

Interviewee: Cooper, Tim

Interview Date: July 30, 2009

**UNIVERSITY OF HOUSTON**  
**ORAL HISTORY OF HOUSTON PROJECT**

**Tim Cooper**

Interviewed by: Reed Amadon  
Date: July 30, 2009  
Transcribed by: Michelle Kokes  
Location: Anahuac Wildlife Refuge Headquarters, 509 Washington Street  
Anahuac Texas.

RA: I am Reed Amadon here for the Center of Public History at the University of Houston here to talk to Tim Cooper the Anahuac is that right?

TC: Anahuac.

RA: Anahuac Refuge Foundation.

TC: National Wildlife Refuge.

RA: Alright Anahuac National Wildlife Refuge.

TC: That's correct.

RA: Okay great. He is the coordinator of the refuge organization as I understand. Is that your title?

TC: My title is actually Project Leader but more simply it is Complex Manager which includes four National Wildlife Refuges.

RA: Excellent. I'm talking about the damage done to the Anahuac Refuge and work done to restore it. It is a good state study for the effects of Ike and the work needed to get the parks back to normal. Thank you for seeing me and being a part of this project.

What first interested you in getting into the work that you are doing with the park service?

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TC: I started being much more interested in wildlife and that's how I found my way to this agency, which is the Fish and Wildlife Service, but from an early age I was very interested in wildlife and the life history of animals and stuff from a very early age so I just gravitated towards that.

RA: So when you were younger did you raise animals?

TC: I had a few pets but I would pour through the library and read every book at a very early age to everything about animals that I could get my hands on.

RA: That's wonderful. So that is more refuge. Just out of curiosity what would you say is the different between a refuge and a park?

TC: Sure. The refuge has a singular conservation mission which is wildlife management and then we allow a lot of public activities but they have to be really related to wildlife. So we have fishing, wildlife observation, interpretation and even hunting on refuges because they all involved wildlife and relate back to that singular conservation mission.

RA: What would be something you would say that you would not relate to the refuge that...

TC: Well like for example that you would do at a park you might have remote control air planes buzzing around the park and that type of thing whereas that would interfere with geese and migratory birds and we would not allow that type of activity.

RA: Probably no camping either?

TC: We have overnight stays related to fishing so if you are fishing out on the bay you are able to do that.

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RA: Okay very good. I see so it's got to relate, it's got to support or relate something to do with the activity.

TC: That's right related to what that mission is.

RA: What was your journey like to get to the position you are in now, what kinds of things did you go through to get here?

TC: I've gotten both my Bachelors and Masters Degree, I've worked in multiple states, I've worked directly with endangered species program.

RA: Where?

TC: I've worked in Nebraska, Texas, Maine and North Carolina and that's it.

RA: That is real diverse. Are you from Texas originally?

TC: Yes I am originally from Texas.

RA: From this area?

TC: No I am from the Dallas/Fort Worth area.

RA: So you were sort of an urbanite that got...

TC: Yes I was born in the wrong place and maybe the wrong time.

RA: That is interesting and you felt much more at home in this kind of environment?

TC: Yes I really like rural areas. I like areas that are more pristine and you know you just don't find a lot of wildlife in the middle of Houston or Dallas.

RA: What was your work like before you came here, can you describe that you were talking about it generally but tell me some of the things you were doing?

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TC: Sure. Typically we are managing wildlife refuges again to enhance habitat. We have a much more hands-on approach than what you would think of as a pristine area that has left kind of in a...

RA: Totally natural?

TC: That's right in a natural thing because in a lot of cases the world around us has changed so much that it is really hard to find the natural spot. So we go in and actively enhance areas with different types of programs including water management. We have a burn program at most refuges where we introduce fire or reintroduce fire under controlled conditions to have certain beneficial effects for, again back to wildlife.

RA: Now historically, of course, burning was very common. Are you doing the kind of things like they said the Native American people did to burn?

TC: Well that's right what we attempt to do is gauge what type of burn program is going to have desired results for us. So a lot of times on these coastal flats and prairies and other things we are reducing wood vegetation, we are opening up areas for different types of wildlife and we are basically trying to mimic a more natural system but it gets more and more difficult due to regulation all the time.

RA: Well I know that they say that the forest, especially in the big thicket, used to be open enough for people to ride through without really a lot of obstacles but it has been cleared and then grown back and as it has it has gotten much more full.

TC: Exactly. A lot of places across the country had certain fire regimes naturally. For example, this area here has a lot of wild fire activity during the summer. Across the four

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refuges that I manage we will average about 60 or 70 fires in a year that are lightning strike fires.

RA: No kidding?

TC: So there is a very intense natural regime of having fire. Now a lot of our activity, our burn activity, it is difficult to do in summer because the winds are not right, we've got to watch out for smoke related to smoking people out and other things. So a lot of our applied fire where we have a lot of control tends to be more in the winter season. But we do monitor everything and try and make sure that we are not making unknown changes to the marsh community.

RA: Which you probably have to watch out for?

TC: Yes you do. Sometimes they have unintended consequences.

RA: When you said that your education was related to zoology?

TC: Yes.

RA: What was your education like?

TC: I have a Bachelors degree in Wildlife Biology and a Masters Degree in both Wildlife Management and Range Management.

RA: Where did those degrees come from?

TC: At Sul Ross University in West Texas.

RA: Okay, in Alpine?

TC: Yes.

RA: Beautiful place.

TC: Yes I loved it out there.

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RA: We've been my wife and I have been out there several times. So you feel like and that education sounds just totally appropriate to what you ended up doing. Did you go from there to the parks? It's not parks is it? It's wildlife...

TC: Refuges.

RA: Wildlife refuges.

TC: Yeah I started at Texas Wesleyan College in a pre med program and it was not my cup of tea. So I found my way out to Alpine and really found something that was my niche that I was very interested and focused. I ran out of degrees to get there so they finally had to kick me out. Then I went to, the first job I had was in Nebraska and I went out there out in a very, very remote national wildlife refuge and where we would see a person like once a month. It was exciting to see a visitor to come out there because the road was so rough and we were so remote in that sand hills area but that was my first introduction to refuges.

RA: Most of the work you have done have been within refuges and in compared to where you have been before, how does this particular refuge relate to some of the other ones that you have been at?

TC: Well one of the neat things about wildlife refuges is that they all have their unique character and all of them, although we are a refuge system of over 500, all of them have an important element to play in National Wildlife. Look across the scope of the map and we've got refuges in every single state and we've got representations of different type of habitat but as we talk about with the Big Thicket there is a bunch of variation even close as to how that goes. What I would certainly say about the refuges that I'm at now is that

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they are in an area that habitat is hard to come by any longer and that is going to continue to be a more and more precious thing so with big metropolitan areas on both sides of us it gives us some unique challenges.

RA: Yeah I can imagine. I think and also the hurricane couldn't have helped?

TC: No. You know the hurricane certainly in the grander scheme of things, the hurricane is a very natural phenomenon and the wildlife that occur on the refuge are adapted to that natural phenomenon so in and of itself, in a vacuum again, that would be something that across the coastal planes would have been not that big of an issue but what we have seen is the additional complexity of highways, roads, ditches, diversion canals and other things have changed that natural sheet flow and how the marsh functions and works, and so again, we are excited because we are in a mode that we try and make the best of a bad situation so this is right up our ally to do.

RA: Sort of the "can do" attitude.

TC: That's right.

RA: Well you are really looking at an enclave that is no longer surrounded by a larger environment, isn't that right?

TC: That's right.

RA: So a hurricane comes along and smashes it its kind of serious?

TC: It is quite serious.

RA: If you have gone through the process I don't know if you are notorious or notable in your field but as you have grown in your field how has the thinking about the field changed?

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TC: I think that my thinking about the field has changed from you know when I really got into this field I was really interested in what I enjoyed and what I wanted to do and biology purely and being the person out there in the field getting paid to count ducks sounded like a great lifestyle to me.

RA: Pure research?

TC: I think with maturity and time I think my recognition of the fact that if I don't figure a way to in part some of that value to the rest of the U.S. population then I'm not doing my job. I think recognition of the importance of and awareness of what has happened or is happening around us has really hit home and has made me willing to sit behind this desk and spend a lot more time pushing paper than I had ever believed originally I would do.

RA: Would you say then your role has become more towards education, educating the public?

TC: I think my recognition of the importance of that has really come full circle to where I recognize the true value of that and the necessity of it. So I'd say that it much, much more keen aware aspect of where I am today than where I was when I started in this field.

RA: Out of curiosity do you feel that people themselves are more conscious and more concerned about these environments than perhaps they were?

TC: I think that I am concerned that the greatest threat to conservation and wildlife and everything else is not global warming, it is not climate change, it is not hurricanes, its apathy.

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RA: Apathy.

TC: If we don't figure a solution to that problem all the rest of those things are going to end up being rounding errors.

RA: That is a great answer I love that.

TC: Thank you.

RA: Again, you said this before it might be a different way of looking at it, what do you feel are your greatest insights are in your field of study?

TC: I think the greatest insights in my field of study and what we do is that the recognition that we can make a difference because if you do look at everything around us and you look at climate change and a bunch of other larger pictures it gets very daunting to people and they say, "What can I do? What good is it going to do?" We can demonstrate that on a very small landscape that we can make significant benefits in a repeatable fashion and make connections in a natural world. We just have to be thinking about those at all times.

RA: Excellent. I think right now people are so concerned about the big picture, everything is all the doom and gloom out there but they are not perhaps doing anything in a local area. What do you feel will be your, if you feel you have a contribution that you have made what would it be?

TC: I think that is what I would like to do at the end of my career is to be able to look back and feel that I contributed, not necessarily as the head of anything, but maybe as an important cog in a wheel at moving again the awareness forward on the importance of the natural resources that we all share and enjoy.

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RA: What is your greatest joy in this field, today what do you enjoy doing the most?

TC: My greatest joy in this field is to again be able to watch our education program here because watching little kids that a lot of times in modern, in what we consider modern times, it's not safe to let your kids out, parents have to watch and it's the nature of the world we've grown up in that we are very insulated, we all drive around in cars that are air conditioned, windows up and everything else and it is exciting to see a bus load of children come out and realize that those kids are the same as I was when I was their age if you just get them out of the capsule and let them get out and get their hands dirty and do stuff. So I think that is the most exciting thing because again it is very hopeful.

RA: That is getting people out into the field.

TC: That's right.

RA: Especially kids. What work have you done? Where have you been or what is the work you do here in Texas? You said you have four areas you are responsible for, where are they?

TC: That is correct. Anahuac is... all of the areas that I am responsible for as National Wildlife Refuges are located between Galveston Bay and Louisiana.

RA: Oh okay.

TC: So that includes McFadden National Wildlife Refuge, Texas Point National Wildlife Refuge, Anahuac and Moody National Wildlife Refuges.

RA: Okay and were they pretty much slammed by the hurricane?

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TC: Yeah they were all pretty much slammed by the hurricane. There was not one of my refuges which total 105 thousands acres that weren't at least four feet under water.

There is not an inch that wasn't at least four feet under water.

RA: Good Lord!

TC: Yeah and some of it was under twelve and thirteen feet of water.

RA: What about the structures and the infrastructure and all that that was on there?

TC: It was I can't accurately characterize it as a total loss but as far as our facilities, you know the buildings that we worked out of and our visitor contact stations and the public bathrooms, all that kind of thing that was largely turned to rubble on most of the places. And at places where it managed to hold itself up it was gutted. Everything inside was gone. All the roads, 18 miles of gravel roads on Anahuac National Wildlife Refuge were freed of all their gravel so they were completely lost. Oddly enough the water came up so quickly that the water control structures, which we do a lot of that management from, survived fairly well. But we had a large portion of Boliver that washed away land on us, so all of the dikes and levies and roads that functionally built little dams during the storm, were debris magnets. So we ended with thousands of tons of debris sprinkled liberally across that landscape.

RA: Have you been able to make progress in terms of... I guess the question is: are some of these areas never going to go back to the way you had them before?

TC: Yeah that is a wonderful question and I wish I knew the answer. Because what we are seeing is very hopeful. In January of this year which was five months after the

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storm passed us, one of my staff members came in and was actually very happy to report that they found three live crickets.

RA: Crickets?

TC: Crickets. I thought that was my lowest moment right there because things were so bleak at that point that we were excited to find these three crickets on a refuge that has hundreds and thousands of wildlife and birds all over it has got a large diversity and we are down to three crickets and we are excited by this. I am glad to report that now things are starting already to rebound and with just a little bit of rain we have been in a horrible drought which has exaggerated the program significantly. But things, you can go out to the refuge now and you can tell it's a refuge. We've got black neck \_\_\_\_\_ (19.57) an unbelievable number of model ducks nesting this year, considering the salinities are so high it is shocking to us and we've got blue wing teals nesting this year and they usually don't nest here. They have found something to their liking that they don't normally find and they stuck with us.

RA: So you've got a change going on?

TC: That's right.

RA: What do you think some of the greatest challenges you are going to have because of Ike or that you are dealing with right now? Explain a little bit if you would for the uneducated about the whole salinity issue.

TC: Okay well the salinity issue is key to this area because the area historically has been fresh water marsh, very fresh. Then it just kind of in a sheet flow fashion would flow out into the gulf and you will find little bays and bayous that open up and that would

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feed everything but a lot of it would move through this kind of moist prairie, that is what a natural situation was here and is what happened is, again, the Gulf of Mexico sat on the refuge for over 24 hours and when it receded, all of the little pot holes and even areas we have impounded and other stuff held that salt water instead of fresh water. Well if you were to go take a big jug of salt water and pour it on your prize rose you would see what salt water does to plants that don't want it. So what we saw was a big landscape wide salt kill across this coastal plane and then the marsh started to recede. We also saw areas of marsh that were physically ripped up and dumped into ditches and dikes and it was really for, if it wasn't an emotional part of it, it is really a very interesting phenomenon to watch but the other thing that the salt certainly did is animals that survived the storm and we are talking about pretty hardy creatures that were able to survive this storm were found in a really bad situation because they couldn't find fresh water. So nictitating membranes on reptilians are the clear lens across the eye, those actually cloud after a while under really salty conditions so we had a lot of snakes that became blind functionally and started striking and we had alligators that were blind and several times we actually saw alligators just crawl and then just stop and they were dead. They almost froze in motion and it wasn't the storm directly that killed them but it was the stress afterwards that cost them their lives.

RA: Oh that is terrible.

TC: Yes. But we were continuing to see this indirect loss of resident wildlife from Ike well into January. The gators held on for a while, turtles. A lot of things that just couldn't get out of the way of the storm, or seemingly couldn't get out of the way of the

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storm, were impacted. Certainly, in my opinion, the greatest and long term thing that we are going to see difficulty with is we are going to see difficulty with frogs and salamanders and these little amphibians that are very porous skin, salt water and they do not get along. Also things like model ducks for example. Model ducks if they get into salinities over 10 parts per thousand, the little brutes will die.

RA: It is over 10 parts per thousand?

TC: Yes it is still over 10 parts per thousand. But in places that couldn't have been because we had quite a few ducks this year that we had this year... so in pockets there is enough fresh water that they are able to maintain themselves.

RA: Now if the salt water is still there how and how long... how does it get rid of and how long will it take?

TC: That is simply and directly a function of weather. If we had seen some normal rainfall we would be well, I believe, on our way to really maybe a bumper year. But we have not been so fortunate. We have had a good squall line come through in February that brought us what we needed but we needed that for several months to flush the system. So what we are doing is we are monitoring very closely what water is coming through past us on those bayous and we will open our water control systems and we will take in what normally we would consider salty water but we can flush into our interior marshes, again trying to decant the salt that is laid out and baked into the soils and trying to start flushing it with what we would call brackish water, it's better than what we've got. So today I was out and we had on in the bayou 10 parts per thousand which is brackish. That is something we would not normally want in our marshes, we would be

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upset by but within the marshes because of the drying effect we had 30 parts per thousand which is saltier than sea water. We can flush back and forth and get ready and maximize those rains if we take the water in right now and let it start to decant out.

RA: How hopeful are you to the recovery of Anahuac?

TC: I am very hopeful on the recovery of Anahuac. I think that some of the, one of the great things about working for this outfit and agency is that we all know each other pretty well and some of the biologists that I would consider the core the biologists pointed out that during Carla, right after Carla in the 60's that that may have been some of the best years for these refuges, the marsh really came back but they were under somewhat of a different set of conditions but we are still hopeful that this purging type effect is not all negative.

RA: Do you coordinate your work I know I've met with the Texas Park and Wildlife people that are at Sea Rim and other parks like that. Do you coordinate what you are doing as far as the flow of water and everything or are you all pretty much independent of each other?

TC: Well we do annual management plans and lay those out but typically we will stay pretty independent because, again, there are multiple refuges on the coast and I worked out at **Lagoon Adascoca (27.09)** down in the valley before coming here and what we did management wise was based on those natural conditions there which are entirely different. We had a hyper saline lagoon down there and it is entirely different then what we find on this end of Texas and so they have to be managed a little independently because, if we tried to go with one cookie cutter mold we would really mess things up.

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RA: I see. Well I was just thinking too just the projects just to get the water in and out because Sea Rim is the same way.

TC: Sure. It varies greatly based on their management capability and we work very closely with our state partners though and we share notes across those boundaries.

RA: Every now and then you have crisis meetings?

TC: Oh yes we tend to spend a lot of time in the boat together looking at things.

RA: Do you have the funds that you need? I mean are you funded well enough to do what you need to do?

TC: I think that we will end up having the funds to do a lot of the debris clean up. We will have the funds to do a lot of the direct recovery stuff. Probably the largest concern that we will have and we seem to continue to have right now is the recognition of the habitat part of this. We have a situation that we are trying to manage habitat but it doesn't seem to fit in columns and boxes and we can't report as easily direct, you know, results and in modern times a lot of this is, "Well you lost a building. That building cost X amount of dollars, you will be funded to replace that building at X amount of dollars." Unfortunately wildlife has never fit into those little cubicles very well.

RA: What about those roads is Anahuac open for people to go through now or not?

TC: Yes it is.

RA: It is?

TC: Anahuac has been open since November.

RA: Wow.

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TC: My crew basically with the help from other refugees pulled together. We had teams come in and we replaced those 18 miles of washed roads within a month and we repatriated the bathroom. I mean we were starting with debris that was four feet deep in the building and we repatriated the bathroom and we had half of the refuge open in November and we had the rest of the refuge open by the first of the year.

RA: Were you able to build the walkways into the bayous and all that? Is all that still there?

TC: A lot of the trails survived. So the trails, we were able to clear the debris from the major ones first. We are just now getting to all of them but we have opened them. We just have signs warning people, don't turn over the debris, don't get too locked up or curious into the debris.

RA: Is there a lot of strange stuff under there?

TC: Well it's just, unfortunately it's been sitting there a while so there could be snakes, there could be other hazards and that is what we are inviting them back to see, it's not the debris pile but what they came for.

RA: So the efforts to restore the part though are really going ahead well?

TC: Yeah. I mean there is a lot of internal debate as to what we should do into the future. A lot of the facilities on Anahuac were impacted by Rita just a few years before. So that was... we kind of came back and came back after Rita and it's been a daunting loss to have such a significant impact to us at this juncture so quickly. Everybody still remembers Rita.

RA: A lot of them were just trying to get over Rita when they got hit?

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TC: That's right. So there's been a lot of lengthy discussion and debate about what we should do moving forward.

RA: Well there was a consideration in Parks and Wildlife I know not to open some parks. Are those the kinds of discussions you are having too?

TC: Well the good thing about wildlife is it is resilient and so I don't think that if you step back from it I think the wildlife value of the refuge we know is going to come back, we just know it is going to come back. It may take rains five years to get us back to where we want to be but we know its going to come back. It is only a matter of time.

The question really revolves around what can we do to accommodate the public and how do we facilitate that? Conversely to what I was saying before the fact is that we've got a lot of support to put the roads back and to put those things back that would allow that type of use and so we were very fortunate with that regard.

RA: Well I've looked at the work that you are doing on this site and it is kind of symbolic of what is going on in the whole coast. Everybody I've met just seems so gung ho and so positive about making it happen, getting it back. There is a real commitment to that which is great. What right now needs further recovery?

TC: Well right now I've spent all this week and I will probably be spending for the next year most of my time strategizing as to what we need to do next and where we need to go next and what needs to happen. But to be quite honest one of the reasons you are hearing so much audio noise in the background is we are packed in to the only rented building that we had and even though our jobs are really in the field, or most of our jobs are in the field, this is our last little hang out that we were left with after Ike.

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RA: Oh is that right all of the other buildings were...?

TC: All of the other buildings were completely compromised.

RA: Where were your headquarters before, where was it?

TC: Well this was in 1963, we moved into this, what I will call a very aged building and with the idea that they were going to build us an office the next year and I've got the design sitting on top of my cabinet right there. But as you can tell that did not happen. Funds and other things ended up getting in the way. After Rita they had put a bunch of the core staff down at the refuge, down where we work. All those facilities were lost. So we have had to retreat back to the place that we seem never to be able to escape from. It is astonishing that this building held up through the hurricane.

RA: But one you probably would have loved to see go.

TC: Like I said it is rented it's not ours but it is... at the time we had people sleeping in here. We had teams from New Mexico, Arizona... all over the country in here trying to help us get back up and running as quickly as possible. So it has become our home away from home like it or not.

RA: Is it a matter of money to get things done or just a matter of time and nature?

TC: It's a matter of that. It is a matter of the fact that we have, as the federal government we have a lot of regulatory requirements that we still need to meet. We have to make sure that we are coordinating our activities with appropriate parties. I can assure you that the people that I have the pleasure of working with will have nothing better than to roll up their sleeves and race out there and just take care of things but we do have a lot

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of clean up and it is logistically difficult. It is challenging. We have done the easy stuff and that is what has allowed us to open the roads and get stuff like that.

RA: That's the easy stuff?

TC: That's the easy stuff. We took over I forget how many tons of debris that my staff just personally got out there and just started digging. We had volunteers come out. I had people that in this community that their house literally just washed up onto the access road of Interstate 10 and they were in here crying on my shoulder about what they could do for the refuge and what could they do? I mean literally crying about it. I'm sitting there thinking, "That was your house I passed today."

RA: So do you feel the people locally are very supportive?

TC: Oh yes we are very fortunate to be in this area. The community is very generous and wonderful to work in. I've been in a lot of places and this is the finest place to work for what I do.

RA: Will the park come back to its original condition or will it come back to whatever condition it has evolved into?

TC: Well on refuges, we are always moving and changing so we will not be the same Anahuac from that standpoint. In some ways we will be better. We will have some additional things. We will have some better protection when we come back from other storm events. The summer right before Ike hit half of my staff had to evacuate for Gustaf and had just returned three days before we had to start mobilizing to get ready for Ike. So we spent a lot of time dodging hurricanes and with our plans that we have laid out I think we will spend less time dodging hurricanes, per se, because we will be more secure

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inland but we will spend a lot more time during day to day commuting back and forth to the ground we work on. So it will be...

RA: So there won't be so many people in harms way?

TC: That's right. We won't be, the heart of our operation won't be on that land base and we will lose something with that. We will lose something precious with that. But we also won't be as at risk and we won't have the facilities at risk that we can't, any of us can't afford to keep losing. So we have taken measures to try and secure that. There will have to be something down there but it will not be near the exposure. We've got plans that some of our buildings will simply blow through.

RA: Really?

TC: They will...

RA: They will stand but everything...

TC: The structure, the metal structure will stand but the skin and the light skin will come off the building to yield rather than... trying to be the willow not the oak.

RA: Interesting that is very interesting. Do you have any sort of global thoughts about all of this? Any closing thoughts that you might like a chance to kind of...

TC: Well yeah I think that, that is a great question. I think that I am so preoccupied on just my little scope of the world that thinking globally is maybe outside the context of my ability right now.

RA: Too much of the emergency?

TC: I spend a lot of days trying to figure out how to make things function that have been covered in salt water and how to make things work where my staff has been

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strained. You know a lot of my staff lost houses, personally. They lost everything so getting back to what we do has been a real challenge for us on many levels. So I will be honest with you, I don't know that I can give you much on a global perspective except that one of the key things that was very invigorating by the whole thing is it was amazing to see at what I would consider maybe my staff's lowest hour and my lowest hour how much assistance we got from sister refuges and I think that probably we would not be 10% as far along without having a real shot in the arm from our peers that have moved in, put their lives on hold and their work on hold and came, they literally came down. They would come down and drive a government truck and leave it. "Here this is yours. You need this." We had incredible support that way.

RA: That's great.

TC: Yes it is.

RA: It makes you feel like you are in the right thing.

TC: Well it certainly makes it, at that time; it makes you aware that you are not in it alone.

RA: Right and that is probably what you feel like when you are looking at this total...

TC: It many times comes across that it is just us and 105 thousands acres of major, major work ahead of us. That bubble was very quickly burst by all of the assistance that we got.

RA: That is great, that is wonderful. What about another hurricane coming? People must be thinking about how long will it take you before you can deal with another hurricane coming?

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TC: Well we will deal with whatever comes our way and I did mathematically I go back and major storms in our area, according to my calculation, major storms strike in our area about once every 8 years is what mathematically from when they were recorded. So I'm figuring we've bought ourselves a couple extra years on the end because we had Rita, Gustaf, Humberto and Humberto is not a major one but I'm hoping it will go in our favor for that average.

RA: For the average. We've got them covered for the next twenty years!

TC: That's right. That is what I am cautiously optimistic but certainly we have stepped up our planning and a lot of the stuff that we are planning with regard to repatriating the refuge will be with that in mind. So that the people who inherit my function and my role don't end up caught in the same fashion that my staff and myself found ourselves.

RA: On this site, this Anahuac, of course is an Indian name. Was this an Indian site; were there Indian artifacts here or anything like that?

TC: Actually my understanding is that Anahuac which the refuge is named for the town but the town was actually named, is a Mayan name and...

RA: You know you are right.

TC: It means Mexico City.

RA: Because I was in Mexico, in the Yucatan and I saw the name Anahuac. It is where... so it came from Mexico.

TC: Yes.

RA: Well how did it get here?

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TC: Well this is my spin on things and I'm certainly not a historian and I've only been here two years so you will have to bear with me. But from what I can interpret from what I have read is that it was placed here when Mexico was trying to deal with the original immigration issue which was Americans immigrating into Mexican. So they named this area for the capital with the very clear demarcation of the trendy river to try to preclude people from moving past that barrier both psychological and physical.

RA: Which of course it didn't...

TC: It did not function so well. Maybe the wall that we are trying isn't going to work any better.

RA: No I don't think so I doubt it. How interesting. So there is no necessarily any evidence of any Indian involvement? They are probably...

TC: Well no we have a couple archeological sites that we are aware of and actually the hurricane has uncovered at least one or two others that we found.

RA: McFadden had some of that didn't it?

TC: Yes. That's right but what we are aware of are primarily shell \_\_\_\_\_ (44.37) that looked like transitory nature of being able to harvest food and other stuff from that area.

RA: Probably \_\_\_\_\_ (44.49) or something like that.

TC: Probably.

RA: Well I think there is a lot of good information here and I think from the human side of it I think it is a powerful story and I just, in this time and age to see that the kind

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of people working together and pulling together to save nature is really a great story, it's a great thing.

TC: Well thank you.

RA: I think you are all committed to it. I appreciate very much talking to you.

Anything, any other thoughts or things that you think are important to know?

TC: I guess the thing that I've told a lot of people and I think is important. While this storm is still so present in our minds is that, as far as wildlife goes our infrastructure and other things took a beating and we've got real problems with that but as far as wildlife goes, they are adapted to this coastal environment and we are already starting to see how amazingly resilient coastal wildlife is. As you talked about the coastal population but the coastal population are more than people. The coastal population is all these wonderful resources that we see and I find myself startled every time I drive to the refuge and see how far it has come in the course of the last couple of weeks. It is kind of a neat thing to witness and one of the phenomenon that I got to see was when we were down to our three cricket story again but when we had kind of lost all hope of everything as soon as the rain started in February turtles appeared out of everywhere. To this day I still don't know and they were marching across 1985 which is the road on the north end of the refuge and of course many of them are being hit but I mean there were literally thousands of turtles out of nowhere that suddenly made this pilgrimage back to the marsh lands as if on cue and you had wondered how many times in non recorded history this very thing may have happened for their species and how ingrained is that that they responded that way. Because if you would have asked me right before those rains if we would see turtles I

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would have told you it will be years for this. Literally over the course of a couple of weeks we had turtles back into the refuge where I couldn't imagine where they had stayed and where they had been for that time.

RA: You get a sense of the timelessness of...

TC: That's right.

RA: Short perspective.

TC: Exactly and alligators drifting across that line too. So I think even though we know a lot about our natural resources, it is always a mystery and for someone who is interested in it, it is always exciting to watch. Even when you are in the middle of it to watch how the system works and I hope that other people facing that get a chance to step outside of their little world and take a look at what is happening around them because it is really fascinating.

RA: Thank you very much and I will get you a copy of this once we get it transcribed.

End of Transcript.