ORAL ARGUMENT – 10/09/02
01-0362
TARRANT REGIONAL WATER DISTRICT V. GRAGG

RATLIFF: Mr. Knizely and I are here today on behalf of the Tarrant County Authority complaining of the judgment of the CA affirming a multi-million dollar judgment against the Authority based upon inverse condemnation of the Gragg ranch.

We had asked that a copy of defendant's ex. 18 be distributed to the court, which is a simplified graph of the physical situation that existed, and that exist in this case. And on that you will find the Richland Chambers Reservoir which is a reservoir operated and maintained by the authority, as well as a separate reservoir to Cedar Creek. Also you will find the location of two gauges, the location of the Gragg ranch which is bisected by the Trinity river and also _____ creek runs through it.

As was clear at the time of the trial in this case, and as one of the plaintiff's experts said, this graph was oversimplified because it does not contain hundreds of tributaries which run into the Trinity river.

The questions here are whether there is evidence that will support causation, whether there is evidence that can support inverse condemnation, and whether the TC erred in trying all of this before a jury instead of bifurcating as the district had asked.

HANKINSON: Would you tell us what the standard for causation should be in a case like this?

RATLIFF: Should be that, but for the construction of the improvement, there would not have been either a damaging or a taking of the property.

HANKINSON: Does that mean that it is a proximate cause, or should it be the proximate cause?

RATLIFF: I believe that it only needs to be a cause, but it needs to be a cause that directly results from the construction. The claim here was, is that the construction and operation of this reservoir in and of itself inversely condemned the Gragg ranch which is located about 7 to 24 river miles down the Trinity river. It is also located about 7 or 8 miles across an area. If you recall throughout the briefing in this case, the claim has been made that this reservoir and this dam was aimed immediately at the Gragg ranch. That omits the fact that there is intervening property of about 7 to 8 miles between that outlet and the Gragg ranch even if you go as the crow flies as opposed to river miles.

It's interesting to me both on the taking issue and on the question of whether

they could establish cause that the plaintiffs concede that not every flood on the Gragg ranch is the responsibility of the authority even after the dam was built. It is clear that this property has always been subject to innendation.

ENOCH: Is that important to your position that you cannot have a taking unless every flood from the day after the dam was built to now causes a distinct set of damages to the property as a result of the dam?

RATLIFF: I think it's important in this regard and, that is, it does require that a plaintiff establish what it was about the district's construction and operation in a particular flood caused damage to the ranch, whereas another flood, same operations, no damage. I do think it's important there.

I also think it is an important fact if they are saying the mere construction and operation of this dam resulted in an inverse condemnation of the ranch how do they explain that it does not invariably do so. And as a matter of fact, one of the points made by the plaintiffs in this case is that on hundreds of occasions the authority had released more water than would have naturally flowed had the dam not been there. And yet they did not, and could not, document hundreds of floods.

Now the fact of the matter is in terms of this case, what they have now said is, the changes that destroyed this ranch aren't addressed by computer models or data analysis. I would submit to you their experts were not present at the Gragg ranch when the damage occurred. They were testifying as experts normally would from data and from analyses. The plaintiffs have now apparently renounced that.

O'NEILL: I think I hear two arguments. One is that this was nothing more than more of the same. At what point do you have to pass to distinguish it as more of the same - meaning just more flooding than before verses this fundamentally was different than flooding? It changed the nature of the flooding so dramatically that it was a distinct cause.

RATLIFF: Let's deal with that. They reject the computer analyses that would take a discharge at the dam and take it down the Trinity river to the Gragg ranch. They say both the ones the district used and their own, we can't tell you what happened at the Gragg ranch, we don't know, we can't tell you what percentage of the water that flowed onto the Gragg ranch came from the discharges from this dam.

O'NEILL: Is that a distinction that makes a difference in our legal analysis as to whether it's just one more grain of sand in the typical type of flooding, or whether it's a fundamentally different thing?

RATLIFF: There are clearly situations, and this courts faced them in cases, where if I'm discharging water directly on to your property, that is an entirely different matter than if the water

is simply following a natural grade into the stream or the natural grade into the property.

O'NEILL: So if the proof showed that there was a cause in fact between this improvement and a fundamental change in the nature of the flooding, and we can argue about whether the evidence was sufficient to get you there or the reliability of it, that would be enough as a legal matter in terms of the analysis to create the distinction between?

RATLIFF: I believe that the law would be that if they could establish that the flooding was different in character in the sense of it was more frequent, and they go through a lot of these words in this record, I believe if they did that and they could attribute how much of that frequency is the result of this consultant...

O'NEILL: But what I was reading was not so much frequency as character.

RATLIFF: I know they used the word character. The only thing I can hook that to is they talk about surges. You can search this record and you will not find one measurement of that surge.

O'NEILL: I want to get away from the evidence. I want to get more to the analysis.

RATLIFF: If they could establish that there was a surge of water that because of the construction and operation of this dam that invaded the Gragg ranch and that it did it repeatedly, then they would have a case I think. Because I think we agree that if I had increased the frequency of the flooding, I've increased the severity of the flooding, I've changed the nature of the flooding, and that is caused by the construction and operation of my facility then, yeah, I think we're dead into a taking case.

O'NEILL: So we really are arguing about the evidence then?

RATLIFF: We're arguing about the evidence clearly.

O'NEILL: And not the legal standard so much?

RATLIFF: I believe in terms of inverse condemnation, there's a question about standard because in this instance, if you recall, the trial judge found as a matter of law that the taking occurred on May 7, 1990. That was the first discharge in a flood condition from the Richland-Chambers reservoir. Now how that meets the test for repeated flood in order to arrive at an inverse condemnation, I think is a legal test. But in terms of the principal attack that we make on the judgment below, what we're saying here is it's one thing to say that it changed the character, but that doesn't dispense with the proof. They talk about these surges. And yet their experts, all you have in the record is their conclusion because they've now disavowed the X-FOR(?) as necessary for their proof. They said it's not data driven. So what drives it?

OWEN: On page 17 of the respondent's amended response to the brief on the merits

they talk about the X-FOR, and they say that they demonstrated through that computer modeling that they compared the natural flows with the reservoir's altered flows. Where from and to does the X-FOR measure those flows?

RATLIFF: First of all, the X-FOR was based on in terms of the amount of water from the dam structure itself through the gates. The X-FOR was not based on actual flows. It was based upon calculated flows based upon 10-year flood, 25-year flood, 50-year flood, 100-year flood.

OWEN: But how far downstream?

RATLIFF: At the dam. They said that there was inadequate gauging of rain gauges, river gauges. All of that for them to say with any adequacy where that water that was discharged at the dam according to their theoretical calculation whether any of them reached the ranch. Because they said we didn't do that study. And as a matter of fact, one of the things that I thought is interesting is their experts have said they were originally asked to determine how much water was coming onto the ranch during the floods and whether the source of that water was the reservoir. The experts said once we eventually got in to it, we realized there wasn't enough data to do an accurate job, and you know basically for us to do that we would just be taking money away from the Gragg ranch estate. They said we can't separate out the water from the river, and the water from the dam.

HECHT: What significance do we give the eyewitness testimony?

RATLIFF: Not to make light of it, but I kind of call it like in a personal injury case it was kind of grunt and groan testimony. Those people couldn't testify to causation, because first of all they were standing at the ranch. They were observing the situation after the flood and they just said boy it looks worse down here than it did before. Well as we point out in the brief, there are several reasons for that. One, 1990 was one of the wettest periods that had ever been there. In fact, those witnesses with the possible exception of one had never been on the ranch prior to Mr. Gragg owning it. And so it occurs to me that causation from a remote facility is particularly one that is expert driven. And a lay person can stand there and say I watched the water come down and I watched it destroy the road or the levy. That lay person can't tell us where that water came from. And if you look back at defendant's ex. 18, you will see there is a very large tributary at _____ creek that runs into the ranch below Richland-Chambers.

You are talking about a drainage area here 12,0000 square miles. You are talking about 7 or 8 Corp of Engineers flood control dams. You're talking about 7 or 8 water supply dams. And in this case, the plaintiffs pled that originally that the other reservoir Cedar Creek had caused a part of the flooding on the Gragg ranch. They dropped that for the _____.

HANKINSON: In looking at the causation issue if we were to disagree with your Havner, Robinson, Daubert arguments, is there legally sufficient evidence of causation even reviewing the expert testimony that was offered by the plaintiffs even taking it into account?

RATLIFF: You're still not, because of the point that J. Owen made. And that is, they never attempted to measure what was going on at the ranch. They never attempted to measure what happened once the water came out of the stilling basin and ran to the channel into the Trinity. They never measured it there.

PHILLIPS: Absent a total failure, absent this being a new reservoir, could the plaintiffs ever prevail without having rain gauges and also water flow gauges up on the ranch before the dam had its first discharge?

RATLIFF: I'm not enough of a hydrologist to know. But I would have to be candid. I think it would be quite difficult. And I think that's what's pointed out I believe in the Wickham case where they say basically when this water goes in with the flood water that destroys an inverse condemnation because there's no way to parse out what occurred.

O'NEILL: That's where I get confused. If it's just water levels and measurements it seems to me that the argument is it's just more of the same. It's just still flooding but it's just more water. Whereas, the argument here is, the dam caused the fundamental change in the nature, not really the amount necessarily, but the nature of the flooding. It happened quickly. It wasn't slow rise. And that that's the distinction on the hydrologist.

RATLIFF: I think that is the distinction they are trying to make. But many of their quotes where they say the floods were worse, what they were saying is is that if you go down to Oakwood gauge it was higher than it had been before. Not that it necessarily - because they've already disclaimed that they can tie destruction to something coming from the dam.

O'NEILL: But if we were to _____ the records, which we are going to have to do, and there were evidence that the character of flooding had changed before the dam verses after the dam, and that fundamental change in character is traceable to the improvement, then you would say they've made their case?

RATLIFF: I would say that if you can do that on something other than simply the ipse dixit of the experts, then you have at least proved a case that the dam in its operation had caused the destruction or taking of the property.

O'NEILL: So regardless of more flooding, less flooding that becomes less relevant. It's more than nature.

RATLIFF: I think it's important in analyzing of the record to recognize that when they say worse flooding in many instances all they are talking about is, there was 4.5 ft of water on the Gragg ranch, and if some of their calculations might have been right it might have added another 2.5 inches on top of the 4.5 feet.

O'NEILL: But again it is not the amount. If it was added quickly that is what I

understand to be the problem. There were cattle and you couldn't move them out quickly enough. It used to be a slow rise. Now it's all at once.

RATLIFF: All the evidence from these plaintiffs is they never lost a cow. They were always able to get them out. That they had hours in order to do so. There was a subsequent lessee that lost some cattle. We don't know the circumstances under which he did.

O'NEILL: But again level might not matter. You would agree that what we need to focus on is if there is a fundamental change in the characteristics of the flooding that is traceable to this improvement, after looking through the evidence they would have made their case?

RATLIFF: I think those would be the things you would look at.

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RESPONDENT

SODD: This case is not now and it never has been about causing floods by this lake. I represent ranchers who applied their trade on a ranch that was designed to take advantage of the free fertilizer from floods. Water would back-in behind an extensive set of constructive levies and deposit free fertilizer. We love floods. We never have said there was one more flood, not one, caused by this lake. This case is about nothing but drastic changes in the character of flooding. Floods came quicker with less warning. And I've given you some graphs in your handout that show how much quicker from computerized simulations. Not just the X-FOR simulation, but we have two models. The Heck model that the district used. And one of their graphs is from their models and it shows floods arriving quicker. It shows floods staying longer. It shows the kinds of things that ruin this ranch for a cattle operation.

In this trial every piece of evidence, the district release records, and you have a PX25 there that shows you natural flow 2,000 cubic feet per second, what they are releasing 15,000 cubic feet per second.

OWEN: The briefs seem like they are talking about two completely different records. And it's kind of hard for me to reconcile...

SODD: It's my great frustration about this entire lawsuit is that we can't get passed what the district's argument at trial was. The rain caused flooding. We didn't cause flooding. We even tried to get them to stop talking about it by conceding it in the record.

OWEN: But for example, at page 4 of their reply brief. You talk about the flood waters being very fast in velocity as opposed to one mile per hour floods. They are now much faster moving. And they say no the record doesn't back that up. They say the release of the floodgates may have been 40 mph, but by the time it got to the stilling basin it had slowed down to 1 mph.

SODD: May I approach this map? You have a small copy of it at your desks. It's PH 10. This is the lake. The copy you have from the defendants that they introduced at trial neglected to show the discharge channel, which is a big factor in this lawsuit. The evidence is, this is a nearly 2 mile long discharge channel. The river flow is coming in this direction. This channel blocks over ½ of the natural Trinity river flood plain creating what the experts call the _____. It speeds the flow of the river waters up. This is a 6 mile dam. All of the water behind this dam is concentrated into 24 gates and it's all released down this narrow, high sided channel aimed right at this ranch. When you increase the release amount suddenly at the top of each hour like they do it's just like pouring a big pitcher of water in your kitchen sink. It makes a wave go out across. They call them transitory waves. Both sides experts admitted a) we have big sudden increases; one of your graphs we have 135 exhibits, but one of the graphs you have show a sudden increase from a little bit to a lot at one time. That makes a big wave. And it's confined. The wave can't spread out until it gets out of this discharge channel.

The question what can the eyewitnesses see? Can we measure it first? No you can't measure it. There are no gauges in here to measure velocity, but neither the Heck models that the district did, none of the hydrology measured velocity. That's not what it does. It measures flow levels. The eyewitnesses saw, they drive over and see the gate is open, they can see these surges in high velocities crossing the ranch. A pilot from an airplane could see the fast flowing water coming across here with the gates open. Up above the lake the same slow easy flow of the Trinity river normally. Fly back the next day and the gates would be shut, the water in that same flood flowing across this ranch had calmed down and it had slowed. He could see it as well as you could see it if I took a hose and hose Mr. Hatchell down. You couldn't measure it. Neither could an expert. But if I knocked him off his feet with a fire hose you would be able to see it.

OWEN: Where's the wildlife refugee that they talk about?

SODD: The district owns all this land between the back of the dam and my client's property. This is the wildlife refugee that we're talking about. Some of it they gave to the state. But they bought this property. They didn't buy this because of the significantly improved nature of this ranch. That's really what this lawsuit is all about. Those surges could be seen coming all the way across here to this ranch

OWEN: But they say there weren't any of the digging out or any of the other damage that occurred on the wildlife refugee. That's their argument.

SODD: The evidence is controverted on that. It's disputed evidence in this record. We believe it did. There is a ranch up in here who had some of that same sort of damage. They said no we don't see a lot of that damage in here. But that's what they claimed. That's one piece of evidence and under the standard of review it didn't carry the day.

Eyeball witnesses saw those surges coming across here. There are no levies in here. You must understand if I flow fast water across this floor you might not see anything hurt.

If I flow fast water under your bench hard enough it might knock your bench over. These were the only raised levies, the ones that protected this ranch from the flow of river waters coming through. When those waves hit those levies they tore those levies out. When they tear the breaches in the levies then you get a real fast flow through the breach. It tears out these craters, sweeps away the fences. 150 cattle were swept away by these high velocities. Not one.

HECHT: Your brief says the changes that destroyed this ranch aren't addressed by computer models or data analysis. What's that mean?

SODD: The physical destruction. There are two kinds of changes. One is the floods is getting there quicker, lasting longer. The district admits, the gate operator said at the tail end of floods they keep releasing water, which makes the flood go longer. It keeps the water on the ground. It kills the crops.

They admit, their records clearly show their graphs and our graphs the floods getting there quicker. That's related to the timing of releases. The surges, the high velocities are just not the kind of thing that the gauges could measure, because none of the gauges were located in this area and because those gauges aren't designed to measure velocity anyway.

HECHT: The petitioners says surges weren't talked about in the evidence.

SODD: The surges were admitted by their expert. Their expert said, we have made those sudden releases. That does cause surges. It's well known by hydrologist. Our experts said it. But the eyewitnesses saw it. There' no explanation for surging waves and higher velocities. Nature can't do that. Not like we're talking about here. More water goes faster. It might speed the river up from 1 mph to 2 mph. But the kinds of surge velocities we're talking about here and those high velocities the experts explain that can't happen in nature. That has to be something manmade that causes _____.

HECHT: Do you agree with petitioner's answer to J. Hankinson's question about the standard of causation?

SODD: I think the standard is a cause.

HECHT: But for.

SODD: But for. And absolutely that's what this evidence shows. The trial judge found in his findings that it happened. It was intentional. It was knowing. It was permanent. It's was continuous. And it's inevitable because of the way this lake aims at this ranch, because it blocks off half the river flood plain, because of the way they are required to make these excess releases. The lake designers said "this plan calls for excess releases and we have made excess releases." Why? Because they store water 20 inches from the top of the gauge. If the water goes over the gauge, the dam is gone.

HECHT: Excess releases don't mean that there is going to be more or different flooding down stream. You just can't tell.

SODD: It does in this sense. There's a certain amount of water that would be there naturally. And it would come naturally slow and even. When you release more water than naturally would have been coming, you change the curve of that flood. In other words, maybe the normal curve is here and if you start letting out water here, the curve is faster. So you get less warning time to get your cattle out.

If you happen to hit the river's natural peak with an excess release, then you are going to increase the peak of that flow. And there were many instances in which these graphs showed that the peaks were increased. So it doesn't mean we flooded more times. I don't think there was a flood from 1990 till the time of trial in which we wouldn't have flooded. But every year from 1990 to the date of trial, every year in big floods, little floods and medium size floods, every year new craters, new breaches in these levies, new destruction and damage to this ranch. It was ruined. They don't even try to dispute that evidence. They conceded it.

OWEN: When were the levies put in?

SODD: In the 1940s. Mr. Gragg bought the ranch in 1949 and start building the levies at that time. But he had operated an oil lease on this property. One of the witnesses who was familiar with this ranch since 1940, for about 58 years, had done bulldozer work on this ranch for Mr. Gragg's oil and gas operation. And had done clearing and was familiar with it from that time forward. The levies began to be constructed in 1949 when he actually bought the ranch. But we had many comparative floods. When I say comparative floods, we were able to show the flood statistics that in the 1940's, '50s, '60s, '70s and 80s, there were individual floods that were virtually identical to different ones of the individual floods after the lake. During none of those floods had there been any of this kind of damage to the ranch. Never seen high velocities. Never seen surges. Never had the levies breached. Never had craters torn out. Never had fences swept away. Never lost any cattle.

HECHT: There's a certain res ipsa element to the argument that before the lake it didn't happen and now it is happening.

SODD: Yes. But it's not just before and after because we also excluded every other cause. There is no other potential cause here. You have arguments given to you in the briefs, but the district expert testified repeatedly and clearly on other causes. Mr. Rutledge said this. "Well in my opinion there is really (in the record at 9RR 175, 176, and 12RR 23), and as you've explained to the jury if that flooding being worse at the Gragg ranch has to be the result of only one of two things: rain fall or the lake? Answer. Mother nature or the district?

HANKINSON: What about the testimony that Mr. Ratliff has cited that the experts could not

separate the impact of the reservoir's operation from the impact of water from other sources?

SODD: That's just spin on this record. You cannot measure precisely, exactly inch by inch at one point on the ranch with any computer model known to hydrology. Both sides experts said our models are not precise. Mr. Rutledge, the district's expert said what these models give us is approximations of averages, because they have to supply so much data. He said hydrology is more of an art than it is a science.

HANKINSON: So he didn't testify that he couldn't...

SODD: He did say he couldn't precisely, exactly measure it. We quoted every time they said that he was talking about precisely or exactly measured.

HANKINSON: But he did testify that he could offer an opinion about the impact of the reservoir _____.

SODD: Relative. Both sides experts said these models are only good enough to give you relative contributions of the reservoir verses natural conditions. And we've got relative and have an overwhelming amount of evidence. The trial judge found it rose to the level of beyond a reasonable doubt that this ranch was causing it. But it was relative and they did a little video that tried to show it inch by inch, hour by hour that a specific point with gauges 50 miles on each side of that specific point. Well it's guess work. And our guys said you can't do that. And they said it to impeach those records and impeach the claim that you could do that inch by inch.

But if you see a car wreck and you see a guy speed through a red light, we may not be able to measure precisely the moment that he came through the light or exactly how fast he was going, but you know he was speeding and you know he ran the red light.

HANKINSON: In the historical information that was available and used by the experts were there any periods of time where the rainfalls were comparable to the rainfall in the 90's?

SODD: Absolutely. We cite you 6 or 7 years that had almost exactly the same rain as for example the 1993 and 1995 floods. And in those prior years there were a number of those prior years and in none of those prior years with the levies present had there been any damage to this ranch. Virtually all the floods according to the witnesses after they went out they would find new breaches in the levies, new craters, new holes dug. Some of it would just be extensions of old craters and such as that. But each flood is so vastly different. You might have a flood that last 2-3 days. You might have one that lasts 2-3 weeks. And the floods are so different, the volumes of water are so different that it's hard to say that every kind of damage happened every time. But every kind of damage happened every year from the time this lake started releasing water until the time of this trial.

O'NEILL: We have quite a few amicus briefs. How do you respond to the argument that all the water districts in Texas are going to go bankrupt?

SODD: I will read you a quote from the district's expert of this trial. "Lake Conroe had that alert system because of their concern about flooding by their gate releases didn't they? Answer. "They had that alert system to have additional data to help them operate their spillway." "Well it was because of their concern and the concern that's common to all water supply lakes about flooding people down stream wasn't it?" Answer. "And upstream as well. They all had that concern. That's true." "You said in your speech (he gave a speech to all the hydrologist in Texas in Houston), your paper says that the San Jacinto River Authority (who filed one of those amicus briefs) faces a very common problem associated with water supply reservoirs. You said that didn't you? Answer. "Yes."

He also agreed that at Lake Conroe that opening five gates only 2 feet would cause downstream flooding. Different in our case. Caused downstream flooding. In contrast with this lake's 24 gates that were opened wide on numerous occasions. Downstream flooding is common as corn with chicken fried steak.

Districts buy downstream flooding easements all the time. This district bought downstream flood easements at Cedar Creek Lake just North on this same river. Yet to read the amicus briefs you would think that the whole idea of them harming somebody downstream was new and novel. Water districts are immuned from negligence. If only their negligent conduct would cause downstream flooding why would they have to buy flood easements? They buy flood easements because in some instances depending on the configuration of the lake, the elevations of the land around the lake, you're not going to be able to avoid causing damage with a reservoir built like this that tries to store water at the brink of overflowing the dam. Is there a public use for that? Certainly. They get to store more water. But the business decision to store maximum water sealed the fate of this ranch. It meant there was no possible way, the testimony in this case is, once they built and designed this lake like they did in this location, nothing they could have done thereafter would have stopped the damage to this ranch. They could not have operated it in any different way.

PHILLIPS: Is there any evidence in the record that they attempted to buy a part or all of this ranch or get a water easement?

SODD: The evidence is they called Mr. Gragg to talk to him about buying a flood easement. Never did follow up with that. They didn't try to buy 100% ownership to my knowledge. But the evidence in the record is the district did approach Mr. Gragg about a flood easement early in the planning of their lake. Management changed, and after the management change he never heard a word from them. He had written them letters expressing concern.

The changes from this reservoir are proven. All of their records show that we're right. Forget computer models for a minute. Their record shows natural flow in one column, actual release in the other. And there were hundreds of periods of time during floods in which they released a lot more than the natural amount of water. If you have a surging high velocity release in a 3-day flood or a 5-day flood one hour of those surges coming across the property could tear out every levy on the ranch. The situation is not that they always constantly from day one until the end

of every flood release excess amount. Their experts explained: it's not the overall average amount of water. Even if you release less overall water during part of the flood that doesn't answer the question of whether releasing more higher velocities, sudden increases that create surges during short periods of time cause the damage.

HECHT: Were there any sudden increases that didn't cause damage?

SODD: Nobody could get out there in the water and stand there and time when they were making sudden increases and exactly when the dirt on the various levies and the holes in the pasture, which were underwater, and the fences got swept away. All we know is that they admit, the record show there were sudden increases. They admit sudden increases cause surges. Eyewitnesses saw sudden increases coming across the ranch. And when the water went down, the levies were gone, the fences were gone. In some cases the cattle were gone. And great huge holes were in the ranch.

HECHT: If that would have occurred because of the rain without the dam...

SODD: Can't occur because of the rain. It's impossible. It's a physical impossibility for mere rain to cause surges, because of the kind of velocities that are caused by surging gate releases. It's a physical impossibility for nature without this lake to confine that water down to that narrow discharge channel and point it at this ranch. And it's a physical impossibility for nature to take that flood plain and confine it in to that little area like that and create those high velocities.

OWEN: They say in their brief that you successfully excluded evidence about extensive damage to property in other areas, not just in the Trinity River basin but others.

SODD: As a matter of fact, we proved that other ranches just North of this ranch in the same floods had no damage.

OWEN: What was the evidence they are talking about that was excluded?

SODD: They had a report from the US Army Corp of Engineers about floods all over Texas in 1990 that included newspaper articles and assessments of damages in small towns and a lot of irrelevant material. They didn't even make it a point of error that that evidence didn't go in. Their problem was, it was a volume this thick and it dealt with other rivers, other streams, other places in Texas that were irrelevant, didn't have anything to do with the Trinity River in this particular area. They never made a restricted offer of that information just as it related to the Trinity River.

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REBUTTAL

RATLIFF: I know this battle of citations to the record is troubling to the court and it's

troubling to me. But let's just put it aside and let's take what Mr. Gragg just talked about. This discharge channel, you will miss any reference to the stilling basin and his own expert's admission that the stilling base slowed the water that's coming out of the gates from 40 mph, that it slowed it down enough that according to his experts it would turn and go in to the Trinity. Now if you've got something with the kind of power he's talking about it's not going to turn to the Trinity River flow.

O'NEILL: What about the eyewitness?

RATLIFF: There wasn't ever an eyewitness that was looking at this dam and was equating it to here. Mr. Schwertner, who is here, one of the owners of the lease hold estate was flying his plane around. He said he went up North of the Cedar Creek reservoir, and the water seemed to be moving slowly up there. But when he got down here, the water was moving rapidly. He didn't say whether it was caused by tributaries coming in here below Richland-Chambers. It was kind of a conclusory statement.

OWEN: What about their assertion that your experts said there were surges and that there were increases in velocity that could cause this kind of damage?

RATLIFF: When our expert was asked about it, he says so there's no real validity at all to the concept that there is some surge or high energy that somehow comes out of the spillway, turns, goes 7 miles to the heavily wooded area and still has energy left at the ranch. I just don't put any validity in that at all.

ENOCH: Waves from the ocean can go around the world. Does it really make a difference if you have a surge that pumps a bunch of water in at one point and it actually can get into a river basin? Is it your statement that the energy somehow is now dissipated that if I put a surge into the water at this point that if it follows the river basin then it must mean that the surge doesn't come out at the other point?

RATLIFF: I think also your basic science would tell you that if you put that wave through a stilling basin, which is a series of baffles, it will break the wave and therefore there will be no wave to be transmitted on around the world.

ENOCH: So the stilling basin if I put it down here, the stilling basin then takes the energy out of that surge, so there's no energy left when it gets to the other end?

RATLIFF: There is energy left but it is minimal. The testimony is the water would have left the stilling basin at about 1 mph, which is less than the flow of the Trinity because the Trinity is deeper. A deeper body of water is generally going to run faster.

Where is the evidence of this devastating effect across here? If it's going to cause damage at the Gragg ranch, what is it going to do to this property immediately adjacent to that channel? Not a single witness, not a single expert ever said that that discharge out of that channel

caused any of the types of horrendous damage that counsel says happened on the Gragg.

Now he also says they excluded all other causes. When our witness says mother nature or this dam, mother nature includes more than just the Richland Chambers and more than just the water behind the Richland Chambers. As I've already said, there are many, many flood control and water supply dams upstream on the Trinity unaffected by Richland Chambers. This drainage area includes the whole Dallas/Ft. Worth metropolitan area.

I think their own witnesses have said that as counsel said every flood is different. They said for us to really know whether this caused these things to happen at the Gragg ranch or not as opposed to at the dam, we would have to know how wet the ground was at the time the rainfall started, we would have to know what the flows were in the Trinity before the rain came, we would have to know whether we are dealing with plowed ground, whether we're dealing with pasture land, whether we're dealing with wooded area. All of these things they said they would have to know before they could tell based on any studies they had done what the impact of water coming out of this dam were on the Gragg ranch.

OWEN: What about their historical evidence? They say that they've got all these floods that were comparable and that this kind of damage had never happened until after the dam was in place.

RATLIFF: First of all, Mr. Gragg wasn't on the ranch during the 40's. Everybody concedes that the 2 wettest areas with the most floods were the 40's and the 90's. Most of the witnesses you heard from all fell in periods of time in-between that.

OWEN: He said there were comparable floods not. Is that not right?

RATLIFF: They are comparable in what regard? There are some that are comparable in height as measured by the gauges, there are some in which the rainfall at least as recorded was comparable. Although, I believe the record would justify that the 90's were one of the wettest periods it's ever had and if there is a period as wet it would have been back in the 40's.

ENOCH: It seems to me that if I got a hydrologist out there and I say look at my land out here. And we know that this is a flood plain and we know there will be some floods. I want you to design my land to help minimize the flood damage. Would it be possible for an engineer to go out and say I'm going to build a _____ out here or a dike out here that will be strong enough to withstand the 100 year flood?

RATLIFF: Could he do that? I doubt a hydrologist could do it by himself. I think the hydrologist could make the condition...

ENOCH: But some engineer could determine I will look at this land. It's spread out over several miles, rain will fall. Let's say a 16 inch rain in one hour. Let's say a 1 foot rain in two

hours. There will be a flow that will occur because of the natural landscaping, so this dike here or whatever I'm putting up in this channel will have to withstand some X pressure of water. So it would be possible wouldn't it for an engineer to see the land knowing the physical properties of rain to determine that this rain in this hour will produce this force and this should withstand it.

RATLIFF: I will certify to you, you would not get an engineer to guarantee that because and you certainly wouldn't on the Gragg ranch where the Trinity River bisects it to _____ Creek bisects it and...

ENOCH: But it's predictable based on rain what kind of flow will come isn't it?

RATLIFF: But where is the rain? That was one of the points that they made. They said for us to translate this to the Gragg ranch, we would have to have hundreds of more rain gauges so we would know where the water was coming from. If I design it against the river, but the great flow is because of a 6 inch rain behind the dam, I may well have designed it where it will hold the river out, it's not going to handle the flow from behind.

ENOCH: But the river would give you a design characteristic of the flow. So if you had 6 inches of rain behind the river you would know where it would be channeled and you would know what the force would be coming through there.

RATLIFF: You would if you knew all the channels. That's my only point. You don't know all the channels.

ENOCH: But you do know because of that factor you could determine when you have a 24 gate opening in this kind of water, you can physically determine the surge that will come out of that.

RATLIFF: Physically determine the surge as it leaves the dam. I cannot, absent doing some sort of computer analysis, I cannot translate that water then down 7, 8 or 14 miles to the Gragg ranch. That's the whole point. When that water joins the Trinity and joins _____ Creek, it gets all bottled up. And the best you can do and the best that our people could do using the Corp of engineers standard technique was to say we have to make some assumptions. And some of them quite frankly that's all they are is assumptions.

ENOCH: So if their experts make some assumptions this becomes a question of fact for the judge?

RATLIFF: No. I don't think so. Every model contains assumptions. And all I'm saying is is the reason for that is you are trying to deal with mother nature and mother nature doesn't act the same way every time under all circumstances. And everybody agrees with that.

HANKINSON: Mr. Sodd said that it's not unusual at all for a district to purchase a flood

easement under these kind of circumstances. And so all the amicus briefs with the sky is falling arguments are really - we're not really going to have the sky fall under these circumstances? Is that usually the practice to buy flood easements under these circumstances?

RATLIFF: I don't know. I would assume that there are times when it is. If you recall here, the question is buy them at what cost? We now according to this judgment have flood easements across this ranch. And it's probably only going to cost us $10 or $15 million. So, yes, if they wanted to they could go down and buy a _____ property. There are times certainly immediately adjacent to these structures where they do acquire it. But I believe all that really goes to is their claim that they really want to try in this case, and that is, we were negligent in not acquiring those flood easements, because they produced no evidence that we knew we were going to take this property.