Kerry St. Pe Interview

Interviewer: Paula Ouder, Roy Kron

(inaudible)

Paula Ouder: Yeah. You're on.

Kerry St. Pe: Testing one two.

Roy Kron: And wanted to, you know, if you could state your name.

Okay.Kerry St. Pe. The director of the Barataria Terrebonne National Estuary Program.

And today's April 28, 2010, and um, and you're perfectly fine with us recording this interview…

K: Perfectly fine with you…

R: Um

K: …doing that.

R: And making it available online.

K: Making it available.

R: And Sea Grant using it for…

K: Sea Grant can have it.

R: And uh, anyway, what uh, what we wanted to talk about a little bit is to get your perspective on is – you've seen a lot of environmental changes since you've been with Bitmap and probably before that. You've um, we've all seen a lot of things disappear, and um, just things turning to open water, and uh, we're not – not gonna talk about climate change, but we do know that there's a lot of evidence of sea level rise and relative sea level rise especially along our coast with the land subsiding and the water coming in. Um, and we wanted to see if you could talk about that as well as the other environmental changes that you've seen, um, over the decades.

K: Okay. Um, well before I was director of the Estuary program, I was um, I worked for 25 years with the Water Pollution Control Division under DEQ – first it was under wildlife and fisheries, and they moved it to DEQ. And um, before I did that, I grew up in Port Sulfur, Louisiana in Plaquemines Parish. So I've seen a lot of changes. Um, you know, first dealing with um, hurricanes - hurricanes have been a frequent occurrence in Louisiana since the – the beginning of time, and um, we endured, um, hurricanes in the 50s and 60s, um, and everybody knows Betsy. And later in '69, Hurricane Camille. Those were serious storms. Um, they – Hurricane Betsy, the eye moved right up Bayou Lafourche, and Hurricane Camille took a track that was almost exactly where Katrina passed. Yet the damage was so much more devastating for Katrina in these later years. And you know, I ask people all the time. Why is that? And

the answer is obviously because of wetland loss. We've lost an incredible amount of land since um, those earlier hurricanes, you know. Started losing the land, way back in the early 1900s, and it uh, greatly um, was accelerated during the uh, sixties, mid, early sixties, when we started removing oil. Um, had a lot of sinkage on the surface, and um, we started losing wetlands. And in these later years, we've started losing the ridges, um, those– places – the higher places where we live. And the ridges that we don't live on serve as um, as highly um, successful speed bumps. Um, they serve to knock down storm surge. Um, and then you know, you have barrier islands that knock it down too, and you have marshes, but those um, ridges really serve to knock down some surge, and we are losing the ridges. Um, you have a ridge that extends six feet above the water level, and you have another 20 feet of oak tree on it, so pushing water through that is very difficult. It knocks the storm surge way, way down. Um, no longer do we have that. Now, those storm surges are overtopping levees because there's nothing in the front of our communities to knock that storm surge down. So um, I'm seeing also due to wetland loss, I'm seeing, um, more impacts of salt water encroaching on drinking water supplies right here in Bayou Lafourche. Um, the (inaudible) water plant – it's closed very frequently because of the chloride violations from the salt water moving in. Um, it makes the water too salty to drink. And um, Houma has the same predicament. Their primary drinking water supply is shut down – the Intracoastal Waterway. Um, their primary drinking water supply is located at the head of the Houma Navigation Canal. And Houma Navigation – Houma Navigation canal has widened considerably since it was built. Um, and delivers ever increasing levels of salt water to the plants, so I'm seeing all these changes, and um, unless we um, deal with the wetland loss issue, unless we restore the land, that's what we need. Unless we restore the land masses, um, you know, in the marshes and in the bottoms of the Barataria and Terrebonne basins, these changes are gonna continue until we can't live here anymore. And um, that would be the beginning of loss of one of the most unique cultures on earth. And that would be the greatest tragedy of all.

R: You mentioned the drinking water issue. I'm assuming probably the same for sanitary sewers – K: there's probably some issues with that.

Yeah, we have um, storm surge impacts on sewerage treatment plants, and um, you know, all sorts of infrastructure. Um, that impacts the use of those you know, treatment systems. I mean, if a sewage plant that 's not ample to operate - if it's inundated with water - flooded, um, if there's no electricity for a long time after a hurricane passes, then um, there's raw sewage going into the water, you know.

R: Probably have a lot of water also going into sewage plants that dosen't necessarily need to be treated as well, but storm surge that…

K: With um, the rains that come with um, you know, hurricanes, um, weather systems, they do have what is called inflow infiltration, um, a lot of these um, the infrastructure that delivers the sewage from – through pipes into the plant, they become cracked, broken, um, over the years, and there's a lot of drainage water that gets into those pipes, and you have – you do have water getting those plants that dosen't need even to be treated, but yet the plant becomes hydrologically overloaded and um, that's – it passes water through the system faster than it should. And it doesn't have time to be treated.

P: What are the consequences of that environmentally?

K: The consequences of that environmentally are that you're um, releasing water that's not completely treated - um, water that's not completely disinfected. You have high levels of fecal coliform bacteria and those influence. And you have um, massive oyster harvesting areas that are closed due to fecal contamination. Fecal coliform contamination. Um, another impact I've seen over the years um, you have Louisiana has a lot of oil production both offshore and inshore. Um, the offshore production comes inshore to large oil transport lines - pipes. And the land loss that we've had over those pipelines – you see, those pipelines are usually buried under marshes. And um, when the pipelines are covered with marshes, boats just travel to the bayous and streams, and um, and they pass over those pipelines, which are jetted down far below the bottoms of navigation channels. Um, but you know, they're just buried under the surface of the marsh, and when the marsh disappears, those boats can now travel over what they think is open water, hitting these pipelines. Um, and these pipelines rupture because of that, and we're – we have many, many more oil spills than we used to have from damaged pipelines.

R: What about the estuaries, um, how to they vary as marshes and wetlands being converted to open water. We've seen that move in landward, or as the water moves landward, or we just really losing the estuaries?

K: Um, well, we're not – we're not losing the estuary per say when you talk about um, the estuary being a place where salt water from the oceans and fresh water mixes, we could say that we're actually increasing the area of the estuary um, because salt water is encroaching inward. Um, but we're losing all the habitats that make those estuaries valuable - um, the marsh grasses, and the plants. And without the plants, um, the marsh grasses, we lose nursery tunnels for the shrimp. And um, fishes, and um, even oysters. Um, and we do think that we're um, you know, at the peak of shrimp production. In other words, shrimp production from now on will be going down, but that's not so easy to see in the data because um, shrimp productivity is more dependent on um, you know, salinity and temperature. Um, that's also dependent on you know, the success of the nursery grounds. And you would think that nursery grounds disappearing would equate to reduction of shrimp production. But that's – that's not so easy to see in the data because if you have a wet spring, um, you know, cool spring, then that causes less shrimp to be produced. Um, so it's highly variable, so it's not so easy to see. But we do think we're seeing in the data a trend downward. It's gonna be a few more years before we can, you know, see that.

(Inaudible Speaker)

K: Yeah. I can talk about that. Um, there's something known as the edge effect, um, in marshes, um, and in within estuaries. Um, the edge effect is simply a biological or ecological um, fact in that the edges of ecosystems are the most productive. Um, and when the marshes disappear or they break up, you know, picture a huge expanse of continuous marshlands, um, you know, extending as far as the eye can see, you have edges around where those grasses meet the water, but that edge is you know, far out. You have to walk far out before it's touching the water, and you picture that massive island of grass, so to speak, um, breaking up. You're creating more edge, so you have more productivity. So even though you have um, a loss of wetlands, you know, a net loss, you're creating more edge as that – that big

continuous mat of grass breaks up. Um, until it disappears, and open water is far less productive than, you know, marshes. Um, so initially, with marsh loss, you have increase in productivity, and not only do you have increased edge, but you have increased – they're trying this production in entering into the water um, column - into the food chain. Um, so you have all these things that boost up the um, productivity and until it's all gone, and it suddenly collapses.

P: Are we in that stage now?

K: We think we are. We think we are. We think we're on the downward trend of um, the whole process. We think the increase in production we had over the last you know, ten, fifteen years, was due to edge effect, but we think we're on the downward trend of um, production.

R: Are there any estimates as to when we hit the bottom?

K: No. No there's no way of telling – no way of knowing that.

R: I guess there's a couple of severe storms could accelerate that, or a mild…

K: Oh yeah.

R: (inaudible) season, and just postpones the inevitable a little bit longer.

K: Well we did lose a lot of wetlands during hurricanes. We lost 217 square miles due to um, the hurricanes of 2005 alone. So um, yes. Hurricanes can accelerate this process.

R: Are you - not from the ecological perspective, but are you seeing changes in um, are people abandoning the area um, are they - I mean, you mentioned fresh water issues, and the sanitation issues, but are you seeing people beginning to pick up and leave and just deciding that it's can't – they can't live there anymore?

K: Yeah, I'm definitely seeing people um, finally decide to move away. And um, that's the thing that the – has maintained our culture for generations. I mean most of our people that live here, um, now, can point to their first ancestors coming here generations ago. No matter what heritage you're from, um, that's been the norm here in the Barataria Terrebonne region, Southeast Louisiana. People come here and they tend to stay. Stay here because what the place produces, um, because they enjoy the food, um, they enjoy you know, viewing birds, or whatever. It's a great place to live. And for generations – all those generations, were been during hurricanes, but people come back. People come back. There's a hurricane – they come back. But now, the degree of um, damage from hurricanes is you know, beyond what some people can endure. I mean now, you expect much more than just the wind damage to your house. Now, you have to expect that your house is gonna be washed away. And in Port Sulfur, Louisiana in the southern half of Plaquemines Parish, that happened. A whole – the whole southern half of the parish was washed away. There were eight structures left on their foundation. Um, and people rarely can come back from that. Um, some people did move back to Port Sulfur, some people moved back to St. Bernard Parish. Some people moved back to um, New Orleans. Um, but far less moved back than, than left. At least in the case of southern half of Plaquemines Parish. Um, and I mean, those are people

that know hurricanes well. I can tell you because I grew up there. And um, it took washing away those homes um, for people not to go back, and I'm seeing more and more of that. Ile Legends Charles, nothing's ample. You get hammered time and time again from hurricanes, um, it becomes, you know, a real chore, or you know, to go back and rebuild. So people don't. They move elsewhere around the country.

R: You talked about building land. Um, do you want to talk about what you think the best way to accomplish that is?

K: Yes. Um, building our wetlands back, you have to look at what created this place the first go-round – the Mississippi River created this whole southeast Louisiana over you know, seven thousand years. Um, we, we destroyed everything it created in the last seventy five. Um, we've levied off the Mississippi River, dug canals everywhere, um, gave – gave our marsh away freely to whoever wanted to dig it up. Um, but in addition to that, we built locks and dams on the Mississippi River so the sediment load in the river is um, has been reduced, by 50 to 80%. The suspended sediment load has been reduced. I repeat. About 50 to 80% since 1850. So we do need fresh water divergence. We need divergence to maintain the marshes that are there – maintain the swamps that are there. Um, but can we create land in the time we need it with water? No matter how much, how much water we put in the system, it doesn't matter. We cannot create that land in the time we need it. I mean, I point out again – the Mississippi River took seven thousand years to build the land that we're on right now. Seven thousand years, and that's when it had twice the sediment level. So there's no question that we need to create land. We need to rebuild the lands that we've lost as much as we can. We cannot build it all back. If you look at the maps when my ancestors first came here in 1760, you would see marshlands continuous all the way to the gulf. We don't have near that anymore, but we can create a lot of land back. We can harvest land from the bottom of the Mississippi River, the bottom of the Atchafalaya, and from offshore sources. And pump it with stretches, and we can create very strategically, exactly, you know, where the land was, um, you know, first go-round. We can do it. It's expensive, but you have to decide um, you know, well is it worth saving? Is it worth restoring? And um, I think we've all decided that it's cheaper to restore it, and not have to move everybody. Um, so it's cheaper to restore it. So what do we need to restore that? Dirt. We need dirt to build land, um, and the only way we can do it as far as I know, unless someone comes up with some magic solution somewhere, we can restore it. We can restore it by harvesting the sediment and pumping it. It was just done by Bayou DuPont. They built 500-plus acres of wetlands in four months. And they could've built a lot more. Um, but you know, because of the way um, you know, these projects are paid for, um, you know, the way they're approached, um, they were finished with their projects, so they – they dismantled the pipe.

R: I don't know if you know the answer to this question or not. We've debated it in the offices. How did the restoration plans really take into account sea level rise – or relative sea level rise, and we're not really sure – we're not really sure, and I don't know if - you don't know the answer either, but I mean, if you look at globally, sea level rise is about two millimeters a year. When you look at south Louisiana, the pipe gauge is – it's about seven to nine millimeters a year. That's because you do have subsidence.

K: Yeah. Well a couple things about sea level rise that I'll mention. Um, I mean there is reference to sea level rise in um, many of the restoration plans around, um, but I don't think you see it a lot because of this fact. We've been dealing with sea level rise for eternity. I mean, not that sea level's been rising necessarily, but we've been sinking here. So essentially, we have the same thing, you know. But ten thousand years this land's been sinking, but for most of those ten thousand years, the Mississippi River flooded its banks, and you know, built up, you know, compensated for the subsidence. So we've always had a net building of land, um, you know, that we interfered with that process though. And secondly, oil and gas extraction have done – has done a lot to um, hasten wetland loss. Um, there's very um, convincing data that USGS has collected that's shown that oil and gas production fluid remove from the um, sub surfaces caused a collapse in the surface, um, of the earth. But we aren't producing inshore as much as we were, so that subsidence rate has slowed if not stopped. Um, but still, there's some level of sea level rise, you know, I believe. Um, and that makes the harvesting of sediment and the deposition of sediment that much more important. That's the only way – the only way we have - there's a chance that we can fix it is with harvesting that sediment, because we need that sediment, and we need it now. We don't need it in two hundred, five hundred, you know, or in a hundred years. We need it now.

R: Do you see this as an ongoing process - the harvesting...

K: Harvesting of sediment, deposition of sediment – I do see that as something that'll have to occur for you know, forever. You haul sediment, you harvest sediment, and deposit it through pipes, um, it's gonna sink, um, you know, all be it slow – more slowly than it is now because you have less oil production, but it will sink, and um periodically, it'll have to be pumped again, so I see you know, people building up um, wetland areas, ridges, barrier islands, um, coastal forests with you know, sediment – something to plant all on, and then just moving around, you know, and doing the same thing elsewhere, and maybe having to start all over when they finish that. That's the only way our culture is going to survive. And I do see, um, a need to um, you know, use river water. We've got to have the water input, but we don't need these massive, um, diversions people are talking about that will completely change us from an estuary to a freshwater pond. Because they won't build any land. Um, with exception of maybe two hundred or so years.

R: I can't think of anything else to ask you. Is there anything you wanted to talk about?

P: If you want to talk about personal losses? Just – how is the landscape different from when you were a kid? What did it involve?

K: Well, you know, I feel comfortable with that. Um, the house I grew up in has um, in some landfill somewhere now, um, my brother was the first one that went down into the parish. He still lives in Plaquemines Parish, but he lives in Belle Chasse. And I told him to call me up once he gets down there, and he tells me what he saw, and so he called me up after he went down there. He said he has some good news and some bad news. The good news was that, he said, you know, we had one house on that lot? I said yeah. He said now we've got three. I have bad news was that none of them were ours. Ours had flooded, you know, up Highway 23 a quarter of a mile. Um, it was in two pieces. Um, Mark St Pe –

part one, part two. Um, and my own neighborhood – the old town, um, the school, everything is gone. And that's hard to see. Yeah.

P: That was – what (inaudible)

K: Hurricane Katrina. Um, the storm surge from Katrina was from the East, and actually crossed the river, and um, flowed over – flooded the parish from Port Sulfur down, and blew out the back hurricane protection levee, and as the hurricane moved upward, um, the circular pattern then blew storm surge from the back hurricane levee. Um, and got a second storm surge. Um, I had friends that lived with me, brothers that lived with me for a month or so, and um, you know, very few people went back. Some people moved to Thibodaux – actually friends I grew up with in Port Sulfur now live in Thibodaux – a lot of them. Um, I'm seeing the whole system - cultures you know, gradually disappearing, you know. And I think unless we restore some of that, um, we're gonna see the end of this culture. Because New Orleans is just as vulnerable as we were in Port Sulfur. Houma is that much you know, easily as vulnerable as we are, Hurricane Katrina would've came through Terrebonne Parish, it would've destroyed it. South Lafourche – it's just a matter of time. You just want to build up marshes to where we have an acceptable level of risk. That's all we ask for. Um, we don't want to be you know, absolved form any future hurricane impacts. We just want to have that acceptable level, you know, of risk. We just want to be um, able to um, build our communities back, you know. Just repair the wind damage. No one should expect their house to be washed away in a tidal surge. Um, the fact is that the system – the wetland system has collapsed while we've been here, you know. We lived here in perfect safety – relative safety for generation after generation. Um, it's only been recent years that we're – it's the land loss regressed to a point where we can't live here anymore. We've got to um, you know, rebuild these marshes. Whether you um, fish, or not, whether you eat seafood or not – if you live here, you depend on those wetlands. Period. So um, this is not a fight, you know, to save a wetlands because of a bunch of um, you know, ecological concerns, or not totally, and it's um, it's about saving of an entire culture – a culture that depends on fisheries production and shrimp production and oyster production, um, still, we still have people making their entire living on those – doing those things. But it's a matter of survival. Unless we restore it, you know, this is all gonna be lost.

P: Can you just describe the culture some more? Describe the culture you grew up in, or where do you see a value, or uniqueness here?

K: Well, I grew up in a very um, you know, interesting place. Port Sulfur was built – the entire town was built by the Freeport Sulfur Company in the twenties. Um, in fact, they pumped sediment from the river to elevate the town um, you know, above marsh elevation, for people to live on. Um, so anyway, they built the school, they built the hospital, they built the houses, they built the entire community. They had sidewalks. I lived in a very um, progressive area, um, far more advanced than the surrounding areas. You had kiddie pools, pools for the kids to swim in, um, and we had a place to swim – a beach that was built by Freeport. We had swimming lessons right across sanctioned swimming lessons – I learned to swim in that place. And um, so it's a very interesting place. Um, they move people down there from um, the um, a prairie Cajun areas, you know, places like Scott, and um, they moved people from down there. They had um, Native Americans that lived down there. Um, African Americans – they had um, Croatian people

that lived down here. I lived in this mixture of cultures that was incredible. We – I thought everybody grew up like that, you know. We didn't travel anywhere – but my dad and mom would pile us in family station wagon, all five kids, and we'd go off to that faraway land we call Biloxi. That was the extent of our vacations. Um, so I grew up thinking that everybody grew up like that, you know. Very often I leave in the morning and come back for supper, and fish and swim all day, and uh, ride my bike and dry off – that's how I would dry off. Just had a pair of shorts on, and that's it. Um, that's how we grew up. We uh – everybody was like that. we all grew up like that, and uh, I'd camp out – I'd go out in the bayou as we call it, and um, camp out on the ridges that um, you know, were great with live oaks hanging with moss, and um, you know, full of uh, palmettos, and today, that ridge is nothing but dead oaks and high marsh because you know, the ridge is sinking, along with everything else, and all the oaks have died, and um, there's nothing but skeleton trees standing up, you know. And that's in my own lifetime to see, you know, a thriving ecosystem be destroyed like that, you know. No one should see that in their own lifetime. Um, but Port Sulfur was - Plaquemines Parish in general was a very interesting place to grow up because of that cultural mix.

(Inaudible)

K: Want to ask about the oil spill?

P: Haha.

D: Everybody else has.

R: I'll give you a break on that. Unless you want to talk about the oil spill.

K: It don't matter. I'll talk about it.

P: How do you feel about the proposed expansion offshore oil and gas? Do you have an opinion on that?

K: Well, I mean um, I think that's a decision by the individual states that they have to make themselves. In Louisiana, we've always had oil production, and we, you know, had consequences, and we've had benefits, and I think individual states have to weigh those um, you know, consequences and benefits on their own. They have to decide if as a state they're gonna accept those consequences for the benefits. There's no question – and I think that uh, we've undergone a lot of impacts – impacts that we didn't have to feel. We didn't have to have those impacts. Um, we could've produced oil in um, a far better um, you know, environmentally safe way, but we didn't. You know, we just – we gave away our marshes, and um, wetlands, um, you know, freely, um, we had agencies that were charged with um, you know, striking a balance, you know. You can have the oil, you know. We get some tax benefits from that, but you know, you have to um, pay attention to the losses, you know. You can't go out there and destroy the habitat. You can't go out there and destroy the fisheries, because those people have an equal, um, you know, right to accessing – accessing those commodities. But that's not the way it happened. What we gave most of it to the oil industry. And I don't fault the oil industry at all. Um, I fault us ourselves because we voted for the governors that you know, appointed the uh, agency heads that allowed that to happen. And we voted for those governors repeatedly. There were repeatedly elected,

and they came in and they appointed those same agency heads that allowed all that to happen. So when these people sandal up and you know, they rail against the oil companies, you know, I'm quick to point out, hey. Don't blame the oil companies – blame yourselves because you know, you voted these people in, and for years and years I worked in the Water Pollution Control Division since 1974, and I saw the most incredible abuses of um, you know, of our environment possible, and um, we were reporting on it, requesting enforcement actions, but Baton Rouge never let enforcement actions happen, so. And um, the general public wasn't saying anything – wasn't you know, out there picketing, you know, they've allowed it to happen, so, um, we have to sleep in the bed that we uh, made for ourselves.

P: How many of those consequences were foreseeable?

K: Many of them. There was no consequence that wasn't foreseen in 1974. And between 1955 and you know, back, I could say that you know, some of those consequences weren't foreseeable. We didn't understand um, you know, the ramifications of you know, for instance, um, discharging – allowing discharges of oilfield product. We knew it was salty, and we probably knew that it would kill even salt water vegetation, um, but we didn't know there was radium in it at the time. Um, so you know, we allowed of those discharges that happened, but later, and certainly by 1974, we understood fully those um, those impacts, and yet we still allowed it.

P: What about the canals and the effects of the extraction on the land loss? Was that foreseeable?

K: Well I'll tell you that in 1978, I was appointed to be on the um, on a land loss committee. Louisiana Land Loss Committee. And that extraction of oil and gas was um, discussed then - whether or not, you know, it resulted in a collapse of surface. Um, and some people said no, occurring at such a great depth. It's not resulting in a collapse of surface. Others said yes, it was, but it was never decided. We had no data until the USGS um, showed that data. And in our own status and trends reports, we knew in 1996 that uh, there were pockets of more rapid land loss that occurred, and they were around these um, very productive oil and gas fields, so that was in 1996. Um, and shortly thereafter, about in 2000, um, Bob Martin of USGS had the data. There's no question that um, we suffered a lot of land loss because of the collapse of the surface around these oil and gas fields.

P: And what about the canals? You said those were constructed – started being constructed when?

K: Um, about 1955 they started you know – that's when it significantly started.

P: Well when did the impact on the wetlands begin to be known about that?

K: Well the wetland loss, um, was known, you know, at least 1944 when uh, Harnett Cane wrote his book called *Deep Delta Country*. He talked about it in there. Um, but whether or not in 1955, um, wetland loss was contributed to canals other than the physical removal of wetlands, um, I don't think that was um, known till a little bit later.

(inaudible)

R: We do appreciate you taking the time.

K: Anytime.

(inaudible)

R: And we'll share all this with you as well.

(Unknown interviewer): Fantastic!