

FORT BEND COUNTY HISTORICAL COMMISSION

ORAL HISTORY COMMITTEE

Interviewees: **Leon Anhaiser**

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Interviewer: Jane Goodsill, Roger Widmeyer

Transcriber: Marsha Smith

Project / Group: Water issues in Fort Bend County

21 Pages



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Transcript

ANHAIKER: As you know the name of Hall Lake is from Kenneth Hall. The lake wasn't there it was dredged out. This was a field; this was a vegetable field at one time all flat. The City always asks for parkland in any new development. But if you put some water in, like dredge out the lake, then that takes up the thing for parks. So that's kind of a donation. They needed to raise the level of land up a little bit, so they dredged out the lake and used that soil. Just like you did at Lake Point for those houses going up on Fluor. It was too low and it would flood, so they dredged out Brooks canal and put that land up there.

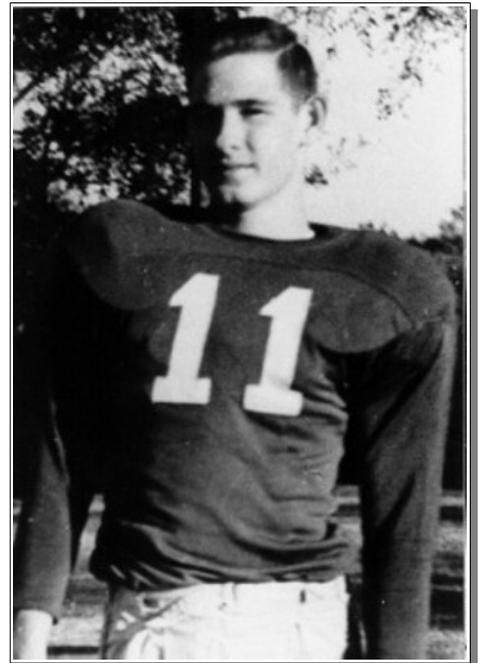
WIDMEYER: Is that how First Street got to be First Street?

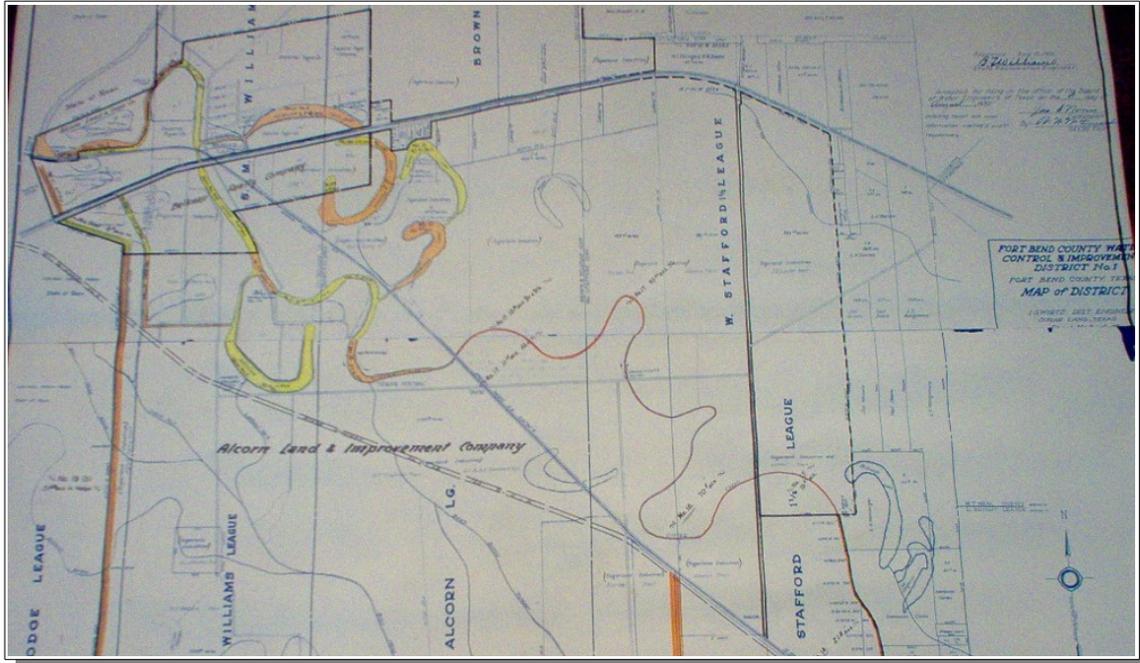
ANHAIKER: First Street was actually Second Street. First Street came later so they re-named the streets. First Street, Second Street, Third Street, but all the original homes were on what we have now as Second Street.

WIDMEYER: But they built up that up from dredging, maybe?

ANHAIKER: No. The hill was there. It is about eight feet taller than this side of town (The Flats). We are sitting in the flood plain. This is the Brazos River flood plain; and that stopped over at Oyster Creek, where the bridge goes to Main. If you look at the soil over there it's all black land clay whereas over here it's all red soil. If you put a shovel here you'll go down and you'll get Brazos River flood soil, which is all red. So that's the reason why Sugar Land homes were built on the Hill originally because it never flooded. Then they call it The Hill.

GOODSILL: Roger Widmeyer, is sitting in on this interview. The topic of the interview today is water issues in Sugar Land and Fort Bend County. Particularly Sugar Land. So if you were going to educate us about water systems in Sugar Land, Leon, where would you start?





ANHAISER: Well, actually I would start with this area that we're sitting in which goes from the Brazos River up to Oyster Creek where The Hill is. This area was all in the flood plain of the Brazos River before numerous dams controlled it. This area was prone to flood quite often.

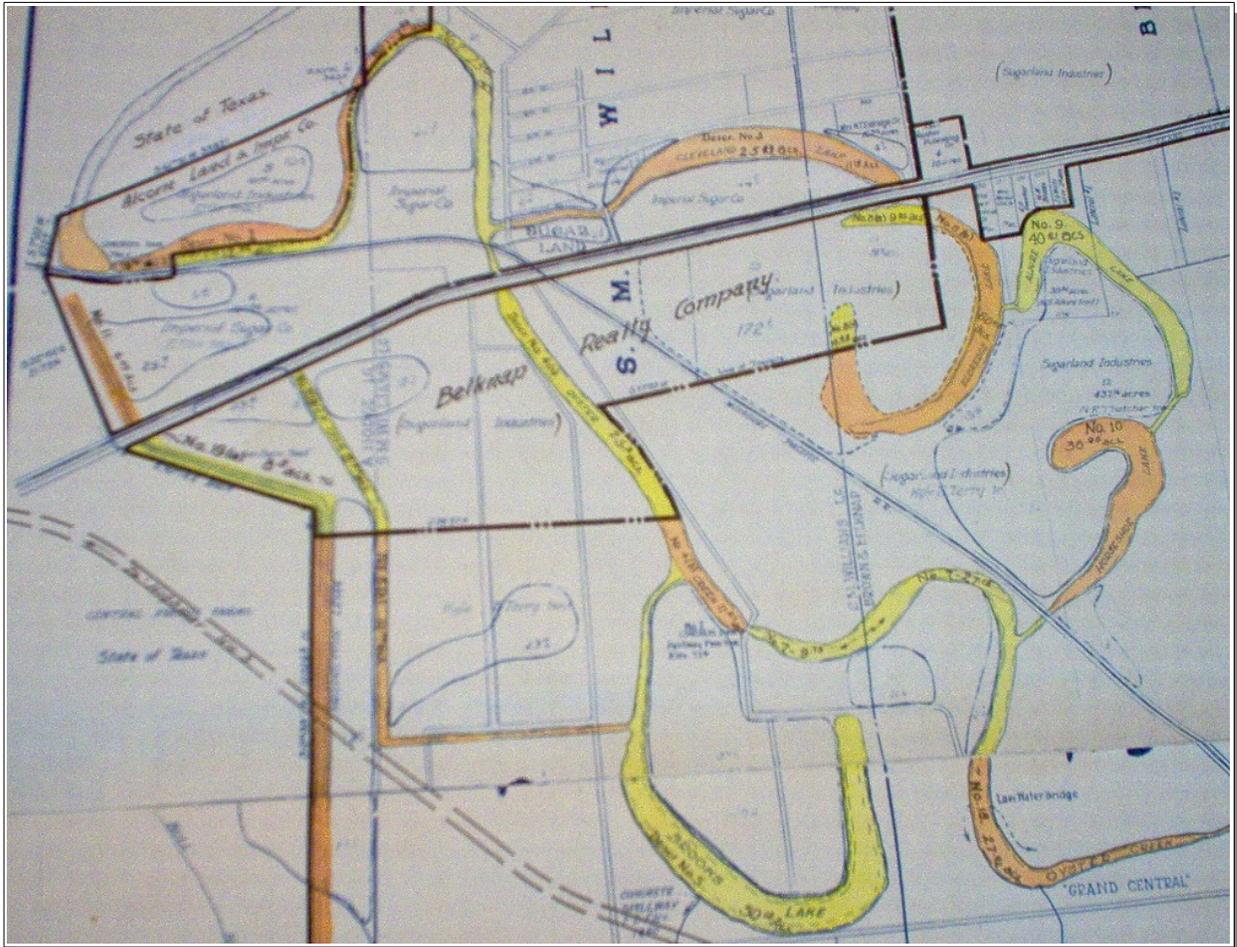
It would flood from the Brazos River all the way up to what we call 90-A today. That's how far the flooding would happen. And the Brazos River here as you can see on this map (pause looking at map) comes down to Sugar Land. Here's the Brazos River coming down. Sugar Land and Oyster Creek and Highway 90 would flood from the Brazos River. The Brazos River in the early stage was navigable, as you know. Ships, small ones admittedly, would come up the Brazos River. And the first point where they actually had a landing was in Richmond. That particular point was Fort Settlement on the Brazos. They came up the Brazos River to Richmond, and they put up the fort right there. The Sugar Land area, part of the original Spanish land grants, was very fertile and primarily used for farming and growing sugar cane.

GOODSILL: Bruce Kelly pulled a article talking about the horrendous floods that happened on July 6, 1899 and wiped out a lot of Colonel Cunningham's property and crops in Sugar Land. And then the 1900 storm wiped out the area again. And in 1913 there was a big flood event.

ANHAISER: There was another in the 20s. All those floods triggered the idea that we'd like to remedy those types of situations, particularly on the lands that the Kempner's had purchased for Imperial, it wasn't Imperial Sugar at that time. He purchased the Cunningham lands about 1908, somewhere in there. And they experienced the floods and the loss of the crops. And so they said, "We don't really like that."

So they started the Fort Bend County Water Improvement District No. 1. I think it was one of the first districts in the state of Texas. At that time the state didn't have any rules for water control improvement districts. The counties actually issued the formation of the district. Mr. Kempner's idea was to form the district, build levees, and protect his land from flooding from the Brazos River. And so that's exactly what happened.

On this map you can see the original levee along all this land that belonged to the Kempner's. The levee pretty much protected them. This is highway 90, right here. We are here at Hall Lake. They put the levee in here and it went all the way down to this location and then across to protect them from the Brazos River. You have a levee here but it's not the original levee. What happened was when they decided to develop First Colony they dug out that levee and made a new levee. And this levee became Ditch H.



Where Ditch H is now is where the levee was. And the new levee is moved over a little bit to the east. But the levee down protecting from the Brazos River is still the original one. Whenever the Brazos River comes out it couldn't get past this levee. Most of the properties that they intended to protect were the properties in the low lands near the flood areas of the Kempner properties. They had farm, cane, and other crops growing which they didn't want to have flooded. That was the idea of the levees. And there was a levee bond issue. The bonds are paid off and they levied all the structures. The landowners paid off the bonds many years ago. So the WCID-1 began around 1932. Then they got the levee built which protected Sugar Land.

They didn't worry about the Hill because it's high and never flooded. They say the Hill got its name from people having to back up their cars to get a running start up Main Street during rainy times. The cars couldn't really make it up there; it was still mud in those days. And so the people would say, "Man, I had a hard time getting up The Hill."

Here's Cleveland Lake. The Hill starts right here at this point. And when you go by the water towers you automatically see that the land is higher. We used to garden up there and all the land is black clay, which never flooded. We have had a lot of changes made by the old river over the years. Oyster Creek changed direction, as you know. You see these curves here? That is the Brazos River changing its course. These are the result of very old abandoned parts of Oyster Creek. If you go back and look at the original pictures of Oyster Creek particularly those taken by the Imperial Sugar Company it really was a drainage ditch. I mean it was just a small drainage ditch. The American Canal Company originally took a look at this and they wanted water coming through here all the time. Through Sugar Land in particular because you need water for barometric condensers. And they had a raw sugar mill here before they had a refinery. You need a pool of water. The pool of water for barometric condensers would be recycled so that they could get the vacuum by condensing steam vapors.

The first road was called Imperial Boulevard. It runs east-west behind Nalco. There were houses all along there. Those were the first houses built and people lived there first. There was a mill originally right over to the West of where imperial Road ended, then later moved. And the dams were put in here. There were three dams built. One by the old bridge near Cooks Dam, and one right as you go to Fluor. And then the third one is further on down by what is now Riverbend Country Club.

GOODSILL: On this map there's a point where Oyster Creek meets up with the Brazos. Tell me what happens there.

ANHAISER: Well, to get water over to Sugar Land they needed to clean the area out and then pump water from the Brazos River which would all come down to Sugar Land. The American Canal Company came into being long before the Brazos River Authority came along. Then later they dredged in conjunction with the Sugar Land Industries. And then the American Canal Company gave the canal to Sugar Land Industries in 1937, which gave it to WICD No. 1.

GOODSILL: Does the water in Oyster Creek ultimately come from the Brazos?

ANHAISER: No. There is a rather substantial watershed that drains into Oyster Creek.

GOODSILL: Rivers or aquifer?

ANHAISER: When it rains further north it drains down into Oyster Creek and flows to Sugar Land. The City of Sugar Land recently designated all the land in the watershed that drains into the Oyster Creek. Those maps are available at the City. When it rains up here it doesn't go into the Brazos it goes directly into Oyster Creek and that comes through Sugar Land. But the Brazos is so big that in order to keep a constant flow they pump water through the canal in this direction from time to time out of the Brazos. So the canal was originally put in there by American Canal Company for the Industries in Sugar Land. And they put the first dam in here primarily because, as you know, the Brazos River has lots of sediment in it.

ANHAISER: The dams are named Dam One, Dam Two, and Dam Three.

GOODSILL: But how are we going to locate Dam One for the readers?

ANHAISER: Well Dam One is located near Highway 6 behind Nalco. This dam would stop that water and let the sediment settle out so it wouldn't go into Oyster Creek. This sediment area is supposed to be dredged to keep that from happening. Back in the 80's Imperial dredged everything out because if you don't maintain the area then it fills up Oyster Creek with sediment.

Dam Two is right here at Fluor. And from there it goes on out and they sell a lot of water to the other counties. The Brazos River goes down this way. But you have other businesses and farms and things out toward Missouri City. Oyster Creek goes this way. There are canals that connect out this way, to get water in different directions.

GOODSILL: WCID sells water?

ANHAISER: No we don't.

GOODSILL: City of Sugar Land sells water?

ANHAISER: Originally the Brazos River Authority did in order to get water for industries and farms that were out in the country. But they have turned over their responsibilities to what we call the Galveston County Water Authority. So now the Galveston County Water Authority pumps the water from the Brazos and they have a contract with WCID-1 that allows them to come through Sugar Land because all of this is under WCID-1. And then it goes out to the different areas. All of this was agricultural land at one time and whenever it wasn't raining they could grow rice or different crops and irrigate. As Sugar Land Industries built up and needed more water for their processes they sold water to them. Now that well water is in short supply they are going more and more to surface water.

GOODSILL: Oyster Creek goes down to the Gulf, doesn't it?

ANHAISER: Yes, but it's a very small thing. If you ever try to follow Oyster Creek you'll see that it is like a little ditch in a lot of places, maybe four or five, eight feet wide. It is small down there.

There is another spot where they can pump into Oyster Creek further down the Brazos. You can see maps pumping areas over at the Galveston County Water Authority or Gulf Coast Water Authority. They have big maps of their entire system.

GOODSILL: Can the waters that flow through Oyster Creek in Sugar Land be regulated?

ANHAISER: What the dams actually were put in for was to keep a constant level so that the Imperial Sugar Company's barometric condensers could use that water for condensing the steam off the pans, which crystallize the sugar. The water would be re-circulated and you needed a pretty good volume because you wanted to keep the temperature down. You didn't want the temperature of Oyster Creek to go up. That's why the creek was dredged out so wide and so large to keep that volume in there.

And Dam Two would guarantee that there was always a volume of water in there. In order for the pumps to pump out of Oyster Creek you needed to regulate the level of water. Obviously if you allowed the water to drop too low the pumps would suck air, or if you let the water come up too high it would cover up the motors. So they wanted a constant level and as a result Dam Two has boards which you can pull out to regulate the level as you put the boards in or out.

GOODSILL: We interviewed Mr. Lawrence Alaminsky who took care of maintenance for Sugar Land Industries and sometimes in the middle of a very rainy night part of his job was to go down pull the boards or push them down and do whatever they needed to keep the water level constant.

ANHAISSER: Right, we used to keep an eye on that pretty close.

ANHAISSER: When Mr. Kempner senior passed away the family had to make some decisions about what they wanted to keep and how to pay estate taxes. The decision was made at that time to keep Imperial Sugar. The way I understand it, if they kept Imperial Sugar they would have to divest themselves of the land around Imperial that was in agriculture. They realized that Houston was moving out this way and that agricultural values were far below values for housing and development. So they made a deal to sell that land. When you use land for agriculture drainage and water needs are different than needs for a housing development. So they would have to have some very good drainage. Water falling on tops of houses and on concrete doesn't sink into the land. It creates a water management issue. As a result they came up with a plan to divert the water coming down Oyster Creek away from the areas that they were going to develop.

GOODSILL: This was all just prior to the development of First Colony by Gerald Hines?

ANHAISSER: Yes by Gerald Hines. You've got to be able to control the flooding. The water came down here through Dam One and up to Dam Two by Fluor. Sugar Land never flooded, never! Why? Because we ran the water down Brooks Canal into Brooks Lake and overflowed it here. And it would spread out across ranch land.

GOODSILL: Brooks Lake surrounds the Fluor complex.

ANHAISSER: That's right, but people didn't realize at that time that overflow was here at the end of the street. There was a street or a gravel road. When it filled up this would just run over the road and go right back into Oyster Creek and below Dam One. So that meant that all this area was protected from flooding and Sugar Land never flooded.

Okay, so when they wanted to develop First Colony they said, "Well we need to get rid of this overflow here and get rid of the possibility of flooding where we intend to build houses."

GOODSILL: And that was okay in the old days because it was agriculture?

ANHAIKER: Right. And it would all absorb. Well they came up with the plan to divert the water by coming down what we call Char Canal in the area of University Boulevard and Highway 90. This piece right here was Char canal. And there was a lake out here when they used to have a canning plant and all the water was put in this lake. They said, "What we're going to do is extend Brooks Canal over here and then drop the water straight down to the Brazos into Ditch H." That was the plan. Ditch H to the Brazos. That's what they did.

Now, they wanted an automatic control system here for the water levels. As Oyster Creek rose they wanted it to be automatically drained by the AMIL gates. AMIL gate is a French design based upon a counter lever. AMIL gates have big counter weights on them. There are three gates. And they would put weights in those big tanks to make sure that when the water got up two, three, four inches then each one of these gates would open up in sequence so the higher the water got the more water would go out. It was an automatic system.

GOODSILL: And where exactly are they located?

ANHAIKER: To the West of Brooks Street a little north of where Medical Center is now on the edge of Ditch H.

ANHAIKER: The AMIL gates release water not over the top, from the bottom. So that's a reversal of the thinking of most everything else. Dams all flow over the top. The AMIL gates flow under the bottom. The advantage of flowing under the bottom is that you have water pressure, which means higher flow volume. If you go over the top there's no water pressure. If you go underneath you'll have four, five, six feet of water pressure that's pushing out under the AMIL gates. So it'll put a lot more volume in, which is why you don't need a real wide AMIL gate.

GOODSILL: So it let's water from Oyster Creek out into Ditch H and down to the Brazos.

ANHAIKER: That's correct.

GOODSILL: To prevent flooding in the whole First Colony area.

ANHAISER: That's right. And that is designed to happen whenever the waters originate from the Oyster Creek watershed and above it northward. So that's the big advantage. You are taking care of the Oyster Creek watershed. The disadvantage is whenever the Brazos River watershed is flooding it backs up all the way to the AMIL gate, up Ditch H and it will be full as long as the Brazos is full.

GOODSILL: The AMIL gates stay close at that point. They can't drain, is that what you're saying?

ANHAISER: Right. So if you have a lot of water in the Oyster Creek watershed and the Brazos is in flood then you have a problem because the water cannot get out because Ditch H is already full.

GOODSILL: The problem then might be that the lakes and creek in Sugar Land might flood?

ANHAISER: Well, its possible. What they have had to do in some instances is pull all the boards and try to let all the water out as fast as they can down through the Oyster Creek drainage. Your danger is when the Brazos River is in flood stage. If you have a big rain in the Oyster Creek watershed drainage area then that's when the possibility of flooding occurs.

GOODSILL: So who's watching the weather so carefully and deciding when the gates should be raised? Who's doing that?

ANHAISER: Well all the gates basically operate automatically.

GOODSILL: Yeah. The AMIL gates do, but these dams...

ANHAISER: But the problem would be if they didn't operate automatically, if for some reason they don't open. They're not moving very much. It doesn't take much weight to move or open them. So it doesn't take much force to keep them closed.

The First Colony Levee Improvement District, who built the levee here also built the AMIL gates, and they were originally charged with maintaining and operating them. They hired an operating company to maintain it; it was their job to make sure that it worked. If we had a problem with it not working then it would be the problem of the First Colony LID. But at this point the city of Sugar Land has purchased the AMIL gates. They own the AMIL gates now.

And so now the City controls it and operates it and maintains it to ensure that we don't get flooding. The problem with another entity doing it was that if these AMIL gates didn't work it didn't make any difference to First Colony because they weren't going to flood. The AMIL gates keep the old part of Sugar Land from flooding, not First Colony. With the City of Sugar Land taking over the AMIL gates the City has a vested interest in not having any flooding.

GOODSILL: Is silt is a problem at the dams or at the AMIL gates, or in Ditch H?

ANHAISER: Well, right now the problem with the silt from the Brazos is that it's going to fill up Oyster Creek all the way up to Dam One to Dam Two with silt from the Brazos. And that's what Imperial Sugar Company used to dredge out.

GOODSILL: And now that Imperial is not in operation?

ANHAISER: Then the question is who's responsible!

GOODSILL: And the silt comes from?

ANHAISER: The Brazos River primarily.

GOODSILL: But once it gets to us we have the responsibility for the silt?

ANHAISER: Not really because GCWA caused the problem. And so that will be the argument. Originally the Brazos River Authority was supposed to maintain this sediment pond. It was their responsibility but they never did it. So it started filling up and that's why Imperial had to do it. They needed the water for the barometric condensers. So they did the dredging. Now it's filled up again so in the near future the issue of drainage will come up.

What First Colony did was build a system that has two drainage points. They're not shown on this map, but what (unfurling maps) you see here is Ditch H. What they did was pump water out into Ditch H at these two points. And that drains all this water out.

GOODSILL: All this water from Oyster Creek to Ditch H.

ANHAISER: No, it doesn't touch Oyster Creek whatsoever. It's inside of First Colony's drainage area. There's no help at all for anything that's in Belknap, Brookside, Hall Lake, or old Sugar Land. It's in the First Colony part. The other one is down here somewhere, and I'm not sure which street it runs into. These are pump stations.

And normally they flood whenever you have water in this area in First Colony it drains by gravity. But if the Brazos River backs up, through here, then they're equipped with pumps and then they pump it out. But when it floods it runs up this Ditch H...

GOODSILL: The pump takes further material out of First Colony into Ditch H?

ANHAISER: Right

GOODSILL: Then it just gets higher.

ANHAISER: Right. You just pump it over the top.

GOODSILL: That's why they recently had to dig Ditch H deeper and wider?

ANHAISER: Well they made Ditch H deeper and widener for two reasons. One, they wanted go up the airport; they wanted to do a bypass above Dam One into Ditch H. You see this piece right here which is Dam One? This is the part where the sediment pond is suppose be. They're going to run Ditch H right around here and across and connect it up here. And so the waters from the airport won't come to Sugar Land at all. They're going to be diverted into Ditch H before it gets into Sugar Land by here. So that the AMIL gates won't be over capacity.

GOODSILL: It sounds like a good plan.

ANHAISER: Yeah. So that's the plan, hopefully, if they can ever get across the railroad track. (laughter) The other reason that you had to widen it was because of all this development that's going on in Telfair. Telfair water is all going into Ditch H. So that's why they had to widen it out. And this last part had never been widened. You saw it all the time, and you assumed it was wide all the way to the Brazos, but it wasn't. It had never been finished. That was a big project.

GOODSILL: Telfair and Riverstone right?

ANHAISER: Yeah. They're all drainage. Drainage is going into there. That will be a lot of water.

WIDMEYER: Concurrently with this for the last 30 years they've been building levees too?

ANHAISER: Yeah, everybody's building levees. That means that you're not going to be flooding the Brazos. It just means that the Brazos is going to get higher and higher with nowhere to go. And so the question is do we have to do what they're doing in Louisiana and New Orleans which is put a gate on Ditch H to prevent the Brazos from coming back into Ditch H.

What happened in New Orleans was Lake Pontchartrain went into their canals like our Ditch H. And then the canals filled from the water from Lake Pontchartrain not from the water that fell on the city. So now what do if water comes up right up to the AMIL gates? Commissioner Patterson had the foresight to put in check valves so when the Brazos comes up Ditch H it can't get into the Char Canal and backup. And if you go to this bridge that crosses State Highway Highway 6 near University you'll see where Highway 6 goes over Ditch H. They have automatic check valves in there that are suppose to close whenever the water backs up this way. And that will prevent the water from going back to the AMIL gates. And there is also another one that's further up here that would backup in the Belknap-Brookside near where the fire station. If you follow that drainage ditch all the way down to Ditch H you'll also find check valves to keep it from backing up in Belknap-Brookside.

So those are the kinds of things that the county has done to protect the subdivisions here from the Brazos River. But at some point one might have to consider stopping it at the Brazos. Every time you put more development along the Brazos and you raise levees, water can't get out or spread out. It's just going to get higher, and higher, and higher. That will be an interesting problem to solve.

WIDMEYER: So let's say we get a terrific rain in central Texas and then three days later we get a big rain here. That's not going to be good.

ANHAISER: That's correct. The flooding in the Brazos River at Sugar Land area is not caused by water falling in Sugar Land. It's caused by water falling in Waco, Dallas, up there. So we don't really have to worry about a big rain here on the Brazos. But as you're saying if we see a lot of rain up there in Dallas, Fort Worth, Waco you'll see that the river will start to go up. Now every tributary to the Brazos that can be dammed, is dammed, every one. However, they were put in to protect from flooding but because of a "perceived water shortage". Way back when they did away with well water. So now they keep the reservoirs full. The result is that when they have a big rain the reservoirs are already full whereas, they used to be empty. So the areas meant to fill up are not able to.

If those dams are not regulated correctly and they release the water then we end up back where we started with a wild Brazos River. And that's a concern. What is the probability of a flood in the Brazos River and a flood in Oyster Creek at the same time? They say it's small. But what was the probability of Hurricane Katrina doing that to New Orleans? It's small. Or the probability of what happened in Galveston in 1900 or to Bolivar during Ike? It's small but totally disastrous when it happens. How we solve this problem is going to be very interesting. And your question is exactly valid. What happens when both of them flood?

WIDMEYER: What about when Riverstone is completely developed? Is that going to make a mess of things down there?

ANHAISER: Well, as far as drainage is concerned it is below us so it's not going to hurt us. It's the developments above us that are a concern. The water from the Brazos comes down to us and if you get too much water up there then the Brazos rises. By the way if you're interested, every day the Brazos River volume at Richmond is put in the paper. So you could keep up with the flood stage. It's also on your computer. The Brazos River Authority has a website that shows all the lakes, how full they are, and how much the water is in them. So you can keep up with it quite well.

GOODSILL: I want to go back to silt again for a second. The silt is building up between Dam One and Dam Two.

ANHAISER: Correct.

GOODSILL: And what happens when silt builds up in a creek?

ANHAISER: Well, last time that it built up too much, you could almost walk across from Main Street where Lakeview comes in. You can almost walk over across all the way over into Mayfield Park. I mean it was soggy, but there was only a very little ditch there that was really water. The rest was all silt.

GOODSILL: So it messes with the water flow? And can create flooding?

ANHAISER: That's right. There's no volume to fill up. At all. Now we don't do a lot of lowering and rising of our Oyster Creek level; however, we can. And if you lower it like we did before, before the last hurricane, when we anticipated a lot of rain, thank God we didn't get it from Ike, we were on the dry side. But a few miles different would have created huge amounts of water here.

What Imperial always did periodically was pull the boards in Dam Two and let the water go ahead and get out of here. And then we could pick up a lot of water in the Oyster Creek area before it would even get up high enough to begin a threat for flooding. Unless it's all silted up then there's no volume whatsoever and it's all going to come through here wide open like it was back in the 1910, 1900s, early 1900s. All fish life and everything else will disappear. And people will be sitting on a muddy bank instead of water. So far as the looks of Sugar Land it would be a huge loss.

The other thing is that the people in Stafford and Missouri City are building a surface water plant. They're happy because the water doesn't have any sediment in it. But that's only because the sediment is being dropped out here in Sugar Land. Once that sets up, the Brazos River sediment is going to go straight over Dam One and straight down to their surface water plants. They are going to find a huge problem because they're going to have to remove all that sediment before they can process it for surface water.

GOODSILL: Well this gets us to the next thing. Would you like to educate us a little bit about the conversion from ground water to surface water?

ANHAISER: Well, I think that's basically one of purification. It's just really a matter of removing the sediment. The water comes from surface. As it rains the rainwater gets into the streams. Most of the contracts for the surface water plants are from the Brazos River Authority to the Gulf Coast Water Authority. That water is mostly coming from the Brazos River, which is high in sediment and very high in salt and chloride. The first surface plant will be out in Stafford. It's going to be in the City of Stafford, and it's in the WCID number 2. That's the Stafford Water Distribution Agency.

GOODSILL: Will Sugar Land be getting their water from them?

ANHAISER: No!

GOODSILL: Sugar Land is going to have their own water?

ANHAISER: Yes, Sugar Land has a different program. We're sitting on a river, an underground river, and we have a lot of water flowing through here. However, the state has mandated that you have to be using a certain percentage of surface by a certain year. WCID-1 owns a lot of water rights and we have maintained those water rights as senior water rights all along. So we have quite a bit of water that can come right out of the Oyster Creek watershed and be used by the City. We now have a contract with the City. And the City can utilize that water.

The best way to use surface water is in using it to sprinkle public areas because then you don't have to treat it. If you don't have to treat it, then it saves you a lot of money! And what we could do is take all the water that normally goes for sprinkling and irrigation from the surface water which would allow us to just treating well water for our drinking water, which would be perfect.

Basically the theory is if that if you're using...just take a number...say 10 or 20% of your well water. It shouldn't be used to water your front yard, or open spaces, right of ways, or golf courses. It's not a practical to use surface water. All of that could be hooked up like it is at Fluor to be sprinkled from Oyster Creek. That will not subtract from our well water. We not trying to percolate it back down, we're just trying to subtract it from our well water usage.

Will the City of Sugar Land have to build a surface plan? They're studying it. And they're running water test. They're getting ready because if the City of Sugar Land annexes New Territory, and so forth then their picture will change. They may have to do a surface water plan in order to meet the state requirements. But it depends on how many people are in your area. And we are going to be annexing quite a few areas from what I understand. So if Sugar Land stayed the same size it is right now, we wouldn't need a surface water plan. If they annex all those others, the possibility is yes.

The other political question we don't know is will the state change rules. The state may say instead of 20% we want 30% or we want 40% surface water. So if they change those rules, then the game changes. The state really doesn't know how much surface water they have. So how much surface water is for sale? And the City of Sugar Land already has contracted the significant amount of surface water from the Gulf Coast Water Authority. The question is, is that water really available because no one is pulling that water and they have a lot of contracts. So if everybody starts taking that water will there be enough? If you have a drought then you won't have the water needed.

GOODSILL: Even if you have the contracts (laughs).

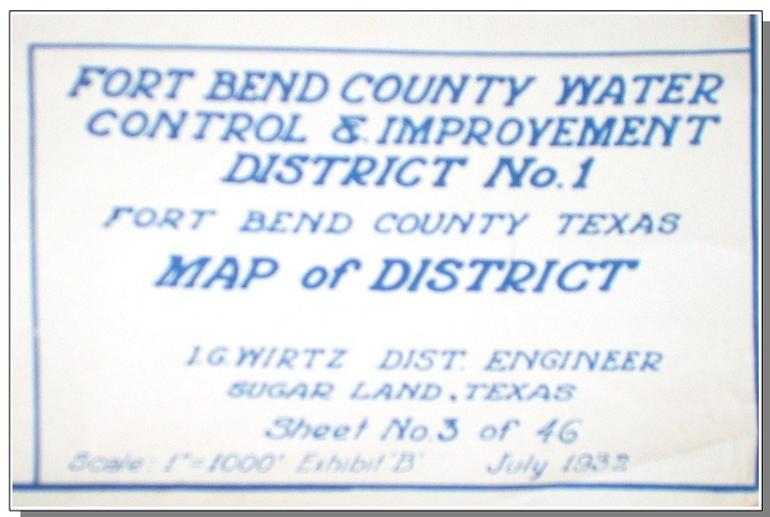
ANHAISER: Yeah, even if you have a contract, you will not be able to get the water, so it won't do you any good anyway. So it's an interesting thing...and why do we want to go to surface water? We know that if we pull too much groundwater out of the earth then you can have a problem with subsidence.

WIDMEYER: Houston is so fortunate because they annexed huge amounts of lakes, for their surface water needs. They don't have to worry about subsidence.

ANHAISER: Well, to go back a little in history, Fort Bend County has a subsidence district, and I was involved in getting that subsidence district created. And the reason we established it was because the City of Houston was bringing water wells into its peripheral areas like Missouri City and all around us. And they were building what we call clusters of wells. They would pump so much water out that they were causing subsidence in Missouri City and Sugar Land. And we had no authority whatsoever to influence that process even though we were sinking. So we snuck in the last day of the legislature some years back asking for the right to create a subsidence district in Fort Bend County. And by the time it was signed Houston didn't find out about it and they tried to get that reversed. But since it was already a law, and the legislature was gone, it was too late. We formed a subsidence district in Fort Bend County immediately. And Houston then was forced to shut down these wells. We forced them to shut down those wells and go to surface water. We still have a subsidence district in Fort Bend County. They still monitor all the wells, including in Sugar Land! They have certain limits on how much water can be pumped out of each. And most of those wells are private going in the lakes, like Venetian Estates.

GOODSILL: The lakes that exist in Sugar Land other than Cleveland Lake, which was dredged, are natural lakes?

ANHAISER: Well all of these were dredged. Basically the issue was all about drainage. Like Venetian Estates, we used to go over there and it was a swamp. There were alligators it was a big swamp. You could go out there and fish and get turtles, and alligators, and stuff like that. At Venetian Estates they went in and just pulled out all of this dirt and piled it up. Since it was a low area, they went ahead and they put in wells and they keep the lakes full of water with well water and that's why it's so nice. There is an overflow there however into Alkire Lake in the back. There is a dam where you can see water flowing over the dam.



WIDMEYER: Lily Lake is the most recent one that they're pulling soil out of to build a levee. This levee is going to be a real help.

ANHAISER: Everybody is putting in levees (laughs). So what's going to happen there? (unfurling map) That's a drainage thing. The big issue is as you put in more levees and keep it in the Brazos is it going to get higher and higher and people in this drainage area (Sugar Land) are going to be put at risk unless we keep it out. It may be that eventually we'll have to come down to Ditch H and put in a closeable gate during the flood, and then put in pumps to pump over.

And that's the problem. Right now they're pumping over in case of a flood in First Colony, as those two points. But when we talk to people about that in the county, one of the problems you run into is will you have electricity whenever you need it? And then the power companies...if you want to put in a bunch of pumps and they're going to have to supply them but you don't pump them but very rarely, then they want to charge you a lot of money for stand-by power. And so that becomes another expensive ongoing problem. So that's one of the things that'll have to be addressed in the future.

The Brazos River is slow flow and low flow. When the Brazos is pretty low you see a lot of sandbars out there. And that's because they are filling up all those dams with water, surface water. It will silt a little bit, you know, that's what it's doing.

GOODSILL: Does it clean itself out?

ANHAISER: When you have a big flood a lot of those sandbars will go away.

GOODSILL: Get wiped out? Huh.

ANHAISER: Yeah, and it's pretty dangerous whenever it's really going. It really moves in a hurry. People drown because of the speed of the water. They don't realize it that it flows that fast. Well, you know any river takes the flow of least resistance and so you get all these little crooked things here going on... (laughs pointing out the undulating course of the river bed)

The other big argument is that the wildlife is trying to survive on fresh water and the saltwater comes too. If you don't have enough fresh water there you lose your wildlife. That's a big problem now with dams everywhere you never have a constant amount of water. And you lose your crabs and your shrimp, and your other fish that need that low salt water.

GOODSILL: Very interesting. Lot of issues involved with this.

ANHAISER: Well, we've been lucky for years but as you pointed out earlier our biggest problem for a flood here would be a combination of the Brazos and Oyster Creek flooding at the same time. And they'll all tell you that the percentage is very low. But if it happens we would be pretty much wiped out just like Ike wiped out Crystal Beach.

WIDMEYER: FEMA will be releasing their flood insurance rate maps in June. Probably going to change everything here. They'll probably research all the levees because we built them up two or three feet.

ANHAISER: Well, that's a very good point that you're making. The levee height has been raised now three times that I know of. So it means that they're expecting the Brazos River to get higher and higher. That means we've got to raise our levees higher and higher. And what that affects is, for instance, this house is a couple of feet higher than Brookside because when they built Brookside Belknap the flood area was considerably lower. But when they built this house they said you have to have a higher foundation because we've raised all the water calculations because of the Brazos. So now they did it again because the Brazos has more and more levees on it so there's less and less water that's going to be able to spread out. So I predict that in the next 15, 20 years they'll raise the levee heights again. I was talking to Commissioner Patterson, "You ought to throw in a couple of more feet now because you're going to get it. It's going up for sure." (laughs)

WIDMEYER: I think FEMA is saying that it's three feet higher in the 100-year flood plain than it was. That's pretty substantial.

ANHAISER: Well, let's talk about the 100-year flood plain. What does that really mean and where do they get their numbers? I know that since 1980 the Brazos River has been out of its banks three times. So that is three hundred years. I don't think the 100-year plain means anything because we've had it three times since 1980. So in what 50 years... 40 years we've flooded three times. And the longest it was out of its banks was over thirty days.

GOODSILL: If flows out over the Brazos then laps up against the levees does it potentially weaken the levees?

ANHAISER: That's right. And that's exactly the fear that we have now. In Louisiana they found out those canals that were built by the Corps of Engineers were suppose to put 42 feet of metal barrier down. I've been there and took the tour. The water went under the levee and they found out they had only put 22 feet down. So now they're having a lawsuit, where did the other 22 feet go! The lawsuit is about the Corps of Engineers not following the construction plan.

Our situation is a lot different because we don't have a Lake Pontchartrain. But our levees can be breached by not paying attention to the little critters who make a lot of little holes in there and you can't even tell that they've made a hole in there cause the grass might be over it. Leave it one little spot and that water can start coming through. So that's why they say we've going to have to inspection the levees all around Sugar Land. And I don't know how you do that exactly; some of those have been there a very long time so the good news is they're hard packed. The bad news is some critter drilled a hole through there. Nutria are really good at that.

GOODSILL: Anything that we haven't asked? Anything I forgot to ask about or anything that comes to your mind?

ANHAISER: Well, no I think we have covered about the main parts. The drainage and I think what you brought up about silting is going to be our most immediate problem in the near future. The problem is, is how do you get silt removed that's already there. What do you do with it? What we did last time to take the silt out. I don't know if you ever saw that piece of equipment.

GOODSILL: The hose that floated on top of the water?

ANHAISER: Right. But the way the barge worked it has double screw conveyor that was movable up and down. So all we did was add a big pump on top of the barge and a screw conveyor. And we lowered the screw conveyor, which would dig up the sediment. In other words, the pump then pumped water out of Oyster Creek and fluidized the sediment. That fluidized sediment went into a floating pipe that went all the way down Oyster Creek to build up tract 3. They're going to start building in there now. But this is Dam One. And so they would go in here and we would build a system up diversion levees, small ones and the water would then go like this and all the sediment dropped out over here.

And then the water went right back in Oyster Creek. So no water was lost. It was just re-circulated. You don't have to get in people's yards or anything else, just tie up to the bank. But it takes a pretty good while to do cause there was so much but it's a nice system.

GOODSILL: Show me how much you dredged.

ANHAISER: The first thing they did was clean out the sediment pond before Dam One. Then they started at Dam One and worked all the way to Dam Two. But most of this wasn't filled up. The worst was near the bridge at Highway 90-A.

GOODSILL: Right by the Teacherage!

ANHAISER: (laughs) Yeah, this is where you are going to see it fill up again. Vegetation is starting to growing in it now.

WIDMEYER: That's on the west side of the tracks near Highway 90 and Brooks Street?

ANHAISER: Yeah. WCID sold the property from Dam One to Highway 90 to the City of Sugar Land. You can go in from Highway 6 to this point. Instead of having to come up Imperial Boulevard behind Nalco because that's fenced off. I mean you have to walk.

I would say that on The Hill you're never going to have a flooding problem. The Hill is going to be fine. The City has spent a lot of money on drainage in Sugar Mill recently. Because what happens is that Houston north of us is pretty lackadaisical about worrying about Sugar Land. They just dump the water on us. I'll give The City credit here recently. They've spent lot of money getting that corrected.

WIDMEYER: I don't know if we'll see another event like Tropical Storm Allison. I was living in Meyerland then. That water...it looked like houses were floating on water. It was up to the roofs, that was how close it was.

ANHAISER: In Sugar Land what they're doing now with all the new subdivisions is they're really raising the foundations. They're using the streets for drainage. The possibility of getting water in the houses is pretty small cause they're pretty high.

GOODSILL: Thank you very much for this interview, Leon. It's been very interesting.

Interview Ends