

TRANSCRIPT

INTERVIEWEE: **Bob McFarlane** (BM)

INTERVIEWER: David Todd (DT)

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DT: It's October 1, 1999 and we're in Houston, Texas. My name is David Todd and I'm here for the Conservation History Association of Texas. And we are interviewing Dr. Bob McFarlane about his many contributions to conservation in Texas. And I wanted to thank you first off for giving us the time to visit on these things.

BM: Oh you're quite welcome.

DT: I'd like to talk about maybe some of your early days and how you first got interested in conservation and the outdoors and maybe some experiences that you had being maybe closer to nature.

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I think that—that my life has been a serendipitous one in that some people establish a path and try to follow it with great determination and I admire them hugely. But mine has been a bouncing off the walls serendipity, which door opens at the moment. I first got involved with nature as a child but through a Junior Audubon Club in Junior High School. They introduced me to birds. I had a—a close friend who was interested in birds and this was in the days when it was still safe for young boys to ride their bicycles. You know, bicycles were the great freedom. You could go anywhere on your bicycle and—and we used to ride to the edges of town and this was New Bedford, Massachusetts and in wetland areas and just, you know, look for birds and things. At the age of twelve, my family moved to a rural area in Virginia, Hanover County which is near Richmond. And I went from an urban dweller to a farm boy, learning how to drive tractors and work on farms and sometimes and things of that nature. And I—we were living in a area that was—the—the house was a mile from the county road where I caught the school bus. So I had to walk that mile every day to catch the school bus which was then a twenty mile road to the—to the school which was a small school, all grades from one through eleven which is as far as they went at that school at that time. Were in one building. There were only about a hundred students in the high school. My senior graduating class was

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fourteen students and I was the youngest. And I graduated when I was fifteen. And so I'm something of a lone, asocial I say and so being thrown into the woods, I had several hundred acres, close to a thousand I guess on a tidal fresh water river, the Pinmonkey River of Virginia. And so I did the hunting, fishing, trapping thing. My mother had a part-time job with a country library. The three counties had a mobile library in a, you know, small school bus and seven days a month she drove it around. Well that bus and its books were parked

in my yard every night and every time she went to the library, she got whatever books I asked for. And so I had a reading, outdoor adolescence, so to speak. So then I first wanted to be a forester. I had a tumultuous teen life. I left home at the age of fifteen. I've been self supporting since I was fifteen. And I—I wanted to go to—I was enrolled to go to the University of Idaho to be a forester but I didn't get there for money and other reasons. So I didn't actually start college until I was eighteen. I worked for three years saving money and—and trying to get there. And I made the mistake of wanting to do engineering and I'm terrible at mathematics. And so, in three semesters, I was three semesters and out of engineering. That was the time of the Korean war, the—the draft. So then I had been protected from the draft unknowingly by being in college. So I went down and they said well you're number three on the list and so I volunteered and—and I went the next month rather than wait for several months. But you couldn't not get a job if you were about to be drafted. So my military service was in military intelligence. That was again serendipitous. It wasn't what I asked for. It was

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what they needed and what they thought I'd be good at when I think I was. Went to Austria and came out then tried chemistry as a major. And that wasn't working very well either. And as a junior in college, I took my first biology course. I had avoided biology and nature because it was so valuable to me. I could—no matter what my troubles were, I could go into the woods and—and walk or look for birds or just sit on a log and find peace. And I had found that I was interested in many, many things but the interest would burn out then I'd go onto something else. And I didn't want to lose that by going into biology. But when I took the first biology course, I saw that well, you know, this is really interesting stuff. I was older, out of the army by that time and thinking—and had some role models in college that said well teaching's not bad. So it—my major professors said why don't you go to the summer course, the University of Virginia's Mountain Lake Biological Station. And I took, of course, it was called Animal Ecology but we focused on amphibians and fishes mostly. It was a five week course with—I was the only undergraduate in the course. The rest were graduate students. There were only seven of us. So it was my first in-depth, full, totally emerging in biology. I loved it, just loved it. So I started my senior year by becoming a biology major. I finished nothing but biology courses essentially that year and summer and then graduated. And went to graduate school, serendipitously. I was at the—I graduated from College, William Mary, it was an extension called Richmond Professional Institute. It was a totally urban school. It had nothing to do with William Mary except that's what the degree said. And I was looking to go to graduate school and the only one I knew that had ornithology was Cornell but that was in New York and it was cold and you can't do field work and I love field work. And so there was the University of Florida because in the summer course I had taken the—the textbook was Vertebrates of the United States and there was the fellow Pierce Brodkorb who had written the sect—section on birds. And he was at the University of

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Florida. So I applied to go to the University of Florida. I said, oh that sounds good. You can do field work all year long and—and I didn't know anything about him nor he me. It was the only school I applied to which is—you know, you don't do that anymore. But I was admitted and so I went. And that started the—my career as an ornithologist. Got a Master's degree with him. He is a paleontologist but was quite free in what you want to study and I

did not want to study bird bones. I earned my keep for a while photographing bird bones for him as a graduate assistant but paleontology was not for me as a research topic. It was too dull and dry. And—and...I started out studying Kestrels, they were still called Sparrow Hawks in those days in Florida. And but that study did not go too well. And then I shift to sperm. There was a graduate student that I was with there that had done a study of mammal sperm and fou—you know, you can tell species apart by their sperm. And so I said, no one's done evolutionary studies of birds looking at spermatozoa for—there had been a few studies done in the late 1800's, early 1900's but no one had really used modern techniques. And so for my master's thesis I did a pilot project, will this work and concluded that it would. And then when I finished my Master's Degree, I took a job with the Smithsonian Institute for the Pacific Ocean Biological Survey Program. They hired four young scientists, all with Master's Degree, two ornithologists of which I was one, a mammalogist and an entomologist. And we started going to the islands of the Pacific, the—the Leeward Hawaiian Islands that are uninhabited, some other uninhabited islands that are near the equator called Baker and Holland and Wake Island and so I—I did that for a year. And back to graduate school

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and I continued to work in the Pacific as a consultant. It was an ideal life in that I would be taking graduate courses and bout the time I was sick of graduate school, it was class break. Two or three weeks off and I'd fly to Wake Island and study sitting terns and everything else and banned birds like crazy and—and have a grand vacation working very hard. And then come back and start classes again. And I'd do this three times a year and—and so that's where I got into it. I—it took a long time getting out of graduate school because I could not learn foreign languages and you had to know two. It took me forever. It held me up. But then it came out and there was a—all the time I had been doing field work but still working with bird sperm in graduate school and electron microscopy and there was a—a coming together at the time I graduated in 1971, jobs were really tight in universities. They had hired too many young people who were going to take many years to retire or die and there were no more slots open. So I had married and we had a three-year-old son. And my wife who's a nurse had always wanted to be in the Peace Corp and the Peace Corp started a program, two programs simultaneously. One they linked up with the Smithsonian Institution to start doing environmental work. And two, they started taking in families and so we went to—to Columbia for two months to learn Spanish and then on to Chile. And we stationed in Arica in the Northern part of Chile and near Peru and Bolivia and it's in the desert. True desert where it's zero rainfall for the rest of the year. And so I studied birds in Northern Chile. And as a family and—and came back, spent a year, my wife got a job at the University of Arizona teaching nursing. And I spent a year writing up...

(misc.)

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BM: So we went to Arizona for a year while I searched for a job. And my wife taught nursing there and I wrote up all the material that I had gathered in Chile. And I was able to get a position, a post-doctorate position, essentially at the Savannah River Ecology Laboratory at the University of Georgia. So we picked up and moved to South Carolina and I was at Savannah River for two years. And—but there I became an ecologist rather than an ornithologist which I had been up to that point. They—they didn't want anyone to work on birds. They wanted someone who could work well with other investigators and do multi-

disciplinary work. And so I was asked to try to do something with the thermal ecology which is a specialty of theirs at that time or radio ecology which is radioactive materials loose in the environment. Savannah River plant being a nuclear facility of the Department of Energy. And so I went to fishes because that was the—the one group I knew something about and everyone else there was working in the—the ponds and lakes on the site and so I moved into the streams. And I started studying stream fishes but, at the same time, since I in—in Chile I had worked with—with rare species of flamingoes and Rheas and torrent ducks and things of that—had been what I tried to work with, I'd gotten in—interested in endangered species and on the Savannah River plant, we had one endangered species, the Red Cockaded Woodpecker. And I felt a—a responsibility as the only ornithologist there at the Savannah River plant, I should know well how is that woodpecker doing on this—this large site which is one percent of the State of South Carolina. It's three hundred square miles of protected land. And—but

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I had to—I could not do the woodpecker work through my job because I was working with fishes. So I tried doing it with undergraduate students and it—we had students come through the National Science Foundation Programs to do undergraduate research at our laboratory. And we had one student who came for the month of January and we tried to work with the woodpeckers and we couldn't find any. And we went to the old sites and we were just getting nowhere with woodpeckers and so I shifted him off to another project with fishes that—that he could do and—and finish and have something for his efforts there. And then I got more interested and started interacting with the Forest Service component at Savannah River. Okay, where are these woodpeckers that we're supposed to have here? And we had a series where we could bring in guest speakers and so I brought in a friend of mine, David Logan, who had also studied woodpeckers on the side. He had come to the University of Florida, studied with Pierce Brodkorb and he had done a fossil project but that's boring and so he had done some fill work of his own on the side and he picked the Red Cockaded Woodpecker to work on and that was the—the seminal study that—that told us, this bird's in real trouble. And I had been out in field with him once and he had shown me and it was very interesting but, you know, I had not gotten too involved. I—I was dealing with sooty terns out in the Wake Island in the Pacific Ocean and that was my thing at the time. So later before I left Florida, I had taught at the Junior College there and I had taught some adult education courses in ornithology. I'd never get to teach ornithology at University because my professor had that locked up. But I got to teach three different courses to some very interested adult bird watchers. And we had talked about the Red Cockaded Woodpecker and gone out to

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see them and all. And then I get to the Savannah River and then we started working and so I had this undergraduate from California apply to the program. His name was Joe Scarupa. The letters of recommendation that came with this lad were just overwhelming, you know, how can this guy be so good? Well he was. So we brought him there, asked him if he wanted to work on the woodpeckers and he was go, go, go. So he—we worked on the woodpeckers and we banded them and studied them and did territoriality with them. And—and I would come and be at the woodpecker trees before the light in the morning. We'd catch them when they'd come out of the cavity, put bands on them and then I'd go to work working on fishes. Then quit work and go out and watch the woodpeckers go to sleep at night, come

back to the cavities, you know. And—and I spent all of my time keeping him with a vehicle, getting through the locked gates, getting him to where the woodpeckers were, keeping him going. But it went very well. He came back that winter and we—we did the summer/winter comparison of the woodpeckers. Then he came back the next summer. I got some—some more money for him on a—from another program and brought him back. And actually he did his Master's thesis with me there from the University—he graduated from the University of Redlands, then he went to the University of California at Davis. And so I got really into the woodpecker business serendipitously using an undergraduate surrogate, so to speak, and it was just—you know, things just came together. Moved to—from there—Savannah River—I—I spent a year and a half with Dupont doing a fish study for them for their nuclear facilities there. And from there through a contact with a Peace Corp volunteer I had worked with, got a job with Brown and Root in Houston. And I worked with them for four years, the recession of the mid '80's crashed. I got laid off, decided to become a consultant. That was not going too well during the recession and my wife suggested that I do some volunteer work. That was a new aspect of it and that really started my active work in conservation although the woodpecker certainly was part of it. But then in the mid '80's, I went to the Houston Audubon Society and eventually was introduced to Wallisville and that's when I started conservation. And I've been doing that ever since. I have found a vacant niche in that is the scientists advocate. Agency scientists can only do what's within the realm of their agency and they can't do but so much because they

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get slapped down if they go too far. University scientists have no reward system for doing conservation. It doesn't lead necessarily to publications. It can be—becomes controversial. The universities don't like it. They don't get promotions or tenure or pay raises on the basis of their conservation work. That's considered public service. And the universities don't reward you for public service. Some scientists feel you have to be a totally objective scientist. You cannot be an advocate. You only report the facts. The trouble with that stance is that you—what you—the facts that you report are you record species going extinct such as the red Cockaded woodpecker almost did. The role of the scientist who remains objective but also advocates is a vacant niche in most places. And that's the niche that I have come to fill in the Houston area. And it's interesting because you can still keep your objectivity, you do good science. You let the cards fall where

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they may based on the science and the information that you collect. Sometimes it'll fall to the favor of the developers. Sometimes it falls to the favor of the environmentalists. But if you stay with good science, you'll be okay and both sides benefit. And that's what I try to do here.

(misc.)

DT: Could we return to some of your childhood days and the times that you spent in the woods of Virginia as a budding hunter and fisherman and trapper, some of those adventures you might have had then?

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BM: Well it was—it was just a great learning phase for me in that it—it just getting into the—the culture and finding everything, learning about nature, you know, discovering field guides and all of these things, trying to identify plants and animals that you came across. It was very much a hunter/fisher culture and I remember there was a—an elderly farmer

nearby who took me under his wing, so to speak, and taught me crow hunting. He—he could mimic crows. And, of course, this was big—big hunting, killing things and crows, of course, you could hunt year around. And he—he taught me how to call crows and for a while when I was about thirteen, I guess, I was very good at it. My voice was just right. And then I went through puberty and my voice changed. I couldn't, you know, crows went the other way when I tried to call them. And so I had a pair of hound dogs, you know, we trained them to hunt deer which were hunted with dogs in Virginia because of the thick brush. And—and that was part of the culture. But I—I think that it—the parts I enjoyed the most was the river that—that I lived on was tidal and it had a four foot tidal change. And it—so the river flowed both directions. It would flow downstream and you'd see a log or some object floating in the water you could recognize. And you'd see it go by and a few hours later, you'd see it go by again in the opposite direction. And so there was an old rowboat that I had access to that belonged to a neighbor and so if I timed it just right, I could get in the boat and, depending on the season, I could take my fishing rod and go fishing or take my .22 rifle and go squirrel hunting and just float for several hours down the river. Then I'd have an hour of slack water, when the tides bowed up and I'd get out and explore around the area. And then get back in the boat and float back up the river to where I lived. And I'd done very little paddling during all of this. And it was nice, it was quiet. You could, you know, just float down the river underneath the trees hanging over the river and look for squirrels and things like that. So it was a wonderful experience. I remember I was not a boy scout although my son and daughter both have gone totally through the scout programs with my help. But I went to a boy scout meeting once and I found they were getting so excited about—went—I went on their camping trip which was into my woods, and they were getting so excited about doing the things that I did every day. And so I said well, I don't need the scouts. I've got this already so I never went back to the scout meetings and—and I never became a boy scout after that. But it just a—a unique experience, having, you know, this freedom to roam the woods as far as you could go and—and not get lost and still get back home. And not see another person. You know, it was a farm area. It was not all woods but there was sufficient woods along the rivers and things. And—and I'd catch catfish and sunfish and things like that and just had a grand time. But...

DT: You later became a trained and professional scientist and how being an observer and user of nature as a past-time when you were a child, compare to being a professional witness as you grew up, this comparison, and I think you mentioned earlier, between being a birder and ornithologist. What's the difference?

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BM: Okay. There's several differences. Once I got interested in biology as a professional, I lost all interest in hunting and fishing. As a—as a teenager and—and young man, I'd always dreamed, oh if I could only go to Florida and fish for those, you know, Florida largemouth bass. Well then I moved to Florida, I lived there twelve years. I never went fishing once. You know, I—I gave up hunting which is not to say that I gave up killing animals. I collected hundreds of birds in my research and, you know, it's—one woman pointed out to me that collecting is a euphemism for killing them. And certainly I would not be a favorite of the Audubon Society today, particularly with the—the rules have all changed drastically. You—but it's much more difficult to get permits and—and everything now. I would never even attempt it these days. But I only collected it for scientific purposes but, you know, when I needed specimens, I went out and got specimens. And—or—around the world. And I've

collected in other countries as well as a number of states in the United States. And so that perspective changed. It—and even

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now when I go down to the Texas coast—when I—if I go fishing, I want to fish with an electro fisher. I want to get the fish that are there. When I go to the coast, I want to fish with a cast net. I'm interested in the little fish, not the—I don't care about the spotted sea trout or the red fish, you know. That—that's fine. That's a—that's a worthy pursuit if that's what interests you but I'm much more interested in the Achille fish and the—and the other things that are being eaten and what are they eating and looking at food chain relationships. So it just totally changes your perspective I find. And it—and it's still fascinating to me today.

DT: Something else that you touched on briefly. You said that you had found a niche as a mature person as a scientist-/advocate and I'm wondering if you can talk about that role and maybe talk about other ornithologists such as...

(misc.)

DT: Rachel Carson. She's been a model to many people and I'm wondering how her role and your role as a scientist/advocate might compare.

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BM: Well I—I don't put myself in her category whatsoever. But Rachel Carson was—was unique in that the—the work that she did was not part of her job, that the work that she did in—in—in—that became so controversial, she did it on her own during summers and researching the effects of—of pesticide. And she paid a heavy price for that because it was, a sense, whistle-blowing. You know, the agencies didn't want to hear that information. And we look at it as—as a major turning point now but that was not part of her job and she paid a heavy price because of that. I find, as an advocate, agency people are on a string. They cannot go but so far. My experience in twenty-one years in Texas has been once a program of a—of conservation or preservation or regulation starts to work, it's killed. It—it will be—once—when it really starts to work, it will be killed. The legislature will terminate that program. And agencies know that and if an agency gets too aggressive in protecting, all of a sudden, they don't get money from the legislature. So they—they have to walk a line. On a more individual basis, agencies don't go the limit because they have to work with one another and part—particularly where you have with let's say, for example, wetlands where you have the Corp of Engineers, the Fish & Wildlife Service, the Texas Parks and Wildlife Department, Environmental Protection Agency, all having to work—they work together on many, many projects. So they can have a project where this is an outrage but they are not going to become outrageous because tomorrow and next week, they have to be back with those same people working on other projects. So it tempers everything down. I have agency people welcome me or come to me behind the scenes and say, did you know about this? Have you read this report and have you seen this permit application, you know, handing me the weapons. And hoping that I will enter the fray be—and—and become the lightning rod because, as an independent, there's not much they can do to me. And...

DT: Can you give some examples of—in the beginning you were talking about regulatory systems that find their footing and start being effective and then they are (?) and later on you were talking about how agencies have to respect and work with their brother or sister agencies and this last instance where they sometimes turn to somebody on the outside to help them where they need...

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BM: Well I have just started a program which we don't have results from yet on a contract with the National Wildlife Federation to look at the what are called the 404 regulations, that protect wetlands and see if they're working. And if—we've had a no net loss program now since President Bush established that and to see is it working. Are we really stemming the loss of wetlands because we've lost over half of what we started with. And the—I've been talking to—to people and they're just so glad that okay, ah, I'm glad we're—you're going to look at this because these programs don't work. We're saving little pieces and missing big pieces. We—in one example, I happened to talk to an agency person the day after he had been in the field and he—he was still steamed up about it because he said we saved a small one or two acre wetland that everybody agreed was a wetland. We lost two hundred acres of forested wetland because the Corp wetland scientist said these are uplands. They're not wetlands. And yet he said, they were obviously wetlands. They had all of the signs of wetlands. The—the—the wetland we saved was higher than these forests were was part of it. And he said, so, I mean, we saved two acres and lost two hundred. This is not no net loss and so—but, you know, he can't jump up and down and scream because he's got to work with that guy next week. And the agencies, you know, don't like you attacking their people. And you—you know, you can't say, you dummy, you made a mistake here. How can you be so stupid? You

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just can't say those things. I can say those things. That's my role.

DT: Speaking of stupidity, you've seen a lot of regulatory programs and permits through your career. Are there things that stand out in your mind as being really, really dumb.

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BM: Well there are individual projects that are really, really dumb.

DT: Can you tell us what some of those...

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BM: Well two of those the—the dumbest ones I think are the—the Wallisville dam and the Westside airport, both of which I was deeply involved in. Wallisville, I got into belatedly. I had gone to the Houston Audubon Society asking, you know, I'm a professional biologist, ecologist, do you have some things that I can help you with. And the only thing they could think of was they had just been given a new sanctuary up near Cleveland and it was a very nice little sanctuary. And I went up there and tried—tried to do—and come up with a—an operations plan for that. Then one day I got a call from them, the President of the Society and said, would you go by and visit with Rayburn Barry(?), he's our attorney. And so I called Mr. Barry and made an appointment and went and he happened—his office was close to where I lived and I went by to see him. And so I said well, I'm Bob McFarlane and I'm an ecologist and environmental impact assessment is what I do professionally. And his response was, you know, he was astounded. Where have you been? Why have they not sent you earlier because in less than two weeks time, we were going into court on Wallisville. So I learned about Wallisville in the courtroom. I sat with Rayburn Barry and it was very unbalanced. There were seven lawyers on the other side, seven representing all the different parties and there was poor Rayburn Barry who was not an environmental lawyer. And he was doing this thing essentially as a volunteer. He—he got paid very little money for his services of nearly two years. And so—but—and I knew nothing about the Trinity River Delta in Wallisville and so I was just learning and I was of some help to him but not

much because I didn't know the right questions. And we were also very limited in that we could only address the environmental issues. We were not permitted by the court to address the need for the project at all. So we were—had to focus on environmental issues. And that was my first encounter with the fact that there is a direct conflict of interest in the United States government in that all of the different agencies, the U.S. Fish & Wildlife Service, the Department of Army Corp of Engineers, the Environmental Protection Agency, National Marine Fishery Service, they are all represented in court action by the United States Attorney. One person. So if one agency is opposing the action of the other agency, they are being represented by the same attorney and he does not want one agency testifying against his client, the other agency. And so the U.S. Attorney representing the— the Corp of Engineers who was the defendant in the Wallisville lawsuit devoted great effort to stopping the Fish & Wildlife Service biologists from testifying and he almost succeeded. So it—the lesson that I learned was that truth is the first victim in the legal process in that at least half of the lawyers don't want the truth to come out and they've used everything in their power to keep it from coming out. Okay. And so instead of being a search for the truth. It is not. It is an

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obfuscation process so that you either don't see the evidence, don't hear the witnesses or don't get to even address the issue. And so that was a major disappointment to me but after the lawsuit, I teamed up with another volunteer, John Cheeseman, who was living in Houston at that time. He has since retired and moved to Anahuac in Chambers County. And John was a realtor, not a scientist. And we were trying to understand Wallisville because it—everything I read about Wallisville, I said, this project makes no sense whatsoever. Why are they even trying to build it. It had five project purposes theoretically like it was designated by Congress. It was to be water supply, salt water control, navigation, fish and wildlife enhancement and recreation. We had great evidence that it was not going to contribute to water supply, that there was no navigation on the river, that fish and wildlife resources were going to be damaged, not enhanced and that recreation opportunities would go down, not up. So the only reason left was to control salt water that comes up into the mouth of the Trinity River during periods of low river flow. But with all of this pressure, we've got to build it. Now Wallisville has been a strange beast. It's been the long—the longest running chapters which is about, I guess, to come to an end. It's finished now. It started in the mid '60's and Congress authorized it in either '62 or '65. In 1970, when the National Environmental Policy Act was passed in

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environmental assessments and statements were introduced to the world, they did an impact assessment which was horrible. And that was what the whole lawsuit was about. You guys have not looked at the real impacts of this project. And the original project was to be 19—a lake of 19,700 acres. As the legal process forced them to go back and reassess they said, oops, we are going to have an impact and they shrank the lake to 5,600 acres. Then as we gained more and more evidence that even that is too much and unnecessary and unjustified. It was shrunk to 3,400 acres and then the bald eagles helped us by moving in and building a nest in the Cypress Swamp of Lake Charlotte. And so now the project does not have a reservoir at all. There are zero acres of water supply and let the project still claims full benefits for the original project. Okay. So it provides no water. There is no navigation traffic but now we have a navigation lock. We will have still impacts on fish and

wildlife. It is interfering with recreation tremendously and the salt water problem could have been solved much easier, much quicker, much cheaper another way. But the system would not consider it. It had been such a battle for so long, people could not turn it loose. The people who wanted to build it which was the City of Houston and the Trinity River Authority. After the legal proceedings ended, Cheeseman and I started nosing around. And so he said, well let's—you know, everybody keeps saying that this—that the driving force is the Trinity River Project which the Corp of Engineers denies, which the City of Houston denies, which the Trinity River Authority denies. The Trinity River Project was the largest civil works project ever to be undertaken by the Corps of Engineers. It was to be thirty-seven locks and dams to bring

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large traffic to Dallas and Fort Worth. Now Dallas and Fort Worth have dreamt of an transportation artery to the sea since the late 1800's. They even built one in the 1920's. They built seven locks and dams. They couldn't keep enough water in them to keep it operating. They needed the thirty-seven that they're talking about. Wallisville is dam number one and that's why it was so important. When you looked at land ownership—well, you know, the—the Federal Government bought all the land around Wallisville. So who's going to benefit from that? Well—but when you look at (?), who's bought land and—upstream and you found interesting patterns that the—the big insurance company over here—American General, is that the one? And Walter Mischer,, they're the ones that own the land up there, right where the dams are going to be built. The—the Trinity River project was not merely damming the existing river. It was digging a new river. It was going to be a big, big expensive project. And Wallisville, dam number one, if you didn't get Wallisville, you didn't get any of the rest of them. Now you don't hear much about Trinity River Project. It would never have flown—there's no economic justification. But I started reading the Corp of Engineers' documents and I found that their numbers didn't match, that they would call for some numbers in this chapter and then in another chapter, they had some other numbers. And they tell—talked about how they derived these numbers and, you know, we take this and we multiply it by that. Well there was an arithmetic error. The—the size of the amount of water that they released was nowhere near what they said. So—it wasn't an engineering problem. It—it didn't require an engineer to interpret it. It was an arithmetic error that greatly overestimated the benefit of the project. So I wrote a letter to the Colonel who's in charge of the Galveston District of the Corp of Engineers pointing out several of these facts that—that you—your own documents do not support your own numbers. Well that was—got—led to nowhere. So then I wrote to the Commanding General of the Southwest Division of the Corp of Engineers in Fort Worth, sending him copies of these letters. Same thing, the numbers are incorrect sir. You need to change them. No, that wouldn't work. Okay. So then I wrote to the General in Washington who is in charge of the Corp of Engineers. And, in fact, the Corp of Engineers own board of Rivers and Harbors, I think it is, had pointed out some of these errors to them but I had found some others. So the General

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told the—the—in Washington, told the General in Fort Worth and the Colonel in Galveston, meet with this kook and find out what his problem is and shut him up. So I got a telephone call, would you please meet us at the—the hotel near Hobby Airport and we'll discuss your letters. And there was seven of them coming, four came from Fort Worth and three came up

from Galveston and we were going to meet. And a couple of days before the meeting was set up, I got another telephone call saying we're concerned that there are seven of us coming and you are there by yourself, would you like to bring someone with you? And so I said well, sure I'd like to bring Jim Blackburn. They said oh no, no, no, no. No environmental attorneys. Uh huh. So I said well that's fine. I don't feel outnumbered at all. Seven to one's good—good odds for me. So we had our meeting for about two hours and they finally admitted that I was right and that their numbers were incorrect. And so I said, okay now that we have admitted that, what do you want to do about it? Well nothing. I said, aren't you going to notify Congress that the proposed benefits of this project are not what they seem to be? Oh no, we couldn't do that. And so you get nowhere. And they—they simply deny that—and they—the only change that came about from that meeting was that, in future documents, the numbers were corrected but never acknowledged that the number had been changed. It just—the numbers just showed up a little different so that the correct numbers were there.

DT: Was it just a matter of pride or inertia or...

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BM: I don't know. I guess yeah, you—I'm willing to admit that you're wrong. Okay. The—the same thing happened with the Westside airport and—and in this case, it was instead of the City of Houston's Public Work Department, it was the City of Houston's Aviation Department. And, you know, the whole history of the—of the Westside Airport, it was a sham to begin with. It was forced through the City Council even though they knew that they were going to have a report saying the airport was not needed. And—and the city bought the land before they did any environmental assessments. They did some environmental assessments that were all fake because they compared it to alternative sites that they knew were not acceptable. And so anyways, finally they—they were going to do—they gave out a new contract to a—an architectural firm here, Howard, Needles, Tammen & Bergendoff and it was in the paper that they were going to have to do some new studies. And so being an alert and starving consultant, I wrote a letter to them and I said, it seems to me that y'all going to need to do an excellent study of birds because you're going to have to defend your numbers in—in either of two outcomes. Either you have to defend it and go to City Council and say, we've made a mistake. This is not a suitable site. Or you have to defend it in trying to convince the public that it is a safe site. And so nothing happened. And I wasn't surprised. A year later...

DT: Could you explain why birds were such a...

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BM: Well they were—they were building the airport right in the middle of the largest concentration of wintering water fowl in North America, particularly geese. It is not a place that you should select to build an airport. Okay. But the—the deal had been put together by the landowners and developers and they had sold the city at four times market rate. They sold it at more than \$4000 an acre and out there you could buy land for \$1000 an acre or less anywhere. And they had the city totally boxed in. It was a trapezoidal site and it had an entranceway, I think at most a hundred yards wide and then, of course, these same people that sold the city the land, owned all the land around it. And that's where they were going to make their killing. They—they were going to repeat the—the Johnson Space Center all over again. And so I got a call asking if I'd come to a meeting. So I went to a meeting and we talked about doing some airport studies and I told them my qualifications for doing this

and I made very sure that they understood that I was the same Bob McFarlane that had opposed the city in the Wallisville issue. And they had—they did. And I was hired. I was surprised but I was hired. So I said okay. So we went out there one day in November of 1987. The—the prime contractor and the city's representative and—and went to the airport site and this was the first time I'd been out there. So here we are standing on the future runway of the airport site and the guy said, from the airport department, said now see, there are no birds out here. And I said, stop. Be quiet, listen. Can you hear that murmur on the wind in the hor—coming from

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somewhere around here? I said that murmur is geese. Now I don't know where they are, how far away they are but that sound that we're hearing is the murmur of geese on the ground. It wasn't five minutes later while we were still at the runway, a shotgun went off and ten thousand birds hit the sky. It was spectacular. All around that airport site and so I said, there's your problem. You have got to have some solid numbers. Okay. So I started collecting data and I would go out there—I found a spot on the airport that I could drive to and from that spot, being flat terrain I—I could see the entire airport site and there was some tall landmarks on the horizon so I could tell distances from where I was. And I knew that I could see the entire airport site. And I simply started counting geese. And I'd get out there before dawn and count birds until noontime and—or I would go out just before noon and count birds until dark. And so I did that for a number of weeks. And we had a big technical advisory board for the project and the Parks & Wildlife people were there and the Fish & Wildlife Service people were there and the Department of—State Department of Aviation were there and had this board and we were interacting and we're going to do this right. So then my numbers start coming up and I found they were 427 geese per hour, I think it was, average flying over that airport site and a larger number flying in the—around the periphery. And I started talking about super flocks because what happens is the geese disperse...

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DT: Let's resume. You were talking about Westside Airport and some of the issues concerning geese and airports.

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BM: Okay. Well we—we had—so what I was showing was there are a lot of geese out there which was obvious to me the very first day but wasn't obvious to them. And—but in—and I had been told by the prime consultants' project manager when I was hired, he said that one of my jobs would be to keep this project honest and I totally failed at that as hard as I tried. But there were—I started talking about super flocks. I found, in my observations, the average size of a goose flock was seventeen birds. Some just, you know, few, some much larger but seventeen was the average. But what happens during the hunting season, as the birds are being shot at they—they begin to gather into the places where they aren't being shot at. So after a couple or three hours in the morning, they're in two or three flocks. There can be five to ten thousand birds in a flock and—and they aggregate into these flocks because they're being hunted. And the day after hunting season stops, the birds disperse and you never see these big flocks again. So it's—it's strictly a phenomenon of—of hunting pressure. But I—I was told never to use the word super flocks, you know, for these big flocks. And—and then once my numbers started coming in, the technical advisory

committee were the outsiders, the—the—the state and federal agency people, that committee never met again. You know, they shut those numbers off from them. And I stopped being invited to team meetings. Well so, at that point, the FAA knew what numbers I was getting so they called in their bird expert from Washington, D.C. And so he comes out to visit us and he was a sly old fellow. He flew in the day before and he—and he had a buddy, he was an ex military pilot—test pilot, who had gotten old and gone into other things and ended up with the FAA as their bird expert. But he had a buddy with one of the oil companies and—and he had called him and they had taken the helicopter and they'd gone out and they had gone out before dark and looked at where the birds were. Then they had sat down someplace and had dinner then they had gone back up with a search light looking to see where the birds were roosting. And so before he ever talked to any of us, he had a good idea what was going on in the prairie. Well he introduced to us a bird strike hazard risk assessment model that he had developed. He spent two days here with us telling us the theory behind the model, how the data were to be collected and everything. So fine. Well then it took us another month to get started on this because there were—there was three consultants. My—I was the tiny one and the money was in the hands of the second one who was writing the environmental assessment. And so to come up with money to do the modeling study, it

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had to come out of their purse because there was no money left for me and they had to do it with the money that was already allocated. So they said well they would do the study. Well their biologist hap—who was a Ph.D.—who happened to be a botanist and he—and we had already been to some bird meetings to—to some presentations to Parks & Wildlife where he had shown slides and misidentified the geese and ducks he had pictures of. And so I finally won that argument by saying look, this is going to court. It's already been promised. It—this will end up in court. And I said, as an expert witness on the stand, you need somebody who knows the birds. And so they finally agreed I would do the study. So we lost a month in there. So I started counting the birds in that study after the Pichah(?) birds. But anyways, I—I did all those counts and got some new numbers to go into the model. We cranked the model and it was unbelievable. It said that every flight in or out of that airport was going to hit ten birds I think it was. And so I said well this—this doesn't make sense. Now I am not a mathematician, I am not a modeler, but I am a biologist and I do know the questions to ask and I am an ornithologist. So I sat down at—I looked at it this way, I have a client and that client has a major problem. I mean, we've got this model and this model is putting out—saying we're going to hit more birds than are hit in all of the United States in a given year. What's wrong? So I started dissecting the model. It had something like eleven or thirteen equations in it. And—and I started trying to put the bird strike model into biological terms. And I—some of it didn't make sense. I found some errors. It—some

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of the equations were doing things which were a no-no. You—you weren't supposed to do that with numbers. And so I simplified the model and reduced the number—fewer equations, changed some of the equations to make it make more biological sense, things that I could say all right, these may be okay. And then we ran the numbers again and reduced it by an order of fifty so that instead of—we were only going to hit, I guess, one bird every five flights or something like that. And I wrote up a report. Now this was not in my scope of work. I—I spent two weeks on this effort and I wrote up a report and I sent the

report to my contact with the prime contractor. And I sent one to the other consultant who was writing the environmental assessment. He turned right around and sent it straight to FAA. Okay. I just sent it to the other—other team members. I did not release the report to anyone. I said here's what I think. He sent it to the FAA. The FAA took two months and they came back and said, okay. We accept these changes to the model. Okay. But it was still way too high, way too high. So then the other consultant got busy or he had been busy in the mean—in the two months waiting and he invented five correction factors to change the model that I had changed. For four of those correction factors, there was absolutely no data whatsoever. They were numbers picked out of the air. Okay. For one of them, we had some data and then he brought with his—brought it down to an acceptable level or near acceptable, still was too high and then the FAA said oh, well we'll get it down this low and we can control those birds with—with active bird control efforts and it'll be safe. Well so now, all of a sudden, it's a safe airport. So I struggled with this issue for months because, in my mind, it—it was—we're

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not—these—these are birds that are hunted. Okay. They're a hunted species—we're not conserving birds here. But it's a public safety issue. You're going to—you know, bird strikes are a major issue, worldwide, to airplanes. Birds and airplanes do not occupy the same space simultaneously without disastrous contents for both parties. The birds usually die and sometimes the people die. And I had seen when I had been on Wake Island what happens when a Boeing 707 jet comes in and ingests a few sooty terns on landing and I knew the damage they did to that engine and everything and if it had been on take-off, it had been a real problem. So I talked to the prime contractor and I said, I can't live with this. This—this is not right. It's cheating. It's lying. So he said, write me a letter explaining your concerns. Send a copy to the FAA. Send a copy to the City Department of Aviation. So I did that. It was like a four or five page letter outlining, you know, these—this is not scientifically sound. We cannot make these statements. Well the first thing that happened was that the Director of the Department of Aviation at that time called the contra—what the hell is going on? Why is this guy sending me this kind of thing? He never talked to me. He called that—shut this guy up. FAA waited and I got a call one day saying be at a meeting tomorrow morning. So I get there and here's the three guys from the—from our team, Aviation Department is there, FAA—two people from Washington, one from Fort Worth, I think is their office and—and it was—so seven of them again—this magic seven number. Seven of them and me and they said, all right McFarlane, what's your problem? So I went over it patiently again. I said these calculations, these correction factors cannot be used. They're not scientifically valid. And I had tried to get the person who was using them to say all right, you know, a reasonable level would be between here and here. And—and so we'll look at a high and low effort and he would have none of that. So, in the end, it was decided that FAA would write the safety report. And the safety report that they wrote said that it's going to be a safe airport. And so, in the meantime, I had withdrawn my name from the environmental

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assessment. I was to be a co-author of it originally. But there was some—not only—well the modeling had been taken out of the environmental assessment where it had been in the first place. But there were other statements which were misstatements. It was just not factual. And I had pointed them out, told them that, you know, this table is mislabeled.

These numbers are wrong—there's not—and they were not corrected and so I said I can have nothing to do—I wrote a letter saying I—remove my name from the assessment, just list me as a participator or something which they did. So I never attended another meeting. I was—it was interesting because I expected the—the City Department of Aviation to attack what I had written. They never did. They said that was not my job which was true. Okay. That had not been part of my scope of work although the other work had been and I had done that on my own. I never billed the City or anyone for it. I was never paid for that two of weeks of work. And—but they said that—his job was not to do the—the assessment and modeling. He was just to gather the raw data. Well that was incorrect and did not match my scope of work agreement that we had. But, you know, there again is a refusal to admit that you've made a mistake and so I didn't know what to do. I'm a member of the Ecological Society of America and, at one point, I served for three years as a member of their Board of Professional Certification and the third year I was the Chairman of that board. And we have a code of ethics that all certified ecologists must sign that they will ascribe to. And, in the code of ethics, it

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specifically states that, you know, a client's information is his information but if it's a matter of public safety or public health then it's your responsibility to don't overlook that. So I said all right, that's my answer. This is a public safety issue and if they build that airport, it's not a question of "if", it's only a question of "when" you have a crash and somebody gets killed. So I released the—the report and the information to the Houston Chronicle and it was on the front page of the paper and I was severely attacked by the—one of the—the principle of the prime contractor at the next public meeting which I was not invited to. I went as a spectator and I talked. And for being unethical and I said no, you can't talk to me about ethics when you're putting in—things in your reports that are blatant lies. You know. But you have to remember that environmental assessments which may lead to environmental impact statements—are written for and paid for by the applicant for the action. And things that are negative to the applicant don't get in that report or they get watered down. And so you get reports that say it'll be a safe airport when, in fact, we know better. Now I have fought for years with City Council trying to point out for—to them, do you realize the liability that you are setting the City up for, that here you have a well-known scientist, I'm an elective member of the—the American Ornithologists Union and who has documented that—and no one has challenged that this is a—going to be an unsafe airport because of bird strikes. And yet you build an airport anyway and—but that's a liability lawyers dream. Boy we are coming after you. I wrote letter after letter. I've talked to council people. You know, they never respond. I wrote to the mayor. He never responded, you know. They don't want to hear bad news.

DT: Where does it stand now? Where does the airport...

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BM: Well the airport is, in fact, dead. It has—they're going to expand Intercontinental and they need to—they're going to have to take some wetlands to do that and they need a mitigation site. So they're going to—if it goes through and—and I don't think it's a done deal yet, they're going to take that 1400 acres which really was wetlands to begin with, a lot of it, much of it had been farmed but there's still the wetlands on it, and they're going to create new wetlands. It's a win-win situation and so—but, you know, it—it has taken years and literally millions of dollars to do something common sense told you in the beginning,

don't do this.

DT: Through working on Wallisville and through studying issues around Westside airport, I guess you've learned a lot about two of the big ecosystems near Houston, the Trinity bottomlands and estuaries and the Katy Prairie that surrounds and includes the Westside airport. I was curious if you might describe some of the other ecosystems around Houston that make it special and maybe describe how some of those systems have changed over the years.

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BM: Well the other special interest, of course, is Galveston Bay and the estuary. And Wallisville taught us a lesson in that we learned that you cannot win with volunteers. That you need to get professional, expert witnesses on your side and you cannot depend on them volunteering their time to do that. You've got to pay them to do it because it takes a lot of work on their part. And so after Wallisville, after we lost the—at the appeals bureau—appeals court level, I and others, Jim Blackburn and—and other environmentalist activists in the area was seeing that Galveston Bay was the thing that seemed to be under attack from multiple projects. There was the widening and deepening of the ship channel. There was the Wallisville dam that—that was—several other projects that were going on that were going to affect the Bay. And—but they were all being looked at one at a time. And so, as a group, we created the Galveston Bay Foundation. And, at that time, also the National Estuary Program was up and running. There had been seven national estuaries designated in the first round and they were coming up to expand the program. So there was a—a group of scientists were coming together and I joined that group as a volunteer.

DT: This was the mid '80's, the late '80's?

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BM: Yeah '88, I guess. And our task was to come up with a description of how valuable Galveston Bay was. Most of the people were federal and state employees. There may have been another volunteer beside myself but I don't remember one. And here again we saw the—the scientists advocate role come up in that I was quickly selected to chair a committee. And because the—the state people and—and the committee I chaired was on data and information needs because the—the agency people wanted a lightning rod out there to chair that committee. So we worked for a year and we went to Washington and—and presented a seminar at—at Noah for congressional aides and all. And Senator Bentsen attended and he was successful in getting Galveston Bay added. It was interesting because they were going to add ten—he got us put in as number eleven. Then they said well, we'll add you but there's no money for you. And so then we had to get Benson involved again and—and he said, we're adding eleven and the money will be divided eleven equal ways. Boom! And that's how the Galveston Bay National Estuary Program came to be. And so I volunteered for that as well and I served on the Scientific and Technical Advisory Committee representing the Galveston Bay Foundation as the scientist on that group. And I worked with that for the six years of its existence and, for the last three years, I was the Chairman of the Scientific Technical Advisory Committee. And it was an—very interesting and educational experience. I learned a lot.

DT: What did you find that was special or valuable to that?

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BM: Well the—the goal of the estuary program is to characterize the bay, describe what it is that you've got and what you may have had before, what you've lost, what you're losing and

then devise a comprehensive conservation and management plan for the bay which is called the Galveston Bay plan. And so that's what we've done and, at that point, it became a state program. It—it went from $\frac{3}{4}$ federal, $\frac{1}{4}$ state funding to $\frac{3}{4}$ state and $\frac{1}{4}$ federal funding and I think that's about where it is now and implemented this management plan for the bay. And what it has done, it has—has caused everyone to pay attention to cumulative impacts from multiple projects that—that are all independent but we—and had all been evaluated independently before. Now we look at all of them and—and say okay, well what are we losing, what do we need to protect most and how do we do that. And so that—that was a very good program.

DT: What are some of the impacts that people see as...

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BM: Habitat loss is—is the—the biggest—one of the biggest ones. We're losing the wetlands. See the—the—Wallisville was an issue that—Wallisville had not started construction and we tried to get Wallisville in and that was resisted mightily and, in fact, we were told, you will ignore Wallisville for your studies of the Galveston Bay. And environmentalists can, in fact, legitimately claim that Wallisville was a success because we saved something like 98% of the wetlands that were going to be lost. Okay. So we're—we're losing minor parts. There is no reservoir. Okay. I consider it personally to have been a failure because the project made no sense whatsoever. It had no justifications for its existence and, you know, it was—it was a dumb project but it got built in a very altered form but it was still built and there was no need for it. And so it's a—it's a—I still don't consider it a success personally but it—but it was. We changed many minds before Wallisville built and the product was totally redesigned and should have gone back to Congress for re-approval but they wouldn't dare do that. And so we have a nothing project. We just consume money from now on and without any benefits. And—and see there again is a—a—the intransigence of the City of Houston's Department of Public Works. I have shown them numbers that show that their benefits that they claim to have gotten are grossly exaggerated, grossly exaggerated and—and

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they say, no you're wrong. And so I say well I've shown you all of my calculations, show me where I'm wrong. Well they can't and they won't. They just say no, we don't accept your calculations. We're right. And—and I said, well you haven't responded to my last letter and the answer from the—the head of the Department was, I don't have to. Okay. So it's this arrogance that officials have. They do have all the power and we don't have to answer your letter. We don't have to address your questions. We don't, you know, we're sticking by our numbers and I—which I've shown to be totally wrong. In fact, I've even shown somewhat to their embarrassment that they have been releasing water from Lake Livingston illegally for thirty some years. They are not authorized to release any water to control salt water intrusion. That is not one of their permitted uses. And they've been doing it—they claim they've released a lot more than they actually have but no one has ever recorded that, you know, after twenty some years of managing the Livingston Dam, no one has ever recorded how much water do you release for salt water intrusion control. Blows your mind. Incompetence reigns everywhere.

(misc.)

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BM: It's the money. It's always follow the money. Take, for example, the—the new light rail

system we are about to build for \$350 plus million dollars okay, that's going to go from downtown to the Astrodome. Okay. Nine miles from downtown, down Main Street, to the Astrodome. That does nothing for commuters, nothing. It solves no transportation problem. It only makes sense when you say, why are they building this? They are—Houston is a developer driven town. It always has been, since its excep—inception. You build a rail and you re-develop the entire area alongside that rail using the rail as a reason you can commute to work on metro rail. And...

DT: Future commuters not...

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BM: Future—it's future commuters, okay. So the developers make millions of dollars. The whole thing is—is—I have a little saying and it's slipped my mind. Federal funding fosters environmental folly. Okay. Federal funding fosters environmental folly. It is so cheap. You're building Wallisville for fifteen cents on the dollar at three point something percent interest paid off over fifty years. You're building the Westside Airport at ten cents on the dollar. How can you not build an airport when you get it for dimes instead of dollars? It's federal funding that drives it all. Federal funding of this rail line. Okay. So it's the—the private developers pillage, plunder, rape the public purse. Pick your verbs. They—they come in and they get tax money to provide the intra—infrastructure. Okay. You're building the grand parkway and the first leg of the grand parkway connects Interstate 10 and U.S. 59, the southwest freeway, way out in the country. Who wants to go between Interstate 10 and U.S. 59? Nobody. Okay. But what do you do? You buy up the land cheap, you give the land for the roadway to the state. It didn't cost much. They use taxpayers money to build the highway then you have access for your people who come and buy your houses to get to work in Houston because, otherwise, you didn't have any access. You use the public money as part of your development project. It—it's been going on for decades. Mayor Bob was a developer who was once Head of the Department of Transportation, okay, for the state level. And Mayor Bob, bless his heart, didn't buy rail. The developers were totally frustrated for six years because he said the numbers don't make sense, okay. Then we get a new mayor and the developers get their new rail line.

DT: Why don't you think there's more uproar about this...either apathy or lack of awareness, people don't have the literacy to understand environmental issues?

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BM: The money goes into the pockets of the politicians. And then they don't care.

DT: Is it campaign finance problem?

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BM: I think so or it's a kickback problem as we—we had this recent, you know, net that pulled in three members of the City Council and all...

DT: Is this the downtown hotel...

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BM: Yeah the hotel scheme. Why does the city want to build a hotel that the hoteliers say won't pay for itself. It doesn't make sense. Okay. Why should the public pay to build a baseball park or a basketball stadium or a football stadium for millionaire owners and millionaire players. It's private pillaging of the public purse. You get the public to put the money out.

DT: Do you feel like sometimes that you're like Alice in Wonderland where nothing makes sense? Do the consultants view the world or the bureaucracies view the world...

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BM: My conclusion is that common sense isn't. Common sense is not very common and you can buy politicians very cheap. Now as a consultant, maybe I can be bought too. Nobody's ever tried. And I don't know what my price would be but I'm sure that, at some point, you might get one that would buy me. But I've been appalled at you buy politicians whether they're local politicians or congressional politicians really cheap. It doesn't take much money to get them, you know, in—in your pocket. I mean, look—look at what we—what—what was happening with the Westside airport where we take ex County Judge, John Lindsay, who was driven out because of his shenanigans and promised not to run for County Judge again, gets himself elected State Senator and tries to pass a law that forbids the City of Houston from using the Westside airport site as mitigation. Now how convoluted is that. Okay. I have also concluded that many businessmen are not very smart. If you show a businessman a projection of future growth and profits, it doesn't matter how absurd it is, they will believe it. The—the major proponent of the Westside airport was the West Houston—Houston Association. Okay. They won't even talk to me. You try to show them, look this analysis that you're touting is full of holes. It doesn't make sense. We paid good money for that. It's a big name, you know, Price Waterhouse, blah, blah, blah. I said, but it doesn't—you know, the numbers don't add up. We—we caught, for example, in the Westside airport, just to show you how the numbers get shifted, we were doing the environment assessment and in the first draft we had this wonderful drawing, a map, showing the existing airports, couple of which they left out and how they served the area and that—you could take that map and say, see that map proves there's a very small area that is not being adequately served. You don't need this airport. That map did not make it into the second draft. It disappeared. Okay. But—but it was produced by the consultants, you know. You—you get—I've lost my train of thought here for a minute. I forgot where I was going.

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BM: They will—oh now I got it. They said, on the—for the economics—and I had nothing to do with the economic study and—all I did was read it and raise my eyebrows. It said that every airplane based at the Westside airport would generate seven jobs and the jobs would be an average of I think it was \$23,000. Okay. Now that means that if I take my—if I had a Cessna or a Piper Cub or whatever they fly these days and I want to keep it out there, that my airplane's going to generate seven jobs worth more than \$140,000 a year. Boy it's going to cost me a bunch of money to keep my airplane out there isn't it? Okay. All right. That didn't make sense. About a year or two after that I got a call from the mayor of Beech City which is on Trinity Bay. It's a little tiny town and he said, we're five miles long and two crackers wide. And it—and it is just that. It's the strip of land between the road and the Trinity Bay Shore and it's just usually just single family homes, one lot after another. And somebody over there wanted to build another airport. The environmental assessment for that was done for a firm in Florida instead of one here. But they said—they called the Houston-Galveston area Council which is the—a council of governments and they said, we need some help with this airport thing. Who can we get? And they said, why don't you call Bob McFarlane. So they called me and they explained the situation and don't have much money. We're a tiny little thing. So I agreed for a small fee that I would read the document. Well the first thing I noticed in reading the document was that quoting the same Federal Aviation Report, the other consultants were saying that every seven airplanes would

generate one job. Okay. So that's a factor of 49 difference. One airplane generates seven jobs or seven airplanes generate one job. Now seven airplanes generating one job, much more reasonable. So I called the owner of Hull airport who before he had been transferred to Sugarland and I said, what do you—he said that's a reasonable number. That's a good number. He said I like that number. So I call FAA and I get a copy of the report sent to me. Okay. And sure enough, seven airplanes generates one job. So I said, oh boy, this is going to be fun

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because all of the economic benefits had been based on this other thing. They had—we have seven or eight general aviation airports in the Houston area. All of them were ignored in all of the economic and environmental assessments, all of them. And the example that was picked was Scottsdale, Arizona. Now Scottsdale, Arizona is a suburb of Phoenix and a very wealthy neighborhood and they have a real general aviation airport there and lots of private airplanes and corporate jets parked there. Okay. So it's skewed that whole thing. So they only compared it to one airport. Now why didn't we use the six or seven or eight that we've already got and go out and gather data and say all right, the average of a general aviation airport, in the Houston area, generates this. Uh huh. We don't want those numbers. Okay. So I wrote a letter to the Houston Post Business Columnist, Janet Thomas, and I explained to Ms. Thomas that I had never met her and that I had always been disappointed that she had never said much anything about the Westside airport to my knowledge. But, you know, it was an environmental issue and maybe she wasn't paying attention but I said, now this is a business issue. So I laid it out for her. And meantime, I had written a letter to the FAA laying it out for them saying look, you know. So she picked it up and she called the city and she called the FAA and she called me a week later and she said, I've got them jumping. She said, they cannot deny that a mistake has been made but they claim their numbers are still correct. And so you see even when you show—now I...

DT: Alice in Wonderland...

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BM: Alice, right, right. Okay so, yes...

(misc.)

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BM: Totally missed the point. They looked at prairie acreage and—either lake and this Katy Soil under the Katy Prairie and that's what makes the prairie and then you have the Brazos River soils in between and, on the other side, Katy soil, an eco lake, and that's where the rice is, that's where the birds are. The prairie was there because of the soil and—and—and it's not—you know, you don't see huge flocks of geese all up and down.

DT: These geese are not portable?

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BM: No they are—they are—they are attracted to specific areas. They used to be natural wetlands. Now they're rice fields. The rice fields are there because of the soils.

DT: Can you speak about why an engineering firm like Turner Collie & Braden or Espey Huston can be so frustrating to a more balanced or objective scientific view? What is it about an engineer that he can't see what a scientist sees...(talking at same time)...

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BM: Let's do that and we'll do the expert thing as to what is an expert and why.

DT: Okay.

(misc.)

0:45:29 – 2027

BM: All right. You—you have to consider experts. People who have a great deal of knowledge in a given area can be considered to be an expert in that area. Now we frequently have multi-disciplinary teams because we have broad problems with—with multiple factors involved. But, on those teams, each member of the team is an expert in his area. He's a lay person in every other area. And so I keep driving that when you write reports, you've got to write them for the lay person, even if it's a team of experts. But what happens is that we tend to extend the level of expertise beyond what actually exists for any expert. You're considered to—if you're an expert in this, you're—you're an expert in other things too. I mean, I get calls all the time people trying to get me involved in this project, that project and I say, I know nothing about that. I will not get involved. I am not an expert in that. So you have to remember that experts are very narrow and you don't necessarily take what comes out of their mouths as gospel truth because they may not be talking about what they're expert in. And this—and particularly when we have the difference between engineers and ecologists. Engineers look at a problem like a black box. You're building a project. It can be a factory, a refinery, a dam, industry, whatever, okay. You have a box and your project is inside of the box. The box has inputs of raw materials and it exports finished goods and waste materials. Okay. But the engineer is only concerned with the box. That's when he—he's to build the innards of the box. And he does that in terms of weeks, months, at most, a few years.

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The ecologist is concerned about what happens in the box only to the extent of what goes into that box, coming out of the surrounding environment and what comes out of that box in the form of waste materials that are going to then be dispersed and spread into the environment. So the ecologist is looking outside the box. And he thinks in terms of years and decades. Okay. So we have a time scale difference as well as a subject difference. And engineers don't think in year terms. Their schedules, weeks, months, maybe two years, you know, and we're still counting it twenty-four months instead of two years. An ecologist says, I may not even be able to measure an impact for two years or five years and it won't see—have a plain as the—as your face for twenty years but I'll have it. So it's a matter of perspective and scale. Now we have a—an eminent ecologist by the name of Garrett Hardin who has—has written a wonderful book called, *Filters Against Folly or How to Survive* Ecologists, Economists and the Merely Eloquent. And he talks about three facets: We have to have literacy. So anytime that you're concerned about a project, his filters against folly are wonderful. The first one is literacy. What do the words say? Do they really make sense? Just what do they say? The second one is numeracy. What do the numbers say? Now this is the part that most people miss. When I look at reports, I love appendices because that's where the jewels are buried. Okay. The real numbers. The numbers may be honest and they're buried in the appendix and the words are not going to match the numbers. So you've got to look at the numbers and understand the numbers and then make sure the words match the numbers. And then there is the third filter, what he terms ecolacy. The ecologist question and then what happens? After you do this, then what happens? It is impossible to do merely one thing. Anything that you do is going to have effects, some of which you can predict, some of

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which you have no idea what's going to happen. Okay. So that's the ecologists question and then what happens?

DT: Is this the law of unintended consequences?

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BM: Yes, that—that—you know, things come about that you didn't think. You did this. It was a very noble purpose but, as a result of that, we go out and we spray DDT because we're trying to kill mosquitoes which transmit terrible diseases and cause a tremendous human impact but the DDT then gets loose in the environment. It's in the Arctic ice, the Antarctic ice, it's in penguins, it's in fish, it's in all the oceans. We—we are slowly committing suicide. Humans are very proud of their intelligence but on the geological scale, humans have only been on the earth a million or two years at most, the best we know. Okay. That's a very short time in terms of the age of the earth and living things. We have not been on the earth long enough to truly demonstrate that our intelligence is an adaptive feature.

DT: We can be (?) on successful...

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BM: We can very easily—we are the first species that has the capability not only of blowing up the world with our nuclear weapons but of poisoning the entire world, not just with radioactive materials as we just had happen in Japan but with the everyday products that we use and dispose of. We are slowly poisoning this earth. We are committing suicide and we have not come to grips with that yet. We still are consuming resources at a tremendous quantity.

DT: What is your message to subsequent generations who is inheriting all the things that we've done...

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BM: You're going to inherit a mess is what you're going to inherit but my message is that one person can make a difference. No—don't—don't ever forget that. That one dedicated person can make a difference in the world but you have to be persistent. It takes endless pressure, endlessly applied. Okay. Never give up. With—with all of the projects that I've worked with over—that have gone on for years, you—you've seen—whether it's Wallisville or the Westside airport, you know, all we've lost, we've lost, we've lost. We—environmentalists enjoy very few victories. But if you hang on, the other side will do something stupid. They invariably do. They—they are building a stupid project. They will do something else stupid that will revitalize your campaign and that you can take advantage of serendipity and pounce on. And so never give up.

DT: Is there a favorite spot that you enjoyed visiting over the years?

BM: I hesitate to share it with you.

(misc.)

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BM: Christmas Bay. That—that's the—the jewel of the Texas Coast.

DT: What makes you enjoy it so much?

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BM: Well I don't—I don't really go there very often. It's just relatively undisturbed. There are no major discharges that flow into Christmas Bay. It's too shallow to—for—for most people in boats but it is—I did the environmental inventory for Christmas Bay for the Estuary Program and that's how I discovered Christmas Bay.

DT: What did you find there?

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BM: Oh it's—it's just a tremendous treasure and it—it—it's the output of so much marine land that, you know, it's—it's a nursery habitat and a wonderful fishing ground and it'll be ruined when too many people start moving in. And it—as it is now, I mean, they've got a website for Christmas Bay and they tell you all about the fishing and everything and they want to take tourists down there and all but, to me, Christmas Bay is—is a jewel that, I guess another one is—is the Lake Charlotte Cypress Swamp in the Wallisville area that—that was going to be inundated and killed. That—that's the largest Cypress Swamp in Texas so it's unique as well. And you have to get into it by canoe. So it—it keeps the motor boats out and—and all but...I think there are a number of places in Texas that—that are still wild and wonderful but it—it's just waiting for the people to overrun them.

DT: What is it about marshes and wetlands and bays that appeals to you?

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BM: They're the most productive biological sites on earth. There's more conversion of—of carbon dioxide and water into organic material in a—in a salt marsh or a freshwater marsh than there is in any corn field or wheat field in the world. And they're doing that because they are subsidized by nature. And tidal marshes are inundated and drained, inundated and drained on a regular basis, sometimes twice a day, sometimes only couple or few times a month, maybe only a few times of the year, but it brings in nutrients and—and energy and it flushes out waste materials so there's a—a—a physical subsidy that goes on there and, you know, Galveston Bay is a seafood factory. It—it—you have the Barrier Islands which we stupidly build on and—and ruin. And—and it's interesting to—to look at photographs of—taken over years of Barrier Islands. If you have a reference point, you can see the shoreline moved. Barrier Islands are dynamic. Okay. And people who build half million dollar houses on the beach are stupid because they don't realize—they haven't had a big hurricane for a while so it's going to be safe or I've got it insured. Well everybody else will pay for my foolishness. You should—there's—there's an old rule that says you should never build anything on the beach that you're not willing to lose because Mother Nature's going to take it. And...

DT: Any last hope about this sort of perversity and stupidity of people. I don't think we have a death wish but it seems like we, again and again, did these things that frustrate our ambitions and sort of go against our better selves. What's going on?

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BM: We're not very bright as people and—and we—it's the tyranny of—of innumerable small decisions. It's not like somebody makes this big decision and we're going to have this big policy. Right now, the overwhelming policy is population growth, I mean, problems with population growth. Nothing that we do to try to restore habitats or do anything else is going to withstand population growth. It's just temporary. The—the pop—we are going—we are already, by some estimates, three times higher than the—the carrying capacity of the earth. And—and people say well, you know, why isn't everybody dying? Because we're subsidizing ourselves. We're using this fossil energy to subsidize it and when we run out of this fossil energy then we're going to pay the price.

DT: Like the estuary and the subsidy from the (?)...for mining...

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BM: And—but you see we are still—the one thing that—that is an almost universal reaction

among Peace Corp volunteers when they return to this country is we're obscene. We consume so much. I mean, I do too. Okay. We consume so much when you see what people get by with in other countries. You know, the thing is totally out of balance. We have few rich countries consuming all the resources of the world. And we're—we have too much population growth in other areas and, you know, even if you shut off growth today and just let those that are—what is it, half of the world's population is less than fifteen years old and that they're going to be coming into the reproductive years. We're going to reach twelve billion no matter what you do. And yet, we have our politicians shutting off family planning money for the rest of the world and this country. You know, it—the thing that I have never understood, I am apolitical. I don't think either the Republicans or the Democrats are worth a hoot. They're both (noise), you know, blow them off. Okay. But the thing I have never understood is that Republicans claim to be good conservatives. So you have conservative, conservation. The only difference in those two words is the last two letters. If you take the "ve" and substitute "on" you've got conservation. Okay. The words have the same root. They mean the same thing but our conservative Republicans don't understand that. They don't recognize that. They—they just blow it off. You know, they—they're just so short-sighted. And—and we don't understand that what we're doing is ruining us. And that says nothing about the effect of religion which we don't have time to go into.

(misc.)

DT: Well thank you very much.

BM: You're welcome. I've enjoyed it.

DT: Learned a lot.

End of reel 2027

End of interview with Bob McFarlane