislation, yes, we did lobby for it. We had some reservations about the bottom-up approach, because there's always the danger that if you have each region coming up with its own regional plan, the focus is going to be on getting more water for your region,

not necessarily what's best for the interest of the state as a whole. We were concerned that the regional planning approach might result in a lot more water projects being proposed than otherwise would really be needed, that everybody would want their own pet water project approved, regardless of whether or not it really was needed from at least a statewide perspective or from the perspective of several regions. I don't know that's been particularly born out in practice. Um, I think sometimes there are questionable projects that have been proposed that aren't really needed, but I don't think our worst fears in that regard have been realized. And definitely we've seen—and this is not just because of the planning process—we've definitely seen over the past several years other pieces of legislation promoting conservation and promoting environmental protection that have helped to balance some of might—what might otherwise have been some of the negative impacts of the new planning process. But during the legislative session in 1997, our role was really to try to support legislation, but try to fashion it or put in requirements and make changes in it that would at least make sure that the environment was important consideration in the planning process. To some extent we were successful, not to the extent that we wanted to, and that required some additional legislation separate from the planning legislation a few years later.

[Brown]: Okay, and from '85 to '97, did you—were there any changes in the legislature itself that impacted the water planning process?

[Kramer]: Yes, I think that you have to say that there were changes in that period of time. For one thing of course, more and more of the legislators were coming from urban areas, and in many respects, that meant more and more legislators were coming from say East and Central Texas than necessarily West Texas because of the heavier population growth in those areas of the state. So, whereas in, say the 1950s and sixties, and seventies, and into the early eighties, you had—well and even maybe beyond the early eighties—you had a heavy tilt of a lot of legislators and leaders in the legislature coming from West Texas, which is, you know, considered to be much more water short than East and Central Texas. I think that really drove a lot of the water policy or the type of water policy we had because it was sort of focused on, how do we address water shortages, which means we want more water, and we need imported water, we need developed water, et cetera, and we need more water for irrigated agriculture. But as the complexion of the legislature changed with more and more urban legislators, I think you've seen a shift away from that to think of water in a more comprehensive way. I think also that obviously you had political changes, especially after the 1990s with Republicans being more and more in charge of the legislature in both houses. Now, that does not necessarily mean a change in water policy. per se because my experience has been that water's not really a Republican versus Democratic issue. It's maybe urban versus rural, but not Republican versus Democrat or conservative versus liberal. But I think it has perhaps blunted somewhat of the influence, impact, of environmental organizations at the Texas legislature on water and other things because the environmentalist tends to view the Democratic Party and Democratic politicians as more favorable to the environment then a lot of the Republican legislators. And that may not be true on water, but it does, I think, impact some of the issues that we deal with on the environment as a whole.

[Brown]: Um-hm. So, after Senate Bill 1 passed in 1997, how did—can you talk more about the changes to the water planning process and what happened next?

[Kramer]: One of the things that definitely changed as a result of the 1997 legislation was that environmental organizations had to really ramp up to try to have participation and involvement in the water planning process at the regional level. You know, it was one thing back in the 1970s and eighties and early nineties, to be able to influence the state water plans at the state level, because that's where the effort of concentration was, that's where the planning was being done. And so, you know, a statewide environmental organization could put its focus on having people in Austin at the state agency meetings, helping to try to influence the policies there. With the regional planning process and state being divided into sixteen different planning regions that meant if you wanted to influence the regional plans, you had to try to get people to participate in each of the regional groups. That was much more of a challenge. I think Sierra Club was able to do a fair amount of that. We weren't able to cover all sixteen regions, but we do have a grassroots membership and we were able to have people participate in probably at least a third of the regions if not more. Some other environmental groups that had people who could participate in other regions. The Sierra Club along with the National Wildlife Federation, and, at that time, Environmental Defense Fund and the Texas Center for Policy Studies created a Texas Living Waters project that got funding to help have staff and other resources to focus on the regional planning process as well as other water policies that helped us to be able to monitor and even participate in many of these regional planning groups. But it has been a challenge, because you have different cultural factors in different regions, different interest groups that may be dominant in different regions, and environmental groups still, I think, don't have enough resources to be able to keep on top of each region, and make sure that our presence is felt in the development of each of the regional plans.

[Brown]: Um-hm. We've been going for about an hour now. Do you need a break or anything?

[Kramer]: No, I'm okay, if you're okay.

[Brown]: Okay, I'm cool. Um, okay, so we talked about '97. Um, can you tell me more about the other bills that come out and Sierra Club's involvement and your involvement, especially in 2001 and 2007?

[Kramer]: Yes, in 2001 and 2007, there were what I would term successor bills to the 1997 water planning legislation. And in some respects, they made some revisions that directly or indirectly impacted the planning process, or they address some other issues that the 1997 legislation did not resolve or did not come up with processes for. So, for example, in 2001 a lot of focus on groundwater management, which had not been a big focus of the 1997 legislation, and attempted to, I think, address some of the lingering issues on groundwater management that had been around for several decades. Even going back to the 1983 and '85 water packages, there were attempts to try to address the groundwater management issue a little more directly, but those did not turn out to be big aspects of the '83 and '85 legislative packages, and there were some future legislative attempts after that before 1997, even before 2001 to do so. Those were important, but what the 2001 legislative session really did was be much more

specific in revising the groundwater management ball, the state especially sort of putting more, I think, definitive provisions into the law that govern the way in which groundwater conservation districts operated and trying to encourage more groundwater conservation districts. And so that was a big focus of the 2001 legislative session, although it did other things as well. After the 2001 session, the next big issue, I think, to rise to the floor again was the freshwater inflows or instream flows issue, and that actually rose to the forefront really not because of a legislative action, but because of an effort by the San Marcos River Foundation to get a water rights permit from what was then the Texas Natural Resource Conservation Commission to basically maintain existing, unappropriated water in the San Marcos River Basin and the Guadalupe River Basin for instream flow purposes. Up to that time, the Texas water rights law for surface water, had been largely silent about whether or not you could actually go to the Water Commission (or whatever the name of the agency at the time with control over surface water rights) and get a permit simply to keep water in the river for instream flow purposes or freshwater inflow purposes, and San Marcos River Foundation decided, I believe that was either 2000 or 2001, to file an application for a permit for basically all the remaining unpermitted water in the Guadalupe Basin, which includes San Marcos River, for instream purposes. Well, that—that just set off a great deal of controversy among the river authorities. They didn't want to see water that was unappropriated just going to maintain instream flows, and they were able in the 2003 legislative session to get legislation passed that basically prohibited the then Texas Natural Resource Conservation Commission from issuing a new water rights permit solely for the purpose of maintaining instream flows. They did allow that an existing water right holder could convert an existing permit from agricultural, industrial, municipal, or whatever water use to instream flow purposes through certain processes. But basically, anybody was prohibited from getting a new water right permit, which put the kibosh on the San Marcos River Foundation application, in essence. However, the then Lieutenant Governor David Dewhurst made a commitment that even though he supported, and the legislature passed this prohibition, that we as a state were going to come up with a way to maintain instream flows and freshwater inflows to bays and estuaries. And so, there was a study committee set up during the interim to try to come up with an approach for protecting instream flows over and beyond what the 1985 water package had done. That study committee had a hard time getting its hands around what the approach should be. So, an interesting development was that a group of us, informally, with an interest in the outcome, got together and on our own initiative came up with a set of recommendations about how this might be accomplished, and that set of recommendations which was a compromise between water development interests and environmental interests, because we were all at the table working this out, went to the committee, the study committee, and was embraced (laughs), in part because they didn't have an alternative at the time, and became the basis for legislation in the 2005 legislative session, which, again, unfortunately—not unfortunately that it initiated it in the Senate, but it was sort of embraced by the senators first, and by Lieutenant Governor Dewhurst to try to fulfill his commitment. But it came out fairly late in the legislative session, was filed fairly late and went to the House and did not get passed in time. But again, it eventually went to an interim study process and came out as the 2007 environmental legislation, plus some water conservation legislation.

[Brown]: Can you tell me more about this informal group, like how you got together?

[Kramer]: Yeah, I think that it got kicked off in part by Andy Sansom, who had been the Texas Parks and Wildlife Department Executive Director and had moved to a new group that was set up at Texas State University called the River Systems Institute, now the Meadow Center for Water and the Environment. He had discussed with some of us in the environmental community, as well as with some of the people in the water development community the idea of pulling together a discussion group, to see if we could hammer out a compromise on how environmental flows ought to be handled by the state. So, he and the rest of us pulled together a group of people that included Andy Sansom, Joe Beal, who was then the General Manager for the Lower Colorado River Authority, Myron Hess from National Wildlife Federation, Mary Kelly, who was then with the Environmental Defense Fund, Dean Robbins, who was the, I guess, Executive Director of the Texas Water Conservation Association, which is sort of a trade association, if you will, for water suppliers and engineering firms that work with water, et cetera, and then Michael Booth, who was a water rights attorney representing different river authorities or water suppliers, and myself. And we sat down over several meetings. I think we met primarily over at the State Capitol and elsewhere and hammered out a proposed environmental flows standards setting process that would then govern new water rights permits for water projects and require certain environmental flows to be reserved or maintained—an elaborate process that also would involve science teams and stakeholder advisory committees for the different river basins and associated bay areas, and it was very interesting process. Again, it produced a compromise that was not perfect, and not everything that environmentalists wanted or everything that the Water Development interests might want in terms of protecting their interest, but it was legitimate compromise, and that's the one that was embraced in what was known as Senate Bill 3 in 2005, one that did not pass but it was resurrected in Senate Bill 3 and House Bill 3, I believe, in the 2007 legislative session.

[Brown]: And were you involved in the lobbying again for this?

[Kramer]: Oh, yeah, yeah. Because we had committed to this compromise, it was important that those of us that had been involved in the process actively, pushed for the legislation in the House and Senate in [2005] and then again in [2007], which involved a lot of meetings with different interest groups, a lot of a hammering out the actual statutory language, legislative language, with the staff members of the [Senate] Natural Resources Committee and of the House Natural Resources Committee, all the things that lobbyists have to do in terms of trying to get an idea or concept from a draft to actual legislation that passes. So, yes, we were heavily involved in lobbying both 2005 and 2007.

[Brown]: And in that lobbying, do you remember the arguments you used?

[Kramer]: The basic arguments were around the importance of maintaining the productivity and the environment of bays and estuaries in order to be able to sustain healthy populations of shrimp and oysters and fin fish and other aquatic organisms upon which they're dependent. A lot of it did focus on not just again, the environmental aspects, but the economic value of these

resources to the state and to the local economies, and the importance of recreational fishing, commercial fishing, all those different enterprises. And the fact that, even though we have—had made some progress in bringing freshwater inflows and instream flows, at least into the thinking and the policy development of the permitting, that we had already appropriated such a huge volume of water resources that we needed to come up with new ways of trying to protect our flowing rivers and our freshwater inflows, given the fact that if all those water rights are actually exercised for consumption purposes, it's going to have a huge negative impact upon those flows and the ability to sustain those things that the flows are there to provide. So, a lot of it focused, for example, on the fact that until 1985, the largest volume of surface water in the state had already been appropriated and had been appropriated without any environmental flow conditions whatsoever. And so, we needed to have a way of beginning to try to make sure that we retain what we still have left unappropriated in a way that protected instream flows and freshwater inflows, and the hope was that we would also see coming out of this process some voluntary initiatives to try to set aside water even if already appropriated for other uses, set it aside for flow protection.

[Brown]: Um-hm. So, bill gets passed, and here's your question again, how well do you think it was implemented?

[Kramer]: Uh, nowhere near as well as we had hoped. The environmental flow standard setting process was a little complicated. The theory was that in each of the major river basins of the state and the associated bays and estuaries with each of those river basins, there would be first a science team, or I should say, actually, I guess first, a stakeholder committee set up with a diversity of interests including environmental interests, agricultural, et cetera. That stakeholder committee in each river basin and associated bay area would choose a science team, technical experts who would first go and assess the ecology of the river basin and the associated bay and estuary. That particular group would come back to the stakeholder group with their assessment as to whether or not that river basin and that bay and estuary system was maintaining what was termed a sound ecological environment. And if not, then what was needed to try to move it to that type of balance. And then the stakeholder committee was to take whatever recommendations that the science team had for what the environmental flows were needed for maintaining a sound ecological environment, sort of run it through the filter of social and economic considerations in that basin, and then make recommendations to what was now TCEQ to set the environmental flow standards for that particular bay and basin area. Then those environmental flow standards would govern any new permits for water rights, so you had to condition those permits on what was necessary to maintain those environmental flows. Also, the theory was that TCEQ would, in those areas where there was unappropriated water, reserve some of that water for the environment, regardless of whether it [TCEQ] would get permit applications or not. There would be a process for then looking at ways in which voluntary decisions could be made to you know, perhaps retain some of the existing already appropriated water for flow purposes. The process was set up so it'd be staggered with like, two river basins and associated bay areas being done over a two-year period and then sequentially, the rest would be covered. Well, the first two, got off to a little rocky start, especially in the Trinity-San Jacinto and Galveston Bay region, in part because there was a

disagreement straight down the middle on the science team of what the recommendations for environmental flow standards should be. There was a general consensus that there was a sound ecological environment in Galveston Bay and the Trinity-San Jacinto Rivers, but no consensus on how you maintain that or what we needed to go forward with it. That came to the stakeholder committee. The stakeholder committee, which I was a member of, could not agree on a set of recommendations as a consensus, and so there were actually a majority report and a minority report that went to TCEQ. TCEQ then set a standard which most environmental organizations felt was too weak to maintain environmental flows and maintain a sound ecological environment, but that's what's in place. And it was a little bit better in some of the other bay basin areas where the standards were a little bit stronger but still easily weaker than what the environmental interests felt was appropriate. And—and so, we've come out with, as I understand it, TCEQ never really set aside or reserved any water, you know, for flow purposes. They've only set these standards that would govern a new permit, but it does not take into account the fact that we already have all this appropriated water that if fully used would very much diminish the flow in these rivers and the freshwater inflows in the bays and estuaries. So—So, no, I think the environmental groups are not happy with how this has worked out. We feel that many of the river authorities stone walled and tried to make sure that the recommendations were not strong. Plus, there was supposed to have been this adaptive management process whereby the standards would be reviewed and potentially revised every ten years, and so far, that's not happened because the legislature has not provided the funding to really carry it out. And so, there's a lot of disappointment in the process right now, since it's actually worked out.

[Brown]: Can I go back to your role on the stakeholder committee? Do you remember any of the discussions and the divides between the two groups?

[Kramer]: Uh, in the Trinity—

[Brown]: Yes. (both talking at once)

[Kramer]: —San Jacinto? Uh, yes. One of the first things, I think, to note is that when the science team was set up some of the science team members were actually consultants who make their living for the most part by being consultants to the river authorities and some of the other water suppliers. So, while they may be quite qualified on a technical basis, there is concern that some of them may be a little bit biased toward the water development side because those are the people that they tend to work for. But at any rate, whatever the situation, it is the case that the recommendations that came from the science team about what needs to be done to maintain environment flows were divided. Some of the opinions about whether or not it was truly a sound ecological environment were somewhat divided as well. And that disarray created a very difficult position for the stakeholder committee to be in, in the first place, because we didn't have any clear message, any clear guidance from our expert science team as to what technically or scientifically they felt to be the case and what they felt was needed. And so, when we did our deliberations as a stakeholder committee, we were already behind the eight ball in that respect, on having a unified recommendation from the

scientists and the technical experts. Then we had what I perceived in hindsight to have been a stonewalling by some of the representatives on the stakeholder committee representing water supply interests that they were going to try to minimize any recommendations for environmental flow standards to try to make sure they have as much flexibility in building water projects and managing the, for example, Trinity River, as they needed from their perspective. And even though I think many of us were working in good faith to try to come up with a compromise, I don't think there was really a willingness on the part of some of the people from the water supply interests to also do that. And so we wound up with a very divided advisory or stakeholder committee. I think it was like maybe two thirds versus one third of those of us representing environmental interests, public interest, and some other interests. We basically went for a minority report for stronger standards, and the majority went for a report with much weaker standards; but the majority were basically the water supply interests and municipal interests and people of that nature.

[Brown]: Um-hm. What do you think is needed in terms of adaptive management to do a better job implementing Senate Bill 3?

[Kramer]: Uh, among the things that are necessary for adaptive management, under Senate Bill 3, I think would be continued commitment by the legislature for funding of the science teams and the stakeholder committees, to do their job. The legislature has, to be fair, provided some money, between a million to two million each biennium over the last thirteen to fifteen years to do some studies in the bay basin areas to provide more scientific background, but it really hasn't been sufficient to compensate the science team members to do the work that's needed to really provide more of a scientific technical knowledge upon which to build the standards. There needs to be also, in addition to funding, a clear direction in interest from the state leadership, including the Governor, Lieutenant Governor, and Speaker of the House, that this is an issue that requires some attention and that they are willing to look at whatever recommendations might come out for changes necessary to strengthen the existing law. But we've had no interest whatsoever in the past several years from the Governor, whichever governor, Lieutenant Governor, or the Speaker of the House, whoever the speaker may be at the time, to really do this. It's very unfortunate because one of the aspects of the adaptive management process is to have this state Environmental Flows Advisory Group that keeps monitoring the situation and approving work plans to do adaptive management and all that. Well, it hasn't met for years now, and some of the positions remain vacant, and that's largely because of lack of leadership by the Governor or the Lieutenant Governor and/or Speaker of the House. So, I think it's a combination of things that basically need funding, and we need legislative leadership attention to the issue, but that's been lacking for well over a decade now.

[Brown]: So, looking back, and at the history of Texas water, if you were to write your history of Texas water, how would you interpret it?

[Kramer]: I think that overall, one of the things about the history of Texas water is that there have been many beneficial changes in Texas water policy over the past several decades. I now have the perspective of, if not being actively involved, at least being aware of and attentive to

Texas water policy over a period of fifty years going back to the 1968 Texas water plan and the 1969 vote that defeated the water bond proposals that would have began—would have begun implementing that plan. If you look back at the '68 water plan, you know, there was no—I mean there was a little bit of text, a little bit of lip service to things like conservation and bays and estuaries, but nothing real in terms of substantive policy or provisions to try to conserve water or to protect environmental flows or anything of that nature. And yet today, even though situations are not perfect, leaders, legislators, policy officials, the people involved in water policy are all aware of conservation, bays and estuaries, and the need to do something to make sure that there is conservation and that there is protection in bays and estuaries. But we disagree on things like how much water the environment needs, or how should that water be provided for the environment. I don't think there's any disagreement anymore about the fact that water for the environment is important. So, I think that there's been a lot of progress made in attitudes over the past half century in Texas, with a better understanding that when we talk about water for the future, we're not talking about just developing new water supplies. We're talking about managing water in a more holistic, more comprehensive way. You know, there's now, for example, a lot of talk about the concept of "one water"—trying to look at water in water policy in an integrated fashion to include water supply, water quality, flood control, flood management, environmental protection. Eventually we need to move our water planning and our water policies into a more integrated approach where we're planning not just for water supply over here, water quality over in another place, flood in another planning process, but trying to integrate those more into one process that makes sure that by trying to do one thing, we're not negatively impacting the other aspects of water. So, I think that there's been a lot of progress in that regard. We have much more active groundwater management by groundwater districts, we've seen the per capita water consumption drop, incredibly, over the past several decades in Texas. We've seen more water efficient agriculture. So, all those things are positive things, so I think there has been progress. The caveat I have to that is that the progress hasn't been enough and that we're still wrestling with things like how should groundwater be managed if we think of groundwater separately from surface water, even though we know in a physical sense that oftentimes, surface water flows are dependent upon groundwater levels and groundwater levels are dependent upon interactions with surface water bodies. You know, we don't, and we probably won't ever have, perfection in terms of our water policy and how we approach water in Texas. We have a long way to go, and I think there's a mindset among many people that conservations good, protecting the environment is good, but first and foremost, we need to have water to do whatever we want to do with water, to have lush lawns or to really foster new economic enterprises that use a lot of water. Those kinds of things. We're part of the American society, and American society, I think, is still focused on growing and expanding and we're going to be able to do whatever we want to, and the resources are just going to have to be accumulated to do that. So that's not really something separate for Texas, but bottom line is, that I think we made a lot of progress in water over the past fifty years, but we have a long way to go.

[Brown]: Is there anything unique to Texas in terms of water issues compared to other states?

[Kramer]: I think that if there is anything unique to Texas, compared to other states with regard to water, it's simply that the size of Texas and the diversity in topography and different climates makes it much more complex, to try to come up with a statewide approach to water that addresses all these different areas and all these different aspects of it in an appropriate manner. You have West Texas, which is currently perceived to be water short. You have East Texas, which is currently perceived to be water rich, you have a coastal environment with all the specific needs of the bays and estuaries. You have different topography in terms of the Texas Hill Country versus the East Texas forests or the South Texas/Rio Grande Valley, or the Chihuahuan Desert in the west. It's very hard to try to fashion a coherent, comprehensive state water policy that addresses all these different regions and all those different interests in a fair and equitable way, and I think that is perhaps the thing that is somewhat unique to Texas. I mean, I think you could probably make the same case for California being in that situation as well, but just the size of the state and the diversity of the topography and diversity in so many other respects make it a much more complicated situation than say it would be in Delaware.

[Brown]: Um-hm. And you mentioned you've been working on water for fifty years. So, what's been your most memorable experience?

[Kramer]: Um, it's hard to say what my most memorable experience about water is. I think that maybe in a way it does go back to the early legislative sessions, in which I was involved with water issues back in especially 1983 and 1985. Because at that time, if you pardon the expression, I was pretty much immersed in working on water and work in the legislative session. And granted, I've worked on other issues at the same time, including in those first sessions, parks, funding for state parks, and solid waste management issues, et cetera. But I think one of the things that probably makes that period of time most memorable to me was it was, aside from the [section] 208 water quality planning process when I was a graduate student, the first time that I was really deeply involved in making policy or helping to fashion policy on water and working with legislators like State Senators and House members and the staffs of the Lieutenant Governor, and the Governor, and really seeing that my activity was making a difference. Whether or not it was as much of a difference as I wanted, it was still having an impact upon the legislation. I could see some of the things that I had drafted being put into the bills. So, I think that in many ways was perhaps at least one of the most memorable parts of my history of working water in Texas.

[Brown]: Um-hm. Well in terms of water or just any other issue, environmental issues in general, is there anything that you wanted to add or talk about today?

[Kramer]: One of the things that strikes me in 2021 is that, over the years, I think people have begun to just accept the idea that it's important to protect the environment and to feel that perhaps government policies and various regulations and initiatives are in place to do that. But it's a little bit, I think, of a misconception that the environment is totally protected these days through our policies and our regulations and all that because environmental protection really requires vigilance on the part of everyone to make sure that the things that were accomplished in the past are not undone by new challenges and attempts by at least some interests to try to

undermine those protections for their own economic or other purposes. I'm a little bit disappointed these days that the environment is not more visible as a policy issue than it was back in the 1970s, for example, when I first got involved in these types of issues. Obviously, when you have something like a pandemic, it's hard to focus on a lot of other things and that becomes the sort of consuming issue, and with the impacts of the pandemic on the economy and on people's lives, it's hard to think about other issues like environmental protection. But setting that aside and going forward, and even prior to the pandemic, I wish there was more public attention to environmental issues and things that have not yet been done to protect the environment. Climate change, I think, is beginning to impact more and more on people's minds and of course, there are enormous environmental implications for climate change, and enormous implications of things we do every day that relate to the environment that impact our changing climate and our adaptation to a changing climate. And so, climate change may be the environmental issue, if you will, that transcends this concern that I have about the lack of attention to the environment compared to the 1970s, but I'm still concerned that we're not focusing enough attention on the number of environmental issues that were really at the forefront before, and if we don't focus more attention on those environment issues, it's going to be hard to really maintain the environmental protections that we fought so hard to win over the past half century.

[Brown]: Are you talking on a local, state, national level?

[Kramer]: I'm really talking on all levels. I think that especially true on the state level, but I think it also is true, maybe to more or less extent at the national and local levels that those people making policy do not look at environmental issues today as priority issues, as front burner issues. I think back to the 1983 or 1985, I think, legislative session when Governor Mark White as part of his State of the State address to the legislature made water issues a top priority issue for the session. Yes, we have had, you know some circumstances like in 2019 when the flood management issue was a top priority for the state legislature because of Hurricane Harvey and all the impacts of flooding from that hurricane plus some other events of flooding in Texas, but it's more episodic it seems. When a crisis develops, then there's a reaction to that crisis, but in most instances, we don't see environmental protection these days as a crisis that needs to be dealt with unless you're focused on something like climate change. And so, I think, we the environmental community find it hard to get traction for some of our concerns about the environment when you have so many other issues like immigration, et cetera, that are impacting upon legislators' minds and people's thinking these days, and you certainly don't have the broad bipartisan concern about the environment that I think we did have a few decades ago at all levels of government. So, I am concerned. I don't think it's just at any one level of government that we're just not making the environment a high enough priority.

[Brown]: Uh-hm. Well, is there anything else that you wanted to add today or talk about?

[Kramer]: One other thing that I would mention that I think is relevant is that looking forward with the changing climate that we're experiencing, we can no longer be satisfied that the knowledge we depended upon in the past will be sufficient for understanding the impacts upon

our world and on the environment of our world in the future. Because of the changing climate, we see changes in habitats, we see changes in species, we see changes in topography, we see changes in the way in which our various ecosystems work and adapt, and the things we might have depended upon in the past as our knowledge that guides our policies in those respects are not necessarily going to work for us in the future. I believe that requires us to spend a lot more resources and a lot more time and effort in being adaptive to the changes that are happening and in putting money into the research and the studies to understand the impacts of the changes we're seeing and how that affects us and how it affects our world. I hope that will become more of an understanding on the part of our government leaders as well as the public in general: that we really need to be dynamic, adaptive, and understanding of the fact that things are changing and that we need to devote the resources to really come up with those changes.

[Brown]: Um-hm. Anything else?

[Kramer]: I think that's it.

[Brown]: Okay, I'll turn the recorder off.

[end of recording]