United States District Court
District of Idaho
Boise, Idaho

THE LANDS COUNCIL, et al,)
)
) Docket No. CV03-344-N-MHW
Plaintiffs,)
)
vs.)
)
JOSEPH STRINGER, et al,)
)
)
Defendants.) Coeur d'Alene, Idaho
) December 8, 2004
_____)

PORTION OF EVIDENTIARY HEARING - DAY 2
TESTIMONY OF ROBERT C. DAVIES

THE HONORABLE MIKEL H. WILLIAMS PRESIDING
UNITED STATES MAGISTRATE JUDGE

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PROCEEDINGS IN PROGRESS

(Court recessed at 3:27 p.m. until 3:43 p.m.)

THE CLERK: Court is again in session.

THE COURT: You may proceed.

MR. GRISHAM: The government calls Rob Davies, Your Honor.

THE COURT: Come forward, stand by the witness stand, raise your right hand to be sworn.

ROBERT C. DAVIES, DEFENDANT'S WITNESS, SWORN

THE CLERK: Would you please state your full name, spell your last for the record.

THE WITNESS: Robert C. Davies, D-A-V-I-E-S.

THE COURT: You may proceed.

DIRECT EXAMINATION

BY MR. GRISHAM:

Q Mr. Davies, are you presently employed by the Forest Service?

A Yes, I am.

Q In what capacity?

A I am the District Hydrologist on Coeur d'Alene River Ranger District, and, basically, I'm a hydrologist on the district level.

Q How long have you held that position?

A I have held this position since around May 2002.

Q Would you describe for the Court your educational background?

A I have a Bachelor's of Science degree in geology from Fort Lewis College in Durango, Colorado.

Q From which college?

A Fort Lewis College, Durango, Colorado. And I have a Bachelor's degree in fishery science, University of Idaho.

Q When did you obtain your geology degree?

A I believe it was 1985.

Q And then when did you obtain your fisheries degree?

A Approximately 1994.

Q Beginning in 1995, can you -- could you give us a picture of your employment history and work forward?

A Yeah, in 1995 --

Q 1985, I meant.

A 1985, okay. 1985 I worked for U.S. Geological Survey for about a year doing research and geologic mapping in the Southwestern United States, and after that, I had started working with the Forest Service in a research facility, Rocky Mountain Forest and Range Experimental Station out of Ft. Collins, Colorado, and I worked approximately three years seasonally, eight month seasons doing hydrologic research, just some technician work with water quality and watershed response to forest activities. And from that point, I moved to --

Q Did that research include sedimentation issues?

A Yes. It included water yield, sediment and erosion studies and that kind of work.

Q Okay. What year did you stop doing that?

A I believe it was somewhere around 1987, '80 -- or '89, probably.

Q Then what did you do?

A I -- 1989 I moved to North Idaho and I worked as a seasonal technician on the Idaho Panhandle National Forest out of Bonners Ferry, Idaho, and I worked seasonally for approximately five years in that area.

Q What types of things were you doing during those five years?

A I was doing quite a bit of fieldwork. I was looking at watershed restoration activities, working with the district hydrologist and coming up with recommendations for restoration. I was involved with implementing some of that restoration work, the timber sale money -- monies collected for restoration was one of my primary objectives where I would help design and help implement some of the work. I was involved with some of the daily collection data entry and processing watershed modeling and I also transitioned during that five-year period into fisheries work. I was doing fish
-- recommendations for fish -- there was no fish biologist on the district, so I made recommendations for fisheries enhancement projects. And during that five-year period, I enrolled at University of Idaho in a fisheries program and got accepted into a cooperative program, which is like an internship program that eventually converted me into a permanent fisheries biologist then.

Q And during that period of time were you also dealing with issues regarding sedimentation, and particularly sedimentation from roads?

A Yes. I was involved with road inventories. Looking at rode erosion problems. A lot of

the restoration work, we -- I was involved with helping implement. I was responsible for actually implementing some of the restoration of obliteration of roads and water barring, providing protection measures and mitigation on roads to prevent sedimentation.

Q And just so we under -- if we use these terms again, when you talk road obliteration, what is that?

A Road obliteration, the term "obliteration" has sort of evolved. It's used rather loosely in the field of hydrology and the -- actually, I, you know, nowadays, the more acceptable term or better term is decommissioning, and I would equate obliteration with decommissioning, and that definition would include -- as Ken White had mentioned earlier, it includes making a road or making -- yeah, making a road hydrologically neutral, and by that definition, I mean, you know, surface erosion from the road, culvert problems, runoff and sedimentation from the road is basically put to a complete stop. A road is left in a condition where you could walk away for basically eternity and you should not have anymore -- unless there's some natural cause, you shouldn't have anymore sedimentation coming off of a road. Culverts are usually pulled. Some level of recontouring could occur within right where the culvert crossings are pulled, so.

Q What is recontouring?

A Recontouring is basically taking a piece of land where a road is and putting it back in its natural shape. The soils are disturbed and may not have the same productivity but the prism of the road is returned back to its natural state before the road was built.

Q All right. And you also mentioned water bars. what are water bars?

A Water bars are one of many type of -- types of water features on a road to help divert

water off the road and disperse the water into surrounding and undisturbed landscape to help dissipate and cause water to infiltrate rather than concentrate. Without water bars, a road will tend to concentrate water downslope and could cause rutting and erosion on the road surface.

Q And that, in turn, results in sedimentation being transferred to potentially a streambed?

A Yes, that is correct. And that potential for routing increases as -- as the road prism will cross tributaries or small stream crossings or large stream crossings, the closer it is to those areas the more likely sediment would be routed into the stream system.

Q Now I think you also used the term "road restoration". And when you use that or you're going to use that, what do you mean by restoration?

A Road restoration, I use that kind of loosely. It encompasses a lot of different type of projects, but, essentially, in most cases, it's decommissioning and when you have -- you have different scenarios depending on the road location. A road that's located in a riparian area or within a flood plain of a stream, it may require removing fill out of the flood plain so the flood plain can act in a natural process. It may require armoring or actually removing fill so that the active channel will not erode the road and it could also involve restoring stream dynamics and placing re-debris for fish habitat and grade control and -- and a variety of things.

Q What is armoring?

A Armoring is basically hardening off of a surface. You know, a very simplistic -- this is not considered so much restoration, but mitigation armoring can -- could include graveling the surface of a road or maybe upgrading pipes that are there that will handle larger flows.

So that's another level of road mitigation that could fall into the category of some of restoration.

Q All right. Now, you indicated you worked on a seasonal basis. If I listened correctly, it's up through about the time you got your degree in fisheries in 1994?

A That's correct.

Q And then what did you do after that?

A I worked for about only another three months after I converted into a permanent Forest Service employee. I was a fisheries biologist on the Idaho Panhandle for those three months, and then I moved to Oregon and I worked on the Ochoco National Forest for about six months. I detailed on the BLM, the Southeastern District, the BLM out of Burns, Oregon, for about six months, and then I worked for about two years on the Malheur National Forest where I was the district hydrologist and fisheries biologist. They kind of placed two duties on myself based on my background.

Q And at some point you returned to Idaho?

A Yeah. It's a long story.

Q And when was that?

A Beyond that, I moved to Utah. I worked on the Dixie National Forest. I worked as a hydrologist on some special projects, water rights related issue -- issues; and from there I moved to the Manti La Sal National Forest, and I was the acting forest hydrologist at that forest for a year until they replaced their forest hydrologist and then I was the fisheries program manager on the Malheur National Forest for four years before I came back here to the Coeur d'Alene River Ranger District.

Q Okay. And when you returned to the Coeur d'Alene River Ranger District, you returned as the district hydrologist?

A That is correct.

Q And what is the -- on the Coeur d'Alene River Ranger District, what does -- what does a district hydrologist do? What are you responsible for?

A I'm responsible for providing input in an inner disciplinary team for forest level management projects ranging from fuels to timber to, in some cases just aquatic restoration and a variety of projects that requires hydrologic analysis and looking at protection of water quality. I make recommendations to preserve and protect water quality and comply with federal laws and the Clean Water Act and state practices and laws concerning water quality.

Q And does a portion of that involve working with roads?

A Yes. Quite a bit of that work on this district seems to be heavily involved with roads because, as we pointed out earlier, the sheer number of roads, you know, on the landscape, whether they're open or closed, you know, over 6,000 miles of road, so, yeah, quite a bit of work is revolving around roads.

Q Now, Mr. Davies, do you work with and understand what are referred to as TMDLs?

A Yes, I do.

Q And what does -- what does TMDL stand for?

A TMDL stands for total maximum daily load.

Q Okay.

MR. GRISHAM: Can I ask that the witness be handed Defendant's Exhibit

590, please.

(Pause in the proceedings)

BY MR. GRISHAM:

Q Mr. Davies, what is a TMDL?

A Well, a TMDL is basically a document. It's a guiding document that outlines some generalities about a basin. Usually, it's implemented at a basin scale, and when there are impaired water bodies, streams or lakes, that are listed on the state Department of Environmental Quality's list of impaired waters that don't meet beneficial uses, DEQ is basically given the authority to initiate a process. It involves the public. It involves interagency participation, and it's basically a document that outlines what are the mechanisms of the sources of pollution, basically, what are some of the leading causes, and it makes some general recommendations on, you know, what can be done to alleviate the pollution.

And it also -- most importantly, it designates what that -- the maximum load can -- a water body can handle on a daily basis. It's a model that's a calculated quantity of the pollutant that a water body can handle and still meet beneficial uses.

Q A couple questions. When you indicate -- what is DEQ?

A DEQ is -- I refer to that as the Idaho Department of Environmental Quality.

Q And they're the ones that prepare the TMDLs?

A Yes. They're the ones that are basically -- EPA is the Environmental Protection Agency has delegated the authority to the Department of Environmental Quality for each state to produce a TMDL for water quality impaired water bodies.

Q When they -- and when you indicate that it determines the total maximum daily limit so it could still meet beneficial uses. What do you mean by beneficial uses?

A Beneficial uses are designated by the state, by the same department. Environmental Quality makes those designations and it's -- for an example, the North Fork of the Coeur d'Alene River has probably six or seven beneficial uses, cold water biota, salmonid spawning, recreation use, both primary contact recreation and secondary recreation so -- and domestic water use in some cases. So it assigns what the values of that water are, and the Department of Environmental Quality has measures and means, and the Forest Service works with them on measuring those quantities to see if we actually are meeting beneficial uses.

Q And so then it determines how much of whatever the pollutant at issue is can be discharged into that water body while still allowing for the beneficial uses they've determined, is that right?

A That is correct.

Q And so, for example, is -- what's been marked as Exhibit 590 is the sub -- is the TMDL for the North Fork Coeur d'Alene River. Do they determine the maximum daily load for the

river or for all tributaries to the river or how do they do that?

A Well, they do it for each segment. They divide the basin up into segments based on the segments that are listed for water quality impaired. And, basically, that load is determined through modeling efforts, and they look at the natural background of sediment. That sediment is the pollutant -- one of the major pollutants of concern that's highlighted

in this document. There are metals and there are other components -- pollutants that are a concern, but the main concern and a lot of what this document addresses is sediment. And the sediment background level, plus 50 percent of the background level is what they consider the load. That was a negotiated amount, too, between the interagency group, which the Forest Service was involved with, but a hundred percent of background plus additional 50 percent is what they've determined for each water body is what the amount of sediment that a water body can handle and still meet its beneficial uses.

Q Okay. I'm not sure what you mean by -- when you say a hundred percent of background, what does that mean?

A Well, the background level is based on natural characteristics of the landscape, you know, sediment potential, landslides. If there were no roads, no activity, what would be the natural background level of sediment and that's determined just theoretically through modeling and basically they do allow for some activity and the additional 50 percent above background would be what was determined for the Coeur d'Alene -- the North Fork of the Coeur d'Alene as what -- what the maximum load could be and there are quantities allegated [sic] -- allocated for each segment of the basin.

Q All right. And so that maximum amount might vary depending upon what watershed you're dealing with?

A Yes, it does. And they also -- within this document, they subdivide the ownership of the basin and they allocate the -- if they're over that amount, which many of the segments are over that amount, they -- that's kind of the main load allocation that's of highest concern is reducing the sediment load back down to what's acceptable to meet beneficial

uses, and if the Forest Service owns 90 percent of the basin, they're responsible for reducing 90 percent of that load back down to a level that meets beneficial uses.

Q So if it exceeds a hundred and fifty percent, the goal is to reduce it back down to at least a hundred and fifty percent if not less?

A That is correct.

Q All right. Now, Exhibit 590 which is the TMDL for the North Fork of the Coeur d'Alene River, when was it approved or put into effect?

A This was approved by the EPA in November of 2001.

Q Now I think you alluded to and there's been testimony or statements at this hearing that this document does conclude that there's impairment in the North Fork of the Coeur d'Alene River Basin, is that correct?

A That is correct.

Q And, again, describe, if you can, in more detail, what that impairment is.

A Well, that impairment is sediment, basically, and the -- and the levels of sediment in the Coeur d'Alene -- North Fork of the Coeur d'Alene are considered above -- you know, at high levels and causing impacts to salmonid species, cold water biota. It has affected habitat for fisheries. The population numbers of fish are lower than they think it -- it should be at natural levels, and sediment is the main source of that pollutant, and this document outlines roads as being a major contributor of that sediment.

Q All right. And so it concludes that there are some areas or tributaries where there's an excess of a hundred and fifty percent pollutant or sediment?

A Yes, it does.

Q Now, does this document talk about -- and referring just to sediment. Does it talk about where that sediment comes from?

A Yes. It does describe in detail what kind of mechanisms are in place and where that sediment comes from. And, basically, it talks about both active and abandoned roads. For example, on page 48, there are -- it outlines some of the sources of sediment. It's active and abandoned roads that are located in flood plains. Sediment sources are from crossings where roads will cross tributaries or streams. Basically, it outlines how the road system itself is kind of an extension of the streams. When you have the approach of the road as it comes into a crossing, there's an extension of that -- of that channelization of water and sediment, and it can be brought more easily into the stream system through the roads.

Q Now, you were referring to a page of the TMDL. I think you said page 48. That's Bates Stamp Number 02311. Would you turn to that page?

A Okay.

Q And you're referring to the summary section on that page? A Yes, I am.

Q And that identifies the very sources of sediment from roads?

A That is right.

Q And it says something about -- what does it say about the key pollutant, what source?

A In the third paragraph down, it describes -- I'll just read it. It says:

> "The key pollutant sources are active and abandoned roads located in steam flood plains, crossings and approaches. These features directly yield sediment to streams and may essentially increase the contributing

area of streams under snow melt conditions. The encroaching roads, crossings and approaches must be remedied in a manner that will make the flood plains function without restriction and road crossings function more as the general stable slopes of the North Fork -- of the North Fork watershed."

Q Now, Mr. Davies, anywhere in this TMDL does it say that one of the sources of sediment that they're concerned about is the effect of opening a closed road to motorized use, simply motorized traffic?

A No. There's nowhere in this document where it talks about traffic and, you know, opening or closing a road having effect on sediment. It really discusses the position of the road. It talks about locations of roads in the flood plain and near stream edges. It talks about crossings contributing sediment, but there's no mention of actual traffic creating that sediment.

Q So the concern of the TMDL is the existence of the road as opposed to the use of the road?

A That is correct.

Q In your opinion, Mr. Davies, what effect does opening an existing closed road to some type of motorized use have on sedimentation?

A You know, it depends on the level of traffic. Generally, you know, the soils in the roads are fairly stable. You know, we don't have a lot -- we have some areas of mass wasting but -- but roads don't really contribute a whole lot, generally speaking, on the Coeur d'Alene River to mass failure and large mass erosion. So just opening a road to traffic really doesn't have that much effect. There's -- there could be some rutting if

grading doesn't occur, if water bars are not in place. There could be some sediment generated from that and it could migrate off that road, but the ability of that sediment to reach streams depends on how close it is to the road.

Q So location would be an important factor?

A Location is a very important factor?

Q And why is that?

A It's just basically -- the ability of the natural landscape and the vegetation, it's a very -- it's a fairly moist environment throughout most the Coeur d'Alenes and the vegetation cover, both over story and ground cover is fairly dense and that has ability to absorb sediment and absorb water. And the routing of sediment just over landscapes generally diminishes when you get a certain distance away from the stream.

Q All right. Now, does the -- does the TMDL come up with some kind of a strategy for reducing the pollutant, in this case, sedimentation?

A Yeah. There's definitely discussion of strategies, and on page 52, there's a Title 2.4.2 near the bottom of the page that's Bates stamped 2315. Just to summarize, the strategy of pollution control is basically the removal of roads from flood plains. That's kind of at the top of the list 'cause that's a very -- it's a very big source of sediment when that road's located within the flood plain of a stream. Rehab of the crossings, restoration or upgrading the size of a culvert, armoring the culvert, basically restoring the -- in some cases, removing culvert and restoring the natural channel, the natural flood plain is another key strategy to help remove sediment. Removal of encroaching roads. And the term "encroaching" basically means when a road -- some portion of the road prism is right up

against an active channel that can cut up against the -- cut up against the edge of the road and cause direct sedimentation into the stream.

And it also talks about the use of grants as a strategy, kind of acknowledging that money to do a lot of this work is very costly and may be beyond, in some case, the annual budget allocated for watershed restoration. So that's kind of the general outline on strategies to remedy sediment.

Q Anywhere in the TMDL does DEQ recommend or indicate that closing roads to motorized use will alleviate the sediment problem that exists in this basin?

A Nowhere in this document have I read or found anything where it talks about closing a road as a remedy to reduce sediment.

Q Now, does the -- does the TMDL have some kind of an implementation plan? Does it come forth with a plan of how the various agencies involved are going to solve this sediment problem?

A Well, there's not much in this document. But, basically, my understanding of the process -- you know, I work with DEQ and TMDLs and designing implementation plans. And this

TMDL --

Q Are you on a -- in fact, are you on a committee to do that?

A I am on a committee within the Hayden Lake Basin to design an implementation plan. So a TMDL is like a phase 1. It's identifying the sources and mechanisms for the pollutant and some general strategies. Phase 2 is an implementation plan which gives specific direction and very specific areas on how to address it, and mainly it gives kind of

a prioritization of where you would want to address the pollutant reduction or sediment reduction within the basin. And --

Q So what, if any, responsibilities does the Coeur d'Alene District have under this plan?

A This plan basically is kind of a guiding document to comply with the Clean Water Act. It allows general strategies to look at ways to reduce sediment, and, it basically -- it helps us understand and the mechanisms and look at ways of changing and addressing those mechanisms that are reducing -- or causing the sediment.

Q Is it intended that eventually that the Forest Service will enter into some kind of an agreement with DEQ about what it will do to implement the plan?

A Well, implementation plans are rather a new thing and TMDLs; and basin by basin, they're kind of all done differently. And the main point is just to get some form of documentation and prioritization. And as a matter of fact, I'm on a subcommittee with Department of Environmental Quality right now where a grant of about 160,000 was given to DEQ to help look at very specific things in the North Fork of the Coeur d'Alene River. And Glenn Rothrock [phonetic] is with DEQ, he's the -- he's kind of the manager of the North Fork and is -- we're basically designing a contract with this money to look at, first of all, some of the existing data we have on the forest and potentially collect some new data, but to really refine site specific projects that could be done to implement the TMDL and start to address, you know, the major pollutant -- pollution and the major sediment sources within the basin.

Q So what are the district's responsibilities until the plan is developed or the agreement with DEQ is developed?

A Basically, the district's responsibility is to look at project by project. When we go into an area and we analyze the area through NEPA, we look at ways to -- within the project area, especially if it has a listed water body that's not meeting water quality standards, we look at ways to reduce sediment, and the overall -- the net -- the net result, sediment-wise, needs to be some from of reduction. When you're -- when you're exceeding that maximum load, it gives us guidance to reduce that load, so -- so I make recommendations as a hydrologist on the Coeur d'Alene River Ranger District on specific -- very site specific areas, and quite often it's road decommissioning, removing culverts, looking at encroaching roads as part of almost any project that we propose now, so that's basically our responsibility.

Q Mr. Davies, based upon your review of the TMDL, in your opinion, what is the most significant factor influencing sedimentation in the North Fork Coeur d'Alene River Basin?

A It's basically just the existence of the roads. When you have a high density of roads in an area, you have a high likelihood of many crossings that can cumulatively affect sediment downstream in the main North Fork of the Coeur d'Alene and also the encroaching roads. I talked to Jeff Harvey, whose the author of this who has worked with DEQ, and he basically said the model -- you know, to summarize what the model used and when they determine what the loads were that 80 percent of the sediment source comes from encroaching roads, bottom roads located right near streams and so that's probably the -- it's one of the more expensive type of restoration works, but treating those roads, trying to remove them or trying to treat them in some form is probably the best approach.

MR. GRISHAM: Could I ask that the witness be handed Defendant's

Exhibit 591, please.

(Pause in the proceedings)

BY MR. GRISHAM:

Q Mr. Davies, Exhibit 591 is a document titled "Toward an Ecosystem Approach and Assessment of the Coeur d'Alene River Basin, February 1998". Is this the document that's been referred to during the course of these proceedings as the geographic assessment?

A Yes, it is.

Q And are you familiar with this document?

A Yes, I am.

Q And do you work with it as part of your job?

A Yes, I do.

Q Can you describe for the Court what this is? What is a geographic assessment?

A Well, the geographic assessment is kind of a large-scale approach to looking at the health of watersheds, and it divides the Coeur d'Alene River Basin into smaller sub-units, and it's analyzed in different respects to different resources, and aquatics and fish and watershed being one and wildlife, social economic are other values and other issues that are analyzed in this broad-scale document. And, basically, it is a step-down, it's a -- it's an approach that tiers down a broader-scale study called the Interior Columbia River Basin Project. And it's the same approach looking at the integrity and the health of these certain pieces of land or these sub-watersheds within the basin.

And from an aquatic standpoint, it separates the condition of these watersheds into

three categories, one category being a properly-functioning watershed, and that can be described as a watershed that has streams that meet beneficial uses, for the most part. It is -- streams are functioning, water quality is fairly good, and there has not been enough of an impact to really hurt the function of those streams. And the middle category would be functioning at risk, and these are watersheds that contain streams that mostly meet water quality standards. They mostly are functioning but they are threatened. And some of those threats are what's described in the TMDL, sediment, of course, being a major one. And roads, road density, past management activity has somewhat impacted but still the streams are functioning and they're at risk.

And the third category is watersheds that are not functioning. And these watersheds, basically, have impaired water bodies. They have quite a bit of management, roading, logging, past management activities that is -- that has impacted the integrity of the streams and their ability to function normally.

And it also outlines a basic strategy on restoration of these watersheds. And the theory is --

Q And let me just interrupt you for a second.

A Okay. Go ahead.

Q How do those three categories play into the forest planning process, there's a functioning at risk, non-functioning or functioning. I mean, how does -- how does the forest use those in terms of allocating resources?

A When you say forest planning, do you mean forest planning revision or just --

Q No. I meant with, you know, watershed projects, restoration projects, road projects,

timber projects. How do you -- where are you gonna -- I guess my question is where you put restoration money?

A That's actually kind of the summary and the bottom line of this document. It does give a priority to where you would go implement restoration, and the strategy being watersheds that are in -- that are properly functioning, they really don't -- you just want to maintain them. You only want to do -- put enough investment to keep them in their excellent shape or the shape that they're in.

The functioning at risk watersheds are the -- are the highest priority for restoration, and the theory behind that is it would take probably a reasonable investment, you know, a feasible investment based on our allocated funds that we could restore those watersheds and keep them in a proper functioning condition.

And the strategy of the watersheds that are not functioning, they could take years and millions of dollars of investment to actually bring them into a state, so it may be a futile use or not a very efficient use of our limited funds to implement restoration, so we use it quite extensively to -- as a guide to how we're gonna spend our allocated funds.

Q Now, specifically, does the, and I may have -- you may have already said this, I might have missed it, does the -- does the geographic assessment address how roads contribute to sedimentation?

A Yes, it does. It does somewhat follow and outline some of the same mechanisms of sediment production as the TMDL does. And, you know, it's kind of a crude -- even a more coarse model than the TMDL, in that it looks at road density as being a factor and affecting the aquatic integrity. It -- so, basically, if there's a watershed that has a lot of

high -- a lot of roads in it and a good portion of those roads are located in the flood plains or near the streams edge, then you're likely to end up having a watershed that's not functioning or functioning at risk.

Q Now, does the -- does the geographic assessment indicate in any -- in any fashion, that opening an existing closed road to motorized use is a factor in producing sediment in this river basin?

A No. There's nowhere in this document where I can find opening or closing a road has any effect on the sediment production.

Q Now, does this document make certain recommendations with regard to the sediment issue?

A It does, and I kind of outlined a little bit of that. It not only gives a strategy on where to invest dollars to implement restoration but it talks about -- on page 61.

Q Okay. That's --

A And --

Q That's 61 of the book itself?

A Of the --

Q So that would be --

A Of the GA.

Q -- Bates Number 2686?

A That's right. It basically, in the second paragraph there, functioning at risk being, of course, the highest priority for restoration that -- it's actually a net reduction of roads. It talks about reducing roads. It's nothing to do with closing a road. They talk about

reducing the roads, and especially the roads that are in riparian areas or impacting the water quality.

Q All right. Now you've talked about both the geographic assessment and the -- and the TMDL which is prepared by DEQ. Do you find that the conclusions regarding sources of sediment and the -- and the methods of attempting to correct the problems that are outlined in the geographic assessment are consistent with the findings of the TMDL?

A Yes, I do.

MR. GRISHAM: Would you, Madame Clerk, please hand the witness Exhibits -- Defendant's Exhibits 610 and 611, please.

(Pause in the proceedings)

BY MR. GRISHAM:

Q Now, Mr. Davies, you were not involved at all in developing the 2001 travel plan, is that correct?

A That is correct.

Q And you've heard -- you were here in court to hear Susan Matthews testify that one of the things they did in developing a new travel plan was to create an environmental assessment?

A Yes, I did.

Q And you've been handed Defendant's Exhibit 611. Is that the environmental assessment that she was talking about?

A Yes, it is.

Q Have you -- have you reviewed the discussion in the environmental assessment

regarding the effects of the -- the preferred option on the 2001 travel plan, the effect of that on water quality?

A Yeah, I have reviewed that.

Q And can you tell the Court what the environmental assessment concludes in summary fashion about the effects of the preferred option on water quality?

A The conclusions basically are with the preferred option, and you can find that on page 95, which I actually have my own copy tagged, so I don't know the Bates Stamp number.

Q Okay. Page 95, which would be Bates Stamp Number 03784.

A Okay. This page describes, you know, the preferred option is Option 3 and the effects on this travel plan on aquatic resources. And, essentially, the cumulative effects from past management, it describes that -- how this has severely impacted fish habitat and water quality. And, let's see, basically, the effects of road channeled crossings and riparian roads would continue to degrade fish habitat conditions, declining habitat conditions, coupled with an increasing human population and their desire for recreation fishing will continue to impair fish stocks.

And the last paragraph, it talks about -- is one of the main points that I've found in relation to water quality is that abandoned roads, there is still thousands of miles of abandoned roads that would not be affected by the proposal. And to me, this indicates that just the existence of the roads out there is the problem, that sheerly just by opening -- or just by closing these roads, you're not alleviating the problem. It basically says that, you know, it concludes and it's inconsistent -- it's very consistent with the GA and the TMDL that the channel crossings and the existence of the roads is the primary cause of

sediment in the area. And so it's basically saying there's not -- there's not an effect. There's not an improvement to the water quality just by closing roads.

Q Okay.

MR. GRISHAM: Your Honor, may I put an exhibit up, please?

(Pause in the proceedings)

MR. GRISHAM: And the exhibit I have put on the easel is Defendant's Exhibit 624A.

BY MR. GRISHAM:

Q Mr. Davies, have you attempted in some fashion to validate what -- your opinion regarding the effect of sedimentation -- the effect on sedimentation of opening existing -- an existing closed road to motorized use, the opinions you've expressed here today and the -- and the portions of the TMDL and the EA, the geographic assessment you've talk about -- talked about?

A Yes, that's right. I basically -- looked at the TMDL and based on, you know, what I've seen on existing roads, I was trying to come up with some tool, some method, to look at, you know, my opinions, to try to support my opinions on whether the traffic on the road and the position of the road may have anything to do with sediment production.

Q So what did you do?

A I used a model called WEPP, which stands for Water Erosion Prediction Project. And it probably would be best if I went to that to explain it and go -- I'd like to go through that.

Q Okay.

A And --

THE COURT: What was the model's name, Water what?

THE WITNESS: Water Erosion Prediction Project.

BY MR. GRISHAM:

Q And just before you to that, let me ask you a couple questions. Is this --

A Okay.

Q Is this WEPP Program a program that's generally accepted for use by the Forest Service?

A Yes, it is. It's been in existence since about 1995. It was developed by some researchers, Flannagan, and I forget the other researcher. 1997, it was adopted for forest practices, you know, logging/roading type activities, and it's a model that predicts erosion from roads and a variety of other activities that you can predict erosion from fires, and that kind of thing. So it was applied to the forest environment in 1997. And in 2000, this model was made available on the web. It's a web interface where anyone can go to a website and input data and parameters and come up with some kind of prediction of erosion from roads, is the way I applied it. And like I said, there's a variety of uses. You know, you can model trails, you can model fire, you know, fire effects and that kind of thing.

Q Is it a --

A So --

Q Is it a model that's widely used by the Forest Service?

A It is widely used, yes.

Q And have you -- have you read any studies that attempted to validate its predictions?

A Yes. There was a study that came out recently. I don't know what year. It was Bill Elliott's out of the Rocky Mountain Research Station out of Moscow, Idaho, and Paul was the other author, where they took almost ten years of using this model and they went to the Clearwater National Forest and they actually tried to measure sediment that came off of roads and that's -- and sediment that was delivered to streams based on the prediction of this model. And they found that they were fairly compatible. It was a fairly accurate model. And it applied well to either new roads or roads that were in fairly high use.

And just to give a background on this, some of the roads I looked at under question are hillside roads, they're brushed in, they're -- some of them are not used, but they still have culverts that may be at risk for failing and that kind of thing. But, basically, these roads, it tends to -- what I found reading the literature, that it probably will over-predict sediment a little bit. It's best applied to newer and active roads.

Q So it would over-predict on some older roads?

A Yeah. If it's an older road that's vegetated, it's probably a little bit of an over-prediction of sediment.

MR. GRISHAM: All right. Your Honor, can Mr. Davies approach the chart and --

THE COURT: Yes.

MR. GRISHAM: -- explain what he did?

THE WITNESS: Before I --

BY MR. GRISHAM:

Q Do you need to put up a slide first?

A Before I do that, I would like to go to one of the Power Point exhibits to show where I actually ran this model and --

Q All right.

A -- and go through an example.

(Pause in the proceedings)

A Okay. This map that's on the screen right now, this is the upper Little North Fork of the Coeur d'Alene River. And as Jamie described earlier, there's these yellow bars. There's one here, there's one right here. And these yellow bars are essentially profiles. They -- through the GIS coverage and through the topography, it's able to map out the shape of the slope. And if I -- well, I need to point out that this road in green right here is the 1550 road, and there's a road down at the bottom by this stream. This is actually Iron Creek. And the road down at the bottom is 794. And if I click on that profile -- actually, I'm on the wrong one. I apologize. This is the one I wanted to use as an example, and I've got a model on this exhibit that I'd like to go through.

MS. LINDHOLDT: Which road is it that you're referring to?

THE WITNESS: Road 1550.

MS. LINDHOLDT: Okay.

THE WITNESS: And road 794.

BY MR. GRISHAM:

Q And so you're referring now to slide Number 000280?

A Right.

Q And you're on disc 500? You are.

A Okay. I believe you. I don't know that but --

Q I don't want you to go all the way back. Is --

A And one thing I realize there, there is a typo on this. Just a -- I'll show you on the screen and then I'll go up there. But, basically, this profile is the -- is the land between the road and Iron Creek, which is down here. And the 1550 road is right at this location. And if you notice, it's 2,644 feet to the edge of the in-fish buffer. And I don't know if you want an explanation of in-fish at this point?

Q Yeah, why don't you go ahead and do that.

A In-fish is an inland native fish strategy that has been adopted and, basically, supersedes all forest plans. It gives direction on protection of streams in riparian areas. And there's a default distance from a stream that is -- that is set aside for the primary purpose of those areas is -- the objectives are to meet fisheries and water quality parameters or values. The values of the stream and fisheries habitat within that area is the primary objective. And in this case, it's based on whether there's fish there or not is the distance. And in this case, I believe this is a non-fish-bearing section. It's about 150 feet wide. So, basically, we have 2,644 feet to the edge of that buffer and to the stream itself we have 2,756 feet. So I used this as an example. And, I guess, at this time I can approach the exhibit.

Q Okay. And the -- and the profile you've put on the bottom of your chart is the same profile that appears on the Power Point screen now?

A It is, other than I did a correction to the road. The 794 road is the one, and it's right

on the edge of that boundary that's about maybe 80 to -- 60 to 80 feet from the stream.

So before you look at the results, the top part of this chart is the results of a single run, actually on the two roads. And I wanted to just describe the variables that go into the model so you can understand this. The climate, it highly relies on the climate of the area, and you're able to select weather stations based on over thirty years of weather climate. And Wallace, Idaho is the nearest one I could find, that it also had the highest precipitation level, which should mimic fairly close to the -- where this area is. You can put it -- you can input the different soil types and they're very generalized for this model. And in this area, we have a silt loam, and we're able to adjust the amount of rock fragments. And the theory is the more rock fragments there are in the soil, the more stable it is. So that's a variable that may affect sediment.

It's the type of road. You can -- you can put in the -- the roads. And there was some discussion earlier about in-sloping, out-sloping roads. That's just a design feature in the road. And most roads that we have, especially like the 1550 up on this hillside, it's an out-sloped road. It has no ditch. So the intent is for -- when water hits the surface of the road, it will run off and dissipate across the landscape rather than run down a ditch and concentrate in a ditch. And this is an appropriate design for a lower use level.

(C)[sic] , road grading, that's just the slope of the road, and most of our roads are -- they contour, you know, fairly close to the contour, so probably 4 to 5 percent is kind of the average slope of a lot of our system roads. And there are -- you'll find exceptions, but I think this one was modeled at 4 percent.

The length of the road, and you can choose any length of road you want, and this

model is for looking at very specific pieces. Let's say you want to design a temporary road that's only 500 feet. It'll give you exactly the amount of sediment coming off of that. What I used is, I used 1,000 feet, and you'll see this if you ever get into more of the Power Point and you want to go road-by-road and look at sediment production, I used 1,000 feet every time because that's kind of a -- I could come up with an average condition with that 1,000 feet of road. Now if you get -- you try to model five or six miles of road you're gonna have various conditions, and this model is really not the best for -- as a matter of fact, I think 1,000 is the longest length you can actually modeling with this version that I used.

You input the road width, we have 14 to 15 feet. It's a little bit wider down at the bottom, it's about 14 feet wide. You have the fill gradient. And the road fill is the road prism that is at the edge of the running surface and it's the slope that during construction was side-casted, and the distance down to where it meets the natural ground, you're able to put the slope of that road fill prism and how long it is. And in this case up here, I think we had about -- we had like about 65 percent. It ranged from 60 to 80 percent. Most of our ground is pretty steep so you get fill slopes that are quite steep. And the distance is about 30 feet. When you get an 80 -- or a 60-percent slope, you know, you're gonna be 30 feet down where you actually have the natural ground.

And then we have the buffer gradient. The buffer gradient, they call the buffer, is the distance from the road to the stream. And that you're able to put in what's the slope of that ground. And if you -- if I went back to the map, I can do that if you want to see it, but right where this profile is drawn, it's somewhat on a ridge. It's probably a little bit

flatter than most the landscapes. So the steeper it is, the more likely that sediment's gonna go down the slope. And a lot of our slope, natural slope gradients in the Coeur d'Alene Basin are pretty steep. You know, we're talking probably 60 to 80 percent are the natural slopes.

And then the length of the buffer. This model actually only allows you to model 1,000 feet, and the road is 1,000 feet away. That's the furthest you can go. In this case, we have 2,644 feet. So based on that, the output is gonna be an over-prediction because we're farther than 1,000 feet. But just as a demonstration, you know, to try -- to try to look at what kind of differences we have based on different amounts of traffic and looking at where the location of the road, how that influences sediment production, is what I wanted to look at.

So now if we focus on the top part of this, this chart is basically a summary of the output of that model, and everything in blue is the hillside road, the 1550, that road that's up far away from the stream. And we have three different levels of traffic, high, low and no traffic. And it does -- the model does not quantify this traffic as far as numbers very well. It's very generalized, and it describes high traffic as continuous log trucks, heavy equipment, you know, a high level of traffic that would generate ruts and really impact the surface of the road. And I don't know if that's ever occurred on the 1550, unless that occurred during the logging back in the -- I don't know when it was -- I can't tell you when it was built, but during logging operations it might have been that, at that level, but this is 30 feet -- or 30 years, I'm sorry, 30 years of traffic. So I modeled high, low and no traffic. And low traffic is described as basically moderate traffic, light recreation

traffic, administrative use. It doesn't give numbers, but I think that kind of somewhat simulates the traffic, the maximum traffic, that we have on some of these roads. And then no traffic is, you know, basically let the road goes, there's absolutely no traffic on it.

Now the main thing I want to point out here is that the two bars, the blue, is the hillside. The dark blue is the sediment that comes directly off the road. If you went right to the base of the road, you tried to measure it, that's the quantities you would get. And in high traffic, it's huge, you know, you're talking 23,000 pounds per year. And when you go low traffic, there's a dramatic increase. But that's just off the road surface. Now if you go down to the stream, 2,000 feet away, the -- it dramatically drops down to 1,370 pounds in high traffic.

And the point that I think this shows in this case, is that high traffic is only slightly reduced on the amount of sediment that can actually reach the stream, and that's due primarily to the distance. You know, if you're that far away from the stream it's not likely that sediment is gonna go all the way down there.

And by contrasting this with 749 -- or, yeah, 794, that's the road that's located right next to the stream there, in those conditions you don't see much difference between the sediment that leaves the road and the sediment, high, medium, low, that enters the stream. It's almost the same. And to me, this demonstrates the fact that the road being right there in the flood plain, being very close proximity, that, you know, you will get sediment differences. You will get erosion on that road, and it has a high likelihood of reaching the stream because it's right there. It's -- in this case, I think I said it was maybe 60 to 80 feet away.

So that's essentially how this WEPP model works, and I tried to use this in various locations on various roads to kind of validate my opinion and look at whether is it the location or is it the traffic itself that's actually causing sediment.

Q Now, Mr. Davies, your model, you modeled a road that's up on a ridge and then you also modeled a road that's in a riparian area. Is it -- based on your experience, is it possible to have a transportation system on a district like the Coeur d'Alene District without having some roads in a riparian area?

A I think that's -- you know, anything's possible. But, you know, the -- a lot of the roads were constructed in the thirties after the fires had gone through and there was a lot of salvage. And at that time, the concern was trying to get materials off the forest in an easy fashion and the cheapest, most efficient road construction was along bottoms. And so at this point, we've sort of inherited those roads and they -- there's plenty of riparian roads on the -- on the district. And the Coeur d'Alene Basin has a very high stream density, compared to other parts of the nation and of the -- of the West. I mean, the tributaries and the main stems, I don't know the number exactly, but it is a very high density of streams and network of streams, so you're likely to have riparian roads.

Q Now, is there, either short of -- well, what can you do with those riparian roads to mitigate or alleviate the sediment?

A Well, the obvious and best solution is just to not have that road there. You know, we've attempted to mitigate the roads in some cases by relocating the road. You know, it can be near the flood plain. If we can shift it over, that's one approach. Any tributaries that come down to a main stem and the riparian road is there, we can -- we can size the

culverts to handle large events, like 100-year flood events, which helps decrease the possibility of road erosion. But other than removing that road and reshaping the flood plains back

to their natural condition, there's not a whole lot you can do.

MR. GRISHAM: Can I ask, Madame Clerk, if you would hand the exhibit -- the witness Exhibit 630, please.

THE WITNESS: Thanks.

(Pause in the proceedings)

MR. GRISHAM: 630.

MS. LINDHOLDT: I don't [unintelligible] 630.

(Pause in the proceedings)

MR. GRISHAM: Do you have it, Karen? You're still looking?

MS. LINDHOLDT: Go ahead. We'll be breaking here.

THE WITNESS: Actually, I have a spare copy if you want.

MS. LINDHOLDT: Oh, okay. Thank you.

BY MR. GRISHAM:

Q Let me ask you this, Mr. Davies. On any forest and, specifically in the -- in the Coeur d'Alene River -- River Ranger District, are there riparian roads that the Forest Service wants to keep open for travel for various reasons, main access points or whatever?

A Yes, there are.

Q And so, though, there may be roads in the riparian area that are important to the travel system?

A Yes, that's right.

Q And so with respect to those roads, then you need to do -- I mean whatever, the things you mentioned, like make sure the culverts are clean or whatever to just at least mitigate the sediment as much as possible from those roads?

A Right.

Q Now, would you identify for the Court what Exhibit 630 is?

A This is just basically an output summary from our GIS layer, which is under construction, it's evolving. But I produced this last summer just from our GIS layer and looked out the amount of roads that were decommissioned. And there are basically three categories.

The first column in the middle underneath a blit [phonetic] code, those are basically, there's no treatment at all. And I need to point out that there are highlighted segments in the -- it's called the Huck 5, underscore name. This is a -- it's a watershed and the highlighted watersheds are within the North Fork of the Coeur d'Alene. This GIS coverage is forest wide so there's -- one, two, three, four five -- six watersheds that are shown here where we've decommissioned roads.

And this is just a record. It's an attempt to look at, you know, what kind of -- what kind of obliteration of roads we've been doing over the years. And, let's see -- and I can't say that this is absolutely complete. I think it was about 1998, '99 is where our records start. Now there's probably some road decommissioning before that time that may not be accounted for.

And I also will point out the grand total of roads, 7,996, that may be a different

number than we've talked about, but I believe that number is probably generated -- those are miles that may be off forest, you know, that were part of the roads there.

But anyways, in the Category 1, basically 1 is removal of culverts. It's where we took a road and we took all the culverts out on that road, we put in drainage features like water bars and we closed the front end typically with a recontour, where we reshape the landscape to prevent users from coming on that road. And under that category road, if you added up just the watersheds within the Coeur d'Alene River Basin, that number is 455.

Q And for what period of time does this cover again?

A This is basically the complete record as far as -- I believe it's about 1998 --

Q Okay.

A -- is when, you know, this is the complete history of all the road decommissioning we've done.

And then there's another level of road decommissioning. A Category 2 is -- we don't do much of this anymore, it's very expensive, but the culverts are all removed and the entire road surface, the road prism is recontoured back to its original condition. And there's 207 miles done. And the --

Q Is that the -- is that what's referred to as decommissioning or obliteration?

A Well, I like using the word decommissioning. I mean it -- they're used interchangeably but decommissioning is basically converting the road to a status of hydrologically inert. There is no more sediment being produced and it's able to sustain the condition long term.

And then the last Category 3 is, the road's still open, but there has been some improvements. There's been some mitigation. Primarily culverts were sized larger to handle bigger flows and it reduces -- highly reduces the risk of that culvert failing from high flooding events. And there's been 31 miles of roads where we upgraded culverts in the 100 year flow events.

Q All right. Now are you aware of any other restoration projects that you've been involved in other districts?

A Yes, I am. I've been here two and a half years and that's -- other than, you know, being a member on ID teams and contributing to watershed protection measures for ongoing projects, I've been involved with restoration with allocated funds. I work with engineers in some of the engineering funding that was talked about earlier today, and I work with different funding sources. And I have specialists that work for me that design and implement road decommissioning.

Q And could you, just for example, describe some of the projects you've been involved with?

A Well, since I've been here -- well, I'll just list some off. This last summer we completed about six miles of road decommissioning in Spruce Creek. It's a tributary of the North Fork. And there was a riparian road that was completely removed and an alternative route, the Road 205 was widened. It was a snowmobile route and so we had an alternative route that was widened and made available up on a ridge top.

Let's see, another road was -- let's see -- I'm kinda blanking out.

Q It's been a long day.

A Oh, there's been -- Hamilton Creek is an area where there was a culvert that was failed and the creek was flowing about a quarter mile down a road before it entered into a tributary to Teepee Creek. And there was -- the pipe was upgraded and there was -- that road was moved and taken out of the riparian area.

There's a project underway right now in Yellow Dog Creek, at the tributary to the North Fork of the Coeur d'Alene River. There's probably six to eight miles of road that is entirely parallel and adjacent to that stream. It's about $330,000 project. It's very expensive and it's a two year project because of the scope of this project. And Yellow Dog Creek is a listed stream for sediment. So we've initiated that project, we removed some bridges and accomplished about a mile and there's about another five or six miles to go next summer on that one, so.

I guess another project would be West Fork at Steamboat. Since I've been here, every year we've decommissioned maybe twenty to thirty to miles of road in that area. And we pulled all the culverts. We made those roads hydrologically inert. Those are hillside roads, they're up -- up in the drainage.

And another project are is Deer Foot, which was talked about earlier. The -- I believe there's litigation on the timber aspect of that project, that the watershed restoration has been approved and we went ahead and decommissioned twenty miles of road up in that area. It's a tributary to Hayden Lake. Hayden Lake is a 303-D listed water body for nutrients. And the nutrients are highly tied into the sediment that comes into that system. So twenty miles of road decommissioning and there was about a dozen pipes and failing pipes that were removed and stabilized just this last fall, so.

Q All right.

THE COURT: We're pretty close to 5 o'clock so, how much longer with this witness?

MR. GRISHAM: For me maybe about five minutes, Your Honor.

THE COURT: Okay. Why don't you go ahead and finish up direct.

MR. GRISHAM: All right.

BY MR. GRISHAM:

Q On the Power Point presentation, Mr. Davies, when you were -- when you were pulling up the profile that's on the bottom of the chart, you pointed to a long yellow line. Maybe you could go back to that so the Court knows what we're talking about.

A Okay.

Q Back to that slide. And which yellow line was that? Do you have a cursor there?

A I actually don't have my cursor. I don't see it. Oh, there is it. Okay.

Q Okay.

A This is the profile right here.

Q Now there are other profiles like that throughout the Power Point presentation. Do each of those yellow lines contain the same type of information that's contained on the bottom of that chart?

A Yeah, they're similar. There's a few different cases, but essentially the modeling was done the same way for different areas, just kind of representative areas that might demonstrate my opinion.

Q And that was my question, how you went about picking those areas. You didn't

attempt to do that for every road or every drainage?

A No. And it was somewhat of a random thing. I tried to pick locations where they were -- they were close to photo points first of all, so if I hadn't been on that road you can click on a -- on one of these yellow dots, which is a photo point. Someone's been there. I can --

Q Red dots?

A What?

Q Red dots, photo points.

A The red dots, yes. The red dots are photos. So either I've been there or I've talked to somebody that's been there or I can use the photo to kinda look at the general condition of the road to input the variables into the model. And also I took some of these roads that -- you know, tried to find an average distance. You know, you can draw a profile anywhere along that road and you can probably find sections that are only twenty feet away and you can probably find areas that

may be three thousand feet away. So I tried to kinda just look at a sort of an average, overall average of what, you know, the distance of this road may be from a stream or a riparian area.

Q All right. Now you also indicate you did -- you have some modeling examples on the Power Point. I believe I see one just above the profile you used. They're marked with a little yellow square?

A That's right.

Q And could you go ahead and just --

A Right here.

Q -- hit on one of them then. And tell the Court what you're doing there?

A Okay. Here's a very similar output of what you see on that exhibit on the chart there, other than I looked at just high and low traffic on Road 1550, which are the left columns, the blue. And in the right columns it's the output from the 794 road with high and low traffic. And I need to state here that I looked at the sediment being produced off the road and the difference from what I've showed earlier is I -- I'm looking at both sediment that comes directly off the road and the sediment that's delivered to the stream.

MR. GRISHAM: May I approach the chart, Your Honor?

THE COURT: Yes.

BY MR. GRISHAM:

Q So I believe your testimony, Mr. Davies, is that on the Power Point presentation your models would reflect the dark blue values?

A Right.

Q Not the light blue values?

A That's right.

Q And that's true for all the models on the --

A Yes.

Q Okay.

A That's correct.

Q So the -- what -- on the Power Point you really aren't modeling the sediment that actually reaches the stream?

A That's correct.

THE COURT: I have a question while we're on that point. You show the dark blue as being the sediment that comes off the road --

THE WITNESS: Yes.

THE COURT: -- on Road 1550. Then on Road 794 you also show the sediment coming off the road, and there's quite a bit of difference between those two. Is that based on the particular characteristics of those two roads that went into your model? In other words, why wouldn't the sediment coming off the road be similar in each case?

THE WITNESS: Yeah. It has some -- it has a lot to do with the design of the road. The -- like I said, that hillside road, the 1550 is an out sloped road and the 794 is a ditched road and ditches tend to concentrate water differently. And so the water -- the sediment coming off that road would be different.

THE COURT: That's what I want to make sure --

THE WITNESS: Yeah.

THE COURT: -- it was because of the design of the two different roads that the sediment coming off the road would be different.

THE WITNESS: And the other thing I guess I'd like to point out to you is, you know, I generalized. You see the output on the screen right now, I've got high traffic and low traffic. And really the high traffic is what -- when I model this is what I considered, you know, what we have out there now. We don't have the high traffic that this -- as described in the model, as continuous logging trucks and deep rutting and that kind of thing. So it's really the moderate and the low is what you're seeing, rather than

the high and the low. I mean the moderate -- I'm sorry. Low traffic and no traffic is really what the output is compared to that one.

MR. GRISHAM: And may I approach this again, Your Honor?

THE COURT: Yes.

BY MR. GRISHAM:

Q And there's one other I had, Mr. Davies. If you look at Road 1550 -- and I don't think you mentioned this before -- with high traffic, in terms of sediment reaching the stream, you've got 1370; for low traffic you've got 997; and then for no traffic it's 1019. Why is -- why would the low traffic sediment reaching the stream actually be a little bit lower than the no traffic?

A Yeah. I noticed that output, I forgot to describe that. And I looked in the documentation and it's in an exhibit, it's one of the last pages. I don't know if you want to refer to that. We could if you want to.

Q Yeah, why don't we just go ahead and pull that real quick. It's Exhibit 606.

(Pause in the proceedings)

A Thank you. Okay, the very last page of this exhibit.

Q Okay. You're referring to the very last page, Mr. Davies, which is Bates Number 03522?

A That is correct.

Q All right.

A The second to the last paragraph on that last page basically describes that roads with higher levels of traffic also receive regular maintenance. And this may decrease

rutting and erosion -- erosion risk, and it can bring fines [sic] to the surface and prevent re-vegetation, both which tend to increase erosion risk. So basically the model is accounting for when a road has no traffic on it, there's not gonna be maintenance on that. And so, you know, basically the sediment can increase a little bit because, you know, you're not able to basically look at culverts, you're not able to detect some of the erosion. So the sediment could actually go up on a no traffic road versus one that has some degree of maintenance on it.

Q Now finally, Mr. Davis -- Davies, what's your opinion regarding the effect of the implementation of the 2001 travel plan on the aquatics on the Coeur d'Alene River Ranger District?

A Well, if I would summerize what the effects would be, the -- really it boils down to, you know, that one of the biggest changes that I see on the effects of watershed is no cross country travel allowed under the 2001. And, you know, that is one element that when you have cross country travel allowed, you know, it's -- and you have a system of roads that are open throughout the whole forest it provides more -- more and more opportunities for people to go off road. When you boil it down to a more -- to a lesser roads -- fewer roads that are open, a backbone system of roads, the likelihood of cross country travel occurring would be less and the ability for law enforcement, as limited as it is, to catch people going off roads would be greater.

The effect on just opening and closing roads, really, from the modeling I've looked at and from what I've seen, you know, from my experience, that it's the existence of the road. It's the road crossing and the condition of the culverts. It's, you know, roads that

are occupied within a flood plain of a stream. Those are the main factors that effect water quality. So whether that road is open or closed it has no effect. So really just the opening -- or the closing of roads doesn't have a large effect on water quality from what occurred with either plan.

Q All right. And have you reviewed or are you aware of the changes that were made to the plan of 2003?

A Yes, I am.

Q Is your opinion the same with respect to those changes?

A Yes, it is.

MR. GRISHAM: That's all I have, Mr. Davies. Thank you.

THE COURT: All right. We'll go ahead and take our evening break.

How many more witnesses for the government?

MR. GRISHAM: I think we would rest, Your Honor, at this point.

THE COURT: After this witness?

MR. GRISHAM: Yes. I would -- but I would like to reserve -- well, we haven't done cross yet. But we would call Mr. Davies back on rebuttal as well.

THE COURT: All right. And then for order of proof the plaintiffs proceed next. How many witnesses do you anticipate?

MS. LINDHOLDT: Yes, Your Honor. I anticipate calling Mr. Isaacson, which will be our lengthiest witness. Maybe the same amount of time as Mr. Davies. And then probably twenty minutes of testimony from Mr. Mihelich regarding the photos that were taken the last couple months. And then John Bentley, the gentleman who's hearing

impaired, who was here, will be testifying regarding the time he has spent out in the Coeur d'Alene River Ranger District analyzing the Iron Honey [sic] project area and the roads and the culverts as were stated in the Iron Honey FEIS. So I don't anticipate his testimony would take more than forty-five minutes.

THE COURT: Okay. And in view of that for rebuttal, any idea?

MR. GRISHAM: Well, I'll be straightforward, Your Honor. It would be our intent to talk about, on rebuttal, each specific road that is referenced by the plaintiffs that they would ask the Court to close for some reason. And so if we're talking about the four roads I think it was that that Ms. LINDHOLDT already mentioned, you know, that would probably take maybe a half hour or so. If they're a large number of roads it could take a considerable amount of time.

MS. LINDHOLDT: What do you mean the four roads?

MR. GRISHAM: You talked to -- you talked about four specific roads with -- who was it? Oh, Mr. Stringer yesterday.

MS. LINDHOLDT: Okay. Well, you know, as everybody received in mediation, what we have request be closed as a -- for remedy, as a result of the NEPA violation. And those -- that same request is also remaining in his declaration.

MR. GRISHAM: Well, then --

MS. LINDHOLDT: So it's everything that was opened under the 2003 plan that was done in violation of NEPA. It was the Section 4 and Section 5 that are articulated here.

MR. GRISHAM: I thought that maybe your position might change during the

hearing. But if that's the case we're gonna be here for awhile, Your Honor. A long time. 'Cause we want to take the opportunity to go road by road. That's the only way to address it. And also to use Mr. White to talk about the characteristics of the road, to use Mr. Davies to talk about the hydrology, to use Ms. Worden to talk about any wildlife concerns, and also to have Mr. Stringer talk about rationale and reasons under the 2003 amendments. And we would have to do that with each road referenced by Mr. Isaacson.

THE COURT: All right. And for the Intervenor?

MR. TURCKE: Your Honor, at this point I'm not intending to call any witnesses. I guess, while this subject's come up I guess I'm a little bit unclear. I understand Mr. Grisham's concern, although I didn't hear Ms. Lindholdt to say that they were gonna put on specific evidence about every road that they perceived to have been open under the 2001 decision. So maybe if we can discuss that a little bit we can get some clarification if we're talking about testimony from the plaintiffs on a handful of roads or it was gonna be kind of generalized to everything stating to be opened.

THE COURT: Well, I do recall from the mediation, which of course is not evidence here at our hearing, that there were specific roads and specific closures that the plaintiffs requested, and much of our discussion seemed to have been generated in that area. So it looks like we will have to perhaps address it on a road by road basis, even though it is time consuming, I don't know how else to handle it.

The Court is not really in a position to say, well, everything under the 2001 will stay in effect plus the 2003, without having evidence that there may be specific roads or areas that would create harm in the interim to the environment. But -- so I don't know

else to address it, except context. And if turns out that the -- part of our equitable relief that we have some that may be closed or seasonally closed, I guess that would be the way we have to approach or they'll remain open, according to the way the plan was originally proposed, so.

All right. Why don't we go ahead and try to start tomorrow at 9:00 a.m. The roads don't seem to be as bad and make most productive use of the time. In view of what's been stated here I'm going to -- for other hearings I had back in Boise, I'm going to schedule a 5:30 flight out of Spokane. Hopefully we'll be able to conclude by that time.

MS. LINDHOLDT: Thank you, Judge. I -- yeah, I don't have any more guidance. I mean, you know, we've specifically identified roads in the 2003 plan and have our reasons. And then as the Court knows we did the other two -- we based our other two requests based upon areas within the district and the information we had on the water quality impairment. So I don't think we could sort of generally cover it without going through the specific roads. Although we frankly don't have specific evidence on each road within that area, but we have a clear understanding as to what the environmental situation is, so.

THE COURT: Well, and then on some of these by area, you're saying like area 3 --

MS. LINDHOLDT: Yes.

THE COURT: -- or area 4.

MS. LINDHOLDT: Mm-hmm.

THE COURT: We want all roads closed in that?

MS. LINDHOLDT: Yeah. Mm-hmm.

THE COURT: So perhaps that will be approached in a more general --

MS. LINDHOLDT: Yeah.

THE COURT: -- if we're on areas, perhaps we can make more of a generalization as far as whether they need to be closed. And the evidence can be directed in those broader terms as opposed to each specific road. And then if you're -- on 2003 you want to do road by road?

MS. LINDHOLDT: Yes.

THE COURT: All right. And I understand the intervenors had one major concerns with one of those roads in the 2003, there was a Bunkle or --

MR. TURCKE: That's correct, Your Honor.

THE COURT: All right.

MR. TURCKE: I have a better picture. I guess probably part of the reason why I'm the most confused about what's at issue is because we weren't present in the mediation, so -- then seek some of the same information [sic].

THE COURT: All right. 9 o'clock tomorrow.

THE CLERK: All rise. Court's in recess.

Proceedings Concluded at 5:18 p.m. and reconvened

December 9, 2004, at 9:00 a.m.)

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WITNESS AND EXHIBIT INDEX

Witnesses

CERTIFICATION

I (WE) CERTIFY THAT THE FOREGOING IS A CORRECT TRANSCRIPT FROM THE ELECTRONIC SOUND RECORDING OF THE PROCEEDINGS IN THE ABOVE-ENTITLED MATTER.

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FEDERALLY CERTIFIED MANAGER/OWNER

Connie Dilworth, Lin Dunbar, Kari Riley 1/13/05 TRANSCRIBER
DATE