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DEPN: Regan, Dick (vjan7b, 1/7/97)

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2	(Whereupon, the following occurred in the
3	presence of the jury:)
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5 THE COURT: Be s	seated, please. Counsel.
6 MR. SMART: Than	nk you, Your Honor.
	he Court, ladies and gentlemen of
8 the jury, my name is W	ill Smart. We met before. I
9 represent Skagit County	y, along with my partner Dave
	Skagit, County Commissioner, is
11 here to represent the	
	are all anticipating a lengthy
	told you how long it might be.
	r kind attention to our problem
	fficient as we can in putting it
16 on.	
_	be a long case, and the reason
	ave one of the rare opportunities
	years of history in Skagit County
	case focuses largely on 100 years
	kagit County. It's not a subject
that everybody is going learn it in detail.	g to learn about, but you will
	something that is of extreme
	tity in this courtroom, and
25 Importance to every em	tity in this courtroom, and
	s made a substantial introduction
	aintiffs, and has informed you of
	, I would like you to consider how
	is to the general public, to
5 Skagit County, to the 6 State of Washington.	diking districts, and also to the
	going to instruct you at the end
	y is equal before the law and each
	our undivided attention, so I ask
	his case to pay close attention
	your minds up prior to the time
12 all the evidence is in	

January 7, 1997

Our case will be some weeks from now before we are able to put it on. The purpose of my statement here is to give you a bit of a road map to what the evidence is that you will hear in the county's case, so when the plaintiffs are putting on their case, I'd like you to harken back to today so that you will be able to reflect on the evidence that's presented by them and anticipate what the other side of the story might be. Because, like many things in life, this case presents more than the story that you heard from Mr. Hagens.

Now, what I'd like to start off with is a little bit about the geology of the Skagit River. As many of you know, the Skagit River is the largest river in

Western Washington, arising in the North Cascades. In fact, it originates in British Columbia and flows down through areas of Whatcom County prior to the time it gets to Skagit County, and along the way it drains a huge territory encompassing the North Cascades and the Skagit River Valley and basically it flows, after it goes into Ross Lake where it checked by a damn, and Diablo Dam, which many of you are familiar with those dams, proceeds down the valley until it gets to this point here, which is approximately 40 miles from the mouth, and, as you know from our earlier map, we have a river delta.

River delta mechanics, you will learn in this case, are not unique to the Skagit River. They have common features with, for instance, the Nile, the Mississippi, all of the major rivers in the country, because what happens in times of high rainfall is that the mountains, the ground, erodes and the waters are laden with silt and sediment that are borne downstream and create this fan-like delta at the mouth of the river.

All of this territory comprising the Skagit Delta has been historically flood plain and, over geologic time, has flooded many many times, countless times. The reason why the soil in the Skagit Valley is so fertile

is because of these sediments that have been washed down by the operation of erosion and deposited in this fan that you see here.

Like many of the other major river deltas in the country, the Skagit is extremely fertile crop land, but it only became farmable after the early settlers diked out the tide from the salt water and made it tillable by turning it from the original muddy bottom of a swamp into bearable farm land by the means of dikes. Similar to dikes in Holland, similar to dikes everywhere, these

dikes are essentially -- are extremely important to the existence of the rest of this portion of Skaqit County.

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The entire valley is diked in one fashion or another, and that includes the Nookachamps Basin where the plaintiffs reside. Diking District No. 20 is located on the south bank of the Skagit River in this area but, unlike the remainder of the banks of the river, Diking District 20 has chosen not to build a dike over time.

I'll get to the mechanics of dike district formation in a second. However, what I'd like you to recognize at this point is that these -- this natural low area comprising the Skagit River Delta did not get to its geographical or topographical conditions by the operation of man. Rather, it was the force of nature.

If you look even at the map that's been placed up here by Mr. Hagens, you will see that the Nookachamps Basin is an extremely low area. It's a bowl-shaped depression, and it didn't get that way because of the operation of any governmental entity.

Barney Lake exists at an elevation of 18 feet above sea level, and that's highly significant because Barney Lake is the center of this Nookachamps Basin. The banks of the Skagit River in this location after it proceeds west under the Highway 9 bridge are at approximately 35 to 39 feet. What that means is that when the river escapes its banks, you have an over-land downhill flow of water from this height, elevation of 35 feet, down to an elevation of 18 feet at its lowest. You have a relatively steep gradient, and this bowl-shaped area fills with water. It has flooded in the Nookachamps Basin as long as the basin has existed, and it doesn't flood because of the operation of government. It has always flooded. It is the lowest area upstream from the Burlington Northern Bridge and it is a natural depression.

Now, why is that important in this case? It's important in this case because the plaintiffs' position is that the county uses the Nookachamps Basin for flood storage. Let's discuss a little terminology. You'll be

hearing from a number of hydraulic engineers in this case that talk about the concept of storing flood waters. To a hydraulic engineer, flood water storage is simply any water that's not flowing downstream and being discharged from the system at that particular time, so when a flood engineer talks about storage, he's simply talking about water that hasn't yet been discharged from the system. And it's important to keep the concept of

storage in mind in this case because there are a number of ways in which water is stored in the system.

First we have the upriver dams which were completed in approximately 1951. You will learn through the evidence in this case that those upriver dams hold and store somewhere between 30 and 40 thousand cubic feet per second of water. A cubic foot per second, I'd like to take just a minute to discuss that concept.

A cubic foot of water weighs 67 pounds. If you were sitting on the bank of the Skagit River and watched a flood event, you would see somewhere between 91,000 and 400,000 of these cubic feet of water pass by your position every second. It's a huge amount of water, and the energy discharged by that water is amazing. The reason why floods are dangerous is because of the unleashing of that tremendous power of the water.

Now, the flooding in the Skagit River has taken

place since recorded history, and we even have, through our hydraulic engineers and historians, evidence of floods far exceeding any of the floods that have existed in the modern times back in the 1800s, 1700s. The flood in 1990 at its peak was an approximately 150 to 200,000 cubic feet per second. There was evidence of a flood in 1815 of 400,000, almost three times the peak flow of the flood in 1990. And we have other floods nearly twice as big in 1956. We have a series of huge floods between 1896 and 1921. These floods are extremely important because, as you will learn from the history in this case, every one of these floods flooded the properties that are now occupied by the plaintiffs, and they flooded them to depths greater than the depths of the flood in 1990. In fact, in the 400,000 cubic foot per second discharge in 1815, scientists estimate that there was as much as 40 feet of water in some locations in the Nookachamps Basin.

So what -- how do we bring this forward to today? The history that you are going to be learning about in this case isn't simply the geologic or hydrologic history of the Skagit River and how the delta got to be formed to the way it is today, it's also the history involving a chronology of events, and this history of events includes both the settling of the

Skagit Valley by citizens and the formation of different kinds of government, and different kinds of governments in this case to perform specific purposes, and one of the main forms of government that you'll be learning about are the diking districts.

Diking districts are a special municipal entity,

a form of government established by the legislature of the State of Washington. When I'm showing you now on the screen is the statute that sets up the system of diking districts, and what the statute provides is that the Board of Dike Commissioners shall have the exclusive charge of the construction and maintenance of all dikes or dike systems which may be constructed within a district and shall be the executive officers thereof, with full power to bind the district by the acts -- by their acts in the performance of their duties as provided by law.

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Mr. Hagens, in his opening statement, told you that it was the county that controlled the diking districts. That is not true. This statute, the legislative enactment by the State of Washington, demonstrates conclusively that it's the Board of Dike Commissioners that controls and has the exclusive charge of both construction and maintenance of the dikes, and that is true with the dikes along the Skagit.

Mr. Hagens talked to you about Dike District 12. The location of Dike District 12 is right here, down to approximately this area, and includes all of this section of dike above the Burlington Northern Bridge, the choke point that he talked about which is located right here. Dike District 12 was formed in approximately 1906 and has its own elected board of commissioners. Although Mr. Hagens was correct that initially the Board of Commissioners was appointed by the county commissioners, that's simply the mechanism for how the dike district gets going. As soon as the initial commissioners are appointed, they're then elected thereafter by a vote of the constituent property owners within the diking district, and that's the way Dike District 12 has been formed, pursuant to statute, and that's the way it has operated ever since it has been in existence.

Now, the purpose of dike districts, of course, is to construct and maintain dikes, and the reason is for the protection of the properties that are within the boundaries of the dikes. That's why they're formed. That's why they exist, and the authority to exist in that fashion is found specifically in the statutes of the State of Washington.

This dike, Dike District 12, is really the only

important dike for your consideration in this case. Mr. Hagens agreed in his opening statement that without Dike District 12's dike in this location, the water, assuming it got high enough, would flow out to Padilla Bay

through this area. And I don't think there would be any dispute among experts in this case that that might be true as long as the water got high enough to come over the bank and exceed whatever other topographical impediments there are in this area, but there are many. There's I-5 located here. There's Highway 99 located here. There's the Burlington Northern Railroad grade, which is an integral part of Dike District 12's dike in this location here, and there is Highway 20 and the railroad together which run in a northeasterly direction through the town of Burlington. All those operate as impediments to the flow of water, and in some places constitute the only impediment to the flow of water off here to the Samish River Basin.

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The computer model that Mr. Hagens talked about earlier really compares a situation of the existence of a dike here with the existence of no dike, and that's very important and I'll talk about that in a second as to what it means. But I want you to remember throughout the course of the presentation of the plaintiffs' case that the -- all of the figures that you're going to be

seeing for water surface elevations, in other words how high the water is under any given flow event, are assuming only two conditions: One, with this dike in place and, two, with it gone, completely gone. So, in other words, the plaintiffs' evidence in this case will assume that the dike districts do not have the power to construct and maintain the dikes in their place, and the damages that the plaintiffs will ask you to award are based on an analysis of taking away Dike District 12's dike and undoing the statutory authority that those dike districts have to construct and maintain their dike.

Now, I want to go back to our chronology for a bit. I've talked a little bit about the large floods that took place between 1896, and 1932 was the last really significant flood, maybe 1933, 110,000, before the State became involved in the business of flood control. We have dikes built by citizens and diking districts in this period 1890 to 1910. We have this period of huge floods on the Skagit between 100 and 220,000 cubic feet per second during this approximately 35 to 40 year period, and then in 1935 we had the passage of another enactment, a statute called the Flood Control Act of 1935, in which the State of Washington determined that, because of these dangerous conditions that had taken place in the early history of the State,

that it was time for the State to get involved, and what the State -- the legislature did is it passed an

enactment called this Flood Control Act which specifically said that it was the State's concern that the alleviation of recurring flood damages to public and private property, to public health and safety and to the development of natural resources of the state is declared to be a matter of public concern and, as an aid in affecting such alleviation, the State of Washington, in the exercise of its sovereign powers, hereby assumes full regulatory control over the navigable and non-navigable water flowing or lying within the borders of the State, subject also to the federal control of navigation.

 The act went on to describe the mechanism for how the State was going to implement its policy of flood control, but the important first point to consider is that in 1935, the statute passed a state policy, and this was after the dikes had already been built by Dike District 12.

Now, how did the State carry out its policy of flood control? What it did was, first of all, it established the Office of the Supervisor of Hydraulics. This is a little bit of a typo, Commissioner of Hydraulics, I misstated it to my secretary. She typed

It should be Supervisor of Hydraulics, that's the term that's used in the 1935 act. And then a system was implemented by the State so that the Supervisor of Hydraulics would review all the plans for diking construction and maintenance and issue permits, as long as the Supervisor of Hydraulics found that the proposed project would be in compliance with the state policy of flood control. Section (3) of the act sets this out. Says "State regulatory control shall be exercised through regulatory orders. The designation of flood control zones and the issuance of permits as hereinafter provided shall be exercised over the planning, construction, operation and maintenance of any works, structures or improvement, private or public, which, if improperly planned, would have an adverse influence on the regimen of any stream or body of water that might affect the life, health or safety of property against damage by flood water.

So, we have in 19 -- in 1906 the building of Dike District 12's dike, in 1935 the State policy of flood control where the State assumed full regulatory control over the dikes and the establishment of the Supervisor of Hydraulics, whose function it was to evaluate all of these works so that it could determine, be determined whether or not they fell within the State's policy of

flood control.

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Now, of course, things didn't stay exactly the You'll be probably not surprised to learn that, like any governmental entity, there was an evolution over time, so that although it was the Supervisor of Hydraulics in 1935, in 1951 they changed the designation to the Supervisor of Flood Control, essentially a new title for the same job, and then again in that year they put the job of Supervisor of Flood Control under the Department of Conservation and Development, a newly created agency of the State. That name was shortened to the Department of Conservation in 1957. In 1965 they put the same job under the target of Water Resources, and finally in 1970, the State agency evolved into the present day Department of Ecology, which is the agency that now has the same responsibility for evaluating whether or not any flood control structure, if improperly planned, constructed, operated or maintained, would adversely influence the flow of water down any particular stream.

I might mention at this time that during the 1960's, the 1935 act was fleshed out by a Washington Administrative Code regulation. An administrative code regulation's basically a rule established by the State to implement the statute, and the statute, again being

the 1935 act, which has been updated into a statute known as RCW, 86.16 which you'll learn much more about as we go along. The modern day version of the Flood Control Act of 1935 has now been fleshed out so that the Department of Ecology has, in addition to the responsibilities under the act, it has the responsibility of determining whether any structures or works would adversely influence the regimen or body of water by restricting, altering or hindering or increasing the flow of water in the floodway or flood channel expected during a one-hundred year flood. And if you look at this parenthetical, this is very important, "In consideration of this provision, the Department, " that's the Department of Ecology now, shall "determine whether the structures, either alone, alone or in conjunction with any other existing or future similar works, could adversely influence the efficiency or the capacity of the floodway and adversely affect the existing drainage courses or facilities."

So, in this point in our history we have this construction of the dikes by the Diking District with the power to maintain them. We have the establishment of the State Supervisor of Hydraulics and subsequent agencies, and we have the designation specifically by the 1935 act and by the Washington Administrative Code

regulation of the responsibility to the Department of Ecology to determine what the effect is going to be, either alone or in conjunction with any of the other works or structures that have been constructed in the floodway.

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Now, how did these dikes go about getting from their initial form when they were built originally in 1906 to the form that they now exist in? They got there by a system of permits, because when the Supervisor of Hydraulics was given the function in 1935 to evaluate all of these dikes, they did so. Surprising thing. The government agency went out and did what it was supposed to do, it evaluated these dikes that had already been built, and you will learn through the course of this case that they then issued permits.

This first permit that I'm showing you here, this first permit here, Number 111, which you'll see is a permit issued to Diking District 12 for this dike here, although this dike wasn't located in exactly this position in 1936 when this permit was issued, but it's a permit by the State of Washington for Dike District 12 to reconstruct because the dike had been damaged in a flood event, to reconstruct and to maintain in perpetuity, meaning forever, a dike along the west bank of the Skagit River between Burlington and the Riverside

Bridge. These permits constitute legal permission by the State of Washington to the Diking District in order to construct and maintain their dikes.

Okay. And that was what was done in this case is Dike District No. 12 and Dike District number 17, in fact, all the other dikes along the river, have received these permits from the State of Washington to construct and to maintain these dikes in perpetuity, and the reason is -- harkening back to the 1935 act, because the State of Washington and its Supervisor of Hydraulics and subsequent agents determined that these dikes would be needing to meet the State policy of flood control which was articulated in the 1935 act.

Now, again, a permit for Dike District 17 to maintain a dike in perpetuity issued in 1937 by the Supervisor of Hydraulics, same permission.

Now, let's talk about a more modern change to the diking system. Dike District 12 used to exist somewhat closer to the City of Burlington and it did not extend as far upstream as it currently does. Mr. Hagens has alluded to the fact that the dike has changed over time. It did in the early days. It had some buildup between 1906 and 1955, but in 1955 the last major change to Dike District 12's dike was implemented, and it was

here, Number 7144 signed on August 2nd, 1955 by Gregory Hastings, who was then the State Supervisor of Flood Control, and what Mr. Hastings did was he followed his statutory duties. He evaluated the proposal, which was an earth-filled dike, which is a relocation and extension of the existing dike to be located south easterly and east of Burlington, in other words, in this location here, and he determined that it met the State policy of flood control to issue this permit so that Dike District 12 could reconstruct its dike in 1955 to where it currently is located, and it's currently located in essentially the exact same location, essentially the same height and essentially the same general configuration. There have been a few changes. There have been keyways added so it doesn't wash out. There's a road on top of it now that didn't used to There's riprap that have been replaced over time, because all of these dikes are damaged during times of high water, but in terms of its location and its height, it's in essentially the same exact condition as it was in 1935 when it was permitted to exist in perpetuity by the State of Washington. And, again, the testimony in this case will show you that when the State granted the right for Dike District 12 to construct and maintain its dike in perpetuity, it expected it to do

it.

Let's talk a little bit about dike maintenance. Mr. Hagens made a big deal -- he always makes a big deal in this case -- about maintaining dikes, making them stronger. What you'll learn in this case about the maintenance of dikes is this. Every time you have high water, a high water event, the hydraulics of the flood damage the dikes, and the reason for that is because they're basically earth-filled dikes, and what you have is you have a dike that, say, is at this level here. Water comes go up here. As the water rises, it exerts hydraulic pressure against the toe of the dike and the dike begins to fail in different ways. If it's porous, the water will seap through and it will erode the dike by having it be undermined by seams and boils. If it's excessive rainfall, it will be eroded from the top.

And there are other problems that can exist with dikes. For instance, cattle often graze on dikes and will wear trails, and once a trail has started, you have excessive rainfall, you get erosion from the top. Sometimes the dikes aren't maintained because the grass dies and that also supports further erosion, but in

order to have a dike, which every expert and every governmental official and probably even the plaintiffs agree, if you're going to have a dike, it might as well

work.

In order to have a dike work, it has to be maintained, and that is why these permits from the State of Washington say that the permit is issued to construct and maintain the dike in perpetuity. So that when Mr. Hagens and the plaintiffs in this case complain about the maintenance of dikes, they're really complaining about something that was made in a decision a long time ago to allow this dike to exist. And our position in this case, and it's a defense in this case, is that Dike District 12 acquired the right to legally have its dike in its current location, at its current height, essentially all of its same features in 1955. The entity that had control over the construction and maintenance of that dike by statute is the Diking District. The entity that granted it permission to do that in perpetuity is the State of Washington. county, of course, has some responsibilities and, of course, has some relationship, as you would expect, between government in any county where it's located. There are a number of relationships that exist and they're important relationships.

The county acts as a liaison between governmental entities. It does the bookwork for the diking districts. It's required to by statute. Your

legislature, the State of Washington, set forth procedures so you don't have a redundancy in government, but that doesn't mean that the entity that has complete charge of construction and maintenance of the dikes is the county instead of the diking districts, and the plaintiffs understand and agree with this.

In fact, in this case, prior to this trial, the plaintiffs sued the diking districts and alleged in this case the very things that I'm telling you now and the very things that they're complaining about the county about. They said in this case that the Diking District defendants, that's Diking District 12 and 17, maintain a continuous wall of dikes and levees -- excuse me a wall of levees in the flood channel of the Skagit River.

In 1990 this system operated precisely as intended and caused water to be diverted onto the plaintiffs properties. River water that should have been flowing towards Padilla Bay and Puget Sound to the west instead was diverted onto plaintiffs' property in a unnaturally great amount. Those are the words of the

plaintiff in this lawsuit prior to today. They're making the same contentions and the same allegations that the county is saying, that we don't believe that a taking occurred, because in order to have a taking you have to have damage that was unexpected or unanticipated

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or part of the bundle of rights of a property owner, and I'll get to that in a second, but if a taking occurred, the county's position is that it wasn't the county that built the dike and took the property, the county hasn't built these dikes, and it wasn't the county that permitted them to be constructed and maintained in perpetuity, rather that was the Diking District, and that's exactly what the plaintiff said prior to the time they brought this lawsuit solely against the county.

Now, again, you will learn that not only did Mr. Hastings permit this dike to exist in perpetuity, he followed the statute and the predecessor of the Administrative Code Regulation and performed a thorough examination of the plans of the proposed work.

Here's a letter that Mr. Hastings wrote to Mr. B. J. Bournes, the Secretary Treasurer of the Sterling Dike Association in August of 1955. The Sterling Dike Association was a citizens group that had some objections or some concerns about the extension of this dike, the dike extension of Dike District 12, and they had a communication and correspondence with the State about whether it was a good idea. What Mr. Hastings said, again, the Supervisor of Flood Control, is he said that upon a most thorough examination of the plans and specifications of the proposed work on the ground, I

find that the proposed dike extension will not adversely affect the normal regime of the river's flood channel and is consistent with both the comprehensive plan and development of both the district and the county. Therefore, in accordance with this — the provisions of Chapter 18.16 — remember, that's the statute that's the modern day version of the 1935 act — a permit has been issued, and not only was a permit issued, but the State agreed to fund the dike and pay for 40 percent of it, so that this last major change to the dike, Dike District 12's dike, was funded 60 percent by the Diking District and 40 percent by the State and not at all by Skagit County.

Now, I'd like to switch gears here for a little bit and, instead of talking about dike districts and dikes, I'd like to talk to you about the plaintiffs.

Mr. Hagens has given you some tags on this map of where the plaintiffs live. What I've done is I've created a

chart that shows where the plaintiffs' properties are, because these pins here identify residences. The properties, many of them are large farms, and these farms are farms that -- many of them have existed for a long period of time. They're farms located here because that's what the land is good for. It's low. It's subject to flooding. It's good farm land. It's

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 inundated by silts. That's why people located for farms.

You'll notice by Mr. Hagens' map, when plaintiffs or their predecessors wanted to locate residences, they generally did it on the perimeter of this area. Why would they do that? The evidence in this case will show that they did that because they knew that in times of high water this area flooded and they didn't want to place their houses where the flood waters are.

As part of its responsibilities in order to evaluate flood hazards, the State of Washington asked the Army Corps of Engineers to generate a report, and the report which was done in 1967, 30 years ago, prior to the time that many of the plaintiffs were even adults is, called the Flood Plain Information Study for the Skagit Basin, and what I'm showing you here is a summary report of that Flood Plain Information Study.

This study is an extremely important piece of evidence in this case for the reason that it sets forth what the plaintiffs or their predecessors could have learned if they had bothered to study the properties that they sought to purchase. Now, not only was the flood plain information published in this form by the Army Corps of Engineers, it was given to various governmental entities like Skagit and like the

Department of Conservation, this State entity, and it was available for anybody to review, so if you were a plaintiff or a prospective property owner in 1967 or thereafter, you would have had access to this information.

Mr. Hagens says there was no information available to people moving into the Nookachamps area to determine whether or not it flooded, but that's not correct because not only was this Flood Plain Information Study widely disseminated, it was published verbatim in the newspaper, and what was it that was published in the newspaper? This is a copy of the Puget Sound Mail from May 25th, 1967. What was published was the very same information that was in the Flood Plain Information Study, and it's very important to this case to determine what was available, if somebody had wanted

to learn about these properties and what had happened.

Really, what we're dealing with is we're dealing with human nature. Because there had not been a big flood in the Skagit Valley between 1951 and 1975, a period of approximately 24 years, people started to move back into the valley. They forgot about the danger of the floods and, in fact, they had a remarkable period between 1951 and 1990 where there was only one big flood, in 1975. Many of the plaintiffs experienced

that. It wasn't a huge flood, but it was a flood in conjunction with the 1951 that easily could have put people on notice of the potential danger and the potential power of these floods. And the newspaper pointed this out.

It says, "As the Skagit Valley has not experienced even a moderate flood since 1959," remember, this is in 1967 when this is being written, "there is a tendency among some of the valley residents to disregard the flood problem. The much larger flood of 1951 is even less well remembered," only 16 years after it took place. "The flood of 1921, which had more than twice the peak discharge of 1959, is practically forgotten. However, recent disasters in floods in other parts of the nation clearly illustrate that a long flood-free period is no assurance of future immunity to flooding. In view of the lack of recent flood experience, there has been an increase of occupancy of the flood plain."

People moved in, not doing the research to determine what they might be facing. That's not all the flood plain information shows though. The Flood Plain Information Study had a specific description of how the flood operates in the Skagit Basin, and this is very important. What was published in the study and in the newspaper is this description: It says, "When the river

overflows its banks, a sheet of water quickly spreads across the flood plain. The water is generally shallow at the beginning and some inundated roads remain passable. However water may stand several feet deep in old river channels and other depressions. As the flow increases towards the peak of the flood, water expands to the outer limit of the flood plain and rises to greater elevations. The normal river banks may disappear from sight, submerge beneath a mile-wide expanse of water. Vehicles being driven along drowned roads are endangered as the force of flowing water may be enough to carry cars and trucks off the pavement into ditches and fields. Homes in the flood plain may be inundated, furniture water-logged, basements filled with

silt and degree. With greater depth and force of flowing water, buildings may be moved off their foundation or undermined."

Mr. Hagens made a big point of telling you that his information will be that the plaintiffs suffered dirty silt-laden smelly awful water in their houses, and they did, and we sympathize with that. There's no question that they've had a difficult time in these floods, everybody does during a disaster, but the question in this case isn't whether they had a problem with the floods. Everybody had a problem with the

floods in 1990. The issue is whether or not they could have known this in advance, and here's a newspaper article published 30 years ago that specifically said if you're going to build in the flood plain, you may have your water -- your basement water-logged, your furniture water-logged, your basement filled with silt and debris, and you may even have your house removed from its foundations.

Now, let me show you some graphic depictions of what this is likely to be like, a mile wide swath of water. Looking south, published in the Seattle Post Intelligencer, February 10th, 1951, these are the properties out here that are owned by the plaintiffs who are seeking compensation from you in this case against Skagit County. This is the mile wide swath of water. Dike District 12's dike is at least a mile over in this direction over here. Anyone who wanted to purchase property in the Nookachamps area after 1951 could have looked at this photograph after '67, could have looked at the Flood Plain Information Study, and not only did the Flood Plain Information Study publish the description, but it had a specific map of where the flood plain is located. This is the Nookachamps Basin. This green as shown here in the Flood Plain Information Study isn't the hundred-year flood plain, it's the

50-year flood plain. It's the flood plain for a flood that's expected to occur at least once in every 50 years, and you will see that each of the plaintiffs' properties is located in that 50-year flood plain. It doesn't mean that it will only flood every 50 years, but what it means is that you can expect, if you are a property owner or prospective property purchaser, to have a flood at least once every 50 years.

Now, what I've also done is I've taken this map showing the property owners and I've superimposed on top of it this 50-year flood plain, and what you can see, if anybody took the time to look or to investigate prior to

the time they bought property in the Nookachamps area, is that every one of the plaintiffs' properties is located, with the exception of some of Mr. Lundvall's and some of Mr. Cheeks' property which didn't flood in 1990, within the 50 year flood plain. Every one, and this information was readily available to them, readily available to anybody who wanted to read the newspaper or pick up a copy of the Flood Plain Information Study, so that when the plaintiffs come before you in this case and say we didn't know, we couldn't have known, the county didn't tell us, what are they really telling you? They're really telling you that they did not take even the most basic steps to investigate where their

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properties were and what influence the flood plain would have on their properties prior to the time they bought them.

Mr. Hagens told you that Mr. Loeb was a particularly sympathetic plaintiff because he had a greenhouse operation, and he located his greenhouse operation in approximately this area here. Mr. Loeb's property is the Summer Sun Greenhouse, and it's located right here, and he suffered some damage to his greenhouse. Mr. Loeb didn't buy his property until the early 1970s, 13 years at least after the publication of the Flood Plain Information Study, and 13 years after all of the information concerning damage to floods was published. Because not only did the Flood Plain Information Study have the description of the flood, not only did the newspapers have pictures of the various flood events that took place, but also it had a specific description of the flood flows in thousands of cubic feet per second, and it had a estimate of the damage that was caused to the area by each of the floods. All of this information was available to the plaintiffs if they'd only chosen to use it.

Now, it doesn't stop with this. The information in this case will demonstrate that the flooding on the Skagit River has been extraordinarily well documented.

We'll present evidence in this case, and I'm showing you a few photographs here of the various floods that have taken place. And here's the 1909 flood in LaConner with people standing in boats outside their houses. Here's a picture of the 1918 flood in Burlington. You can see the water running down the street and getting into buildings. Burlington, remember, is supposedly protected by the dikes, Dike District No. 12. Here's a picture again of the 1909 flood showing Mount Vernon and the mile wide or more, looks to me more in this

photograph, expanse of water. In 1917 and 1918, another flood, again, published photographs of the damage that existed to the houses where they're knocked off their foundations.

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The newspapers were replete with examples of barns floating away in these floods, people who had moved in back there, locating too close to the river, having their livestock drown, their barns tipped over, floating away, and the pictures of this damage makes for very interesting damage, and obviously it's not a subject of levity, but it's an intent historical record of the trouble that residents in the Skagit Valley have always had and will always have as long as there's a natural force of precipitation and as long as people want to build and live in the flood plain.

As far back as 1898 we have photographs showing the damage. Here's a photograph of Hamilton, Washington where whole buildings along a city street have been wiped out by damage by flood waters. Here's the 1909 flood in LaConner. Here again is the 1917 and 1918 flood in Mount Vernon. Here's a picture of people rowing their boats to their house in LaConner in 1917 and 1918. Here's the 1921 flood.

Remember I talked about the power of the 1921 flood coming over a road? You can see the telephone poles about to be washed away and, again, at least a mile wide expanse of water heading out to a stranded house in the flood plain. 1921 and 1932, similar mile-wide expanses of water showing the devastation of these floods. All of these pieces of historical information could have been learned by intelligent prospective property owners who did not want to voluntarily move into the Nookachamps.

But, as I indicated earlier and as Mr. Hagens indicated or alluded to in his opening remarks, people like the Skagit Valley. They like living in an area that is pastoral, that is pretty, that doesn't have a lot of other people around it. People make a choice when they move there, but in order to make that choice they have to take the good with the bad.

You will learn that from the evidence in this case that there were some individuals who did make choices to protect themselves from the flooding. There are dairy farmers who are currently plaintiffs in the case, or former plaintiffs in the case, who established or who had their parents establish barns that had facilities for the cattle to exist on the second floor in the Nookachamps Basin. Mr. Johnson, whose farm is

located in this area right here, he's no longer a plaintiff in the case but he was originally a named plaintiff in the case, has a barn that has stanchions for cows on the second floor. A Stanchion is a device to hold a cow in place while it can be milked. Probably many of you know this. It took this case for me to learn that but, anyway, the only possible purpose for having stanchions on the second floor of a barn is to have cattle on the second floor of the barn during times of high water.

Now, if you're going to build a barn that has stanchions on the second floor, why do you do that? It's because you know that there is a chance of flooding. You build your barn in the Nookachamps Valley with the expectation that it's going to flood. And that's true of other plaintiffs in this case. Bertha Torgeson who is a plaintiff in this case has testified

that she had a barn on her farm that floated. And the poor lawyer taking this deposition said, "The barn actually floated?"

 $\mbox{"Yes, on logs, and then it would go up and down."}$

"Was that here when you bought the place?"

"Yes, it was here. And then one time, Alsworth, they went over there and they went and cut the cable and it floated over to my dad's place so when he had to tear it apart and build it back, and then we built the barn up."

"Did your husband discuss the fact that the property flooded before you bought it?"

"Oh, he knew it flooded."

That would be the testimony of Mrs. Torgeson in this case with respect to her floating barn and whether or not she knew the property flooded prior to the time she and her husband bought it.

The testimony in this case will also show that prospective property owners could have consulted with the old timers. Mr. Hagens mentioned the Austins. The Austins lived through the 1951 flood. They're no longer plaintiffs in the case. They had flood waters in their living room during the 1951 flood and again in 1990. It was not news to them. Whether or not the plaintiffs in

this case consulted with the Austins between the time of 1951 and when they bought their property is unknown at this point, but you will probably learn whether they did when the plaintiffs testify.

Judge Ward, who is a resident of the -- excuse me, of the -- of Francis Road, Francis Road being

located approximately in here, Judge Ward, no longer being alive but being a foresightful person in Skagit County, built his house ten feet off the ground in order to accommodate the flood waters.

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This is a house built by somebody who anticipated the problems of flooding in the area. This house is now owned by Mrs. DeVries. She is a plaintiff in this case. Her property is located in here and Judge Ward's house is located in this approximate location here. She is a person who will come before you asking for compensation because flood waters have invaded their property. Judge Ward knew flood waters were going to invade the property and that's why he built this house in this location in this configuration in the 1950s.

Now, I want to switch gears again for just a minute before closing. The plaintiffs' position in this case is that the activity of Skagit County has caused their problem. We will demonstrate through the evidence in this case that it isn't Skagit County that's caused

the problem and, in fact, the computer model presented by the plaintiffs in this case which demonstrates a condition of the dike system as it currently exists versus no dike, demonstrates that for at least the last 40 years, at least since the last change to Dike District 12's dike, there has been no substantial change in the configuration of the dike as it affects the Nookachamps area.

There are other ways to prove this same proposition. What I'm showing you now is a rating curve, and I want you to spend a little bit of time on the concept of rating curves because it will be an important piece of evidence. They're a little bit difficult to understand but simple when you get the hang of it.

A rating curve, for the purpose of this case, is a chart that shows the relative height of water on one axis, that's the vertical axis in this case, and the flood flow on the horizontal axis, and what you see here is a rating curve that will be an exhibit in this trial from the Riverside Gauge. The Riverside Gauge is an United States Geological Survey device that's located downstream of the Riverside Bridge in this location right here and its purpose is to calculate how much water flow there is for any given flood. That's the

horizontal axis, and remember we talked about cubic feet per second before. The rating curve shows how many thousands or hundreds of thousands of cubic feet per second there is flowing by the gauge during any given flood, and the points on the curve represent the peak flow for any given flood, and I have some of them marked here.

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They're a little hard to see so I'll blow it up here for a second. These peaks here, 1990, 1975, 1990, 1951. These are all points for the flow on the rating curve at the USGS gauge, and what this -- you'll learn what these ratings curves show is that there has been no change in the ability of this system to pass water since at least 1951. Here's the '51 rating curve point and you can see that it's on exactly the same curve as 1990, 1975, 1951 and the other 1990 flood. If there had been a difference in the ability of the system to pass water between different floods, you would have expected, as a hydraulic scientist, to get a skattering of points at different locations than on the curve, but because we have the USGS station there, we know that the rating curve -- we know that the floods for each of the floods over at least the last 40 or 50 years have all fit on exactly the same curve so that there has been no change in the ability of this system to pass water.

What does that mean in this case? It means that the last major change in 1955 to this dike hasn't -- it means that the dike itself has no greater or lesser ability to restrict the flow of water towards Padilla Bay than it ever had, at least since the State permitted that last major change to exist, and the evidence in this case will demonstrate through the testimony of Mr. Hastings and others that even that change was very minimal relative to the overall system.

Mr. Hastings estimates that the change from 1955 to what preexisted that had zero effect on the flood waters and the amount of flooding to be expected in the Nookachamps area, and he'll so testify by video tape deposition because he is elderly and is ill.

Now, I have only a few minutes left, but I want to say just a few words about the county's case against the State of Washington. As I indicated to you before, the county believes that it will demonstrate, correspondingly that the plaintiffs will fail to demonstrate there's been any taking of property by Skagit County. We believe that is a solid proposition because of the things that we pointed, because of the history of the dikes, that Skagit County didn't have the statutory authority to construct and build the dikes and it didn't construct and build the dike. It didn't make

a change to Dike District 12's dike in 1955 and it didn't permit those dikes to exist in perpetuity. It

just didn't do that. It had have some responsibility later on for maintaining the dikes. It did fund some dike maintenance by making funds available to all dike districts and cities and towns who also have the right to maintain dikes in Skagit County through a program called a Skagit County Grant Fund Program, but what Mr. Hagens didn't tell you about the existence of those programs is what the county did when they made those funds available was that it appointed a citizens advisory committee called the Skagit County Flood Control Committee. Some of the plaintiffs have served on that committee. It's that committee, not the county, that prioritizes the needs of the various entities, including cities, towns and diking districts, for the money and it's that committee that puts in the request to the county for these funds in the priority that is established by the Flood Control Advisory Committee.

 The testimony in this case will be that there has not been any instance since the Flood Control Advisory Committee came into effect in approximately 1980 when the priority requested by the committee was overturned or undermined or changed by the Skagit County Commissioners and, again, the evidence will show that

the funds that were made available by Skagit County were in the order of \$100,000 per year for most years, whereas the State made available the FCAAP fund, Flood Control Assistance Account Program, FCAAP, and you'll hear a lot about that. The State did the same thing. It made available funds to the county or to dike districts or to states or cities or whoever had a project that was allowed to be permitted by the state, again exercising its regulatory control to assist these entities in maintaining dikes and flood control structures that fit within the state policy of flood control.

You'll hear about FCAAP, you'll hear about the county grant program, but the important thing is that these were funding mechanisms that were made available and they were coordinated with a citizens advisory committee, a flood control committee which included representatives from all of the areas, including both Sterling and Nookachamps, and on whose committees some of the plaintiffs sat, so when the plaintiffs say the county has never done anything for these people, they've appointed an advisory committee. They've allowed people to serve on it, and they made funds available to serve the needs of the community in this area.

Now, getting back to the issue of the case against the State. We believe that when you get to the end of this case you will determine, as we have, that there has been no taking of the plaintiffs' property by Skagit County. In fact, the county has simply done what responsible government are supposed to do. They're supposed to listen to the needs of all the citizens and all the entities and governmental entities in the county, including the diking districts, which have and do have the right to legally maintain these dikes, and they respond in an appropriate fashion, both during the planning and funding mechanism for maintaining these important public facilities and also in times of high water and emergencies when people find themselves in trouble because they have moved into the flood plain.

We believe you'll find that no taking has occurred, but if you determine that a taking has occurred, it's our position, number one, that it was the dike districts who constructed and maintained the dikes and who had the exclusive right under state statute to construct and maintain those facilities, and in the event that you determine that a taking has occurred, that you should pay attention to the statutes and regulations that say that it was the exclusive province of the State of Washington to make an determination as

to whether or not these structures that have been permitted to exist in perpetuity have an adverse influence on the floodway.

That's what the statutes do, they articulate a State policy of flood control and they give the State the responsibility to do this.

Another statute that you will hear about, 86.24, it's the last portion of the 1935 act that I'd like to talk about, and it is a portion of the statute -- if I can find it here -- it's a portion of the statute that says that in the event where counties operate together with the state -- I'm going to flow it up here, again a portion of the 1935 act, Section 163, what it says is "That a county or counties acting jointly in order to take action in matters related to flood control act for the State when it performs such activities under this provision of the statute."

I'd like to read it to you in its entirety. "The State Director of Conservation and Development, in cooperation with the Secretary of War acting through the Corps of Engineers of the United States Army, and any other agencies of the United States, and in cooperation with any official agency or institution of the State and any flood control district created under the laws of the State and any county or any counties acting jointly

pursuant to Chapter 54 of the Session Laws of 1913," and here's the important part, "shall act for the State in the formulation of plans for the control of floods in the several flood areas of the State."

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The county has always taken some measures with respect to flood control. It has to. It has to do the bookwork, for instance, of the dike district. It has to cooperate for its interlocal agreements with the diking districts and with the State and with the federal government and the Army Corps of Engineers. When it does that, it is acting pursuant to the terms of this 1935 act as an agent of the State. It says "it shall act for the State," and that's an agency relationship, ladies and gentlemen.

At the end of the case the judge will instruct you on the law relating to agency, but I want you to harken back at that time to determine whether or not these acts by the county were for the formulation of plans for flood control, because if they were pursuant to the state policy of flood control, the 1935 act and it's modern counterparts, those acts are solely for the State. They're not for the county, they're not for other purposes, it's for the State policy of flood control.

So, ladies and gentlemen, we think that you will

find that there has been no taking of the property. We think if you find that there is a taking, you will correctly allocate that responsibility to the diking district who own the dikes and the State of Washington who articulated the policy of flood control. Certainly the county has responsibility. Certainly the county does certain things. What they didn't do is build the dike. They didn't build Dike District 12. They didn't have the power or the right under state law to maintain that. That lies exclusively with the diking districts, and to the extent that they did acts at all, they acted for the State of Washington.

Thank you very much for your patience. I know I've been long-winded. I'm likely to get hoarse. I apologize.

Thank you for your attention.

THE COURT: Thank you, counsel.

THE COURT: At this time I'm going to give you an afternoon break. The State is anticipating an opening statement that they think will be in the 45 minute -- they anticipate between 45 minutes, an hour, something of that sort, for them to explain their anticipation of how the case will develop, so we'll take a break now so we can all get a stretch and a breath of fresh air,

whatever we need to do between that period of time.

That should allow us some time this afternoon to begin actually with testimony in this case, depending on how everything works itself out, so with that, we'll take a 15 minute recess then.

(Recess was taken.)

(Whereupon, the following occurred in the presence of the jury:)

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THE COURT: Mr. Anderson.

MR. ANDERSON: Thank you, Your Honor.

May it please the Court, opposing counsel, ladies and gentlemen of the jury, as you know, I'm Assistant Attorney General Glen Anderson and I'm the Assistant Attorney General that's been assigned to represent the State in this case.

I'd like to introduce at this time Mr. Tim D'Acci. Mr. D'Acci is the State Coordinator for the National Flood Insurance Program and he also has responsibility for the FCAAP program which you've heard a little bit about but you'll hear more about from me, and perhaps you'll hear some testimony from Mr. D'Acci about it later on in this case.

The issue in this case is very simple from the State's perspective. The issue in this case is who should bare the risk of the damage caused by flooding on

the plaintiffs' property in November of 1990. Now, there's no dispute that the plaintiffs' property flooded. That's not the problem. The question is who should bear that risk. Should it be the plaintiffs who purchased the property in the flood plain and who, based on their property in the flood plain, could expect it to be flooded, or should it be the dike districts who own the dikes.

And it's undisputed in this case, let me point that out at this point in time, it's undisputed in this case that the dike districts constructed and own the dikes which the plaintiffs contend caused their damages. Should it be they who pay? Should it be the county who, as the plaintiffs contend, has based —based on the county's participation in assisting the dike districts in maintaining the levees, or should it be the State based on the State's regulation of the dike district's activities, and it's the State's position in this case, if it is anyone other than the plaintiffs that should bare this risk it should be the dike districts.

And I'm going to be right up front with you. I'm going to tell you that if anyone is responsible for these levees it's the dike districts, and they're not here, but we're asking you to put that responsibility on

them because the dike districts are the ones that created the levees, they're the ones that constructed the levees, they're the one that own the levees, they're the one that maintain the levees, and they are the individuals who benefit from the levees, and those who benefit from something that causes damage ought to be the ones who pay if that structure causes damage. It's a simple proposition and that's the proposition we're relying on in this case.

Before I talk about the evidence you're going to hear in this case, and I will apologize at this point because I'm going to repeat some of the things you've already heard. I'm going to try not to repeat too much of it but I feel the need to do that, because part of it needs to go in the flow of my explanation and my statement and why I think the responsibility lies with the plaintiffs and the dike districts, but before I do that I want to talk a little bit about the posture of the case, and you've already heard it from me before, but the plaintiffs are not suing the State in this case. They have not brought any claims. They are suing the county, and so it's their burden to prove that the county has caused their damages, that is but for what the county did the plaintiffs wouldn't have suffered any damages. And so first the plaintiffs have to prove

their cause of action against the county, and you've already heard some of the defense that Mr. Smart has or some of the things that the county has argued to defend against that claim.

It's only if you find that the county is responsible for the damages caused to the plaintiffs that you have to worry about the county's claim against the State. The reason for that is that the county's the only one making a claim against the State, and their claim, as you heard Mr. Smart, is that the county, to the extent that it may do anything on the levees, acts as the State's agent. That's what their claim is. They say if we did anything, we did it on behalf of the State, and in order to carry their claim on that, the county is required to prove that that they were required to act or they acted at the instance of the State and that they acted under the direction and control of the State.

Now, the evidence in this case will show that the

State has done nothing to require the county to do the things they do related to the levees. The State does not require the county to participate in levee making. The State has never required the county to construct or maintain levees, and I just -- I want to briefly address not having any evidence to establish that this State

requires the county or has required the county to participate in levee maintenance.

Mr. Smart, at the end of his argument, pointed out a statutory provision, RCW 86.24, actually he refers to the 1935 act but it's codified now in RCW 86.24 of the State statutes, and Mr. Smart represented to you that this statute -- and he had it highlighted and up there on the screen, too -- for the proposition that to the extent that the county did anything, they acted on behalf of the State, and that's what Mr. Smart says the statute says.

The State does not agree that that's what the statute says, and the State's position is that any reasonable reading of that statute indicates that the State Director of Conservation acts on behalf of the State in cooperation with all these other agencies. Under Mr. Smart's reading of the statute, the United States Army, the Corps of Engineers, the counties, anybody else that's mentioned in this statute, the long list he read off, acts as the State's agent, and that's simply not the case.

Now, what the testimony and evidence in this case show, the testimony and evidence, you've already heard a little bit of this, is that the Skagit River has historically flood odd numerous occasions. It's flooded

41 times this century. It's exceeded 100 cubic feet per second at the Mount Vernon gauging station, which is considered to be significant flooding, more than 20 times in recorded history. And in each of these instances, the Nookachamps area where the plaintiffs lives floods. That fact has been identified as early as 1923 in a Army Corps of Engineers study. The Army Corps of Engineers did a flood reconnaissance study of the Skagit River and they reported during significant flooding events, even lower than 100 feet cubic feet per second, that the Nookachamps area flooded and it filled up with water. That study and that finding has been repeated throughout the years.

The Army Corps of Engineers has done a number of studies in the thirties, in the fifties, in the sixties, and even in 1979 recording that fact. Consistent with that reality, the evidence in this case is going to show

that the plaintiffs' property has flooded historically. Mr. Smart has talked about that to you and I won't repeat a lot of that, but the evidence, for example, is going to show Mrs. Torgeson's property has flooded on several occasions to the extent that her barn floated away. The evidence is going to show that an individual named Madison Parker, when he purchased his house, was told that the house had flooded before, that it had had

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up to two feet the water in the living room on prior occasions. And you'll hear similar testimony from other residents, all showing, as you might expect, that if you live in the flood plain you can expect to be flooded.

Now, the plaintiffs in this case complain and they allege that the floods are higher than they were before. And the evidence, testimony and evidence in this case is going to show you that there are a number of reasons for that, but that the most significant reason is that there simply was more water. The factors which combine to cause a flood or make a large flood are, more than anything else, functions of nature. You have snow melt-off, you have warm temperatures, you have rain that previously saturated the ground, you have high tides, and when all of these things come together they cause a large flood event, and that's what occurred in November of 1990. And, in fact, the flood in November of 1990 was the largest flood as you can see, November 11th of 1990, the flood at that point in time was 142,000 cubic feet per second measured at the Mount Vernon discharge point, gauging station.

If you look at February 11th of 1951, the discharge was 144,000. The flood in November of 1990 was the largest flood measured at Mount Vernon since the flood of 1951.

Now, the significance of this, there's two things. First of all, let me refer to the fact that also if you look at the flood elevation in 1990 at Mount Vernon, and that's measuring the flood elevation of the river, how high is the river at Mount Vernon, I think you can see that in 1990 it was at 36.6. If you refer back to 1985 when the flood -- or 1951 when the flood was 144,000 feet per cubic second, 2,000 cubic feet per second more than it was in 1990, the flood elevation is 36.85. Those numbers are fairly consistent. And what that establishes is that when the flood comes down the river, that the flood flow was the same in 1990 as it was in 1951, has roughly the same flood elevation in Mount Vernon, and consequently we expect the same type of flooding.

One of the reasons that there was no significant -- that there was this long a period of time from 1951 to 1990 between large flood events of this type is that in 1959, the dams on the upper Skagit River were completed. The Upper Baker Dam and the Ross Reservoir, the dams were completed up there. And those dams are significant because the Army Corps of Engineers uses those for flood storage, and the evidence in this case will show that after the 1990 flood in 1991, the Corps of Engineers, in a document called the Flood Summary

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 Report on the Nookachamps and Skagit and Snohomish River Basins, did a study, and part of their study was to determine what effect the flood storage that the up-river dams had on the flood downstream, and the Army Corps of Engineers concluded that as a result of the water that they were able to withhold from the river, from the flood during the flood event, resulted in the flood level being three feet lower at Mount Vernon than it would have otherwise. That is if the dams had not been there and they had not had that storage capacity, the flood levels would have been at 39 feet in Mount Vernon instead of at 36 feet. Consequently, the flood elevations on the plaintiffs' property would have been higher.

The reason that's significant is for two reasons. One is that is partly responsible for the fact that there were no large floods or that that resulted in a diminishment of the flood sizes between 1959 and 1990, leading to what Mr. Smart referred to as a sense of security on behalf of people that the valley wouldn't flood. The other is that that compensates, if you take out the levees as the plaintiffs allege, and you attempt to remove the levees and pretend like they're not there, then you also have to remove the up-river storage by the dams. And when you do that, you end up with roughly the

same situation in the 1990 flood whether the dams and the levees are there or whether they're not. The flood levels are going to be roughly equivalent, so the evidence in this case is going to show that these plaintiffs could expect to be flooded, that they could expect to be flooded, and that, in fact, they could expect to be flooded to even levels worse than this because they live in the hundred year flood plain. And this wasn't a hundred year flood event, and when you move into the hundred year flood plain, if you know that you can be flooded and you know that you're subject to the 100 year event, then you know that you can be subject to a flooding that is worse than this.

Because of this flooding people have been building dikes on the river since the 1800s, as counsel mentioned to you. As they both have mentioned to you, the first dikes were built by farmers, and they were primarily dikes that were intended to protect the crops from the summer floods. They were mounds, as counsel describes. They were small and they met with limited success

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 In the 1890s, legislature passed a statute which authorized the formation of dike districts. That's been referred to, too. Dike districts are not state agencies, and I don't want you to be misled. They're

independent governmental entities. They're like school districts, they're just like fire districts, they're just like cities, they're just like towns. The legislature passed a statute authorizing their formation. That doesn't mean they're a state agency. Dike districts are independent governmental entities. They have the power to tax. They have the power to condemn land. They have the power to buy land, to sell land, to lease land, to enter into contracts, to sue and be sued, all the same things that any other governmental entity has, and these dike districts exist for the sole purpose of constructing and maintaining dikes. And, in fact, as counsel pointed out, the dike districts have the sole responsibility for the sole charge of dike construction and maintenance in their dike districts, and these commissioners that are elected by the members of that dike district are responsible to the members of the dike district and their duty is to insure that the dikes are constructed and maintained in order to protect the people behind them.

The independence, as I referred to, that the dike district has the exclusive responsibility, exclusive charge for the construction, has long been respected by everybody, including the State of Washington.

I want to show you an excerpt from the same

letter that Mr. Smart showed you to Mr. B. J. Bournes, referring to the dike relocation on Dike District 12 in 1955, and if you read -- let's see if I can get this all on here. I don't know if everybody on there can read it, but what this letter says, after approving the dike district's project, after agreeing to grant them a permit, which I'll discuss in a minute, Mr. Hastings, the State Supervisor of Flood Control, stated, "The extension program now in progress is in direct conformance with district law and the district's ultimate comprehensive plan for flood control within

their financial ability to carry out such a program. Neither this office nor any other authority can interfere with the affairs of the district as are deemed feasible and advisable by the diking commissioners who represent that district."

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So, in 1955, Greg Hastings is telling Mr. Bournes, who is complaining about this extension, that you can write a letter to me and you can complain but there's nothing I can do about it because if the diking district is conforming with the law and they're doing what they can, then I can't interfere with them.

Pursuant to the statutes I've referred to, as you've already heard, Dike District 12 and Dike District 17 were formed in the early 1990s. These dike

districts, Dike District 17, is on what I would call the south side of the river. I think of it as you're driving up I-5, you get there and look upstream towards the Cascades, Dike District 17 is on the south side of the river, Dike District 12 is on the north side of the river. These two dike districts constructed the dikes that are there today. They maintained the dikes. They've operated the dikes and they've done everything in regard to the dikes. They've constructed them, operated them and maintained them since that time.

Evidence will show that to this day the dike districts continue to make all major decisions about the dikes. They decide what repairs to do, they decide whether to raise the levees, they decide whether to riprap them, whether to put roads on top of them. They're their dikes and they decide what they want to do with them and nobody else interferes in that.

Along that line that will be the testimony of the dike districts commissioners that come in here. That hasn't been mentioned to you, but there are dike district commissioners like Pete Walker who is a commissioner of Dike District 12 from sometime in the 1950's 'til I think in the mid 1970's, I can't recall, a long time. Gerald Mapes, another dike district commissioner from Dike District 12 for a long period of

time both will come in here and tell you that decisions that are made as to the construction, maintenance and operation of these levees are made independently by the dike districts free of any influence from the state, free of any influence from the county, free from any requirement. They will both tell you that they are not aware of any requirement by the State that they construct or maintain levees. State witnesses will tell you the same thing. We haven't gone out and we haven't

told anybody that they have to construct or maintain levees.

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Now, the reason these levees are constructed and the reason that these people act in the fashion that they do, and I'm referring to the dike district commissioners, is because the whole purpose of the dike is to protect the people that are behind the dikes. The people that the dike district commissioners tax and the people that elect the dike district commissioner, that's their constituency. That's who they're responsible to. Their interest is to maintain that dike and that's why they do it.

Now, what is the State's role in all of this? Up until 1935 the State had no role in flood control. They had no role whatsoever. They didn't build dikes, didn't regulate dikes, didn't do anything, and up until that

time, so what we had prior to that was all these dike districts, independent people, private citizens out there building dikes, and the evidence in this case will show that the result of that was you had a lot of levees being built that were improperly constructed, that weren't safe, that were put in improper locations on the river and, in essence, you had a lot of levees being built that caused more harm than good, either because they caused flooding where they shouldn't. They didn't make sense because you had a levee here and a levee here and no levee in between, or you had levees that were failing during even minor floods.

And in 1935 the legislature looked at this, and in the exercise of its wisdom, the legislature said we need to regulate this. If people are going to be out there building these levees and representing that they're going to protect the public, then we need to regulate it and we need to insure that that is done in a workmanlike fashion, that sound engineering principles are used so that we can insure the public safety and health, so that we don't have dikes that fail every time there's a flood, so we don't have dikes that are being built in a position where they cause more harm than good, and the legislature passed the act that Mr. Smart referred to earlier. And that act gave the State

regulatory control over all navigable waters. It didn't give the State control over the flood control stretches. It didn't remove the dike districts and put the State into their position, it didn't put the State into the position of developing a plan or having a policy of what flood control would be. It didn't give the State the right to impose upon the local government

what they wanted -- what the State's will would be as opposed to what the local government will would be when it came to flood control. And what it gave the State the right to do was to have essentially what amounts to building -- or construction standards, and it gave the State the authority to reject applications to construct levees if they, number one, didn't meet sound engineering principles, weren't built safely or weren't planned to be constructed in a safe manner and, number two, if they were going to be put in such a position that they caused more harm than good by increasing the flooding in other places.

Now, these same rules that were passed by the legislature in 1935 applied to all construction on a navigable water. They applied to the construction of levees, they applied to the construction of bridges, they applied to the construction of dams and they applied to both private and public parties. Didn't

matter whether it was Dike District No. 12, Skagit County, the State of Washington, Department of Transportation or Boise Cascade or some other private individual. It didn't matter if it was Joe Smith that wanted to build a levee. Everybody had to conform to those same regulations, and the way that this was administered was that you filled out an application. you wanted to build a levee, if you wanted to engage in some type of other major reconstruction, as Dike District 12 did in 1955 when they relocated their levee, you filled out an application. And not surprisingly when these dike districts filled out these applications, and this is one again that Mr. Smart showed you earlier, they sought -- the dike districts or whoever, somebody building a dam, and, interestingly, you'll see evidence in this case if you wanted to construct a home in the flood zone you had to get one of these permits, and this kind of makes the point.

These people, when they sought the permits, they sought them in perpetuity because they wanted the right to construct the dike and leave it there. They didn't want to come back to the State and ask can I have a permit to keep my levee here, and we can all agree that that would be a bureaucratic nightmare if you had to come back and get a permit to maintain your home, so

these people applied for the permits in perpetuity.

As was the case in 1955 when Dike District No. 12 rye located their dike, if they met the standards, if the levee met sound engineering standards and the levee was not going to increase flooding or alter the regime

of the stream, the State was required to issue a permit. That is what we would all expect. If you're going to have regulatory requirements, if you have a building code and if you think of it like a building code, if you meet the standards the State can't say to you or the county or whoever issuing the building code, they can't say to you, no, I'm not going to give you a permit, they've got to be able to tell you you didn't meet the standards, but in the cases where they did, the permits were issued and they were issued in perpetuity, because that's what was asked for.

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And something that's interesting about these permits is if you turn them over on the back, and every one of them has this language, and this is really small so I don't know if you'll be able to see it, these permits state that no property rights are granted herein, nor does this permit absolve permittee from liability for any damages which may be suffered to life or to -- to life or to property, public or private, by reason of works, structures and improvements authorized

hereunder. So when the State is issuing this permit, the State is telling Dike District 12 or the individual building the dam or the individual building their house that they're not being relieved of any liability, that the State's not accepting that responsibility. All the State is doing is saying you met the regulatory requirements so you can do what you want to do. That's what the permit system is about.

Now, one comment I wanted to make about that, Mr. Smart made the comment that when this permit was issued that this certified that the levee or whatever other flood control structure was in compliance with the State policy on flood control. Now, when the legislature mentioned the State policy on flood control, they didn't come out, and there's going to be no evidence in this case of any policy or any plan indicating that people should or should not build levees, where they should be built or anything of that nature and, in fact, the permit does not indicate compliance with the state policy on flood control. What the testimony in this case will be is that the permit indicates that the person met the regulatory requirements and they were entitled to receive the permit.

Now, the State had another role which has been mentioned, and that is that over the years the State's

administered the FCAAP program, and that's the Flood Control Assistance Account Program, and that is a program whereby the State has made available funds, assuming the legislature appropriates them, and in some years you will hear testimony the legislature has not appropriated money for these purposes, but over the years when the legislature has appropriated these funds, the State has money which they make available to the local government to construct and maintain these type of facilities.

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These funds are available on a voluntary basis. Nobody's required to apply for them, nobody's compelled to apply for them, but they're available to cities, towns, counties, dike districts, drainage districts, any entity that maintains some type of flood control structure, whether it be a levee, whether it be tide gates, pump houses, things like that. This money is available to them and they apply for the money. It's a grant program.

Essentially what the State is doing is giving away money to the locals, and they do it based on applications received from the local government. The projects, the Dike District Commissioners in this case, even on their FCAAP projects, they're initiated at the local level. They decide what they want to do on the

levees each year and then they decide which of their projects are important enough to them that they want to try and apply for State grants, because this state fund covers the whole state and it's competitive, and I'll tell you there's not a lot of money.

Mr. D'Acci will tell you when he testifies that the applications for these funds far exceed the available funds, and so it's competitive, and so the dike districts make their decisions about which projects they want to apply for. Some of them they receive money for, some of them they don't. Funding for each project is limited to 50 percent from the State, and the testimony you will hear is that a lot of the projects don't receive funding from the FCAAP program, either because they don't apply or because the project application is denied because there's not money, there's other priorities that are more important, because what happens is these are funneled up through the county. The applications are submitted to the county and the county engineer prioritizes them on a county-wide basis and then they go up to the State and the State looks at it and prioritizes them on a state-wide basis, and it's an allocation of limited funds and you try and decide what is the best way to spend the money, and the evidence will show that a lot of projects are done by

the dike district without any speciousness by the State

because money's not available.

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Evidence will also show that when the State participates, it acquires no ownership interest and there's no requirement that the levees continue to be maintained. Maybe there should be but there's not.

And this is in contrast to a program that you'll hear about called PL99, and PL99 is a program administered by the federal government, by the Corps of Engineers, and it's a similar grant type of program except it's a little more direct. If your levee breaks in a flood, which they frequently do, or if there's severe damage to it, the dike districts can apply to the Corps of Engineers to have the Corps of Engineers come in and repair the levee, and the Corps of Engineers will come in and do that on a participating basis, where they will provide the work and they will provide the majority of the funding and they will take care of your problem for you, and the evidence in this case will show that the dike districts, in particular Dike District 12 and Dike District 17 in this case, have, on several occasions, sought the assistance and received the assistance of the Corps of Engineers under PL99. condition of receiving PL99 funds, the local sponsors have to agree, the dike districts, have to agree to

maintain the dikes to Army Corps of Engineers standards, and they have to agree to that before they receive the funds, and if after they receive the funds they do not maintain the dikes to Army Corps of Engineers standards, the Army Corps of Engineers position is they're not eligible to apply for PL99 funds anymore, and that's pretty significant and pretty important to these dike districts because when their dikes get damaged in floods, they need help in maintaining them and the Corps of Engineers is the number one group to assist them.

Now, one other thing that you'll hear is called flood plain management, and the State has been involved in flood plain management and now it's involved under the National Flood Insurance Program, and flood plain management is kind of a fancy euphemism for regulating development in the flood plain. Under the National Flood Insurance Program, local government, if they regulate development in the flood plain and qualify, the whole county, so, for example Skagit County, if they regulate development in the flood plain, can qualify under the National Flood Insurance Program for reduced rates of insurance, and they qualify for insurance so that residents in the flood plain can purchase flood insurance at reduced rates, and the requirements of that program are that the county adopt an ordinance and that

the State is the kind of coordinating agency between the federal government and the county on that. The county adopts an ordinance which limits development, basically either prohibiting development in the hundred year flood plain or conditioning it so that buildings are constructed to be above the hundred year flood plain.

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The National Flood Insurance Program and the flood plain management has nothing to do with the maintenance of levees. There may be some suggestion made in this case, there may be some inferences made in this case that it has something to do with levee maintenance, but when you get right down to it, it has absolutely nothing to do with levee maintenance because when they map the hundred year flood plain, and you'll see this, you've seen it already, the hundred year flood plain goes around the levees, and the federal government says unless you have a levee that's certified to withstand a hundred year flood, which one none of the levees in Skagit County are certified to, the federal government acts as if they are not there in mapping the hundred year flood plain, and they treat a house that's on the protected side of the levee the same as the house on the unprotected side of the levee is treated in terms of insurance rates and mapping and all of the requirements that they apply. The county has to

regulate development the same inside the levee as outside the levee, and so it has nothing to do with levee maintenance.

Those are the primary functions performed by the State, or historically performed. I should mention, and I missed this point. The State no longer issue flood control zone permits, the permits I showed you earlier. The State stopped issuing those in Skagit County in 1981 because Skagit County requested that be delegated to them and the flood permit program was abolished in 1987 by the legislature, so those are what the State does.

The evidence in this case -- there's going to be no evidence that the State owns these levees, that the State construct these levees, that the State maintains these levees or that the State required that they be built or maintained. There's going to be absolutely no evidence about that. There's also not going to be any evidence of any grand state plan or any state policy where it is set forth and dictated to the local government what they're going to do. The State has never taken that position. The State has never gone up to Skagit County and told Skagit County to build levees.

Now, the last thing I want to talk about is the

heard some of this but since 1907, so even before the State had any authority in this area, the county has had authority to engage in flood control if they so desired. In this particular case they don't own any of the levees and they didn't construct any of the levees. You've already heard Mr. Smart talk about the programs that they administer. They administer the local county river fund, they administer a rock riprap fund where they provide riprap to the dike districts. Those programs are administered by choice by Skagit County, and that's an important point. Those are voluntary programs of the county. They're not required by the state and you're not going to hear any testimony that they're required by the state.

The county has also, on several occasions, numerous occasions provided assistance of various forms to the diking district. A lot of this is based on intergovernmental agreements where they agree to provide some service to the diking district and the diking district agrees to reimburse the county for this service. Those services are provided on a voluntary basis. That's a decision of the Skagit County Commissioners or the Skagit County government as to whether to provide that or not. It's not required by state law. It's not required by any state employee

going up and telling Skagit County that they've got to do that.

The one instance that there is some requirement is under the FCAAP program, and the county engineers, as I've already indicated to you, are required to prioritize projects on a county-wide basis. They're also asked to supervise the construction and to inspect it. They don't initiate the programs. They're not required to initiate the projects. They're not required to participate in the projects. They're required basically to be the State's ears and eyes on the ground to make sure that the project, if the State puts money into it, make sure that the project's done properly and to make sure when the project is done, that the money has been spent for what it's been requested, and that's not a real complicated proposition.

The State sends an inspector out there to do the same thing. If Dike District 12 applies for \$20,000 to repair some aspect of their -- some damage to their levee, then they're required to submit plans. The plans have to be approved to insure that it makes sense to spend the money, and then after the project is done,

somebody wants to go look at it to make sure it was done the way it should have been done and to make sure that the money was spent for what it was intended to be

spent.

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The county has also, over the years, developed a number of plans to in, essence assist, the dike districts or guide the dike districts in what they do. These plans are primarily the result of work of committees established by the county commissioners. For example, as early as 1968 the County Commissioners appointed a Water Resources Advisory Committee and the charge to the Water Resources Advisory Committee was to develop a comprehensive plan for flood control on the Skagit River. That committee recommended a plan which included as an aspect of it the lower levee system, which refers to the area that we are talking about, and the plan referred to these levees would be raised pursuant to the plan developed by the Corps of Engineers, authorized by Congress and the 1966 Flood Control Act. That plan was eventually adopted by the county.

In 1980 another committee was appointed, the Skagit River Flood Control Committee was established, and -- this is a document that will be entered into evidence. It's a County Commissioners' resolution establishing that committee, and that committee -- the charge again to that committee was to develop a comprehensive plan for flood control on the Skagit River

and again, a plan was recommended.

In 1989, finally in 1989 the county adopted the Comprehensive Flood Control Management Plan. That plan undoubtedly will come into evidence and you will see that plan. That plan was funded in part by the state through the FCAAP program and the county adopted it pursuant to the FCAAP program. Under FCAAP there is a requirement that for the continued participation in the FCAAP program, there has to be a comprehensive plan. And that's part of the State's response to the fact that money was going out to the counties and was being spent, for lack of a better term, willy-nilly and the State wasn't necessarily getting the best deal for its money and, as most governments learn, the best way if you're going to start giving money away is to require the local government to have a plan before you give the money to them, and so in response to that need, the State put in the FCAAP program a requirement that in order to remain eligible the counties had to adopt comprehensive flood control management plans.

The testimony in this case, first of all, if you didn't want to adopt a plan you didn't have to. Alls that meant was you didn't get FCAAP funds. Second of all, the testimony in this case will establish that what went into the plan was the decision of the county or the

people developing the plan. The State didn't dictate what the plan was. The State said that the plan had to consider certain alternatives but that the selection of the plan was up to the local government. That's what the evidence in this case will show, and the evidence in this case will show that Skagit County, consistent with their prior plans, and there will be plenty of testimony about that, adopted a plan which included levee maintenance, and what's interesting about this plan is that the plan lists as one of its goal here on the executive summary "maintain local control of flood control works." And if you look on page -- chapter four, which is where the goals and objectives for area of coverage are included, short-term goal number four, or number five on page -- short-term goal number five is to maintain local control of flood control works.

And that's exactly what I've been talking about is what local government wants is to maintain local control. They don't want things to be dictated to them by somebody upstream, and that's what the county engineer, the flood control engineer Don Nelson, who was the flood control engineer at the time that this was adopted in 1989, will tell you in his testimony. He was the flood control engineer from 1975 until he retired in 1991, and he will tell you that this referred to the

diking districts wanting to maintain control. They didn't want somebody further upstream taking over their responsibilities and telling them what to do. They wanted it to remain the way it had always been.

Another thing, and as I'm getting close to the end here, another thing that's interesting that Don Nelson will tell you to you is that the State -- that there's nothing that the State does that requires the county to maintain the levees. His testimony is consistent with what he said in his deposition testimony, his prior testimony. He will testify in this Court that the county is not required by the State nor does there exist any State requirement that requires the county to do anything in regard to the levees. Remember that I mentioned earlier that the dike district commissioners will testify along those same lines, that they act independently and they don't act in response to any State requirement, and that's important because what

19 the county is claiming and what the county, in terms of 20 the State is that the county is required to do the things which the plaintiffs allege caused their damages, 21 22 and the evidence is not going to support that. 23 Now, I want to thank you for listening to me. 24 This is going to be a long trial. Some of us wish it 25 wouldn't be, but there's a lot of evidence that's going 1 to be put in. Because of the order of the case, as I've 2 discussed, because of the burdens of proof, it may be a 3 long time before you see me again. When we get to the 4 end there may not be any evidence left for me to 5 produce. All the witnesses may be called, all the 6 witnesses may testify and I may have to elicit testimony 7 from them during the plaintiffs' case or during the 8 county's case, and so it very well may happen that at 9 the end of the case I'll stand up and say, "We don't 10 have any witnesses to present, Your Honor." I don't want you to think if that happens or, as 11 12 we go through the case, I don't want you to think that the State doesn't have a case, because the State does 13 have a case. The State's case is that these people at 14 15 the local level, the diking districts, made their 16 decisions and they chose their destiny. It wasn't 17 dictated to them by the State. The fact that we don't 18 call any witnesses at the end of the case doesn't change 19 that, and I'm going to have to rely on you to listen to 20 the evidence throughout the case, to listen to that, to 21 recall that evidence, because it may not come in all in a nice little package like perhaps the plaintiffs' case 22 is going to be. My case is probably going to be spread 23 out all over time but I want you to recall this theme, 24 25 and at the end I think the evidence -- you'll agree that 1 if there is a verdict against anyone, it should not be 2 against the State of Washington. 3 Thank you. THE COURT: 4 Thank you, Mr. Anderson. 5 THE COURT: Counsel. 6 MR. HAGENS: Call Mr. Mr. Regan. 7 THE COURT: All right, sir, if you'd raise your 8 right hand. 9 RICHARD P. REGAN called in behalf of the plaintiff, being first duly 10 sworn, testified as follows: 11 12 DIRECT EXAMINATION 13 BY MR. HAGENS:.

Would you state your name and address, and please spell

- 15 your name, if you would?
- 16 A My name is Richard P. Regan, R-e-g-a-n. I live at 26050 17 Southeast 159th Place, Issaquah, Washington.
- 18 Q By whom are you employed currently?
- 19 A I'm employed by Northwest Hydraulic Consultants, which 20 our office is in Tukwila, Washington.
- 21 Q What capacity are you employed?
- 22 A I'm senior hydraulic engineer with the firm.
- Q Who do you report to?
- 24 A I report to a fellow by the name of Mr. Jerry Mutter.
- Q What is his capacity?

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- 1 A He is the principal of the firm and senior owner.
- Q Okay. Now, let's talk about your profession, hydraulic engineer. Are you licensed as such in the State of Washington?
 - A Yes, I'm a licensed professional hydraulic and civil engineer in the State of Washington. My certificate number is 10210.
- 8 Q And what kind of training, if any, do you have to have 9 to be a licensed civil engineer and hydraulic engineer?
- 10 My training started out in Wentworth Institute in Α 11 Boston, Massachusetts. I started in mechanical 12 engineering, which is before I went into the Air Force. After leaving the Air Force I went to the University of 13 14 Washington, studied civil engineering. Subsequent to 15 the University of Washington, I went to Colorado State 16 University and the Corps of Engineers Hydroelectric 17 Engineering Center and studied additional hydraulic 18 engineering.
- 19 Q What did you do after going to Colorado State?
- 20 A The additional courses I took at Colorado State during
 21 the time I was employed by the U.S. Army Corps of
 22 Engineers. My employment with the Corps of Engineers
 23 started in 1961 and terminated at my retirement in
 24 1987. I spent 27 years with the Corps of Engineers as a
 25 hydraulic engineer, and the last ten years was Chief of
 - 1 Hydraulic Engineering.
 - Q What did you do as Chief of Hydraulic Engineering your last ten years with the Army Corps of Engineers?
 - A Okay. My principal assignment during that period of time was I was in charge -- during that time as Chief of Hydraulic Engineering, my assignment was to -- I was in charge of all hydraulic engineering done within the Seattle District.
 - Q And that was during what period of time?
- 10 A That was from about 1978 to 1988. At that time I had as 11 many as eight or ten employees and other times it was 12 down like four or five, depending upon the work load.

- Q Were those engineers as well?
- 14 A They were all engineers -- no, they weren't. There was 15 one technician. All the rest were engineers.
- 16 Q Did you retire from the Corps, Mr. Regan?
- 17 Α Yes, I retired -- I had -- with my military time I had 18 over 30 years of time with the federal government, and I 19 retired and went to work -- after I retired I went to a 20 form name of Klohn, Leonoff, principally a Canadian 2.1 company that had a small office in the Seattle area. 22 worked at that firm between 1988 and 1991. In October, 23 I believe it was of 1991, I went to work in the -- in my 24 present capacity as senior engineer, Northwest Hydraulic 25 Consultants.
 - 1 Q Have you ever taught dam design or anything of that 2 nature?
 - A Yes, I've had a number of experiences. I've lectured at more than five different courses at the Corps of Engineers Training Center in Pittsburgh, Mississippi. During my tenure with the Corps of Engineers I was a member of the Corps of Engineers Channel Stabilization Committee. I was on that committee for ten years. That committee looked at -- it was a committee of about ten, twelve people, and all engineers that looked at most serious problems that the Corps of Engineers had throughout the United States. We looked at two or three different projects, problems every year.

Also during my time with the Corps of Engineers I was a -- I was a member of a team that went to the People's Republic of China in 1980. That trip to China, we were there for two reasons. One to assist the Chinese engineers with a very large dam that they were proposing to build. Another purpose of the trip was a -- to teach, to provide technical transfer of all types of -- all dam design. Each person on the team was an expert in certain phases of dam design. My phase was hydraulic engineering.

Q And have you also served as a consultant with the Corps of Engineers in connection with the Mount Penatubo

- 1 eruption?
- 2 A Yes.

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- 3 Q Tell us what your experience was.
- During my time right after I went to work for Northwest
 Hydraulics, the Corps of Engineers of the Portland
 District hired me as a consultant to a team that they
 sent to the Philippines to look at the river channel and
 sedimentation problems that had arose from the Mount
 Penatubo eruption.
- 10 Q All right. So you went to the Philippines then; is that

11		right?
12	A	Yes, I spent two or three weeks, I believe, over in the
13		Philippines, and worked afterwards in office work after
14		we came back.
15	Q	Who typically hires your services or the services of
16		your company?
17	A	Okay. Our company is hired by all different types of
18		clients. We have quite a bit of work going for the
19		Corps of Engineers. We have quite a bit of work going
20		for the State of Washington. We are hired by county
21		governments, city government. We also have some private
22	0	clients.
23	Q	Okay. What is the sorts of things that you as a
24	70	hydraulic engineer do, Mr. Regan?
25	A	Okay. My work is in water hydraulics as opposed to
1		machinery hydraulics, water hydraulics having to do with
2		anything having to do with rivers, river run-off, the
3		sedimentation in the rivers, erosion. Basically that
4		probably covers everything. I probably could think of a
5		few more if I was more serious about it.
6	Q	Have you had any experience on actual dam projects as
7		such?
8	A	Yes, I have been a designer on a number of dam
9		projects. The largest one that I have worked on was the
10		Libby Dam which was designed in the late sixties and
11		early seventies, and proceeded into the mid-seventies
12		really. Libby is a dam in northwestern Montana. It's a
13		450 foot high concrete gravity dam and it's basically

from the dam.

I've worked on modifications to the Chief Joseph
Dam on the Columbia River. During that time we designed
a complete rebuild of the spillway, and raising of the
dam. I worked on the Lower Monumental Project on the
Snake River. Worked -- I did all the hydraulic design
on the Willapa River outside Grays Harbor. And
presently I've been working with the Portland District
on their four dams on the lower Columbia River,

half a mile across the top. It stores water in the

reservoir, as I remember, five million acre field of

water, and backs water up for about 90 miles upstream

Bonneville, The Dalles, John Day and -- yeah, and McNeary.

3 Q Okay. Do you have any familiarity with the Skagit River?

4 A Yes. Yes.

 Q Would you tell the jury what that familiarity is?

A I'm quite familiar with the Skagit River. During my tenure with the Corps, I was hydraulic engineer in charge as being -- of the design team of the Corps of

9 Engineers project that came up in 1979 for raising and 10 strengthening the levees on the Skagit River. 11 Prior to that I had been involved in the Skagit 12 River to some extent during flood fight activities, and 13 subsequent to that I got myself abreast on what was 14 going on in the Skagit River for my own edification. Okay. Have you had any work in the Skagit River in 15 Q 16 connection with any activities that FEMA has been 17 involved with? 18 Α Yes. During my time with the Corps we did some work for 19 FEMA, Federal Emergency Management Agency. We did look 20 at flooding in the -- basically from Sedro Wooley 21 downstream, and I believe we did some flood studies 22 upstream to Concrete. 23 Okay. And how were those flood studies used, Mr. Regan? Q 24 They were to be used with the flood insurance program, Α 25 to develop rate maps and to develop maps that will 1 assist the regulatory people, the county or cities as to 2 where buildings could be built and how high above --3 where the flood profile would be in various agency areas 4 so you would build the houses high enough. 5 Can you tell the jury during what period of time you did 6 this FEMA work. 7 I can't really remember. It had to be after 1979. Α 8 Let's talk a little bit about general data and 9 definitions. Does the Skagit River drain a large area? 10 Skagit River drains, if you're at Mount Vernon, Α Yes. 11 say the highway, upstream from highway I-5 bridges, 12 about 3,050 square miles of drainage. 13 Do we have a map with us that shows the actual drainage 14 area of the Skagit River? 15 Α Yes, I do. Where did you obtain this map? 16 17 Α That map is a reproduction, a blowup of an exhibit that 18 is in the Corps of Engineers July, 1979, General Design 19 memo, Skagit River, Washington, General Design Memorandum of Levee Improvements. 20 21 Q Was that the project you were chief engineer on? 22 I was chief hydraulic engineer on that project, yes. 23 MR. HAGENS: We would offer Exhibit No. 197 at this time, Your Honor. 24 THE COURT: Counsel. 25 1 MR. SMART: No objection, Your Honor. 2 MR. ANDERSON: No objection, Your Honor. 3 197 will enter. THE COURT: 4 MR. HAGENS: Your Honor, I don't know how this 5 thing works.

Your Honor, may the witness just approach the

7 board?

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8 THE COURT: Again, as I say before, if you'll
9 have him testify from your side, therefore keeping the
10 line of sight open with the Court Reporter as much as
11 possible.

- 12 Q Sure. Mr. Regan, I wonder if you just describe 13 essentially what this exhibit is and what it depicts.
 - A This is a map basically of the Skagit River drainage area which is outlined in blue. Also on this sheet is a small inset at the upper right-hand corner of the State of Washington, showing the Skagit drainage basin shaded in yellow.
 - Q And the red or lettering you put in here are what?
 - A Now, I've outlined the Skagit Basin in blue, which at the Mount Vernon gauge the U.S. Geological Survey says it's about 3,050 square miles of drain upstream from that. The basin extends some 20, 30 miles up to Canada. It also extends basically the same amount of distance into Snohomish County. It covers a vast area of the

Skagit County.

- Q Does it include the Western Cascades, in that region, or not?
- A large portion of the Western Cascades. Basically the ridge, the crest of the Cascades, would fall on this blue line here.

I have outlined on here a number of other things for reasons you'll see later. As I pointed out, the Concrete gauge. We'll be talking about discharges at the Concrete gauge. That's the U.S. Geological Survey gauge at Concrete. There is -- there was another gauge, U.S. Geological Survey gauge, at Sedro Wooley. I pointed to that one. That gauge is no longer in existence. In fact, it was only in existence for a short period of time. There isn't a lot of record on that gauge. There is a gauge, newer gauge at Mount Vernon. The Geological Survey saw fit to move the Sedro Wooley gauge down to Mount Vernon, and it's on the old Highway 99 bridge, and that's why I showed Mount Vernon gauge at that location.

Also shown on here, the town of Mount Vernon. I outlined it. The Nookachamps Creek, the Nookachamps area here. Burlington is right in this area. It gets so confusing. I got it underlined here but you can't see it because it's so small. Burlington is right in

this area.

There are five dams on the Skagit River, the largest being Ross Dam. Down below Ross is a small dam called Diablo and another one downstream is called

Gorge. Those were built in the 1930s era and they're owned by Seattle City Light. There are two dams on the Baker River, the Upper Baker Dam and the Lower Baker Dam. Those are owned by Puget Power. Upper Baker Dam is used for some flood control and Ross Reservoir is used for some flood control, and they were not designed for flood control projects but they are regulated in a manner that they do provide some flood control to the lower river.

- Q Okay. I want to ask you about the gauges. Maybe you can just tell the jury briefly what they measure on these gauges at Mount Vernon and Concrete?
- A I might as well use the microphone.
- 18 O Sure.

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A The Geological Survey establishes gauges on rivers.

Just about all the major rivers have one or more gauge.

The gauge is a method of determining how much flow, how much water is passing that point.

THE COURT: Sir, can I interrupt for a minute.
We're getting our feet wet. How is that
sounding? Is it too loud, not loud enough? Are we

okay?

Again, as I said in the beginning of this case, if you have difficulty hearing a witness, seeing a witness, anything like that, obviously your perspective is different from mine, would you just let me know right away so we don't continue to have problems, difficulty with hearing or -- believe me, in this courtroom at some time or another we're going to get a witness positioned with a chart or something that is going to be out of -- it's not going to be comfortable for you, so let me know that and we'll stop and try to make corrections for that as we move along.

I'm sorry, sir.

As I was stating, the Geological Survey establishes these gauging locations, the purpose being to measure how much water is going past that point and their continuous measurements. There is a little gauge house. Maybe some of you have seen those. They're normally quite frequently along side of a bridge at someplace, a little house about four foot square, and it sits right on the river bank, quite often painted green. There's also in the immediate vicinity the cable way that usually will extend across the river itself.

The process of determining how much water is passing a gauge, the gauge is actually measuring how

high the water gets. There's mechanical equipment in there that's doing that. It measures it continuously

and puts it onto a chart or a tape, and nowadays it's getting into -- electronically on a computer-type apparatus. Periodically the Geological Survey people will come out and they'll go across on this cable way. There will be a little cart. They'll go out on the cart. They'll have a meter and put it in the water, and that meter, by doing a procedure where they go section by section across the river, they can -- they get information on how fast the water is moving. They're able to mathematically come up with how much water is passing that point. And normally that is in cubic feet per second. In other words, how many cubic feet, one foot by one foot by one foot passes that point in every second, how many cubic feet per second is passing that location.

- Q Okay. How large is the Skagit River in comparison to other regions, both in the state and outside the state?
- A Skagit River is the biggest river in the Puget Sound region. In discharge, it's as -- it falls in the top ten, maybe 15 in the United States. In discharge, but not in area.
- 24 Q You mean drainage area?

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- 25 A In drainage area. There are many areas much bigger in
- drainage area but they don't have the discharge, the large discharges that Skagit does.
 - Q This case is about floods. Do you have some knowledge as a hydraulic engineer as to what causes floods?
 - A Yes. You don't have to live in the Northwest very long, you don't have to be much of an engineer to realize what causes a flood. Basically here in the Northwest a flood is caused by heavy rain falling over -- usually over a snow pack in the mountains. Snow will build up a week or two weeks, a month, and then there will be a very warm spell come balming in from the Pacific Ocean loaded with water and dumps water very heavily on the basin, and especially in the head waters of the basin it melts all the snow and it all comes down the river as flood.
 - Q Okay. Can you give the -- you've talked about CFS. Can you give the jury some idea or sense of like how many CFS the Skagit River would have, say, during a summer month when the river might be down, and then perhaps contrast it with some of the events in November of 1990.
 - A I reviewed some of the Geological Survey records. I didn't look at all of them, but it's obvious that you got five or 6,000 CFS in August-September era. It could be as high as 20,000 CFS at that time. It just depends on the Skagit, what the dams are doing, if they're releasing more water or less water, but it falls in that

neighborhood, five to 20,000 and that is way below the 1 2 river banks. It's well within the channel. 3 And contrast that, if you will, for, like, the November 4 24, 25 event, how many CFS was that? 5 Α November 24 and 25, 1990 event was about 150 thousand 6 CFS. 7 Q Do you remember what the November event was? 8 It was around 140,000. Α 9 The November 30th, 1995, event? O 10 Α About 135 thousand. 11 Q And all those readings taken from the USGS data? 12 Those all came from the U.S. Geological Survey data. Α I have another -- Mr. Regan, have you -- can we get this 13 14 marked as an exhibit, please. 15 Mr. Regan, are you familiar with the New York 16 Times article of -- Science Times article on July of 17 1993 that tended to depict some of the terminology that 18 is used commonly in hydraulic engineering? 19 Α I've seen the article, yes. 20 Does it have a map or at least a schematic of the various sectors of a flood plain and floodway and the 21 22 like that you think might be helpful to the jury 23 understanding some of the language in this case? 24 Α It certainly does. It's a very good depiction of a 25 flood plain and river system. 1 Q Just illustrative; is that correct? 2 It's just illustrative. It doesn't predict any Α 3 river particular, it's just a -- illustrative. 4 Is Exhibit 198 the document you had in mind? Q 5 Α That's correct. 6 MR. HAGENS: Your Honor, we would like to use 7 this for illustrative purposes only for terminology 8 purposes. It's not intended for scale or anything at 9 all. 10 MR. SMART: May I voir dire the witness on the document? 11 12 THE COURT: Yes. 13 MR. SMART: Mr. Regan, you're only using it for 14 the purpose of identifying terminology? 15 THE WITNESS: Floodway, I mean floodway, flood 16 plain, left bank, right bank. 17 MR. SMART: You explained that many times in 18 your courses without the use of this document, haven't 19 you? 20 THE WITNESS: Yeah. 21 MR. SMART: You know how to explain the 22 terminology without the use of a document? 23 THE WITNESS: The document makes it a lot 24 easier, that's all.

MR. SMART: The document doesn't have anything

1 to do with the Skagit River? 2 THE WITNESS: No. It's a document that came out 3 of the New York Times, Science Times. 4 MR. SMART: I object. It doesn't have anything 5 to do with this flood, this river system. The 6 terminology, you don't need a document to explain the 7 definition of terminology. 8 THE COURT: Counsel -- Mr. Anderson? 9 MR. ANDERSON: No objection. 10 THE COURT: Objection's overruled. You may 11 proceed. 12 (Whereupon, Plaintiff's Exhibit No. 198 was admitted 13 into evidence) 14 15 Mr. Regan, would you come up here to Exhibit 198, which 0 16 we'd offer for illustrative purposes only, and explain to the jury some of the terms and expressions that are 17 18 commonly used in describing the floodway and the flood 19 plain, whatnot, and I'd ask you to do that using Exhibit 20 198 for illustrative purposes. We're going to look at the upper portion of the 21 Α 22 picture. What it shows here is a river coming out of 23 the mountains, so there's a lot of rain up in the 24 mountains here flowing down through the valley. 25 the rivers do, they're narrower at the headwaters and

get wider and wider and get down to the flood plain.

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What we've done in the picture is cut it right off so it's a cross section of the end. Dotted little speckled area down here, basically the ground. The line at the top of the speckled area is the ground surface. On there is showing the channel and showing a wiggle line on there being the water surface at the channel, and that's basically channel fall. Also showing on here a thing called the floodway, which I'll get to in a moment, and the floodway fringe on each side, but the entire width across the valley is actually called the flood plain.

Now, within the flood plain you can see you have flood fringe on both sides. This normally occurs. Basically this is storage. Water goes into it and it stores and then comes out as the flood drops down. The water isn't -- in the storage isn't moving downstream, it's just sitting there waiting 'til the water moves on and then it moves out of the storage and goes downstream.

In the floodway area, this water in this area, the floodway is actually moving downstream. If you stood on the -- at a point where you can watch, you'd

see some current through there. It's not very fast, but there's water actually moving downstream in the floodway

- area and, of course, in the channel, and the channel is considered part of the floodway.
- Q Okay. Can you tell the jury on this exhibit where the flood plain might be as distinct from some of these other terms.
 - A I did say that, Carl, but the flood plain is the entire -- everything that is flooded, the flood fringe and the floodway and the left flood fringe, right flood fringe and the floodway. That's the whole thing is the flood plain.
- 11 Q Okay. And then the bottom just shows the typical levee arrangement?
- 13 A Right. What this is showing is -- from here, it
 14 squeezed down in between levees, and the article had a
 15 discussion on levees. I thought this was a good picture
 16 up here and kind of depicted everything that you need to
 17 know about the terminology on the river.
- Okay. Now, are you familiar with where the flood plain is with respect to the Skagit River and the delta area?
- 20 A The flood plain you say?
- 21 Q Yes, sir.

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- 22 A Yes. Definitely the flood plain is the entire area of 23 the Skagit from high ground to -- on the north to 24 basically high ground on the south.
- 25 Q Okay. And would it include the cities of Mount Vernon
- 1 and Burlington?
 - A Cities of Mount Vernon, Burlington, and all areas in between
 - Q Now, the floodway that you've mentioned, are there different types of floodways?
 - A Their definitely is. There's two types. One is basically what you see on the exhibit there. A floodway being, as I described the area, wherein the flood water is flowing downstream. There's another floodway that is called a regulatory floodway, and this gets into the flood insurance program.

The flood insurance program saw fit to, in their program, to come up with what they call a regulatory floodway. What that did, and I'll show it on this exhibit, there's a procedure to determine the water surface profile in a river, a mathematical procedure. Knowing that -- you can do that on a computer system. You don't have to do it by computer, you can do it by hand but nowadays it's much easier on a computer. You can compute the water surface elevation up the river.

Now, regulatory floodway, FEMA defines it as how

22	much of this natural floodway can you pull in towards
23	the channel but you do not raise the water surface on
24	the above the natural water surface more than a foot,
25	and that's what they call the regulatory floodway.

1 Q And that's to contrast with the natural floodway, which 2 is what?

- A The natural floodway doesn't raise the water surface anything because that's the way -- it's just the way it is, but the regulatory floodway eliminated all here -- eliminates flow out in these areas are so the water has to do something. As you eliminate flow out here, the water surface will go up some and you bring those sides in of the regulatory floodway so you don't exceed one foot over the natural water surface.
- Q You mentioned you worked for FEMA and developing flood maps. What are those maps used for and how are they used?
 - A It's my understanding there's two uses for them. One is to -- to provide insurance people with a method of determining flood rates, actuarial tables and so forth. Another method -- another use of them is for the local government agencies to use in their planning and building permits and that type of activity.
 - Q Do you know if the FEMA flood maps ignore or -- entirely levees unless they provide the hundred year protection?
- 22 A That's true. When FEMA's requirement is the levees, to 23 be considered in the flood insurance program, levees 24 have to provide a hundred year flood protection plus 25 three feet of free board. In other words, they got to
 - be three feet higher than the computed hundred year water surface elevation. If they don't, then the maps are produced as if the levees weren't there.
 - Q What about the levees in Skagit County, are they at the hundred year plus three feet of free board levees?

 A No.
 - MR. SMART: I'll object to the form of the question, Your Honor, unless Mr. Hagens identifies which levees he's talking about.
 - Q Any of the levees, any of the levees in Skagit County, are you familiar with any of them being at the hundred years plus three feet of free board?
- During the time I did the work in 1979 design memo we surveyed the entire length of every levee on the Skagit Valley. None of them were above the hundred year flood.
- 16 Q When are rivers deemed to be at flood stage, Mr. Regan?
- 17 A Basically rivers at flood stage any time the water in 18 the surface of the channel exceeds the top of the 19 channel bank.

20 21 22 23 24 25	Q A Q	Is there a particular number at which the Skagit River is deemed to be at flood stage? It varies at various locations along the river but, generally speaking, it's in the neighborhood of 75 to 80,000 CFS. Now, was your firm retained by us in early 1982?
1	А	1990.
2	Q	Excuse me, early 1992; is that correct?
3 4	A	Yes. What were you asked to do by our firm?
5	Q A	What were you asked to do by our firm? Okay. Our initial request from Hagens & Berman was to
6		go out and look at the levees, look at the system, look
7		at the Skagit County, look at the Nookachamps area and
8 9		the Sterling area, Burlington area, make a general appraisal of the area, and then to do some preliminary
10		type computations to determine if we felt that the
11		levees were causing any problem in the Nookachamps area.
12 13	Q	What THE CLERK: Exhibit 199.
14	Q	I'm going to show you, Mr. Regan, Exhibit 199. Can you
15	~	just tell us what it is without describing it?
16	A	Okay. That's a figure out of the General Design Memo
17 18		that shows boundaries of the hundred year flood, shows all the diking districts and it shows all the levees.
19	Q	Was this part of your work back in 1978 and '79?
20	А	That's correct.
21 22		MR. HAGENS: Your Honor, we'd offer Exhibit 199. MR. SMART: No objection, Your Honor.
23		MR. ANDERSON: No objection, Your Honor.
24		THE COURT: All right, thank you.
25		THE COURT: 199 will enter.
1		(Whereupon, Plaintiff's Exhibit No. 199 was admitted
2		into evidence.)
3	0	Mr. Danier Tarandan if ann ann anns anns bana and
4 5	Q	Mr. Regan, I wonder if you can come over here and describe to the jury this is getting a little
6		confusing here actually if I take these down. If you
7		could describe for the jury what Exhibit 199 depicts.
8 9		THE COURT: Actually, let me ask, jurors number 6 and 12, you're kind of in the heart of it, would it help
10		you to have the board turned a little bit more for you.
11		JUROR NUMBER SIX: How about a longer stick,
12 13		with something longer than a pencil. MR. SMART: My suggestion would be to move it
14		back a little more.
15		MR. HAGENS: This is my first effort at this,
16		Your Honor, so bear with me a little bit.

- 17 Okay. Mr. Regan, maybe you can describe to the jury 18 what this exhibit is all about. Maybe this is -- maybe 19 you could, using this as well as your chart over here, 20 you could describe for the jury what this exhibit is. Okay. This is a map of the Skagit delta area, 21 22 basically from Sedro Wooley downstream to Skagit 23 Bay/Padilla Bay. It shows on here all of the diking 24 districts by number, 17, 12, 20, 21, so forth. It also 25 shows in the dotted line right here basically the 1 outline of the hundred year flood plain. It also shows 2 on here the heavy black line is the existing levees. 3 They start basically upstream of Burlington, 4 follow down on the northwest side of the river, the whole way through the bay, and basically have -- the 5 6 upstream edge of Mount Vernon --7 Q Is that where the Burlington Northern Bridge is? 8 That's right. The Burlington Northern Bridge is on an 9 alignment like that. The levees start at the Burlington 10 Northern Bridge on the southeast side and follow the 11 entire way down to the bay. There's also a levee that 12 encircles the entire Fir Island, which is composed of a number of dike districts. 13 14 Q There's also some other levees that go along the bay to 15 Α 16 keep tidal flooding out, these heavy lines, and there's also another levee that runs along the edge here, and 17 18 that's to contain a stream that comes down in here, and 19 it carries that stream down and dumps it into the river 20 at a location about here. 21 Were these the levees that you went out and did the 22 field inspection on early on in your assignment? That's correct. All those levees were surveyed in the 23 Α 24 mid 1975, '78, in that era. 25 I have personally walked almost every one of the 1 levees that are adjacent to the river. I have not been 2 out on a lot of these tidal levees, but the ones that 3 were adjacent to the river that were pertinent to our 4 study walked just about everyone of them. 5 Our assignment was to determine what, if any, flooding 6 may have been caused by these levees. Were any 7 restrictions put on that assignment, that is things you
 - 8 were not to study?
 - 9 Α
- 10 Q Did anybody tell you how to do your work?
- 11 No. We had a free hand to do what we felt was necessary. Α
- 12 And what was your hourly rate for this work?
- It's varied since we started, but it's -- my rate --13 Α 14 that we charge to Hagens & Berman is something like \$125

15 16 17 18 19 20 21 22 23 24 25	Q A	an hour. What was your particular role in the assignment to determine whether or not the levees were causing any flooding in the Nookachamps/Clear Lake area? I had two roles. As I stated before, I was involved in doing a preliminary look at it to see if there really was a problem and what the magnitude of that problem was. Another part of my role was to oversee the computer modeling that our firm had done and act as a consultant to that work, and also I reviewed and looked at a lot of reports and data that pertained to the
1 2	0	levees.
3	Q	What was the purpose of the reports and data that you reviewed that pertained to the levees?
4 5 6 7	A	We felt that we should know what the levees really are accomplishing out there, how big they are, how strong they are, how they fit into the system, just information that you need to have to proceed into a detailed study.
8	Q	And was this a normal assignment for your firm?
9 10 11	A	Somewhat normal. We're doing another study similar to this, flooding study, on the Kalama River down in Woodland.
12 13 14	Q	Did you do any preliminary estimates to determine whether or not a further study of the effects of these levees was justified?
15	A	Yes.
16	Q	Would you tell the jury what you did in that regard.
17 18 19 20 21 22	A	Basically they were some preliminary computations as opposed to a detailed computer model, where I looked at what would happen in the Nookachamps area if the levees weren't in position against what was going on and how and the flooding that occurs with the levees in places they are today.
23	Q	And what did your preliminary calculation tell?
24 25	A Q	There could be around three foot of difference. Let's talk about your historic review. Where did you
1 2 3 4 5	А	observe these reports that you indicated that you A lot of these reports that I looked at go back, in fact, to the 1920's. I've known about them and had seen them while I was working at the Corps of Engineers doing the general design level work. Some other reports were
6 7 8 9	Q	brought out in the discovery portion of this case. And can you give the jury were any of those reports relating just to the Nookachamps area, the Nookachamps/ Clear Lake area, Exhibit 199?
10	A	There was no report per se on the Nookachamps area, but

I looked at -- let me refer to my reports here -- and I

looked at 12 different documents that date from 1922 to

13 14 15 16 17 18 19 20 21 22 23 24 25	Q A Q A	1993, and basically they all say the same thing. They say that the Nookachamps area acts as a large storage area that reduces flood heights in the surrounding and lower districts. If you can sum it up in just a few words, that's basically what they say. Did that comport with or was that contrary to your preliminary finding? Repeat that. Was that consistent with or inconsistent with your preliminary findings or your computations? Very consistent with my findings and my understanding of the system. Okay. I want to go through a couple of these exhibits.
1 2		Let's start with Exhibit No. 1, Plaintiff's Exhibit No. 1. I'm going to hand you Exhibit No. 1 and ask you to
3 4 5 6 7 8 9	A	identify it. This is a report done by an engineer, hydraulic engineer James E. Stewart who worked for the U.S. Geological Survey. It's dated I believe 19 my notes say it's dated 1923. I don't see it right on the cover. It's a report that was done in accordance with an agreement between Skagit County and the United States Geological Survey.
11 12 13 14 15 16 17 18 19	Q	Is this part of the historical record that you reviewed in connection with this case? I reviewed this document a number of times, not only this time but in the past, yes. MR. HAGENS: Your Honor, we'd offer Exhibit No. 1 at this time. MR. SMART: No objection, Your Honor. THE COURT: Counsel? MR. ANDERSON: No objection, Your Honor.
20 21 22		THE COURT: Number 1 will enter. (Whereupon, Plaintiff's Exhibit No. 1 was admitted into evidence)
23 24 25	Q	I'd ask you to turn to page 17 of that report if you would, and the bottom paragraph, paragraph No. 2 of page
1 2 3 4 5 6 7 8	A Q A Q A	17. I have it, yes. Have you got it? Uh-huh. Did you review this paragraph as part of your work? Yes. Along I read the whole report. Okay. Maybe you could just read the bottom portion of paragraph the one that says under paragraph 2 on page 17, if you'd read that into the record.

- Paragraph two on page 17 is titled Delay Diking Off the 10 Α 11 Nookachamps District. That's the heading of the 12 paragraph. Goes on to state, "The Nookachamps District 13 in its present condition acts as a storage reservoir and 14 thus reduces the flood height in the surrounding and 15 lower districts. This storage reservoir has been of material benefit in the past and has undoubtedly 16 17 decreased the number of breaks for the larger floods and prevents breaks for the lower floods." 18 19
 - Q Okay. I wonder if you'd read the next sentence, too, going onto the next page.
- 21 A "According to a Mr. Robert Hersome, Assistant Engineer 22 with the Great Northern Railroad, the reservoir capacity 23 of the Nookachamps District and other adjacent lands is 24 a flow of 150,000," he calls it "second feet", but 25 that's an old term for cubic feet per second, "for five

hours."

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- Q Now, you know this is a historic document. Where did you have the opportunity to review it?
- A I reviewed it when we were doing the general design memo. It was brought out, and I believe through a -- literature search or was in our library at the Corps of Engineers, but I don't know exactly where it came from.
- Q Is this exhibit generally available to the public or not?
- A Not unless the public does a lot of searching. I mean you just don't walk in the library and say, hey, let me have this book. It's not that kind of a document.

 O All right.

MR HAGEN: I wonder if now would be a perhaps a

good time.

THE COURT: Now is as good a time to break.

THE COURT: NOW IS AS 9000 a CIME CO D

THE COURT: Sir, you may step down.

All right, ladies and gentlemen. We will be recessing for the evening. We have a sentencing set for the morning at -- unless -- it's still on our calendar so we will be reconvening this matter at 9:30. If you'll be in the jury room at 9:25 and ready to proceed on this case.

And, again, I have to admonish you, and I know we'll all get tired of you going through this drill but it's something that I really am required to do, and

especially the early stages. You're advised not to discuss this case with anyone upon your retiring this evening and going home. Please do not indicate or attempt to, I should say, locate any information about this case. If you should hear any sort of media reports of any kind about this case, you are to ignore those and not be present around anyone else who might be listening

to such reports and who might be discussing the case. Please come in and go directly to the jury room to -- leave directly from the jury room, come directly into the jury room as much as possible to avoid conversations that might be taking place in the hall. There are any number of plaintiffs obviously in this case, 60 some, and any number of other parties and people associated with this case, many of whom might fail to recognize you as a juror and you might fail to recognize them as a party and thereby inadvertently overhear some sort of discussion about the case. It's central to a concept of a fair trial that the only evidence you make your decision on ultimately comes from the witness chair and through the exhibits that are admitted into evidence in this case. And that you keep an open mind in this case until you've heard all the evidence in this case. And then and only then begin to make your deliberation until that portion of the case

has been reached, which will be sometime down the road from now.

With all those considerations in mind, I hope you have a pleasant evening and we'll see you in the morning tomorrow morning. Again 9:25 in the jury room, please.

Thank you.

(The matter was concluded.)