IN THE VERMONT SUPERIOR COURT
ESSEX COUNTY CIVIL DIVISION

PLUM CREEK MAINE ) Case No. 72-12-10ExCV
TIMBERLANDS, LLC, Plaintiff, - against -

VERMONT DEPARTMENT OF
FOREST and PARKS, Defendant.

PLUM CREEK MAINE
TIMBERLANDS, LLC,
Plaintiff,

- against -

VERMONT DEPARTMENT OF TAXES Defendant.

TRANSCRIPT OF COURT TRIAL
BEFORE THE HONORABLE MARY MILES TEACHOUT, SUPERIOR COURT JUDGE

APPEARANCES:
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PROCEEDINGS RECORDED BY ELECTRONIC SOUND RECORDING.
EXHIBITS: DESCRIPTION MARK ADMIT

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(Proceedings convened at 9:06 AM)
THE COURT: Good morning.
IN UNISON: Good morning.
THE COURT: This is dockets 72-12-10Excv, and 30-611ExCv, both of which are appeals from decisions of the Department of Forestry and Parks. And dockets 31-6-11, and 19-4-11, which are appeals from the decision of the Department of Taxes.

And representing the appellant Plum Creek are -- and I'd like to ask you to identify yourselves.

MR. DAVID GRAYCK: Good morning, Your Honor. My name is David Grayck, and I represent Plum Creek Maine Timberlands, LLC. And with me is co-counsel.

MR. KIMBERLY CHENEY: Good morning, Kimberly Cheney. I'm also representing Plum Creek.

THE COURT: All right.
MR. MICHAEL DUANE: Michael Duane, Your Honor,
Assistant Attorney General, Your Honor, for the State of Vermont.

MS. THEA SCHWARTZ: Thea Schwartz, Assistant
Attorney General for the State of Vermont.
THE COURT: All right. And let me just put on the record that yesterday, May 28th, the Court took a view of the property. Myself as presiding judge, and both Assistant Judges Noble and Colby were present. Attorney Grayck and
various representatives from Plum Creek were present, and Attorney Schwartz and various representatives from the State of Vermont were present. And we did two of the properties. Only the attorneys spoke and pointed out things to bring to our attention to enable us to better understand the evidence that we're going to be hearing in this hearing.

Let me just ask if there are any preliminary logistical matters before we get started.

MR. DUANE: I don't think so, Your Honor. Thank you.

MR. GRAYCK: I just have exhibits and we're prepared to share them with the court in due course.

THE COURT: Are there any stipulated exhibits?
MR. DUANE: Yes, Your Honor. We've been acting cooperatively, and I think we've agreed to the admission of the exhibits with regard to their authenticity. There may be some arguments with regard to relevancy. But we've exchanged exhibits, exhibit lists, and I think we've come to an agreement with regard to the foundation for the documents.

THE COURT: Okay. So we'll just take them up as we go through then.

MR. DUANE: Yes.
THE COURT: If there's no objection, you can just tell me so we can do that expeditiously.

MR. DUANE: Thank you.

THE COURT: And are you prepared to give an opening statement of some kind?

MR. DUANE: Well, we talked about that, Your Honor. And we, in light of the fact that we have submitted trial memorandum, and the Court has reviewed them, that we were not going to do opening statements.

THE COURT: All right. All right, Mr. Grayck?
MR. GRAYCK: Your Honor --
THE COURT: I'm assuming Mr. Grayck starts, but did you discuss that?

MR. GRAYCK: Yes.
MR. DUANE: Yes. And Your Honor, based on our mutual understanding of the process in this kind of a case, as an appeal by Plum Creek from these two decisions, I've marked as exhibits the decisions below.

THE COURT: Okay. Great.
MR. DUANE: One from the director of Property Valuation and Review, and one from the acting commissioner of Forest Parks and Recreation. They are contained within the record that those tribunals forwarded to the Court.

THE COURT: Yes, but I would prefer having everything marked as an exhibit so it's altogether.

MR. DUANE: Exactly. That was my sense as well, Your Honor. So I've had these marked as State's A, which is the decision of the Department of Forest, Parks and

Recreation; and State's B, which is the director's decision from the Property Valuation and Review Division of the Vermont Department of Taxes. And at this time, I would offer into evidence what's been marked for identification as State's A and State's B.

MR. GRAYCK: No objection.
THE COURT: State's A and State's B are admitted.
MR. DUANE: Thank you.
(Decision was hereby marked for identification and received into evidence as State's Exhibit A, as of this date.)
(Decision was hereby marked for identification and received into evidence as State's Exhibit B, as of this date.)

MR. DUANE: Thank you very much. May I approach, Your Honor?

THE COURT: Yes.
MR. DUANE: Here are the two exhibits.
THE COURT: Thank you.
MR. DUANE: And the State submits that, at that point in time, with those being offered and admitted into evidence, that the burden of persuasion and proof rests with Plum Creek, and I will sit down.

THE COURT: Mr. Grayck?
MR. GRAYCK: Thank you, Your Honor. We'll call Mr. Mark Doughty.
having been duly sworn, testified as follows: DIRECT EXAMINATION

BY MR. GRAYCK:
Q. Could you please state your name?
A. My name is Mark Doughty.
Q. And who do you work for?
A. I work for Plum Creek.
Q. And what is your education?
A. I have a Bachelor of Science degree from the University of Maine in forest engineering.
Q. And what are your duties with Plum Creek?
A. My title is community affairs manager, and that entails government affairs at the state level, community outreach, and communication.
Q. And how long have you been at Plum Creek?
A. I've been with Plum Creek since they bought the land base that I work on in 1998.
Q. Okay. And what involvement, if any, did you have with Plum Creek's purchase of property here in Vermont?
A. I was part of the due diligence team.
Q. And what did you do as a part of the due diligence team?
A. I reviewed the regulatory structure, the conservation easement requirements, the local communities, and the areas that we would be involved in over here. And I was
part of the team that came over and inventoried, or check inventoried part of the lands.
Q. Okay. Could you please describe what business Plum Creek is in?
A. Excuse me?
Q. If you could describe what business Plum Creek engages in?
A. Plum Creek is an owner of Timberlands and a manager of Timberlands, growing and harvesting trees.
Q. And how many acres does Plum Creek own in Vermont?
A. 86,212, plus or minus.

MR. GRAYCK: Your Honor, I have a series of
exhibits. I have the -- what I call the official copies
stickered and ready to give to the clerk. I also made
additional copies for each member of the Court.
THE COURT: Thank you.
MR. GRAYCK: If it's all right, I would provide
those to you, or you tell me --
THE COURT: Only once they're admitted.
BY MR. GRAYCK:
Q. Showing you, Mark, what's been marked as Plumb Creek Exhibit 1. Do you recognize that document?
A. I do.
Q. What is it?
A. It's the limited warranty deed passing ownership of
the land in question from Essex Timber Company to Plum Creek Maine Timberlands, LLC.
(Warranty deed was hereby marked for identification as Plum Creek's Exhibit 1, as of this date.)
Q. Okay. And from whom did pc purchase the land?
A. Essex Timber Company.
Q. And from whom did Essex Timber Company purchase the land?
A. The Conservation Fund.
Q. And from who did the Conservation Fund purchase the land?
A. Champion.
Q. And prior to Champion, who was the owner of the land?
A. St. Regis.
Q. Okay.

MR. GRAYCK: Your Honor, I'd like to offer 1 through
5 for admission at this point.
THE COURT: And what are $2,3,4$ and 5 ?
MR. GRAYCK: 2 is the limited warranty deed of
Champion International Corporation to the Conservation Fund.
3 is Champion International working forest grant of development rights and conservation restrictions. 4 is Champion International working forest lands grant of public access easement. And 5 is quit claim deed, St. Regis

Corporation, Vermont Electric Transmission Company.
MR. DUANE: Your Honor, we have no objection to their admission, although I would prefer if the witness would identify the documents and state what they are before we -before we -- in the future -- agree to their admission without objection. Thank you.

THE COURT: Plum Creek's 1 through 5 are admitted.
(Warranty Deed was hereby received into evidence as Plum Creek's Exhibit 1, as of this date.)
(Warranty Deed was hereby marked for identification and received into evidence as Plum Creek's Exhibit 2, as of this date.)
(Restrictions was hereby marked for identification and received into evidence as Plum Creek's Exhibit 3, as of this date.)
(Public Access Easement was hereby marked for identification and received into evidence as Plum Creek's Exhibit 4, as of this date.)

Quit Claim Deed was hereby marked for identification and received into evidence as Plum Creek's Exhibit 5, as of this date.)

MR. GRAYCK: Your Honor, I do have an exhibit list, if the Court would like one?

THE COURT: Yes, that would be helpful. Thank you. MR. GRAYCK: And I have one for each member of the

Court, if that's okay.
THE COURT: All right.
BY MR. GRAYCK:
Q. Mark, I'm showing you a document. Do you know what it is?
A. Yes, I do.
Q. What is that?
A. It's the --

THE COURT: Excuse me, does it have a number?
MR. GRAYCK: It's Exhibit 2, Your Honor, I apologize.

THE COURT: Okay. All right.
MR. GRAYCK: Exhibit 2.
BY MR. GRAYCK:
Q. And what is Exhibit 2?
A. It's a limited warranty deed from Champion

International Corporation to the Conservation Fund selling all of their holdings in Vermont, I believe.
Q. Okay. And I'm also handing you Exhibit 3, which is the -- Exhibit 3. Have you seen this before?
A. Exhibit 3 is the Champion International Lands working forest grant of development rights and conversation restrictions.
Q. How, if at all, does the document you're holding describe or divide the lands of Plum Creek?

THE COURT: Excuse me just a moment. You are confined to one spot only in the courtroom.

MR. GRAYCK: I'm sorry.
A. On page number 5, under permitted uses of the protected property, it says that the right to convey the protected property has four distinct tracts, provided each such tract is conveyed its entirety as each tract is depicted on the conversation plan. The protected property shall not otherwise be subdivided or conveyed.
Q. Okay. And I'm now going to show you Exhibit 4. And that's this document?
A. This is the Champion International working forest lands grant of public access easement.
Q. And in effect, what does that document allow for with respect to the use of Plum Creek's land?
A. It allows for public access in different ways.
Q. And how does the public access the land? What are some of the examples of uses that are made of it?
A. Unlimited foot access at any time. There are also corridor managers that are assigned or approved to manage vehicular access on roadways. There are -- there's a corridor manager to manage snowmobile access in the wintertime. There is a corridor manager for horseback riding, for a hiking trail. And at the present time, one's been added for a boat launch in Lemington.
Q. Okay. And with respect to Exhibit 3, which was the development rights and conservation restrictions which you had already testified about. How, if at all, does that restrict the use of Plum Creek's land?
A. It retained the development rights by the conservation fund, so we are not allowed to develop it at all. In other words, subdivide and build buildings on it or things like that.
Q. And in what context did the declaration of the conservation easement arise, in that which transaction was it part of?
A. After the Conservation Fund bought the land from Champion, they placed a conservation easement on the land before they sold it to Essex Timber.
Q. So now, if at all, is sometimes the Plum Creek land referred to as the former Champion land?
A. That's correct.
Q. Okay. All right. I'm going to show you --

THE COURT: I'm sorry; it's a little confusing what the sequence of these documents were. I think you attempted to clarify that with your last question, but could you go over that again, please?
Q. Could you explain the transaction where Champion International divested itself of its property holdings here in Vermont, and who was the initial purchaser of the land which
is now owned by Plum Creek?
A. I believe it was 1999 that Champion sold the land to the Conservation Fund. The land was broken up into three pieces. One went to the National Wildlife Refuge, now called Conte. One went to the State of Vermont and is the West Mountain Wildlife Refuge. And the working forest portion went to Essex Timber. They purchased that portion.
Q. And in connection --

THE COURT: It went to from whom?
THE WITNESS: From the Conservation Fund to Essex Timber Company.

THE COURT: And what was the first one again?
THE WITNESS: The National Wildlife Refuge, now called Conte.

THE COURT: All right.
BY MR. GRAYCK:
Q. And Mark, could you describe how long the Conservation Fund's period of ownership was of the property it purchased?
A. It was very brief.
Q. And from -- to whom did the Conservation Fund convey the property? The former Champion --
A. It was conveyed to those three parties.
Q. Thank you.
A. Would you like the acreages?
Q. We're going to get there.
A. Okay.

THE COURT: But then the -- when was the -- when were there restrictions put on?

THE WITNESS: The restrictions were put on during the Conservation Fund's ownership prior to -- prior to transfer to Champion.
Q. Excuse me. To Champion or to -- the restrictions were put --
A. Oh, sorry. Prior to transfer to Essex Timber Company.

THE COURT: Okay, go ahead.
Q. Showing you Exhibit 5. And what's this?
A. Exhibit 5 is a quit claim deed from St. Regis Corporation to the Vermont Electric Transmission Company selling a strip of land 200 feet in width across their ownership in Lewis Avery's Gore, and one other town, and I don't see it here. Sorry, across Avery's Gore, Lewis, Brunswick, Bloomfield, Ferdinand, Victory and Granby in the County of Essex.
Q. So how, if at all, does the property owned by -that was conveyed to VETCO, how, if at all, does it affect Plum Creek's property in the town of Lewis?
A. It splits it into -- the one parcel into two because VETCO and now VELCO owns a two-hundred-foot-wide strip in fee.
Q. Okay. Showing you what's been marked as Exhibit 6. Do you know what that is?
A. It's the State of Vermont Public Service Board's decision under petition by the Vermont Electric Power Company for a certificate of public good.
(PSB decision was hereby marked for identification as Plum
Creek's Exhibit 6, as of this date.)
Q. And how does Exhibit 6 relate, if at all, to Exhibit 5?
A. I believe the Vermont Electric Company received the certificate of public good before purchasing the transmission line, which is -- or the land for the transmission line which is the subject of this certificate of public good.

MR. GRAYCK: Your Honor, I would move the introduction of Exhibit 6.

MR. DUANE: No objection.
THE COURT: Plum Creek 6 is admitted.
(PSB decision was hereby received into evidence as Plum Creek's Exhibit 6, as of this date.) BY MR. GRAYCK:
Q. I'm handing you what's been marked as Exhibit 7. Can you tell the Court what that is?
A. Exhibit 7 is the Champion Lands conservation plan, which is a map of the Champion Lands holdings in Vermont and represents the distribution of the three blocks that it was
broken into.
(Champion Lands conservation plan was hereby marked for identification as Plum Creek's Exhibit 7, as of this date.)
Q. Could you please look at Exhibit 3, which is the conservation easement?
A. Yes.
Q. How, if at all, or where, if at all, does Exhibit 3's conservation easement make reference to Champion Lands conservation plan?
A. On page 5 --
Q. Could you --
A. -- under number 3, permitted uses of the protected property, item 1. The right to convey the protected property has four district tracts, provided each such tract is conveyed in its entirety as each tract is depicted on the conservation plan.
Q. And so I'd ask you to look at Exhibit 7. And --

THE COURT: I'm sorry, would you state again where
that is on page 5 in Plaintiff's 3 -- or Plum Creek 3?
THE WITNESS: On number 3, the protected uses of the -- the permitted uses of the protected property. It's item number 1 under that.

THE COURT: Okay.
BY MR. GRAYCK:
Q. So is Exhibit 7 what is referred to in the deed?
A. Yes, it is, it's the conservation plan.

MR. GRAYCK: Your Honor, I'd move the introduction of Exhibit 7.

MR. DUANE: No objection, Your Honor, thank you.
THE COURT: All right. Would you wait just a
minute, please?
(Pause)
THE COURT: All right. Plum Creek 7 is admitted.
(Champion Lands Conservation Plans was hereby received into evidence as Plum Creek's Exhibit 7, as of this date.) BY MR. GRAYCK:
Q. Mark, I'm handing you an oversized exhibit. Can you identify what that is?
A. This is the Champion Lands Conservation Plan, a copy of Exhibit 7.
Q. And who prepared that exhibit? Who prepared the oversized exhibit that you're holding?
A. I prepared that by printing it on a plotter and taking it to Staples.
Q. Okay.

MR. GRAYCK: We just wanted to use the oversized exhibit for illustrative purposes, Your Honor.

THE COURT: Any objection?
MR. DUANE: No, Your Honor. Thank you.
THE COURT: Fine, thank you.

MR. GRAYCK: Okay.
BY MR. GRAYCK:
Q. Mark, can you please describe what's shown as Subdivision A on the Champion Lands Conservation Plan?
A. The four subdivisions are shown in a small breakout block. And subdivision A are these towns: Lewis, Avery's Gore, Brighton, and Morgan.
Q. And if you could describe -- if you could describe subdivision B, please?
A. Subdivision $B$ are on the other side of the VELCo ownership. It's the blocks in Averill -- two blocks -Lemington, Bloomfield, and Brunswick.
Q. And subdivision C?
A. Subdivision $C$ are -- is down in this area. It's Maidstone and Brunswick.
Q. And subdivision D?
A. Here is Burke, East Haven, Granby, Ferdinand.
Q. Okay. And this Champion Lands Conservation Plan, it was -- when was it produced? Or which transaction was it produced in connection with?
A. It was produced in connection with the transfer to the conservation fund prior to their transferring it to the three -- three holders.
Q. And approximately how many acres are represented by subdivisions A, B, C and D?
A. In total?
Q. Yes.
A. 86,212 .
Q. Okay. And I'm going to show you Exhibit 8. Would you like to -- yeah, go ahead.
A. I'd like to clarify that, if I may.
Q. Yeah. Yes. Go right ahead.
A. The original sale from the Conservation Fund to

Essex Timber Company involved 84,000 acres. Subsequent
purchases increased the acreage to Essex Timber Company.
Q. So if you'd just -- you can put that down. We'll continue to use it in just a little bit.

I show you what's been marked as Exhibit 8. And what's Exhibit 8?
A. Exhibit 8 is also the Champion Lands Conservation Plan and it's one that $I$ made some highlighting and notes on.
(Champion Lands Conservation Plan was hereby marked for identification as Plum Creek's Exhibit 8, as of this date.)
Q. Could you please explain what the highlightings and notes represent?
A. The --

THE COURT: First, what is it again?
THE WITNESS: It's the conservation plan.
THE COURT: The same as 7?
THE WITNESS: The same plan. Yes.

THE COURT: Okay.
THE WITNESS: Yup. It was just a copy of that.
A. So to this plan, I added a purchase by Essex in 2000 of approximately 1,483 acres.

THE COURT: 1,433?
THE WITNESS: 1,483.
THE COURT: 83.
A. These acres were subsequently placed under an almost identical conservation easement to the original. BY MR. GRAYCK:
Q. If you could please continue to explain each of the additions on this exhibit?
A. Certainly. In East Haven, Essex Timber purchased a 228 block, which is not covered by a conservation easement. And that was done in 2005, even though the map says it's 2001. And in Bloomfield, Essex Timber purchased an additional 226 acres in 2006.

THE COURT: And what town was the 2005 transaction?
THE WITNESS: The 220-acre transaction was in 2005.
THE COURT: In what town?
THE WITNESS: In East Haven.
BY MR. GRAYCK:
Q. And now I'll show what you're holding, which is Exhibit 8. Who is the present owner of the acreages shown on the conservation plan?
A. Plum Creek Timber.
Q. And so how many acres does Plum Creek own?
A. Total 86-212, plus or minus.
Q. And how much did Essex Timber purchase from the Conservation Fund?
A. 84,000 acres.
Q. Okay. So this map, am I correct, represents additional acreage since the time of the Conservation Fund transaction.
A. That's correct.
Q. Okay.

MR. GRAYCK: Your Honor, we would move the introduction of Exhibit 8.

MR. DUANE: No objection, Your Honor.
THE COURT: Plum Creek 8 is admitted.
(Champion Lands conservation plan was hereby received into evidence as Plum Creek's Exhibit 8, as of this date.) BY MR. GRAYCK:
Q. Okay, showing you what's been marked as Exhibit 9, also, again, and oversized. What is Exhibit 9, Mark?
A. Exhibit 9 is a map of Plum Creek's holdings showing subdivision $A$, and subdivision $B$, and also showing the adverse inspection report area that we visited yesterday, and the upper Clough Brook North harvest prescription area; that 471 acres that was approved for harvest.
(Plum Creek Map was hereby marked for identification as Plum Creek's Exhibit 9, as of this date.)

THE COURT: Before we get there, do I understand correctly that Plum Creek 7 was all of the Champion Lands prior to the transfers to the three different entities, of which Essex Timber was one?

THE WITNESS: The conservation plan is. It represents all three blocks.

THE COURT: So it would be helpful to understand which part went to Wildlife, which part went to the State, and then which part went --

THE WITNESS: Okay.
THE COURT: -- Essex Timber.
MR. GRAYCK: Sure. Sure.
BY MR. GRAYCK:
Q. Mark, could you identify --

MR. GRAYCK: I'm sorry, Your Honor, I didn't hear
you. You also said you would like to have clarified what Plum Creek owns as shown on this? I just didn't hear you.

THE COURT: Well, as $I$ understand it, this was all of the land that Champion conveyed to the Conservation Fund. And that the Conservation Fund then conveyed out in three chunks.

MR. GRAYCK: Yes.
THE COURT: One to Wildlife, one to the State of

Vermont, and one to Essex Timber.
MR. GRAYCK: Yes.
THE COURT: So if you could clarify --
MR. GRAYCK: Okay.
THE COURT: -- what those three areas were.
MR. GRAYCK: Yup. Okay.
BY MR. GRAYCK:
Q. Mark, could you please first clarify what Essex Timber got?
A. Essex Timber got subdivision A, subdivision B, subdivision C, and subdivision D.
Q. And I know it's somewhat difficult, but can you try and -- can you correlate the subdivisions as shown on the small box with the broader plan?
A. Sure. Subdivision A is here. Subdivision B is here. Subdivision C is here. And subdivision D is here.

THE COURT: So where's the part that the Wildlife entity got?

THE WITNESS: The National Wildlife Refuge got this portion here, which is right here.

THE COURT: So that's not part of Subdivision A? THE WITNESS: That's correct.

THE COURT: Okay.
THE WITNESS: Subdivision A's break is here.
THE COURT: All right. And what did the State of

Vermont get?
THE WITNESS: Got the West Mountain Wildlife area,
this area in green here.
THE COURT: Oh, that's the wildlife area?
THE WITNESS: Or is this yellow? Yes.
THE COURT: Okay. I thought that you previously
said that there were three chunks. One is the National
Wildife Refuge that became known as Conte.
THE WITNESS: Um-hum.
THE COURT: So which one is that?
THE WITNESS: It's this one up here.
THE COURT: Okay. And then the State of Vermont is in green.

THE WITNESS: Yes.
THE COURT: But you called it something else. What did you call it?

THE WITNESS: West Mountain Wildlife Management
Area.
THE COURT: Okay. Thank you.
MR. GRAYCK: I'm sorry, Your Honor, is Exhibit 8 admitted?

THE COURT: Yes.
MR. GRAYCK: Thank you.
BY MR. GRAYCK:
Q. Okay. And so Mark, you have Exhibit 9 in front of
you? Or --
A. Not yet.
Q. Didn't I hand that one to you?
A. Oh, yes. I'm sorry, yes.
Q. So what is Exhibit 9?
A. Exhibit 9 is Plum Creek's holdings in subdivision A, and subdivision B. It shows the adverse inspection report area, as well as the 471-area that's approved for harvest.
Q. Okay.

THE COURT: So Exhibit 9 only shows A and B?
THE WITNESS: Only shows A and B, correct. C would be -- C and D are south of the map.
Q. Mark, the director of Property Valuation and Review decision has been admitted into evidence, and that document disqualifies 56,604 acres of Plum Creek land. Does Exhibit 9 show any land which is not included in that disqualification?
A. Yes.
Q. Could you point that out to the Court?
A. This 812-block of land up here, which is not
Q. And that 812 acres is wedged between two ponds. Could you just identify the ponds that you see on the map there?
A. Little Averill Pond and Great Averill Pond.
Q. Okay. And where, if at all, is the power line corridor in Lewis?
A. The power line corridor is here in the Town of Lewis.

MR. GRAYCK: Your Honor, I'd move the introduction of Exhibit 9.

MR. DUANE: No objection, Your Honor.
THE COURT: Plaintiff's 9 -- or Plum Creek 9 is
admitted.
(Plum Creek Map was hereby received into evidence as Plum Creek's Exhibit 9, as of this date.)

BY MR. GRAYCK:
Q. Mark, I'm going to show you what's been marked as Exhibit 10. Please tell me what Exhibit 10 is.
A. Exhibit 10 is the same map that we just saw Exhibit 9 with the lands that Plum Creek owns in the Town of Lemington crosshatched.

MR. GRAYCK: Your Honor, I'd move the introduction of Exhibit 10.

MR. DUANE: No objection, Your Honor. Thank you.
THE COURT: Plum Creek 10 is admitted.
(Town of Lemington map was hereby marked for identification and received into evidence as Plum Creek's Exhibit 10, as of this date.)

BY MR. GRAYCK:
Q. Your Honor, I'd show you Exhibit 11. What's that?
A. Exhibit 11 is the same back map as Exhibit 9 and 10 with the area crosshatched that is east of the power line and does not include the Averill wedge land.

MR. GRAYCK: We'd move the introduction of Plum Creek 11.

MR. DUANE: No objection, Your Honor.
THE COURT: Plum Creek 11 is admitted.
(Power line boundary map was hereby marked for identification and received into evidence as Plum Creek's Exhibit 11, as of this date.)

BY MR. GRAYCK:
Q. Mark, I'm showing you what's been marked as Exhibit 12. What's that?
A. Exhibit 12 is the same basic map as Exhibits 9, 10, and 11. This time, the crosshatched area represents the parcel of 56,604 acres that the commissioner of forests -excuse me, Property Valuation and Review has removed from UVA for five years.
(56,604-acre map was hereby marked for identification as Plum Creek's Exhibit 12, as of this date.)
Q. Could you take that oversized exhibit, which is the Exhibit 7, the conservation plan map, and if you could also just have that available to you.
A. Um-hum.
Q. I'm just going to --

MR. GRAYCK: Your Honor, may I -- may I hold up one exhibit while --

THE COURT: Yes.
Q. So in looking at what is Exhibit 12, which represents the 56,604 acres disqualified by Property Valuation and Review, could you please correlate what's shown on Exhibit 12 with respect to what's shown on the Champion Land conservation plan which is Exhibit 7, pointing out what differences, if any, there are between the two.
A. Okay. The differences -- the similarities are subdivision A, subdivision B -- subdivision A, subdivision B. A and B. And the difference is this 812, 820-acre block which is right up here between the Great and Little Averill Ponds.

MR. GRAYCK: We would move for the introduction of Exhibit 12.

MR. DUANE: Might I inquire, Your Honor?
THE COURT: Yes.
MR. DUANE: Thank you.
VOIR DIRE EXAMINATION
BY MR. DUANE:
Q. Mr. Doughty, with respect to Exhibit 12, who made that document?
A. That was made by a Plum Creek employee.
Q. And did you oversee them making that document?
A. I worked with that employee to make that document, yes.
Q. And Plum Creek also owns an additional few thousand acres that make up the 82 - or 84,000 . Where are they in relation to the parcel shown on Exhibit 12?
A. Can I use this map?
Q. Yes, please.
A. I believe you're talking about subdivision C.
Q. Okay.
A. And subdivision D. And they are south of subdivision A and subdivision B.
Q. And they're not contained on the parcel depicted on number 12, correct?
A. That's correct. They're not shown on that map.
Q. Okay. And when you indicated that this map showed the parcel that was excluded from current use by the director of Property Valuation and Review, that other land you indicated to the south was not excluded, correct?
A. That's correct.
Q. Thank you.

MR. DUANE: Your Honor, we have no --

THE COURT: I'm sorry, ask that question again. MR. DUANE: When he was talking about -- when Mr.

Doughty was talking about the land to the southern part of the exhibit he's holding up which I believe has been marked and admitted as number 9-- 7. That the 56,000 acres that was excluded from current use that's on appeal does not include the land to the bottom two sections of that map. That those acreages which total then 82,000, the difference, those were not excluded and are not subject of today's proceedings.

THE WITNESS: Correct, these were not excluded.
MR. DUANE: Thank you.
THE COURT: Wait a minute. Okay. All right.
MR. DUANE: With that, we have no objection to the admission of Exhibit number 12.

THE COURT: Plum Creek 12 is admitted.
(56,604-acre map was hereby received into evidence as Plum Creek's Exhibit 12, as of this date.) BY MR. GRAYCK:
Q. And Mark, again, just to clarify, the total land holding by Plum Creek in Vermont is how many acres?
A. 86,212 .
Q. Okay. And the acreage essentially represented by subdivisions A and B, except for the acreage wedged between the two Averill ponds, is approximately how many acres as determined by the director of PVR?
A. Approximately 56,604 acres.
Q. Okay. I'm going to show you what's been marked as Exhibit 13, and can you tell me what that is?
A. This is a map of Plum Creek holdings in Vermont, all four subdivisions with the acreages from the forest management plan table represented on the towns.
(Plum Creek holdings map was hereby marked for identification as Plum Creek's Exhibit 13, as of this date.)
Q. Okay. So again, in looking at Exhibit 13, if you could point out to the Court what acreages and property acreages constitute the 56,604 , which is the subject of the director's decision?
A. Would you like me to just point them out or read them?
Q. Yeah, if you could --

THE COURT: Well, let me -- I thought you said this was all Plum Creek holdings in Vermont? Or based on the question, it sounded like it was only the 56,604. So if we could have that clarified.
Q. Mark, what does this map show?
A. This map shows all Plum Creek holdings in Vermont. So it's subdivision A, subdivision B, subdivision C, and subdivision D.

THE COURT: Plus the additional subsequentlypurchased pieces?

THE WITNESS: Yes. That's all represented here, plus the 1,483. Yup.
Q. So approximately how many acres does this map show?
A. Approximately 86,212.
Q. Okay.
A. The forest management plan, all the acreages here add up to 86,262 acres. That's what's in the forest management plan.
Q. We haven't yet introduced the forest management plan, but let me just ask you this question.
A. Um-hum.
Q. In the course of your work, what variations have you encountered with respect to the precise amount of land owned by Plum Creek in Vermont?
A. We've come across slight corrections on boundary lines, on acres of ponds, on road acres, those kind of things. Just small corrections.
Q. And what is the threshold amount, if any, which you have found the various sources to be in agreement regarding?
A. Ask that a different way, please.
Q. I'm sorry. What amount of acreage does everyone seem to at least agree on of the variations that you've discovered?
A. 86,212 is a very commonly-used acreage.
Q. Okay. And sometimes it's also adding up to slightly
different than that?
A. Yes.
Q. And that slightly different amount is?
A. Due to mapping corrections, mapping errors.
Q. Okay.

MR. GRAYCK: We would move the introduction of Plum
Creek 13.
MR. DUANE: No objection, Your Honor.
THE COURT: Plum Creek 13 is admitted.
(Plum Creek holdings map was hereby received into evidence as Plum Creek's Exhibit 13, as of this date.)

BY MR. GRAYCK:
Q. Mark, you just made reference to a document and I'm going to show you what's been marked as Exhibit 14. Could you please tell me what that document is?
A. That's the forest management plan for the Essex Timber Company lands. It was produced in November 2007, and it was subsequently accepted by Plum Creek and by FPR as the management plan for Plum Creek's lands after we purchased them.
(Forest management plan was hereby marked for identification as Plum Creek's Exhibit 14, as of this date.)
Q. And what familiarity, if any, do you have with Exhibit 14?
A. I've read it rather extensively, I guess.
Q. Perhaps on more than one occasion.
A. Um-hum.
Q. Okay. And just to clarify again, what is a forest management plan?
A. It specifies the different -- it contains an inventory of the forest, and it specifies the different treatments that can be applied.
Q. Okay.
A. To the different types of the forest.
Q. What is your understanding as to the acreage to which that forest management applies?
A. This plan applied to the acreage in the table on page 8, and it's listed as 86,262 acres.
Q. Who presently owns that acreage referred to in the table?
A. Plum Creek owns that land, and Merck owns a very small piece that was excepted from the sale.
Q. Okay. And do you know --

THE COURT: Who? Murph?
THE WITNESS: Wilhelm Merck, the Essex Timber
Company.
THE COURT: Okay.
BY MR. GRAYCK:
Q. Do you know approximately how much land Mr. Merck
A. Approximately 50 to 70 acres. It's not clear to me.
Q. And is that again another source of one of those slight variations?
A. Yes.
Q. Between 86,212, and 86?
A. Yes, it is.
Q. Okay. All right.

MR. GRAYCK: We'd like to move the introduction of Exhibit 14.

MR. DUANE: No objection, Your Honor. Thank you.
THE COURT: Plum Creek 14 is admitted.
(Forest management plan was hereby received into evidence as Plum Creek's Exhibit 14, as of this date.)
Q. And so now I'm showing you what's Exhibit 15, Plum Creek Exhibit 15. And what's Exhibit 15?
A. Exhibit 15 is the use value appraisal forest management plan signature page for the lands of Plum Creek Maine Timberlands.
(Signature page was hereby marked for identification as Plum Creek's Exhibit 15, as of this date.)
Q. And what did that document do? What was the consequence of that document?
A. It certifies that it constitutes an addendum to the forest management plan that Plum Creek has elected to adopt the plan developed by Essex Timber Company, which was admitted
as Exhibit 14.
Q. Okay. So what constitutes the present Plum Creek forest management plan?
A. Exhibit 14, which is the forest management plan developed for Essex Timber and adopted by Plum Creek.
Q. Okay. And what about Exhibit 15? Is that a part of the plan?
A. Yes; it's an addendum to the plan.
Q. Okay.

MR. GRAYCK: We would move the introduction of
Exhibit 15.
MR. DUANE: No objection, Your Honor.
THE COURT: Plum Creek 15 is admitted.
(Signature page was hereby received into evidence as Plum Creek's Exhibit 15, as of this date.)
Q. Mark, I'm showing you Exhibit 16. Could you please identify the documents which comprise Exhibit 16?
A. Exhibit 16 is made up of eight tax bills from different municipalities for the tax year 2012 covering Plum Creek's lands in those towns.
(2012 tax bills were hereby marked for identification as Plum Creek's Exhibit 16, as of this date.)
Q. And can you identify the municipalities in the tax bills, please?
A. The Town of Averill, Town of Avery's Gore,

Bloomfield, the Town of Brighton, the Town of Brunswick, the town of Lemington, the town of Lewis, and the town of Morgan.
Q. Okay. With respect to the 56,604 acres, how much, if any, is covered in those -- in the acreages specified in those tax bills?
A. Everything except for the Averill wedge, which is -I'm sorry, the Averill wedge would be included in this. So the Averill wedge, in addition to the 56,604 acres.
Q. Okay. Except for the Averill wedge --
A. Um-hum?
Q. -- otherwise, the tax bills are representative of the 56,604?
A. That's correct.
Q. Okay.

MR. GRAYCK: We would move the introduction of
Exhibit 16 and the tax bills identified therein.
MR. DUANE: No objection, Your Honor. Thank you.
THE COURT: Plum Creek 16 is admitted.
(2012 tax bills were hereby received into evidence as Plum
Creek's Exhibit 16, as of this date.)
Q. Mark, do you still have the oversized exhibit showing the conservation land plan?
A. Yup.
Q. Okay. Could you please identify on the conservation land plan the location -- or which subdivision is the alleged
cut contrary located in?
A. Located in subdivision B.
Q. Okay. And the 471 acres, which subdivision is that located in?
A. It's located in subdivision B.

THE COURT: What was the question again?
MR. GRAYCK: The 471-acre --
THE COURT: Okay.
MR. GRAYCK: -- harvest unit, what town -- what
subdivision is it located in.
THE WITNESS: Subdivision B.
BY MR. GRAYCK:
Q. And then Plum Creek's land in the Town of Lemington, which subdivision is it located in?
A. That is located in subdivision B also.
Q. Thank you.

MR. GRAYCK: May I have one moment, Your Honor?
THE COURT: Um-hum.
(Pause)
Q. Mark, looking at Exhibit 16, which is the tax bills.

THE COURT: Excuse me; $I$ just want to ask one question --

MR. GRAYCK: Sure.
THE COURT: -- about that exhibit, the oversized
Exhibit 7. You've indicated that the 471 acres in the

Lemington lands are in subdivision B. What are the white squares in subdivision B?

THE WITNESS: The white squares were those lands that were not owned by Champion when the land was conveyed to the Conservation Fund.

THE COURT: So they are not owned by Plum Creek now?
THE WITNESS: There are some squares that are owned by Plum Creek now. And those were the yellow squares located on Exhibit, I believe, 8.

THE COURT: Okay. Thank you.
BY MR. GRAYCK:
Q. Mark, a small point of clarification with respect to the tax bill for the Town of Brunswick. Would there be a portion of property in Maidstone that would have been included in that tax bill, but is not encompassed by the 56,000?
A. Yes. That's correct.
Q. Could you just explain that to the Court?
A. Actually in the Town of Brunswick.
Q. Brunswick. Thank you.
A. Yes. Subdivision B is here, subdivision $C$ is down here. In the Town of Brunswick, there's land in subdivision B, as well as land in subdivision C. And the Town of Brunswick makes no differentiation between subdivision $B$ and C. So they included both of these parcels on the tax bill.
Q. And so the Plum Creek land in Brunswick, how, if at
all, is it contiguous?
A. In Brunswick?
Q. Yes, just in Brunswick.
A. There's two parcels in Brunswick that are not contiguous.
Q. Okay. And of the two parcels, how many, if any, are included within the 56,000 disqualified by the director of PVR?
A. This parcel adjacent in subdivision $B$ is included in that 56,640 .
Q. So one of the two parcels?
A. One of the two.
Q. Okay. Thank you. Mark, Exhibit 14, which is the forest management plan.
A. Um-hum?
Q. I just -- just to assist the Court, could you just identify where in the plan there's a description of a transcript which involved the Conservation Fund and Essex Timber?
A. On page number 4, the first paragraph talks about Champion International Corporation selling its Vermont timberlands to the Conservation Fund.
Q. Okay. And then of course, after Essex owned it, and then to whom did Essex sell the land?
A. Essex sold --

THE COURT: I'm sorry, what were you referring to again? I --

MR. GRAYCK: On page 4.
THE COURT: What I'm looking at as page 4 doesn't seem to be what he's looking at, so what was the question again?

MR. GRAYCK: The question was just to identify for the Court where in the Essex Timber Company forest management plan the transaction from conservation fund to Essex Timber is described.

THE COURT: Okay. I have found it.
MR. GRAYCK: I mostly just wanted to point that out to the Court, if it's looking for a summary of the transaction.

BY MR. GRAYCK:
Q. And looking after page 4 to page 5 of that plan, what are we looking at on that page?
A. We're looking at the subdivision map that was contained on the conservation plan.
Q. Okay. So how, if at all does what's at page 5 of the Essex Timber Company forest management plan, which is now the Plum Creek forest management plan, how does that compare to the conservation plan map which was -- we have as an oversized exhibit in front of you?
A. It shows, basically, this block down here without
showing the Conte and the West Mountain Wildlife area. It shows subdivisions A, B, C, and D.
Q. And is what's in the plan an accurate -- is what's in the Essex Timber Company forest management plan on page 5, is that an accurate -- or how accurate is that representation of the subdivisions?
A. Looks to me like an accurate representations of the subdivisions.
Q. Okay.

MR. GRAYCK: No further questions, Your Honor.
THE COURT: Mr. Duane?
MR. DUANE: Thank you, Your Honor. CROSS-EXAMINATION

BY MR. DUANE:
Q. Good morning, Mr. Doughty.
A. Good morning.
Q. How are you?
A. Very good, thank you.
Q. Mr. Doughty, your current position at Plum Creek is community affairs manager, is that correct?
A. Yes.
Q. And what does that entail with regard to interacting with state or local governments.
A. One of my interactions is with state government, the legislature and agencies.
Q. And do you work just in Vermont? Or do you work in other northeastern states?
A. I work in about six states with varying levels of responsibility in those states.
Q. And what states do you work?
A. In Vermont, New Hampshire, Maine, Michigan, Wisconsin, and West Virginia.
Q. Okay. And where are you based from?
A. Fairfield, Maine.
Q. And have you appeared before those legislative bodies in those states for any variety of reasons over the years you've been the community affairs manager?
A. I've appeared before the Vermont Legislature, and the Maine legislature committees, specifically.
Q. And you're also responsibility for community and environment affairs, as well, is that correct?
A. More community, and I dabble in environment, you could say.
Q. And with regard to community affairs, how does that differ than governmental affairs?
A. Community affairs is much more of an outreach position. We have the Plum Creek Foundation which is a philanthropic organization of Plum Creek that I administer or help administer for our six states.
Q. And again, in addition to Maine, New Hampshire, and

Vermont, you mentioned Wisconsin?
A. Wisconsin, Michigan, and West Virginia.
Q. And does Plum Creek own lands in those states, as well?
A. Yes.
Q. And in how many states does Plum Creek own land?
A. Nineteen.
Q. And is Plum Creek one of the largest landowners in the United States?
A. Yes.
Q. Is it the largest landowner in the United States?
A. We think so.
Q. Thank you. And with regard to Vermont, it's true, is it not, that Plum Creek is the largest landowner in the State of Vermont?
A. We believe that we are, yes.
Q. Now, when Plum Creek was going to buy the Essex Timber Company lands from Essex Timber Company in 2008, you testified that you were involved in the due diligence process, is that correct?
A. That's correct.
Q. And what is the due diligence process with regard to
a real estate transaction such as this?
A. It's basically looking into all the different factors that we would encounter if we bought land in Vermont
and how they would affect the land.
Q. And the purchase of the Champion lands from Champion, to the conservation fund, to the Essex Timber Company, and the breaking off of the portions to the federal government and to the state government, and to the Essex Timber Company, and thence to Plum Creek in 2008 is not a simple real estate transaction, is it?
A. That's correct.
Q. It's a complicated real estate transaction. And with regard to doing the due diligence in the purchase by Plum Creek from Essex, did you work with anyone else in the Plum Creek organization to do that due diligence?
A. Yes.
Q. And who was that?
A. The senior resource manager for New England was Tim Durrell. He was a team meeting. Paul Davis, who is the general manager for New England was a team member.
Q. And in doing the due diligence, I believe you testified on direct examination that you reviewed the regulatory structure, is that correct?
A. That's correct.
Q. And what did that entail?
A. That entailed bringing together all of the regulations and reviewing those, and it would have included things like the AMP manual and the use value appraisal manual.
Q. And the AMP manual, just for the record, is the accepted management practices on logging jobs in Vermont, correct?
A. Yes.
Q. And the UVA manual, UVA, just for the record, stands for use value appraisal?
A. Um-hum.
Q. And sometimes it's -- is that a yes?
A. Yes.
Q. Sorry. Thank you. And sometimes that's known in Vermont as the current use program, correct?
A. That's correct.
Q. And at the time that Plum Creek purchased the land from the Essex Timber Company, the land was enrolled in the current use program, correct?
A. That's correct.
Q. And the land had been enrolled in the current use program since 2001, correct?
A. I'll accept that date. I am not clear exactly when the land was brought into use value.
Q. But it was enrolled in use value prior to the purchase by Plum Creek, correct?
A. That's correct.
Q. And you knew that, correct?
A. Yes.
Q. And at the time that Plum Creek purchased the land in 2008 from Essex Timber Company, the Vermont Land Trust had a conservation easement on the land, correct?
A. Correct.
Q. And are you familiar in your work in your states with the notion or concept of a conservation easement on land?
A. Yes, we are.
Q. Have you ever done title searches in the course of your work, and looking at deeds and records?
A. I haven't done title searches, but I've looked at deeds and records.
Q. Okay. So you're familiar with deeds and records?
A. Yes.
Q. As a part of your job.
A. Correct.
Q. And the Vermont Housing and Conservation Board also had an easement on the Essex Timber Company land at the time Plum Creek purchased it, correct?
A. They were a co-holder with the Vermont Land Trust.
Q. And the Vermont Land Trust's easement is a conservation easement, correct?
A. Yes.
Q. And the Vermont Housing and Conservation Board also holds an easement on the property with the Agency of Natural Resources, correct?
A. The access easement.
Q. That's the access easement you talked about earlier, correct?
A. Yes. Um-hum.
Q. And that's the public access easement.
A. That's correct.
Q. And the Agency of Natural Resources includes the Department of Forestry, Parks and Recreation, isn't that correct?
A. Yes.
Q. Now Plum Creek is based in Washington?
A. Washington State.
Q. Washington State, in Seattle?
A. Correct.
Q. And it's a large corporation, is it not?
A. Yes.
Q. And in 2012, Plum Creek had a gross revenue of 1.34 billion dollars, is that correct?
A. Yes.
Q. That sounds about right?
A. Sounds about right.
Q. Okay. And in 2012 Plum Creek's net income was 203 million dollars, is that correct?
A. That sounds very close, yup.
Q. Thank you. And Plum Creek is in the business of
purchasing timber resources throughout the United States, correct?
A. Yes.
Q. And in purchasing those timber resources, is it fair to suggest or state that Plum Creek gets involved in complicated real estate transactions?
A. Yes.
Q. This is not just a neighbor buying another neighbor's house, correct?
A. Correct.
Q. And so in the Essex Timber Company transaction from conservation fund, the federal government bought a part, correct?
A. Yes.
Q. Or took a part?
A. Yes. Um-hum.
Q. And the State of Vermont took a part?
A. Yes.
Q. And Essex Timber Company took a part? And at the same time that was going on, the Vermont Land Trust obtained an easement, correct?
A. Um-hum.

THE COURT: You have to --
Q. Yes?

THE COURT: -- say yes or no when you're testifying.

THE WITNESS: Sorry. Yes.
Q. Sorry, Mr. Doughty, just for the record, the yes or no is great.
A. Yes.
Q. Thank you. And the Vermont Housing Conservation Board and the Agency of Natural Resources also took and easement, correct?
A. That's correct, an access easement.
Q. And in your role as community affairs manager, being involved in governmental affairs and community affairs, do you, in the six states you cover, ever have meetings with executive agency officials like forestry department officials in Maine, in New Hampshire, and Vermont?
A. Yes.
Q. So you're familiar with the workings of state governments?
A. Um-hum. Yes.
Q. Yes, thanks.
A. Yes, I am. Yes.
Q. In your area of forestry.
A. Correct.
Q. And you're a forester yourself.
A. $\quad I \quad a m$.
Q. You have a degree in forestry?
A. Um-hum. Yes, sir.
Q. From the University of Maine?
A. Yes.
Q. And you have appeared before the Vermont

Legislature?
A. I have, yes.
Q. And when did you appear before the Vermont Legislature?
A. That would have been during the 2011 session.
Q. Two years ago.
A. Two years ago.
Q. And why did you appear before the Vermont Legislature?
A. The senate agriculture committee invited me to appear and testify.
Q. And what were you testifying about?
A. They were looking into clarification of the UVA program around penalties for the large landowner alternative program.
Q. And Plum Creek had hired a lobbyist, correct?
A. That's correct, in 2011.
Q. To go to the legislature on Plum Creek's behalf, correct?
A. That's correct.
Q. And you went to the legislature on February 17th, 2011, does that sound about right?
A. Sounds about right.
Q. And you were asking the legislature to deal with the situation that we're here in court today on, isn't that correct?

MR. GRAYCK: Your Honor, I'm going to object. It's not relevant to the issues before the Court.

MR. DUANE: Your Honor?
THE COURT: Mr. Duane?
MR. DUANE: It's extremely relevant. In Plum
Creek's pretrial memorandum, they suggest -- not -- more than suggest, they expressly state that the legislature could not have intended the result in this case. And what I'm trying to show with the evidence is that Mr. Doughty, on behalf of Plum Creek went to the legislature to try to get the law changed to clarify or amend the current use statute for this particular purpose. So I think it is highly relevant what his testimony was and what his purpose was at being at the legislature, given Plum Creek's position in this case.

MR. GRAYCK: In response, Your Honor, Mr. Doughty has testified that the purpose was to seek clarification of the law. With respect to the trial memorandum, the trial memorandum presented the chronology of events which encompassed the enactment of the UVA statute, its amendment, the enactment -- the adoption of the current use advisory board rules. And included with the large landowner
alternative. So the pretrial memorandum focused on events that led up to but did not occur after the adoption of the large land owner alternative. So I think there's a distinction between what has happened since and what happened prior.

THE COURT: The objection is overruled. Based on Plum Creek's position as expressed in its pre-trial memorandum, and the fact that it's always relevant what an individual testifying might have as a bias or an involvement on a particular issue. So the Court will take the evidence. MR. DUANE: Thank you.

BY MR. DUANE:
Q. And Mr. Doughty, a bill was introduced to affect the result in this case, is that correct?
A. Yes.
Q. And the legislature did not enact that bill, is that correct?
A. That's correct.
Q. Mr. Doughty, I just wanted to clarify a couple of points, if I may, and I'm going to show you, if I may, what was marked for identification and admitted as number 14, which is the forest management plan of the Essex Timber Company, which you identified earlier.

MR. DUANE: And Your Honor, may I approach the

THE COURT: Yes.
MR. DUANE: Thank you.
BY MR. DUANE:
Q. And Mr. Doughty, I'm going to show you what is my copy of Exhibit 14.
A. Okay.
Q. Rather than getting it from the Court.
A. Sure.
Q. Thank you. Thank you, sir. And this is the forest management plan for Essex Timber Company?
A. That's correct.
Q. Dated in 2007?
A. Yes.
Q. And this was prepared by Landvest, correct?
A. That's correct.
Q. And who is Landvest, if you know?
A. Landvest is a forestry consulting company with offices here in Vermont.
Q. And have you done business with Landvest in the past?
A. Yes, we have.
Q. And you find them to be a reputable organization?
A. Yes, we do.
Q. In terms of their qualifications?
A. Sure.
Q. And this forest management plan, and I am now looking at page 3, that is signed by Matt Langlais, correct?
A. That's correct.
Q. And Matt is the Essex-Orleans County forester, correct?
A. Correct.
Q. And Matt approved this plan, correct?
A. Correct.
Q. And the plan is also signed by Dan -- and you know Matt.
A. I do.
Q. You've met him.
A. Yes.
Q. And the plan is also signed by Dan Kilborn for the Town Plan Trust, correct?
A. Correct.
Q. And Vermont Land Trust approved this plan.
A. Correct.
Q. And do you know Dan Kilborn?
A. I do.
Q. Okay.

MR. DUANE: And Your Honor, may I approach again?
THE COURT: Yes.
MR. DUANE: Thank you.
Q. Mr. Doughty, I want to show you what's been marked and admitted as number 15. And again, this is my binder copy, rather than taking it from the court.
A. Okay.
Q. And if $I$ can show you what's been admitted as 15.

This is the use value appraisal and that's the current use program, correct?
A. Correct.
Q. And this is the signature page for Plum Creek's land, correct?
A. Accepting the forest management plan.
Q. Accepting Essex Timber Company's forest management plan.
A. Correct.
Q. And this is also approved by Matt Langlais, correct?
A. That's correct.
Q. He's the Essex-Orleans County forester?
A. Um-hum. Yes.
Q. Correct. And it's also signed by Plum Creek by Tim Durrell, correct?
A. Correct.
Q. Is that the same Tim Durrell you mentioned earlier?
A. That's correct.

THE COURT: We'll take our morning break now for fifteen minutes and continue at 10:45.

MR. DUANE: Thank you.
COURT OFFICER: All rise.
(Recess at 10:27 a.m., until 10:47 a.m.)
THE COURT: Please be seated.
Mr. Duane.
MR. DUANE: Thank you, Your Honor.
BY MR. DUANE:
Q. Mr. Doughty, you were aware, then, that the land from the Essex Timber Company was enrolled in the use value program before it was purchased by Plum Creek, correct?
A. That's correct.
Q. And in the other states that you work, those states have tax relief or tax abatement programs for agricultural and forest lands to some extent as well, don't they?
A. Yes.
Q. Vermont is not unique, is it, with regard to its current use program with regard to trying to promote working forest land, correct?

MR. GRAYCK: Your Honor, I'm going to object to the extent that the line of questioning is going to include, has included, and is asking for answers relating to other states. I don't see what other states' programs have any relevance. And it's also going to require us to start taking the statutes from the other states, and regulations from other states, and going through them in detail. And I think it's not relevant
to what's before the Court.
MR. DUANE: Your Honor, I think it is relevant. It goes to the fact that the current use value appraisal program in Vermont is not unique. That when a landowner with the sophistication of Plum Creek come in --

THE COURT: Well, let me just stop you.
MR. DUANE: I'm sorry.
THE COURT: You asked a general question.
MR. DUANE: I did.
THE COURT: The objection appears to be carrying it further and getting specific about state statutes. Are you planning to get specific about state statutes?

MR. DUANE: No.
THE COURT: The objection is sustained as to going into individual state statutes.

MR. DUANE: But with regard -- if I may, Your Honor?
THE COURT: The specific question that you asked in the general nature is permissible.

MR. DUANE: Thank you.
BY MR. DUANE:
Q. Now, Mr. Doughty, you testified also that the Vermont Land Trust has a conservation easement on the property, correct?
A. That's correct.
Q. And you've -- you're familiar with that conservation
A. Yes.

MR. DUANE: Your Honor, may I approach the witness?
THE COURT: Yes.
MR. DUANE: Thank you.
BY MR. DUANE:
Q. Mr. Doughty, I'm going to show you what's been marked and admitted into evidence as Exhibit number 3 from my binder.
A. Um-hum.
Q. And this is the Champion International Lands' working forest grant of development rights and conservation restrictions, correct?
A. Correct.
Q. And Plum Creek owns the land, correct?
A. Correct.
Q. But the Vermont Land Trust and the Vermont Housing and Conservation Board own the development rights of the land, correct?
A. Correct.
Q. And so Plum Creek doesn't own those legal rights, correct?
A. Correct.
Q. They've granted those to the land trust, correct?
A. Correct.
Q. And that was part of the financing arrangement of the purchase of the property with regard to Essex, and conservation fund, and now Plum Creek, correct?
A. That was taken into account, yes.
Q. Thank you. Because generally speaking, those easements lower, to some extent, the otherwise fair market value of the property, correct?
A. That's correct. Or they should.
Q. They should. And that's helpful to the purchaser, correct?
A. Yes.
Q. And I'm going to direct your attention to the first page of the Vermont Land Trust conservation easement and I'm going to direct your attention to section 1, subsection 2, subsection (a), and that provides, does it not, that the principal objective of the grant or the easement is to maintain productive forestry resources on the protected property, correct?
A. That's one, yes.
Q. That's the primary.
A. Primary.
Q. Principal objective.
A. Yes.
Q. Correct?
A. Yes.
Q. And as a result of having sold the development rights to the Vermont Land Trust and the Vermont Land Trust having a conservation easement, the landowner, now Plum Creek, has to have a forest management plan, correct?
A. Would you ask that again, please?
Q. As a result of selling the development rights to the Vermont Land Trust, the landowner, as a part of the easement, has to have a forest management plan, correct?
A. As part of the easement, yes.
Q. And the Vermont Land Trust oversees that easement, correct?
A. That's correct.
Q. And as part of being in the current use program, the landowner has to have a forest management plan, correct?
A. Correct.
Q. And the Vermont Department of Forest and Parks oversees that forest management plan, correct?
A. Correct.
Q. And is it your experience that the Vermont Land Trust, and Plum Creek, and the Department of Forestry and Parks have attempted to work together with regard to those forest management plans?
A. I think that's a good characterization.
Q. Thank you. And you've been involved in some of those discussions, haven't you?
A. Some of those discussions.
Q. Yes. And at one point, isn't it correct that Mr. Langlais, on behalf of the department, raised some concerns with regard to Plum Creek's compliance with the forest management plan?
A. At what point are you referring?
Q. Well, in February of 2009, didn't Mr. Langlais raise some questions with regard to Plum Creek's compliance with the forest management plan regarding the Town of Averill?

MR. GRAYCK: Objection, Your Honor. The line of inquiry is not related to the two decisions which are on appeal for the Court.

MR. DUANE: I was attempting to clarify, if I may, Your Honor, for the witness, he asked me to what I was referring with regard to the relationship between the State, Plum Creek, and the Vermont Land Trust.

MR. GRAYCK: And my objection, Your Honor, is that what's before this Court are the two decisions, and that those decisions pertain to the events surrounding an alleged cut contrary at Clough Brook North. To the extent that the State is now seeking to introduce evidence regarding other harvest activities, I don't think it's relevant to the decisions and the two main issues which are on appeal.

THE COURT: So what is the scope of this line of questioning?

MR. DUANE: The scope of the line of questioning will end up with the Town of Lemington and the land in question that caused the expulsion of the entire parcel, and Mr. Doughty's personal understanding of what happened in Lemington.

THE COURT: So how is communication about the forest management plan as applied to some other parcel? Is this the Averill wedge?

MR. DUANE: No. It's another parcel in Averill.
THE COURT: Okay. Another Averill piece relevant to the matter before the Court.

MR. DUANE: I believe it's relevant, Your Honor, but I can withdraw the question at this time, because I --

THE COURT: Okay.
MR. DUANE: Frankly, I was responding to Mr.
Doughty's inquiry to me. But $I$ believe it is relevant. It will come up at another time.

THE COURT: All right.
MR. DUANE: If I may. Thank you.
BY MR. DUANE:
Q. Mr. Doughty, with regard to the Clough Brook North tract in the Town of Lemington, did there not come a time in which Mr. Langlais raised concerns with Plum Creek regarding its compliance with the forest management plan on that tract?
A. There did some a time with the amendment to the
forest management plan.
Q. Thank you. And on -- do you recall meeting with Mr. Langlais on February 19th, 2010 to discuss, at this office in St. Johnsbury, to discuss the State's concerns regarding what was happening at Clough Brook North?
A. I do. That was some time ago, but I do recall.
Q. Thank you. And prior to that meeting, isn't it true that Plum Creek asked Landvest to go out and conduct a cruise of the property over which Mr. Langlais had concerns?
A. Yes.
Q. And Landvest -- again, that's the same Landvest who developed the forest management plan -- went out and did a cruise of a portion of the property in Lemington, correct?
A. Correct.
Q. And they provided Plum Creek with some data,
A. Correct.
Q. Let me show you what's --

MR. DUANE: I am going to, Your Honor, marked for identification and offer as a State's Exhibit C, what has otherwise been at least marked for identification as Plum Creek's Exhibit 28. So if at this time we had this marked as State's C, I'd appreciate it. Thank you.
(Pause)
MR. DUANE: Thank you very much.
Q. Mr. Doughty, let me show you what's been marked for identification as State's C. Do you recognize that document?
A. I believe I've seen this before, but I recognize the map more than I do the figures.
(Landvest cruise results were hereby marked for identification as State's Exhibit C, as of this date.)
Q. Okay. And is that a document that Landvest prepared at Plum Creek's request, if you know?
A. I wouldn't be certain enough to say. I suspect that it is.
Q. Do you have any reason to doubt that it's not?
A. No. I don't see Landvest's name except on the map, but I guess I don't doubt that it is the report from Landvest to Plum Creek of the cruise.
Q. Thank you.
A. Yes.

MR. DUANE: Your Honor, I'd like to offer into evidence what's been marked for identification as State's 3. MR. GRAYCK: No objection.

THE COURT: State's $C$ is admitted.
MR. GRAYCK: No objection.
(Landvest cruise results were hereby received into evidence as State's Exhibit $C$, as of this date.)

MR. DUANE: Thank you very much. Thank you, Your Honor.

BY MR. DUANE:
Q. Mr. Doughty, when you met with Matt and other folks from the State on February 19th, 2010, at the Agency of Natural Resources in St. Johnsbury, that data was discussed, was it not?
A. I would imagine that was one of the topics that we talked about. I have a vague recollection.
Q. And at that meeting -- and who was there besides you at that meeting, if you can recall?
A. It was myself; Tim Durrell, the senior resource manager; and Chris Fife, the forester.
Q. And that's the same Tim Durrell you've mentioned a couple of times?
A. Yes.
Q. And Chris is the -- Chris Fife is the Plum Creek forester for this area.
A. Yes.
Q. And in addition to Matt, do you know -- do you recall who else was present at that meeting in St. Johnsbury?
A. Ginger Anderson was there. I believe Kathy Decker was there.
Q. And -- thank you. And they're employees of the Department of Forestry, Parks and Recreation, correct?
A. Correct.
Q. Okay. And that document that's been admitted as C
is in reference to stands 34 of the Clough Brook North tract, correct?
A. I believe so. If I could see it again, I'll --
Q. Thank you.

MR. DUANE: If I can approach, Your Honor, and had it to the witness.
Q. Mr. Doughty.
A. Thank you. Yes, that's correct.
Q. Thank you.
A. Stand 34.
Q. And isn't it true that, when Matt Langlais mentioned to you and your colleague at Plum Creek that his analysis of stand 34 came up with a certain residual basal area -- and you know what residual basal area means?
A. Yes, I do.
Q. I'm sure you do better than I. But just for the record, what is residual basal area?
A. It's the basal area of trees that are remaining on the stand after the harvest.
Q. And when Matt said to you that the residual basal area for stand 34, as calculated by him, was nineteen square feet, didn't you say, "That's almost exactly what we came up with."
A. For the area that was harvested, that's correct.
Q. Thank you. And isn't it true, Mr. Doughty, that the

Vermont Land Trust, with regard to its conservation easement over the Plum Creek property also had concerns about Plum Creek's compliance with the forest management plan?
A. Correct.
Q. And didn't the Vermont Land Trust request of Plum Creek that Plum Creek go out and employ a third-party forestry company, forest partnership, to go and do a cruise of the property, correct?
A. I believe that's correct, yes.
Q. And Vermont Land Trust went out and hired a company named Dirigo, is that correct? D-I-R-I-G-O.
A. In Maine we call it Dirigo.
Q. Thank you.
A. Yeah.
Q. And they are a Maine company, correct?
A. Correct.
Q. And Dirigo did an analysis of the property in Lemington and other towns at Vermont Land Trust's request, correct?
A. I believe so. Yes.
Q. Okay. Thank you very much.

MR. DUANE: Your Honor, I have no further questions for Mr. Doughty at this time. Thank you.

THE COURT: Mr. Grayck?
MR. GRAYCK: Thank you, Your Honor.

## REDIRECT EXAMINATION

BY MR. GRAYCK:
Q. Mark, you've been asked some questions with respect to the forest management plan, but what I would like to ask you is what's a timber harvest prescription?
A. It's basically a plan of how to harvest the timber to accomplish the goals of the harvest.
Q. Okay. So Plum Creek's forest management plan, which is in effect an adoption of the Essex Timber Company's forest management plan, what harvesting, if any, does that forest management plan allow for?
A. None; no harvesting.
Q. No harvesting.
A. Unless an amendment is offered and approved.
Q. And what do we call the amendment? What's the common phrase that you, and me, and the county foresters use to describe that document?
A. It's a harvest prescription.
Q. Okay. So when Mr. Duane was asking you questions about the forest management plan, were you talking about the forest management plan that Plum Creek adopted from Essex Timber Company, or were you talking about the prescription for Clough Brook North?
A. When he asked me about the forest management plan, I was talking about the forest management plan.
Q. Okay. And with respect to the harvest activities at Clough Brook North, were you talking about the forest management plan or the prescription?
A. That would have been about the prescription.
Q. Okay. All right. Now, Mr. Duane asked you questions about the meeting in St. Johnsbury, and he asked you about your concurrence with Mr. Langlais with respect to a residual basal area of nineteen for the area harvested, is that correct?
A. Correct.
Q. Okay. What significance, if any, does the residual basal area -- why did you emphasize for the area harvested?
A. Because that was the area that we cruised at that time.
Q. Okay. And the area harvested for stand 34, does that encompass the entire area authorized for stand 34, or was the area harvested something less than what the prescription authorized?
A. It was something less. It was just a portion of stand 34.
Q. Okay. So the residual basal area of nineteen was for the area harvested, correct?
A. That's correct.
Q. Okay. Is there a different residual basal area for the area of stand 34 which was not harvested?
A. Yes.
Q. Okay. Now, do you have any recollection of what the residual basal area for the area not harvested on stand 34 is? Or if you could look at the Landvest cruise results.
A. I'd have to look at the cruise results.
Q. Okay. Do you have them still in front of you?
A. No.

MR. GRAYCK: Where did that go?
MR. DUANE: It's been admitted as an exhibit, so the Judge has it.

MR. GRAYCK: Your Honor, may I give my witness my copy?

THE COURT: Yes.
BY MR. GRAYCK:
Q. I know this is a bit on the spot, but are you able to discern the area harvested from the area not harvested from the respective residual basal areas?
A. Boy, I'd have to study it for a little while and --
Q. Can you just -- we'll deal with it later. But can you just show the Court the area that -- of stand 34 that was not harvested?
A. Based on the basal areas listed on the plots, it would be this area over here.
Q. Okay. If you -- is it possible, if at all, to calculate a residual basal area across an entire span?
A. Yes.
Q. Okay. If the residual basal area of the area of stand 34 which was harvested was nineteen, and you assume that the residual -- that the basal area of the area on stand 34 which was not harvested is higher than nineteen, is the residual basal area across stand 34 going to be greater or lesser than nineteen?
A. Greater.
Q. And why will it be greater?
A. Because the average residual basal area across the stand includes both the harvested and the unharvested area in stand 34.
Q. Okay.
A. And those averaged together give you a higher number.
Q. And why, if at all, is it important to measure across the stand?
A. Because that's the average residual basal area. And that's the unit of measure in Vermont, is the stand. That's what the prescription is written for.
Q. Thank you. Now, Mr. Duane asked you some questions about Plum Creek's business and its profitability. I want to ask you, first off, generally speaking, what effect, if any, does increased property taxes have on the value of timberland?
A. Tends to depress the value of timberlands.
Q. And why is that the case?
A. Because it's a higher carrying cost for that land; a higher outlay.
Q. And what does -- what, in terms of financial
objective does the harvesting of timber result in?
A. Revenue and income.
Q. Revenue income.
A. Yes.
Q. And what are the property taxes paid out of?
A. Revenue and income.
Q. So if the property taxes go up, what happens to the revenue and income?
A. It goes down.
Q. What action, if any, does Plum Creek take when a unit, or an area of property ceases to be profitable? What's one of the actions Plum Creek could take?
A. We could sell it.
Q. And why would you sell it?
A. If it's not profitable, then it doesn't make sense to keep it for the business.
Q. And why doesn't it make sense?
A. Because it's not making money.
Q. And to whom does Plum Creek owe an obligation to with respect to making money?
A. Our shareholders.
Q. Now, Mr. Duane asked you questions, and the Court admitted the testimony to show your knowledge and experience regarding legislative matters. And Mr. Duane asked you questions. And I want to ask you, what was the senate agriculture's reaction to your testimony?
A. They thought that --

MR. DUANE: Objection, Your Honor; hearsay.
THE COURT: You may not testify as to anything any particular person said, but you may give your understanding of your general impression of what the reaction was.

MR. GRAYCK: Yes.
BY MR. GRAYCK:
Q. Go ahead.
A. My general impression was that most people that heard that 56,604 acres were being disqualified for an alleged 140-acre cut contrary said that was a disproportionate penalty.
Q. And what was your understanding as to why the legislative committee didn't do anything in terms of passing a bill or amending the law?

MR. DUANE: Objection, Your Honor; calls for speculation on the part of the witness with regard to what the legislature committee did or didn't do.

THE COURT: He may testify as to his own impression. MR. DUANE: Thank you.
A. The senate agriculture committee was interested in seeing the bill passed. It was the full legislature that did not pass the bill.
Q. Okay. And what concern, if any, did the legislative committee have with respect to legislation and the timing of it?
A. The committee was interested in a retroactive provision, which would mean that this case would be included in whatever law was passed.
Q. Um-hum.
A. And the general legislature, it was my impression, did not like ruling on a case currently before the courts, currently that had not been decided.

MR. GRAYCK: Thank you, Your Honor.
MR. DUANE: No further questions?
THE COURT: Does that complete your --
MR. GRAYCK: No further questions.
THE COURT: -- redirect?
MR. GRAYCK: I'm sorry.
THE COURT: All right. That completes your
testimony. You may step down. Thank you.
MR. DUANE: Your Honor, may I redirect?
THE COURT: On what new material?
MR. DUANE: On the property tax, and selling it, and the legislature's reaction.

THE COURT: That's not new material.
MR. DUANE: If I may, Your Honor, I think --
THE COURT: You brought it up yourself on crossexamination.

MR. DUANE: Well, with regard to the effect of property taxes and Plum Creek then having the option of selling the land, that was nothing I brought up.

THE COURT: You may ask about that.
MR. DUANE: Thank you, Your Honor. Thank you very much.

RECROSS-EXAMINATION
BY MR. DUANE:
Q. Mr. Doughty, if Plum Creek wanted to sell the land, that conservation easement that Vermont Land Trust has on the land runs with the land, correct?
A. It runs with the land.
Q. And the easement that the State of Vermont and the Vermont Housing and Conservation Board have on the land would run with the land, correct?
A. Yes; correct.
Q. And so Plum Creek cannot chop up their holdings in Vermont and sell them as individual lots, or camps, or resorts, or personal property, correct?
A. That's correct.
Q. And it has to stay as a working forest land,
A. That's correct.
Q. That's the whole point, isn't it?
A. That's correct.
Q. Okay. Thank you.

And when -- I'm going to assume that you are as sophisticated as you appear, and land is taxed on its fair market value, correct? Generally speaking.
A. Land can be taxed on its fair market value, unless you're in the current use program and then it's taxed at the use value appraisal.
Q. Thank you.
A. Yes.
Q. There's fair market value, correct? Generally, there's fair market value as a value of property for tax purposes, correct?
A. Correct.
Q. And then if there's an easement on the land, like the Vermont Land Trust has, that lowers the value of the property because the development rights have been sold off, correct?
A. It should.
Q. It should. And then the current use program lowers the value for tax purposes even further, correct?
A. Yes. Depending on the level of reduction for a
conservation easement, yes.
Q. So anyone who is going to buy the Plum Creek land would have to buy it with those considerations and those legal restrictions in mind, correct?
A. Certainly.
Q. Thank you.

MR. DUANE: Nothing further, Your Honor.
THE COURT: Mr. Grayck?
MR. GRAYCK: Nothing further, Your Honor.
THE COURT: All right. That completes your testimony. You may step down, thank you.

THE WITNESS: Thanks.
MR. GRAYCK: Your Honor, I just need a few minutes to put some items back together and get the next set of documents ready for my next witness. Could --

THE COURT: All right. We'll take a very short break.

MR. GRAYCK: Yeah, just a few minutes. Thank you, Your Honor.

COURT OFFICER: All rise.
(Recess at 11:18 a.m., until 11:27 a.m.)
THE COURT: Please be seated.
Mr. Grayck?
MR. GRAYCK: Plum Creek calls Christopher Fife to the witness stand, Your Honor.

COURT OFFICER: Please raise your right hand.

## CHRISTOPHER FIFE

having been duly sworn, testified as follows:
DIRECT EXAMINATION
BY MR. GRAYCK:
Q. Will you state your name, please?
A. Christopher Fife.
Q. And for whom are you -- by whom are you employed?
A. Plum Creek.
Q. And where is your office?
A. Colebrook, New Hampshire.
Q. And what is it you do for Plum Creek?
A. I'm a unit supervisor, resource supervisor. I
supervise three other foresters. I'm in the management of our Vermont and New Hampshire lands.
Q. And what is your title?
A. Resource supervisor.
Q. Resource supervisor. Senior resource supervisor?
A. No.
Q. Resource supervisor.
A. Yes.
Q. Okay. And prior to your current position, by whom are you employed?
A. Plum Creek.
Q. Yup. And what was your job duty?
A. I was a senior resource forester.
Q. And where were you doing that?
A. In Maine.
Q. In Maine. And before that, who did you work for?
A. Also for Plum Creek.
Q. And where were you?
A. I was in Virginia.
Q. And what were you doing in Virginia?
A. Managing timberland.
Q. Okay. And before that where were you?
A. I was in Georgia.
Q. And who were you working for?
A. Plum Creek and the timber company who was -- the timberlands arm of Georgia Pacific.
Q. Okay. And before that who were you working for?
A. I worked for the timber company in Maine.
Q. And was that the James W. Soule Company?
A. No. No. That was after Soule Company.
Q. Oh, okay. And what did you do for the Soule
A. The Soule Company, I cruised timber.
Q. Okay. And what's your education?
A. I have a Bachelors of Science in forest management from the University of Maine.
Q. And what professional licenses and certifications do
you hold, if any?
A. I'm a licensed professional forester in the State of Maine, and a member of the Society of American Foresters.
Q. Okay. Chris, where were you yesterday?
A. I was in the woods in Lemington.
Q. I'm showing you what's been marked as Exhibit 52.

What's that show?
A. This is a picture of the landing where we parked the vehicles yesterday.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 52, as of this date.)
Q. How, if at all, is it an accurate and true representation of what you saw yesterday?
A. It's a picture of where we were and what we saw. It's on the landing and shows the surrounding area.
Q. All right. So keep 52 right there -- what's been marked as 52.

Showing you what's been marked as Exhibit 53. What does that show?
A. It also appears to be from the site visit yesterday. It looks like the first area that we walked into the woods.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 53, as of this date.)
Q. Okay. And how, if at all, is it an accurate representation of what you observed yesterday?
A. This is -- it's a picture of where we were when we walked into the woods.
Q. I show you what's been admitted -- marked -- marked as Exhibit 54. What does that show?
A. This shows the group yesterday in the wood.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 54, as of this date.)
Q. And how accurate, if at all, is it a depiction of what you saw?
A. It's very accurate.
Q. Okay. I'm going to show you what's been marked as Exhibit 55. What does that show?
A. This is the same picture, same -- it's the same as 54.
Q. Okay. And what location is it at?
A. This appears to be in stand 43. We were walking up one of the skid trails.
Q. Okay.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 55, as of this date.)

MR. CHENEY: Can you speak up a little? I can't hear you.

THE WITNESS: Oh, yes.
BY MR. GRAYCK:
Q. And how accurate, if at all, is it a depiction of
what we saw yesterday?
A. It's where we were yesterday.
Q. Okay. I'm going to show you what's been marked as 56. What does that show?
A. Appears to show stand 43 where we were yesterday.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 56, as of this date.)
Q. And how accurate a depiction is it with respect to what we saw yesterday?
A. It looks to be showing what we looked at.
Q. Showing you what's been marked as 57. What's that show?
A. This is also from yesterday's site visit.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 57, as of this date.)
Q. About what location do you think?
A. Again, it looks like stand 43 when the group was walking up into the cut contrary area.
Q. Okay. Showing you what's marked as Exhibit 58. What does that show?
A. This shows that same area that we visited in stand 43, in the alleged cut contrary.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 58, as of this date.)
Q. Showing you what's been marked as 59.

I'm sorry, did I ask you whether 58 is a true and accurate representation of what we saw?
A. You did.
Q. And your answer?
A. It is.
Q. Thank you. I apologize.

I'm showing you Exhibit 59. What's that?
A. This also appears to be a picture from the site visit yesterday.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 59, as of this date.)
Q. And can -- what does it show?
A. It shows softwood and hardwood trees regeneration.
Q. Is it a true and accurate picture of what we saw yesterday?
A. Yes, it is.
Q. Showing you what's been marked as 60. What does that show?
A. This is also a stop on the site visit yesterday with the group.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 60, as of this date.)
Q. Is it a true and accurate representation of what we saw yesterday?
A. Yes, it is.
Q. I'm going to show you what's been marked as number 61. What does that show?
A. This looks like the ruffed grouse nest that we saw.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 61, as of this date.)
Q. What, if any regeneration is in this picture?
A. There's maple, spruce.
Q. Is it a true and accurate representation of what we saw yesterday?
A. Yes, it is.

THE COURT: Did you say ruffed grouse?
THE WITNESS: Yes, ruffed grouse.
Q. Let me show you what's marked as Exhibit 62. What does that show?
A. It shows regeneration.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 62, as of this date.)
Q. Is it a true and accurate -- or how, if at all, is it a true and accurate picture or representation of what we saw yesterday?
A. It appears to be a picture of a site we stopped at.
Q. Showing you what's been marked as Exhibit 63. What does it show?
A. It's another picture from the site visit yesterday. It shows trees and the group walking through the -- through
the woods.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 63, as of this date.)
Q. Is it a true and accurate representation of what we saw yesterday?
A. Yes, it is.
Q. Let me show you what's been marked as Exhibit 64. What does that show?
A. It's a picture of the harvest area, Clough Brook, from yesterday.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 64, as of this date.)

THE COURT: What did you say after harvest area?
THE WITNESS: On Clough Brook, where we were yesterday, Your Honor.
Q. Is it a true and accurate representation of what you saw yesterday?
A. Yes, it is.
Q. I show you what's been marked as Exhibit 65. What does that show?
A. Appears to be the edge of a long landing.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 65, as of this date.)
Q. Is it a true and accurate representation of what you saw yesterday?
A. Yes, it is.
Q. Showing you what's been marked as Exhibit 66. What does that show?
A. It shows the group on yesterday's site visit.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 66, as of this date.)
Q. Is it a true and accurate representation of what you saw yesterday?
A. Yes, it is.
Q. I show you what's been marked as Exhibit 67. What's that show?
A. It's showing a view from yesterday's site visit.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 67, as of this date.)
Q. How accurate is it a representation of what we saw yesterday?
A. It's very accurate.
Q. Showing you what's been marked as Exhibit 68. What does that show?
A. This is also a picture from yesterday's site visit.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 68, as of this date.)
Q. Is it a true and accurate representation of what you saw yesterday?
A. Yes, it is.
Q. Showing you what's been marked as Exhibit 69. What does this show?
A. This is a picture from yesterday's site visit.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 69, as of this date.)
Q. What's the approximate location of this -- what's depicted in this picture?
A. This would be on the boundary of stand 43 and 54 up at the top of the hill.
Q. Okay. And so in terms of yesterday's site visit, about how far along were we when this picture was taken?
A. Approximately a third of the way.
Q. Thank you. Is it a true and accurate representation of what we saw yesterday?
A. Yes, it is.
Q. Showing you what's been marked as number 70. What does that show?
A. This is also a picture from yesterday's site visit.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 70, as of this date.)
Q. Can you tell the approximate location?
A. It appears to be on the border of stand 43 and 44 as we began to head back down the hill.
Q. Okay. Is it a true and accurate representation of what we saw yesterday?
A. Yes, it is.
Q. Showing you what's been marked as Exhibit 71. What does that show?
A. It shows a view of stand 34 looking up the hill.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 74, as of this date.)
Q. And is it a true and accurate representation of what we saw yesterday?
A. Yes, it is.

MR. GRAYCK: Pardon me, Your Honor, for just sitting down for a moment.

THE COURT: All right.
Q. Showing you what's been marked as Exhibit 72. What does that show?
A. You're pointing to regeneration -- maple regeneration.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 72, as of this date.)
Q. Is that what -- is it -- can you identify the regeneration?
A. Yes. It's maple regeneration.
Q. Thank you. And the number of that exhibit is?
A. $\quad 72$.
Q. Showing you what's been marked as Exhibit 73. What does that show?
A. This is another picture of the site visit yesterday.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 73, as of this date.)
Q. Is it a true and accurate representation of what we saw?
A. Yes, it is.
Q. Were you able to tell the approximate location of where this picture was taken?
A. This appears to be on top of the hill once the State was leading the group, where we stopped and looked at an alleged AMP violation.
Q. Thank you. Showing you what's been marked as 74. What does that show?
A. This is another picture from yesterday's site visit of you pointing to regeneration.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 74, as of this date.)
Q. And can you make out what the regeneration is?
A. Yellow birch.
Q. Is it a true and accurate representation of what we saw yesterday?
A. Yes.
Q. Showing you what's been marked as Plum Creek Exhibit 75. What does that show?
A. This is a view from yesterday's site visit of the
group on top of the hill, again, at the alleged AMP violation site when the State was leading us through.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 75, as of this date.)
Q. Showing you what's been marked as Exhibit 76. What does this show?
A. This is from yesterday's site visit on the way up the hill, on the way to the previous picture, showing a tree with $S B$ printed on it in blue paint.
Q. I'm sorry; I didn't hear what you said. Showing what?
A. $\quad S B$ painted on a tree in blue paint.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 76, as of this date.)
Q. And what does the SP --
A. B.
Q. B.
A. $\quad \mathrm{SB}$.
Q. What is that?
A. Stream boundary.
Q. Okay. Is it a true and accurate representation of what you saw yesterday?
A. Yes, it is.
Q. Showing you what's been marked as Exhibit 77. What does that show?
A. It's a closer picture of that same tree with the $S B$ on it.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 77, as of this date.)
Q. And are you able to tell us, by looking at this picture, approximately where we were in the site visit?
A. This was just before we got to the top of the hill where Exhibit 75 showed the alleged AMP violation.
Q. And is this picture -- was it taken -- do you recall if at all having lunch -- a lunch break?
A. This was after the lunch break.
Q. Thank you. Showing you what's been marked as Exhibit 78. What's that a picture of?
A. It's a picture of a stump that we looked at on the site visit yesterday in close proximity to the tree that was marked with the SB.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 78, as of this date.)
Q. And is it a true and accurate depiction of what you saw yesterday?
A. Yes, it is.
Q. Okay. And using your experience and training as a professional forester, are you able to identify whether, if at all, this stump is from the Clough Brook North harvest, or some other harvest?
A. This would have been from a previous harvest.
Q. Okay. Are you able to gauge some amount of time from what you saw yesterday in this picture?
A. The stump was beginning to decay and covered in moss and some lichen, so -- but I wouldn't be able to say how long before.
Q. Okay.
A. Maybe fifteen, twenty years. Something like that.
Q. And do you know who was the owner of the property approximately fifteen to twenty years ago?
A. It would have been Champion.

THE COURT: It is time for us to break for lunch.
We will resume at 1 o'clock.
MR. GRAYCK: Thank you, Your Honor.
COURT OFFICER: Please rise.
(Recess at 11:58 a.m., until 12:59 p.m.)
THE COURT: Please be seated.
Mr. Grayck.
MR. GRAYCK: Thank you, Your Honor. Your Honor, it was pointed out to us over the lunch break that Exhibit 54 and 55 are identical. So we will withdraw 54, if that's acceptable to the Court.

MR. DUANE: No objection, Your Honor, thank you. THE COURT: All right. So 54 is -- it hasn't been admitted yet anyway.

MR. GRAYCK: Right. We're just --
THE COURT: But I understand you're withdrawing.
MR. GRAYCK: But I'm not changing the numbering sequence.

THE COURT: Right.
MR. GRAYCK: Okay.
THE COURT: Thank you.
MR. GRAYCK: And Your Honor, my records indicate that I left off with 78.

THE COURT: 78 was the last one.
MR. GRAYCK: That's been marked and handed to -okay.

BY MR. GRAYCK:
Q. Chris, I'm handing you what's been marked as Exhibit 79. What's that a picture of?
A. This is showing a harvested portion of the area that we walked at the harvest boundary -- the boundary of the approved harvest area.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 79, as of this date.)
Q. And is it a true and accurate depiction of what you observed yesterday?
A. Yes, it is.
Q. And now I'm providing you with what's going to be marked as Exhibit 80. And what's that a photo of?
A. This is a picture of the -- another alleged AMP violation location on the site visit yesterday.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 80, as of this date.)
Q. And is it a true and accurate depiction of what you observed yesterday?
A. Yes, it is.
Q. And then I'm showing you what's been marked as Exhibit 81. And what's that a picture of?
A. This is a picture of the stream crossing just below -- just downhill from the last picture that we looked at together yesterday where Plum Creek believed the alleged AMP violation site was.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 81, as of this date.)
Q. Okay. Is it a true and accurate photo of what you saw and observed yesterday?
A. Yes, it is.
Q. Okay. Now I'm showing you what's been marked as Exhibit 82. And what's that a photo of?
A. This is a photo of an area just after the last picture where we crossed from stand 43 into stand 34 , the group talking about the site at that location.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 82, as of this date.)
Q. And is it a true and accurate depiction of what you observed yesterday?
A. Yes, it is.
Q. Handing you what's been marked as Exhibit 83. And what's that a picture of?
A. This is a picture looking uphill in stand 34 up to the boundary of the approved harvest area, up to the 2,500foot line.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 83, as of this date.)
Q. And I'm handing you a picture of what's been marked as Exhibit 84. And what's that a picture of?
A. This is a picture of a stop yesterday on the site visit in stand 34.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 84, as of this date.)
Q. Is it a true and accurate depiction of what you observed yesterday?
A. Yes, it is.
Q. I'm handing you what's been marked as Exhibit 85, and what's that a picture of?
A. This is also a picture from stand 34 from our site visit yesterday, looking at an individual stem of a tree.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 85, as of this date.)
Q. And is it a true and accurate depiction of what you observed yesterday?
A. Yes, it is.
Q. Showing you what's been marked as Exhibit 86. What's that a picture of?
A. This is a picture of the group on the site visit yesterday in the log landing second from the end on the road -- the winter road.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 86, as of this date.)
Q. And is it a true and accurate depiction of what you observed yesterday?
A. Yes, it is.
Q. And I'm showing you a picture of Exhibit 87. And what's that a picture of?
A. This is a picture of the group in the same landing showing the area of an alleged AMP violation and part of an old culvert laying in the grass.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 87, as of this date.)
Q. And now I'm showing you what's been labeled as Exhibit 88. And what's that a picture of?
A. This is a picture of a stream crossing as we left that landing I was just speaking of. And this was also cited as an alleged AMP violation.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 88, as of this date.)
Q. Is it a true and accurate depiction of what was observed yesterday?
A. Yes, it is.
Q. Showing you Exhibit 89. And what's that a picture of?
A. It's a picture from the site visit yesterday in stand 43.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 89, as of this date.)
Q. And is it a true and accurate depiction of what was observed yesterday?
A. Yes, it is.
Q. And I'm showing you what's been marked as Exhibit 90. And what's that a photo of?
A. This is also a picture from the site visit yesterday looking across from -- looking across at the western portion of stand 34 .
(Photograph was hereby marked for identification as Plum Creek's Exhibit 90, as of this date.)
Q. Is it a true and accurate depiction of what you observed yesterday?
A. Yes, it is.
Q. And now I'm showing you photo 91 -- Exhibit 91. And
what's that a picture of?
A. This is another picture from yesterday's site visit and the eastern portion of stand 34 up the hill.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 91, as of this date.)
Q. And now I'm showing you what's been marked as Exhibit 92. And what's that a photo of?
A. This is a photo of a tree with a blue $X$ on it, a marking that related to the timber harvest.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 92, as of this date.)
Q. And now I'm showing you a photo marked Exhibit 93, and what's that a photo of?
A. This is a picture from yesterday's site visit of an old fallen tree starting to decay.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 93, as of this date.)
Q. All right. Is it a true and accurate depiction of what we observed yesterday -- what you observed yesterday?
A. Yes, it is.
Q. And now I'm showing you what's marked as Exhibit 94. What's that a photo of?
A. This is a photo of stand 34 a little further down the hill from the downed log that was in the previous picture.
(Photograph was hereby marked for identification as Plum

Creek's Exhibit 94, as of this date.)
Q. And now I'm showing you what's been marked as

Exhibit 95. And what's that a photo of?
A. This is a photo of what we referred to yesterday as stump 9 on the edge of the uncut portion of stand 34.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 95, as of this date.)
Q. And now I'm showing you Exhibit 96, and what's that a photo of?
A. That's a photo looking at the boundary between stand 43 and stand 34 as we walked out the winter truck road yesterday.
(Photograph was hereby marked for identification as Plum Creek's Exhibit 96, as of this date.)
Q. And is that a true and accurate depiction of what you saw yesterday?
A. Yes, it is.

MR. GRAYCK: Your Honor, Plum Creek would move the introduction of Exhibits 52, 53, and then 55 through 96.

MR. DUANE: No objection. Thank you.
THE COURT: All of those are admitted.
(Photographs were hereby received into evidence as Plum Creek's Exhibits 52, 53, 55 through 96, as of this date.)

MR. GRAYCK: All right. All right.
BY MR. GRAYCK:
Q. Chris, the admitted exhibits, are they -THE COURT: All the photos, $I$ believe, are in --
Q. Do you have them in front of you?

THE COURT: -- front of Mr. -- we will need to mark them as admitted, but if you want to go ahead and use them, fine, we'll pick them up later.
Q. Chris, could you show us Exhibit 53? If you could just point at it? Thank you. All right. What's shown in Exhibit 53 with respect to shade, if any?
A. This is a picture from the first stop where we walked into the woods. We walked down the road and into the woods. There's -- you can see the shade in this picture. The understory here is primarily what's called hobblebush. It's not a tree species, it's a bush. It tends to be heavy competition to regeneration of trees.
Q. And what stand would that have been in?
A. This was on the -- I am not one hundred percent sure.
Q. What would it have been --
A. I need to look at the map.
Q. -- on the edge of, or straddling?
A. I think it was on the edge of 44 and 54.
Q. Okay. All right. Thank you. If you could hold

THE WITNESS: That's Exhibit 53.
THE COURT: 53, all right.
BY MR. GRAYCK:
Q. Turning to Exhibit 55. What does this photo show with respect to treatment?
A. This was as we walked off of the winter road up -the first sort of area through the woods. We were walking on a skid trail. We saw moose prints nearby here in the mud. This would be an overstory removal treatment. It shows the variability of the height of the trees that are left. We have areas that are open. We have areas that have larger, taller spruce trees. There's some hardwood trees noted in here, as well. There's also some dead trees that were left, which is more for diversity -- or those would be goals more to do with certification under Sustained Forestry Initiative and the conservation easement.
Q. Okay. Looking at Exhibit 56, what area of harvest -- of the Clough Brook North harvest is shown in Exhibit 56?
A. This is stand 43, and it's looking from about the edge of the alleged cut contrary area back into non-cut contrary area. So this was an area that was not cited as cut contrary. We walked through here, actually, on this skid trail coming out of the picture. It shows the variability, again, of heights of trees, the gaps of the skid trail, and
the openings in the background that makes a species primarily softwood, but also some hardwood species.
Q. And what portion -- of what's depicted in this photo, what portion, if any, is in what we refer to as the OSR box?
A. This entire picture would be looking into what we refer to as the OSR box.
Q. Now if you go to picture 57. With respect to variability, what's depicted in picture 57?
A. Again, this picture is in stand 43. This is pretty much turning around from where the last picture was taken and looking back the other direction to the north. You see variability, again, of tree heights, of density of trees, openings, but also areas where groups of trees were left, see variable regeneration of softwood and hardwood regeneration. So really it's a variable nature of the harvesting in this area.
Q. In fact, as a forestry concept, what is variability? What does variability refer to?
A. Well, variability could be variability of species, it could be variability of size, it can be variability of health conditions. So there's a number of things that contribute to what would be called variability. It's kind of what it sounds like.
Q. Okay. And with respect to in Exhibit 57, what, if
any, slash on the trail is shown?
A. Yes. This skid trail that we walked along was covered in tops and limbs, which is referred to as slash. It's the material that's not used. It's left. And in this case, and in many cases, it's used to -- it's put on the trails to keep the trails from getting rutted by the equipment. So it's a way to implement acceptable management practices or best management practices in harvesting so you don't have so much -- you don't have impact on soft ground.
Q. Turning to Exhibit 58. What does Exhibit 58 show with respect to overstory?
A. Again, this is in stand 43, at that same stop, turning and looking to the west. There's a variability here of, again, species, softwood, and hardwood, both in the overstory, and in the regeneration. A variability of the density of the trees that are left. You have gaps with no overstory trees left, and you have areas with groups of overstory trees left.
Q. And what about regeneration. What, if any, regeneration is evident in this picture?
A. The entire foreground is very evident that it's regenerated. You can see quite a bit of maple in there, some birch, and other species.
Q. Looking at Exhibit 61, I know you touched on this before, but what's this a picture of?
A. This is a picture of the ruffed grouse nest that we saw on a stump along our way.
Q. Okay. And am I right there's also a little bit of regeneration in this photo?
A. There is. There's a spruce seedling here beside the -- to the left side of the picture. And there's maple both in the upper portion of the picture, and in the lower portion of the picture.
Q. All right. Could you turn to Exhibit 63? And what's that a photo of?
A. This is a photo of walking through the riparian area. Soon after we passed by that, where the nest was, we went and crossed the stream, and that area was the riparian area that's a stream-side zone that's protected. In this case, it was left uncut. That was not always -- you can do some management in those areas, but given the sensitivity, it was left uncut in this instance. And this was right on the southern boundary of the cut contrary -- the alleged cut contrary area. So a portion of this riparian zone was all included in the alleged cut contrary area.
Q. Thank you. And I apologize; I'm going to ask you to back up to photo 62. What does photo 62 show?
A. Photo 62 is a photo of the regeneration. This was when -- I think we got down close to the ground to look at this, which it was small regeneration, quite a bit of maple,
softwood, there's fir in here. It's noticeably older, although it's still small, kind of stunted. And also beech and birch growing in here. So it shows regeneration.
Q. Chris, if there were a couple inches of snow on the ground instead of the day we had yesterday, how visible, if at all, would this regeneration be?
A. You would still see it with a couple inches.
Q. And if it -- and what about more than a couple inches? Let's say six inches.
A. It would -- could become difficult to see with six inches of snow.
Q. And more than six inches?
A. You probably wouldn't see this regeneration, or most of it, if it's more than six inches of snow.
Q. And Exhibit 64? I'm sorry, Exhibit 65, I apologize. And what's Exhibit 65 a picture of?
A. This was just before we started heading up the hill, we went onto another winter road that headed back to the south, but up the hill. We didn't stay on it very long. We were in a corner here right on the edge of stand 43 and stand 44. And this picture is showing that transition between stand 43 which had more of a softwood component, to stand 44, which had really almost no softwood component in it. Just illustrative of the fact that stand lines on the ground are as narrow and black-and-white in some cases as they are drawn on
a map, for instance. You often have bleed over of a little bit of the softwood coming out of the stand, and a little more hardwood coming in. So it's not always a very defined line on the ground, and that was the case right here. You can see the hardwood and the softwood both in the overstory and in the understory.
Q. Looking at Exhibit 66, what's that a photo of?
A. Exhibit 66 is a photo of a yellow birch -- well, a number of trees. It's looking at the crowns of the trees, but right in the center of the photo, David is pointing at a yellow birch with a very nice crown to it. It's -- the top of the tree with the leaves and the branches is the crown of the tree. This would be a very healthy-looking crown. Lots of branching and leaves to it. It would be a good seed producer. With the size of it, it would be able to produce seed, and that's, obviously, a way to provide for regeneration of a stand when it's harvested, is for seed to fall and grown into those seedlings. And it also has a nice straight stem to it, so the stem is also a thing that will determine which trees are left, which trees are cut; the form of the stem.
Q. And would that be an example of unacceptable or acceptable growing stock?
A. From what $I$ can see in the picture, this would be an example of acceptable growing stock.
Q. And what would make it -- what attributes, if any,
would make it acceptable growing stock?
A. Acceptable growing stock is defined as a tree that does now, or can in the future contain a saw log, and this tree, because of the form, the straightness, how long it has that straightness before it gets into the top, the limbs of the tree, and no evident major damage, as well as the species of the tree, all would lead me to believe that it could be -could grow a log, or even may contain, depending on the size of it, a saw log, which would make it acceptable.
Q. Now, with respect to seed, approximately how much seed might a tree like this produce or throw off in a season or a year?
A. Tens of thousands -- probably hundreds of thousands. I mean, that's a very huge -- big crown, healthy crown on that tree.
Q. Okay. So now let's go to 68. And can you tell us what's shown in Exhibit 68?
A. Exhibit 68 is looking into the uncut -- the unharvested portion of stand 44. This was left when we ceased harvesting. And what it's illustrating, I think what we were trying to capture is the tops. There's -- here, there's a top that was broken. Part of the top is broken out. Here there's another part of the top that's been broken and is leaning over sideways. This was -- it's probably a result of the ice storm. There was a fair amount of damage up in this area
noted from the ice storm because of the elevation and the aspect of this area. So that's illustrating some of the lower-quality crowns that were in that area pre-harvest.
Q. And when you say ice storm, to what ice storm are you referring to?
A. The 1998 ice storm.
Q. So the 1998 ice storm you are able -- or how are you, if at all, able to discern from the trees' present condition, damage related to that ice storm?
A. It's -- you couldn't say for sure, but knowing the mapping that was done of where the ice damage was more prevalent, this area was very hard hit by the ice, and that was one of the things that happened, was the tops of trees, as you may know, broke -- broke out. Branches and tops broke out of trees from the heavy loading of ice.
Q. Moving to Exhibit 69. What stand is that?
A. We were standing on the boundary between stand 54 and stand 43; 54 would be to the left, 43 to the right. 54 was not in the alleged cut contrary area. 43 is in the alleged cut contrary area. The stand boundary runs kind of up through the left-hand side of this picture. This was near the stream crossing up on top of the hill -- the first stream crossing on top of the hill that we got to.
Q. Exhibit 71, what does this photo depict in terms of type of harvest area?
A. This is a picture of stand 34. It's a more open area. It would be what you would expect to see in one of the patches that was prescribed for this area where all of the trees are harvested, to provide for an area of -- basically, it's a clear cut -- it's a small clear-cut area. All the trees are harvested and then it regenerated from the seed and shoots that are there.
Q. And what, if anything, is shown with respect to initial stand quality?
A. Nothing in the picture shows the initial stand quality. But the fact that the patch was implemented here would indicate to me that that was one of the places with the lowest quality -- the poorest initial quality in the stand, probably highest ice damage. Maybe the highest percentage of low-quality trees.
Q. Exhibit 72. What's that a picture of?
A. This is a picture of regeneration. Again, Dave -Mr. Grayck is pointing to the sugar maple regeneration in this case.
Q. And going to Exhibit 74. What's that a picture of?
A. This is also a picture of regeneration in the same location. Mr. Grayck is pointing to yellow birch tree generation right here.
Q. Then going to picture Exhibit 75. What's in this photo?
A. This is the first alleged AMP violation that we looked at, and the State was -- had led us up to the top of the hill. This is an area where a small stream is running through a grassy area. This is an area that we had a little question about on the visit. And when I went back and checked the data that $I$ received from the State and the maps, this location was not identified originally as an AMP violation location in the regional cut contrary that we received.
Q. Okay.
A. It's also notable that this area would have been covered in snow, probably not even noticeable. Had previous harvesting all around it, and no skidding occurred across this particular channel that we looked at.
Q. And so you just referenced snow. When would it have been covered in snow?
A. This would have been covered in snow during the site visit that Plum Creek took with the State -- the Land Trust in January.
Q. Do you recall the date of that visit?
A. It was January 26th.

THE COURT: What year?
Q. Of what year?
A. of 2010 .
Q. Exhibit 76, can you tell us what that's a photo of?
A. This is a photo of a tree with $S B$ marked on it. SB
indicates stream buffer. This is one of the ways that the stream buffers are delineated in the field ahead of the harvest. We often use flagging, blue ribbon, but this is another way that was implemented up there, because the stand was being marked with blue paint anyway with the harvesting, and so the paint was also used to mark $S B$ to indicate to the contractor, the logging contractor, that this was the place to stop.
Q. Going to Exhibit 78. I believe we touched on it before, but briefly, what's Exhibit 78?
A. Yes, we did. This is the stump. This is in that same area of the alleged AMP violation that I just spoke of. This stump is an old stump from a previous harvest. It's already decaying, covered in moss and lichens. So just indicates that past harvest had happened in this area, and some of these openings are actually still the result of that.
Q. And moving to Exhibit 80. What's Exhibit 80 a photo of?
A. Exhibit 80 is a photo of the second alleged AMP violation site that we walked down into as a group.
Q. And what, if any, would have been visible in this area on January 26, 2010?
A. Similarly, this area would have been under quite a bit of snow. The tracks from the equipment would have been visible, but the actual water courses, or the -- some of the
wet areas in the surrounding area wouldn't necessarily have been visible.
Q. Now, what's the basis of your understanding that this is an area of alleged AMP violation?
A. Well, the stop yesterday, we believe -- the discussion on January 26th was of the location a little bit further downstream, just down below this, and it was where we thought that the issue had occurred and we had hoped to remediate anything that had been brought to our attention. But yesterday we walked to a site above that, which apparently the State thought was also part of this violation area.

Again, the data that we received with the cut contrary, the map, doesn't show this location as a point of an AMP violation. It shows the area further downstream.
Q. Okay. And let's go to Exhibit 81. And what's in Exhibit 81?
A. Exhibit 81 is the area $I$ was just referring to, just further downstream, where we stood at a stream crossing. The stream crossing has been -- received AMP close-out work, so it has been seeded and mulched. It's re-vegetated. The channel is clear. There's no ongoing erosion or discharges here.
Q. And let's go to Exhibit 82. And what's this a photo of?
A. 82 is a photo just after that last one. We were walking up from stand 43 back up into stand 34 . We were
continuing uphill at that point, and the group was talking about the current stand conditions right in that area. It shows the variability, again, of openings, groups of trees that are left, variable density of the trees that are left.
Q. And Exhibit 83, what's that a photo of?
A. Exhibit 83 is looking uphill from close to the last -- where the last photo was taken. This is looking up towards an uncut area in stand 34. That's the 2,500-foot line, so that is the -- we stopped at the contour 2,500 feet. Above 2,500 feet requires an Act 250 permit to harvest, and we did not go through that process for this harvest. Instead, we cut the harvest off at the 2,500-foot contour line.
Q. And what's Exhibit 85 showing?
A. Exhibit 85 is showing damage to an individual stem. There were wounds from a previous harvest, and also a wound on the stem from this past harvest. These would be things that would cause a tree to be considered unacceptable growing stock. It demonstrates a couple of things. One, the idea that, if you have a big enough scar on the base of a tree, it's a place that disease can come in, or that just will never allow this to develop into a saw log, because your saw log is in this lower portion of the tree, what we call the bowl of the tree. It also indicates that sometimes we will use what would be considered then unacceptable growing stock. Because it has damage, it can't grow into a saw log, but it still can
serve a purpose of other than just being cut. In this case, to protect the regeneration of small trees that are growing behind it. So when the wood is being pulled out, this tree already had a scar on it, it was a good choice to leave to be scarred again, since it was not going to become a valuable saw $\log$ tree.
Q. So even though a tree might be identified as unacceptable growing stock, it's not, what I like to say, the kiss of death for the tree.
A. No. No. There could be a number of reasons why you might keep acceptable growing -- unacceptable growing stock on a site.
Q. And if you could look at Exhibit 86? What's that a photo of?
A. This is a photograph of the landing. We came off of the hill and stand 34 intersected the road that was running north and south through the harvest block. We walked south down to this landing and we looked at another alleged AMP violation with a stream course that came down behind the landing, along the side of the road, and then crossed the road in a channel on the road and went down behind the landing.
Q. And if I could have you turn to Exhibit 87? And what's that a photo of?
A. Exhibit 87 is in the same location, but it's looking slightly more to the northeast -- north northeast. It shows
the remnants of an old culvert. Again, we were doing the closeout which would be implementing remediation or it's implementing AMPs that prevent erosion when you're not on the site. So that over the years, when you're not up there doing anything, things stay stable and there isn't erosion to the water bodies.

We had had some disagreement about where the course of this stream had been in the first place. The AMP violation stated that the stream had been moved. As we did the remediation, we found that, actually, the old stream crossing was in the location that we now have it on the road. The old culvert was evidence of that and was dug out and just the channel left open so the water could flow freely. And we saw that after all the snow was gone. This would have been in the spring of the year, and I believe it was March when we were back looking at this area with no snow on it. So it wasn't evident during the wintertime, but became evident when the snow was gone.
Q. In March of which year?
A. 2010 .
Q. Okay. And moving to Exhibit 88, what's that a photo of?
A. This is a photo of the stream as we left that location and walked back out of the skid trail, into the woods. It was just before we took a break in a wet area.

There was a big piece of -- looked like gears or something off of a piece of machinery. This was just back before that.

This was also cited as an AMP violation. There's no
discharge. It was a crossing done according to the acceptable management practices for logging. And as you can see, there's no discharge presently.
Q. And Exhibit 89, what's that? What do we see in that picture?
A. Exhibit 89 is another view of stand 43 further along after we climbed up the hill probably halfway. We -- this is looking at a group of trees that were released. This is softwood trees, but you also see small hardwood in the foreground here. Another example of the diversity of the stand following harvest.
Q. And when you see diversity, what do you mean?
A. Both the heights of trees, species of trees that are out there growing on the site now.
Q. And that's variability, yes?
A. Yes.
Q. Exhibit 90, please? What's that a photo of?
A. Exhibit 90 is standing just beyond that last photo, a little further across the slope looking back across at stand 34, the western portion of stand 34. It shows the variability of the stand, and it may be difficult to see without having it close up, but there's more open in the middle here, more of
the patches we were talking about, a little more dense as you go what would be to the north and -- or the right-hand side of this photo. It's showing how that harvest was implemented and the variability of the implementation of the different prescriptions.
Q. And what we see in Exhibit 90, can you recall whether this was the State's portion of the site visit or was this the State's site location? Or are we on the Plum Creek portion?
A. This was the State's.
Q. This was the State's, yes?
A. This was the State portion.
Q. Exhibit 91, what's that a photo of?
A. This is after we got to the -- the last time we got to the top of the hill, and this is looking to the eastern part of stand 34. This is showing again just the variability of the density of the trees that are left, the stem form of the trees that are left straight. You have green crowns growing, healthy crowns here. This is an area that had more trees left for the shelterwood in this area.
Q. And are you able to discern any of the condition prior to harvest?
A. Not by -- not from what I see from the photo. I could only infer what -- that this was probably a better quality area. That this was implemented leaving more trees
because there were more quality trees to leave.
Q. And Exhibit 92, what's that a photo of?
A. Exhibit 92 is a photo of a maple tree with a blue X on it. This harvest was implemented by what we would call marked to leave. The trees that were supposed to be left were marked with a blue $X$. Trees that had no mark on them were to be harvested. So this is an example of a tree that was marked to leave.
Q. And Exhibit 93, what's that a photo of?
A. Exhibit 93 is a photo of a downed tree. It's an older tree that had fallen probably before this harvest, but it may have been dead at the time and fallen after the harvest. This is -- we try to protect these. This is more towards the goals of the conservation easement. We call this coarse woody debris. Coarse woody debris is a habitat for a lot of critters and an important part of the functioning ecosystems. So that's one of the goals of the easement, different from the goal of use value. Sort of an additional goal.
Q. And Exhibit 94, what's that a photo of?
A. Exhibit 94 again is stand 34 as we were heading down the hill before we rejoined the Plum Creek route. This is just an example again of the quality of the stems in that part of the stand; tall, straight. We would call that good form to then have the potential to grow into good saw-log trees and to
continue to develop and have health crowns that will expand and help the tree to grow.
Q. And Exhibit 95? That's a picture of what?
A. Exhibit 95 is the stop second from the end where we were on the edge of the harvested portion of stand 34 looking into the unharvested portion. So this area was planned for harvest. It was part of the approved harvest. We stopped the harvest at that boundary after our site visit on January 26 th in response to the concerns. So this area is approved for harvest, it just has not yet been harvested.
Q. And Exhibit 96, what's that a picture of?
A. Exhibit 96 was walking out the winter truck road -when we came back out onto the road from that last stop, by the other harvested area. We stopped along the way on the way out. This is where the stands 34 and 43, the stand line, again, between the two, to the right. And 34 was alleged cut contrary to the left; and 43 was not alleged cut contrary. And the stand line curved away and back up the hill from this point along the side of the road. So 43 would be over here; 34 over here. And the road does curve around behind here. You know, it's open here, but there's a little more of an open impression with the road curving.
Q. All right. Chris, I'm going to hand you what's been marked as Exhibit 97. First of all, do you recognize what this document is?
A. Yes.
Q. Okay. What is this?
A. This is a map that $I$ created based on the route that we took yesterday. The green lines on this represent the boundaries of the approved harvest area and the interstand -the stand boundaries within that approved harvest. The black line represents the alleged cut contrary area. The red line shows most of the route we took. Just at the beginning, we didn't capture a small section from where we parked, which would be right here, down and back up to right here near the number 43. Beyond that, this shows the entire route that we walked and each of the stops that we took, where pictures were taken where we discussed anything on the site visit.
(Site visit map was hereby marked for identification as Plum Creek's Exhibit 97, as of this date.)
Q. And what data did you rely upon to produce this map?
A. The GPS data from the GPS unit that we were carrying.
Q. And what experience, if any, do you have with respect to GPS units?
A. Use them regularly in the course of laying out harvest, doing any number of jobs, forestry jobs, from navigation to layout. The interaction now between computer -what we call geographic information systems, which would be what contains all this information on stand boundaries and all
these shapes, and the GPS, is we often will put these boundaries into a GPS and then use that GPS in the field in order to locate where these -- basically, where these are on the map. So we'll use it for things like layout. We'll use the GPS for mapping streams that aren't mapped. This site had one stream mapped on it when we -- when we started doing the layout on his harvest. There are actually numerous small streams, as we saw yesterday. As we do the -- as we flag those or buffer those, we would take that data in the GPS unit, put it back into our geographic information system to update our information. So quite a bit of experience with GPS .

MR. GRAYCK: Your Honor, I'd move the introduction of Exhibit 97.

MR. DUANE: No objection, Your Honor. Thank you.
THE COURT: Plum Creek 97 is admitted.
(Site visit map was hereby received into evidence as Plum Creek's Exhibit 97, as of this date.)

MR. GRAYCK: Thank you, Your Honor.
BY MR. GRAYCK:
Q. Chris, what experience, if any, do you have with the administration of the conservation easement which is on Plum Creek's land?
A. I've been administering that easement, working with the Vermont Land Trust since I started working in Vermont in

2008 -- the end of 2008.
Q. And who is the Vermont Land Trust forester that you work with?
A. Dan Kilborn is the stewardship forester for the Vermont Land Trust.
Q. And what participation, if any, does Mr. Kilborn have in the review and approval of the timber harvests that Plum Creek conducts?
A. This was mentioned earlier. The management plan -the forest management plan for Plum Creek is a conceptual plan. The Vermont Land Trust views that plan the same way; the conservation easement refers to our management plan. So any harvest, individual harvests that are planned, have to be approved by Dan Kilborn on a harvest-by-harvest basis. It works hand-in-hand with the use value process.
Q. Now, what's -- what do you mean by conceptual plan? What are you referring to?
A. I'm referring to the forest management plan. The document that was introduced earlier that -- and I call it conceptual because it doesn't -- it gives a concept, in general, of the management that will be implemented. But for an individual group of stands, it might give three or four options of what could be done. And the approval of that plan doesn't approve any activity, any harvesting activity. So it's conceptual in the sense that it's saying this is how we
plan to do our management. But then the actual management has to be done on a stand-by-stand basis providing more data for each of those stands, as well as the prescription.
Q. And what's the relationship, if any, between an individual harvest prescription and the concept plan?
A. The individual harvest prescriptions are considered amendments to the management plan. So it's an amendment to allow harvesting activity. So in the case of Clough Brook North, that area was submitted for approval to harvest, and the approval was given to harvest those 470 acres per the amendment that had been submitted. Other than that, there's no activity -- no harvesting activity approved under the tenyear management plan.
Q. And when you say the ten-year management plan, is it what's been admitted as Exhibit 14, the forest management plan of Essex Timber Company, and Exhibit 15, the use value appraisal forest management plan signature page for the lands of Plum Creek?
A. I would need to see that.
Q. Here, I'll show it to you; no problem. So this is Exhibit 14, and this would be Exhibit 15. So what is Exhibit 14 and 15?
A. Yes. That -- Exhibit 14 is the management plan that I'm referring to; the ten-year management plan. And then 15 is Plum Creek's acceptance of or adoption of that approved
management plan for the balance of the life of the plan, the ten years.
Q. So while Exhibit 14 says Essex Timber on it, whose plan is it today?
A. It's Plum Creek's plan.
Q. And as of what date has it been Plum Creek's plan?
A. As of the l1th -- I'm sorry, the 7 th of November 2008.
Q. Thank you. And the date you chose -- why did you choose that day in particular?
A. That's -- there's two signatures. Tim Durrell, who is the senior resource manager for Plum Creek, and then Matt Langlais, who is the Essex-Caledonia County forester, and Matt signed it on November 7 th, so until Matt signed it, it wouldn't have been approved as adopted.
Q. Okay. I'd like you to keep that. Can you turn to the first page of Exhibit 14, which is right there? First page of 14. Yup. Do the initials FSC appear in the title page to the Essex Timber Company plan, which is now the Plum Creek plan?
A. Yes, they do.
Q. Okay. To what does the FSC -- could you read the whole title to the plan?
A. Forest management plan, Essex Timber Company, LLC, Essex, Orleans, and Caledonia Counties, Vermont, Vermont FPR

Department, BLT and FSC version.
Q. Okay. And does it indicate on that first page who prepared that plan? The bottom.
A. Landvest, Inc., Timberland Division, and Richard G. Carbonetti, VP of Timberland, Project Manager.
Q. Okay. To what does FSC refer to?
A. FSC is forest stewardship certification.
Q. And what is forest stewardship certification?
A. I'm sorry; I believe it's actually Forest Stewardship Council.
Q. Forest -- okay.
A. And it's a certification -- it's a third-party sustainability certification or forest certification just so that consumers and other outside parties can be assured that the timberlands are being managed in a sustainable way with regard for all different attributes of the ecological functions that they provide.
Q. What third-party certification, if any, does Plum Creek have in relation to its forestry practices?
A. Plum Creek is a sustainable forestry initiative, or SFI certified. A similar program; it's a third-party verification system for sustainability and also looks at things like community involvement, buy diversity, wildlife, a number of things like that.
Q. I'm showing you what's been marked as Exhibit 17.

Could you just tell me what Exhibit 17 is?
A. This appears to be kind of a definition and an introduction to the Sustained Forestry Initiative standard from the SFI Web site.
(SFI standard was hereby marked for identification as Plum Creek's Exhibit 17, as of this date.)
Q. And is that -- is that the certification that Plum Creek has? SFI?
A. Yes, it is.

MR. GRAYCK: I move the introduction of Exhibit 17, Your Honor.

MR. DUANE: No objection, Your Honor.
THE COURT: Plum Creek 17 is admitted.
(SFI standard was hereby received into evidence as Plum Creek's Exhibit 17, as of this date.)

BY MR. GRAYCK:
Q. Chris, what environmental stewardship projects, if any, does Plum Creek have here in Vermont?
A. Well, we've been involved in Spruce Grouse relocation project, which was capturing spruce grouse in Maine, working with the Department of Fisheries and Wildife to bring those over and relocate them. They were able to relocate those in Vermont.

We were -- we were involved in working with the
State and Trout Unlimited on some stream habitat enhancement,
where we're allowing them to add coarse woody debris to streams to improve fish habitat.

We're also looking at improving crossings for fish passage so that fish can get up and down the streams and try to again improve the fisheries.

We have an eagle next reporting program where we reward people for reporting eagle nests that helps the State document those, but also helps us to, if they're on Plum Creek property to tailor our management and to recognize those appropriately. Those are a few of them that come to mind.
Q. What stewardship projects, if any, are located on the 56,604 acres proposed to be -- or disqualified by PVR?
A. The fish -- the trout enhancement, stream enhancement project, some of the crossing projects. There's projects we worked cooperatively to try to monitor moose and moose grouse, and to work with hunters to have access to our property and try to help them to -- when they have a successful moose hunt, get their moose out of the woods. That would occur on those acreages.

We work with some trout stocking with the -- I believe it's called the Vermont Fish and Wildlife. It's a separate group. It's not like a -- not a government group. But they stock with the State's approval small beaver ponds and things. That occurs on those acreages. Those are a few of them.
Q. And what's an FSI (sic) audit?
A. Will you say that again?
Q. What is an SFI audit?
A. An SFI audit would be -- it's a third-party audit, so a third-party company comes in, they audit both the policies that we have in place to meet the SFI standard. They audit from the corporate level and in the book side of things, all the way down through the local level. So at my level, at a local level, it would primarily involve going to the wood with an auditor, they pick random harvest sites. They go out and they do a rigorous audit of the site to see if we're implementing the practices we say we use to see if we're paying attention to the environment in the say that SFI requires.
Q. What governmental agency, if any, requires Plum Creek to be SFI certified?
A. There isn't any requirement for certification.
Q. And so why has Plum Creek chosen to be SFI certified?
A. I think it's a decision to try to display the commitment to the environment as a large -- one of the largest land-owning companies. Obviously, there's a hope that the market will reward that and pay more for products that have that SFI stamp on them, and therefore, landowners like Plum Creek could maybe command a premium in the market place for
the timber that we grow. We don't necessarily see that yet, but we hope that will come in the future.
Q. All right. So that's SFI.

Now I'd like to ask you what's the Vermont heavy cut law? What does that mean; heavy cut?
A. The heavy cut law is a law in Vermont that applies to harvests where the harvesting will bring a stand below a certain level of stocking. There are stocking guides. Socking refers to, in real simple terms, the number of trees on a site. It's also based on size of those trees. And if the stocking will come below a certain level on a stocking guide for that type of stand, which is the C line. There are different lines on the stocking guide, then a heavy cut permit is required. Heavy cuts -- for example, a clear cut would be a heavy cut. There's no residual volume of larger trees on that site after the harvest. So you would be required to have a heavy cut permit in order to do that harvest.
Q. How, if at all, does the heavy cut requirement interact or influence -- I'm sorry, interact with your getting UVA approval for harvest?
A. They're fairly integrated. We deal with County Forester Langlais as our forester for UVA. We submit our amendments to propose a harvest to him.

Richard Greenwood is the heavy cut forester. He works out of the same office in St. Johnsbury, so they work
very closely together.
Usually, we'll submit the plan to Matt Langlais, and then, if we do a site visit ahead of the harvest to look over what the plan is proposing, both Dick Greenwood and Matt will come, if possible. And then if any changes are requested, we make those changes, resubmit. Once Matt Langlais has approved our amendment, then because he has approved it, if it involves a heavy cut, we submit the heavy cut permit. But we are given an exemption from that based on the fact that our harvesting was approved through the UVA -- with -- because we have an approved ten-year plan. And this amendment would fall under that plan at that point. It's approved as an amendment to the plan to do harvesting.
Q. So as part of the --

THE COURT: I'm sorry, I didn't understand. You said there was an -- meant there was an exemption from getting a heavy cut permit?

THE WITNESS: It's a --
THE COURT: Once it's been approved under the plan?
THE WITNESS: It's -- because the heavy cut is
approved by the county forester, you're not required to have the actual permit. You are given -- am I using the right term?

MR. GRAYCK: You are, and I'm going to help out the

THE WITNESS: An exemption from that. If I had the permit in front of me.

MR. GRAYCK: Your Honor, may I give the witness an exhibit that will clarify the Court's question?

THE COURT: Is this a document that hasn't been admitted yet?

MR. GRAYCK: It has not yet been admitted, but I am going to be moving to admit it.

THE COURT: Okay. Can you show Mr. Duane what it

BY MR. GRAYCK:
Q. Could you look at what's been marked as Exhibit 23 and just explain to the Court what that is.
A. Thank you. This is the notice of determination approving a heavy cut.
(Notice of determination of heavy cut was hereby marked for identification as Plum Creek's Exhibit 23, as of this date.)

And the box that has been checked -- this is signed by Virginia Anderson, so it goes through Richard Greenwood. And the box that is checked says this proposal is in conformance with rules adopted by the department. The cut may proceed. And it says that for parcels that do not qualify -I'm trying to find that here. As the landowner, when we fill this out, we fill out the section under exemptions.

There's a box here to check that says I certify that the proposed heavy cut is consistent with one of the following. Number one is a forest management plan currently in effect and approved by the department under the current use assessment program.

So the steps in the process are the county forester has to approve the amendment so it becomes a part of the approved management plan. And then the heavy cut exemption can be allowed because the UVA program has approved that. MR. GRAYCK: So we'll move the introduction of Exhibit 23.

MR. DUANE: No objection, Your Honor.
THE COURT: Plum Creek 23 is admitted.
(Notice of determination of heavy cut was hereby received into evidence as Plum Creek's Exhibit 23, as of this date.) BY MR. GRAYCK:
Q. So, Chris, we've talked about UVA, the conservation easement, SFI, and heavy cut law. Now I'd like to look at Exhibit 18. And can you tell me what Exhibit 18 is.
A. This is what we refer to as the AMPs -- acceptable management practices for maintaining water quality on logging jobs in Vermont. This would be the booklet that contains the actual AMPs for logging.
(AMP for water quality was hereby marked for
identification as Plum Creek's Exhibit 18, as of this date.)
Q. Now, with respect to Plum Creek's activity, who administers the AMP rules with respect to your prescription harvests?
A. Our first point of contact would be the county forester, Matt Langlais.
Q. And after that?
A. Jeff Briggs is or was the AMP forester out of St. Jay.
Q. Okay. And how do you implement AMPs with respect to a timber harvest?
A. AMPs really are -- I think of them as three phase. There's the planning phase, so you need to plan to implement things like stream crossings in the right place, to put buffers in the right place. There's the implementation, then, when you go and actually put those on the ground. And there's some of those that occur during the harvest. When skidding is finished on a trail, a skid trail, then it may require water bars, and a skidder might put some in. Maybe they're temporary at that point, but at least they're something that's implemented as the harvest is ongoing. And then there's a close-out phase. So after the harvest is complete, there's certain acceptable management practices that are implemented at that point to stabilize the site so that there aren't erosion issues or water quality issues during that interim
time when you're not actually there doing anything on the site. And those apply to everything from skid trails and stream crossings, to actual truck roads. Like, for example, yesterday we walked over a number of humps, both in the skid trails and in the truck roads that were water bars. They were diverting water so it wouldn't pick up too much velocity and begin to cause erosion. And so that it wouldn't run down into streams.
Q. Now, how, if at all, do the AMPs pertain to the UVA 2006 manual?
A. The manual refers to the AMPs. It requires the enrollees in current use, use value, implement AMPs to the maximum practical extent that they can be done on the logging jobs.

MR. GRAYCK: I'd like to move the introduction of Exhibit 18.

MR. DUANE: No objection, Your Honor. If I may -- I have an inquiry. Those are being admitted as the rules of the Vermont Department of Forest, Parks and Recreation.

MR. GRAYCK: Yes.
MR. DUANE: As adopted rules.
MR. GRAYCK: Yes. And -- yes.
MR. DUANE: Okay. No objection.
THE COURT: Plum Creek 18 is admitted.
(AMP for water quality was hereby received into evidence
as Plum Creek's Exhibit 18, as of this date.)
BY MR. GRAYCK:
Q. Okay. Now, Chris, what's your understanding of the status of Plum Creek's plan after it purchased it from Essex Timber Company with respect to enrollment in UVA?
A. We're enrolled in UVA.
Q. Okay. Now, can you go to Exhibit 15? And again, what's Exhibit 15?
A. This is the use value appraisal forest management plan signature page for the lands of Plum Creek Maine Timberlands, LLC, signed by Tim Durrell and Matt Langlais.
Q. Okay. And what's your understanding of the large landowner alternative?
A. The large landowner alternative is a program that was developed by Forest and Parks to allow landowners with over 5,000 contiguous acres to enroll in UVA without having a stand-specific inventory -- so a stand-level inventory of their property. And that's where the approval of the ten-year management plan with no activity actually approved comes in. It allowed for a different level of data, a lower level of data collection -- what's called stratified sampling where you'd lump stands that are similar together in your inventory. It allowed for that in order to develop the management plan -the ten-year management plan for the property. But that tenyear management plan, as I said, under the large landowner
program does not approve any harvesting activity. So all harvesting, when it's proposed, must meet the standards of the UVA program that applied to all landowners in the program. So our amendments to our ten-year plan meet the requirements of any other landowner as far as inventory data, and mapping, and all the other things that are required to have that amendment approved.
Q. And when we use the phrase stand specific, what does that mean?
A. Part of the approved forest management plan is a map showing the property broken into stands. The stands are identified or delineated from aerial photography based on things like composition of hardwood versus softwood, size of the trees that are there, past harvest history, soils underlying those sites can affect the stands. All of those factors create areas that you can see that are different from each other. You can imagine hardwood and softwood -- pure hardwood and softwood would be a very obvious one, especially if they were side by side. Those would be two separate stands. And so this map that's provided with the plan, that's an integral part of the plan, delineates all the stands. And that was a -- that's a requirement of the large landowner program, as well. Then those stands are what are carried forward and used to define where the management will occur. So we would prescribe harvest activity to a stand, and then go
and implement that on that stand.
Q. Okay. So which meets the definition of stand specific? The concept plan or the prescriptions that get filed for a harvest?
A. From the point of view from harvesting, the standspecific map that is submitted for the harvest, the amendment, that meets the definition.
Q. Okay. And --

THE COURT: I'm sorry, I didn't understand the answer. Maybe I didn't understand the question.

MR. GRAYCK: My apologies, Your Honor. I'll do better.
Q. Chris, when we say that there's a stand-specific forest management plan, since you're in the large landowner alternative, when we say stand-specific forest management plan, are we referring to the prescription which was approved for the harvesting, for a specific harvest unit? Or are we referring to the concept plan?
A. We'd be referring to the actual prescription that was approved, because the concept plan gave a number of different potential scenarios, you could say, from a harvesting point of view. These are different types of silviculture that could be implemented in this type of stand. And then, when you look at -- it lumped stands together, so it wasn't stand-specific. It was looking at groups of stands.

And in this group of stands, we would generally have maybe these three options. But when we look at the specific stand, and collect the data, the inventory data on it, and write the prescription, we're writing it for that specific stand.
Q. Okay. What's stratified data?
A. Stratified data, as $I$ was saying, is grouping those stands together. You take stands that are similar to each other, maybe they're softwood stands, but they aren't all exactly the same height, and you group them together and you inventory that group of stands. It requires less points in the inventory, but it doesn't give you the precision -- it doesn't always give you the precision to make decisions at that stand level because you don't necessarily have any points. You haven't collected any data, necessarily, in every specific stand.
Q. Okay. And so when you obtain harvest approval, are you -- when you obtain harvest approval in connection with the submission of a prescription, are you submitting standspecific data or stratified data?
A. We're submitting stand-specific data.
Q. And the stratified data would be contained in which? Prescription or the concept plan?
A. It would be in the concept plan -- the ten-year management plan.
Q. And again, the ten-year management plan, what
harvesting, if any, does it approve?
A. It does not approve any harvesting.
Q. And what do the prescriptions approve?
A. The prescriptions approve harvesting on the individual stands that have been submitted in an amendment.
Q. So when we refer to the Clough Brook North harvest unit, or when $I$ refer to it, what does that mean to you?
A. The Clough Brook North harvest unit was an area that was submitted as an amendment with maps, inventory on the number of stands and current conditions noted, and the prescriptions for those stands, the harvesting that we were requesting to do as a unit, that package was submitted, and that would be the stand-specific plan, the prescription for the Clough Brook North. That was the name we gave that harvest area.
Q. Okay. And Exhibit 14 and 15, which is he Essex Timber Company forest management plan, and Exhibit 15 is Plum Creek's adoption of it. So again, it's, in essence, Plum Creek's plan. To what acreage does the ten-year concept plan apply to? I mean, approximately how many acres does it apply to?
A. 86,000 .
Q. I'm sorry; can you just say that louder?
A. 86,000 .
Q. Okay. So essentially, the concept plan applies to
the entire Vermont landholding of Plum Creek, right?
A. Yes.
Q. Okay. And then -- and then, when you do a prescription, what is it applicable to? The entire 86,000 or, obviously, a portion thereof?
A. A portion. Whatever portion is submitted in that amendment.
Q. Okay. Now UVA adopted this category called the large landowner alternative. What's the large landowner alternative an alternative to?
A. It would be an alternative to a landowner with over 5,000 acres going out and doing individual inventory plots on every stand that comprised that 5,000 acres in order to get a level of data that would be meaningful to the county forester and the State in order to be able to approve harvesting on those acres for ten years. So it would require identifying -it would require collecting data at that level, and then identifying all the activities that were to occur in our case on 86,000 acres for the next ten years, and submitting those in detail to Forest and Parks, to the county forester for their approval.
Q. So what would it take to produce a stand-specific forest management plan for your 86,000 acres?
A. Take a lot of time, and manpower, and money.
Q. And so how, if at all, has Plum Creek benefitted
from the large landowner alternative?
A. Well, it allows us to be in the use value program, the current use program, to enjoy the tax benefits of that, while managing under this approved plan, which doesn't approve any activity, and being able to submit each individual harvest area for approval. So it, basically, says, yes, you can be in the program, yes, you should be allowed to have those tax benefits, as long as you meet the requirements. But I guess I would say it elongates the time frame to meet those requirements. It allows us to meet them over the course of the ten years on the stands we're really going to do something -- some kind of harvesting activity versus having to submit volumes and volumes of data on areas that we may not do anything for the next ten years.
Q. Okay. Let's talk a little forestry terms. We've used the word stand, but what is the definition of a stand?
A. It's a group -- it's a delineation of an area of the forest based on similarities in the trees that are there. Whether it's like I said, species, age, past harvest history. So it's a way to break the larger forest down into smaller units based on similarities of the trees that are there on that unit.
Q. Okay. And what's the specific management practice or practices applied to a stand of trees? What's that called?
A. For harvesting, it would be silviculture.
Q. Okay. So what's silviculture? What does that word mean?
A. Silviculture is the -- it's the systems, the various systems -- application of -- in this case we're talking about harvesting in order to get desired results in a forest. So the silviculture is in your bag of tools in order to come up with the outcome that you're looking for from your harvest. It's really a way to manipulate forests to try to cause them to grow the way you want them to grow to produce the species of quality. That you use those natural processes by implementing these disturbances, which really is what harvesting silviculture is: to come out with the outcomes you want.
Q. In other words, what commodity, if any, is the result of -- results from silvicultural practices?
A. The timber would be a commodity. Wildlife habitat you could call a commodity. It's not really a commodity, exactly, but it's an outcome you could have from your silviculture.
Q. And how or to what extent is silviculture both an art and a science?
A. Well, silviculture is based on science. It's based on studies that show, if you do this, this is the response you can expect. There's different types of silviculture based on the species that you're working with; hardwood, softwood,
spruce, and fir, versus northern hardwoods of sugar maple, and birch, and beech. There's Champion based on the outcome that you want. What mix of those species that you're looking for. And so the -- I'm sorry, can you repeat the question?
Q. Well, just how is silviculture, if at all, both a practice of art and science?
A. The art portion is implementing those different tools, as I said, those different silviculture to take into account the variations that are out there naturally in our forests. So for us in the northeast, in particular, you know, we have varying species, which may bring the different dynamics of health or marketability. And you may want more of
a species or less of a species. And as you implement your silviculture, the art part really becomes trying to get that result that you're looking for. Trying to work with those natural systems and implement a harvesting regime that gives you the results you're looking for as far as value, or habitat, or species composition.
Q. So when you're starting a new forest, what's that called?
A. The forest starting as regeneration.
Q. And then during the period when the trees are growing, what's the term that that refers to that period when the trees are growing, but not yet harvested?
A. Growth. There's, I mean, a couple of different
levels there. You have saplings, you have a pole stand, you have smaller trees that you aren't actually harvesting, you're just delaying to put on growth.
Q. So there's a period of tending.
A. Yes.
Q. Yes?
A. Well, tending would imply actually going in there and doing something. That would be at the stage where the stand is developed to the point where you're now able to go in. It might be pre-commercial. It might be something that you go in and do some cutting of trees that don't produce a product, but they make space for the trees adjacent to them that are -- that you want to release and give more sunlight. Or it may be actually a commercial type of treatment where you go in and do some work.
Q. And then lastly, with respect to silviculture, what's the last phase?
A. The harvesting phase, when you're going in and you've tended the stand, you're growing it to grow value, for instance. You've thinned it, you've removed the lower value. Over time, you've improved the quality, the trees are mature and you would harvest them and restart another stand again.
Q. And so these three phases of regeneration, tending, and harvesting, how, if at all, do they apply to the formulation of a silviculture system for a particular stand of
trees?
A. They're all -- you're thinking about the outcome that you're looking for, so the silvicultural system would be implemented in order to tend or harvest that area and make sure that you got the right objective the next time around. So silviculture is really forward looking. So in the case that you're asking about with regenerating a stand, if you were regenerating a whole area, you would want to implement a type of silviculture that would make sure you got seedlings back on the ground, got regeneration on the ground; otherwise, it wouldn't have been a successful harvest.
Q. And how, if at all, can professional foresters disagree with respect to an appropriate silvicultural practice for a given stand of trees?
A. There's a -- there's a number of different ways you can implement silviculture to get, in the long run, similar or the same type of result. A good example would be even-aged management versus uneven-age. Even age, you are treating a whole stand through time across the stand to -- as one age class. Kind of think of a crop, you know, a crop of corn or something, where it's growing. In this case, it's growing together. You're tending it. You're removing the lowerquality trees, but the trees you're leaving are all the same age. And then near the end of that rotation when you're going to harvest that overstory on those mature trees, you either
already have regeneration that you've got started by your past harvesting, or you need to do something to open up more light, get more seed on the ground, get that regeneration established before you do that final harvest. And at that point, you would have two age classes, still even age. You would have the older trees on top, the little seedlings below, and then you would cut the trees that are over top, and you would have one age class again; those seedlings that would grow up through and you would treat them the same way.

You could do -- you could have a similar result of high-quality large trees at the end of your rotation by doing what's called uneven-age management, where you do more age trees -- you try to keep the age and size classes, a variation of those across throughout the stand so that every time you go in you're trying to make sure you have some of each of a certain category, a size -- we'll call it size or age of trees in there. So you end up with more than two ages in that stand. But after a time, every time you go in, you're able to remove some amount of mature trees, some amount of smaller trees, and you try to keep this balance.

So those would both give you a result of growing and being able to harvest high-quality saw-log trees, but they are two different methods of silviculture to get to that same end.
Q. Thank you. All right. Let's turn to -THE COURT: We'll take our afternoon break at this
point and continue at five minutes of three.
MR. GRAYCK: Thank you, Your Honor.
COURT OFFICER: All rise.
(Recess at 2:35 p.m., until 2:58 p.m.)
THE COURT: Please be seated.
Mr. Grayck?
BY MR. GRAYCK:
Q. So Chris, we've already touched on this before, but we've used this phrase a lot, the prescription. Okay? So when you want to get the county forester's approval for a particular harvest, you submit what's called a prescription, am I right?
A. We submit UVA forms, and part of those forms is the prescription, the what we want to do from a harvesting point of view in that stand.
Q. Okay. So let's start talking about the selection of the Clough Brook North harvesting area. What's the process that Plum Creek was using in 2009 to identify and select harvest areas?
A. Well, we had employed Landvest to, as I mentioned earlier, as a contractor. They were the authors of the tenyear management plan which, again, gave the general guidance on how the management, the harvesting, and the implementation of silviculture would go on the property. We hired them to identify sites based on the management plan that were ready
for harvest. To develop plans for those sites and provide those to us and then to lay out the harvest; basically, get everything ready for the harvest to occur on those sites.
Q. Okay. And who are the employees that Landvest was having do the Plum Creek work with respect to prescription -preparation of prescriptions?
A. In the -- on Clough Brook North, Johnson Horton was the Landvest employee who did that preliminary work, and ordered the prescription, and was involved -- was a forester for them.
Q. And who is Dan Singleton?
A. Dan Singleton is another forester that worked for Landvest who was employed into 2009. I believe he had left Landvest by that point -- by the time we submitted the plan for Clough Brook North.
Q. And before it was Plum Creek, when it was still Essex Timber, there was an outfit called North Country Environmental and Consulting. Were there employees of that firm who then came and did work via as Landvest employees for Plum Creek?
A. Yeah. Yes. When Plum Creek purchased the property, one of the reasons that we brought Landvest on was that they hired two employees who worked for North County Environmental as foresters for Essex Timber Company. And so they already had familiarity with the property; that was John Horton and

Dan Singleton. They had been doing this work, basically, on the property for Wilhelm Merck as the owner of Essex Timber Company, and we wanted to keep that continuity. So by bringing Landvest on, who hired these two foresters that had been working on the property, the idea was to keep the continuity, keep that knowledge base. No one from Plum Creek had ever worked in Vermont, let alone on this property, and in this area before, so we wanted to try to start out on the right foot, be successful in, you know, implementing both this management plan that was written by Landvest and the -- and involvement with the different programs, the different people, agencies that we interacted with.
Q. So when Plum Creek purchased the land, what assessments, if any, did it do of the acreage or the land base in formulating a plan to develop an inventory of harvests?
A. Well, one of the -- my understanding, one of the discussions -- and I was not involved directly in these, but between Tim Durrell, who was my boss, and Landvest, was to develop an inventory of harvest blocks that were ready to go with plans written and approved, and harvest layout done, the streams identified and marked, skid trails laid out.

Everything that needed to be done, done to the point where the logging contractor could move in when the time was appropriate.
Q. Okay. So do you know when the Clough Brook North
area was identified as a potential harvest area?
A. It was in the middle of 2009 , probably $I$ would say around August of 2009 .
Q. Okay. Now I'm handing you what's been marked as Exhibit 19. Can you tell us what Exhibit 19 is?
A. This is an e-mail from me to Matt Langlais and Dan Kilborn with an attachment of stand boundaries, a digital -in a digital format saying that $I$ was sending them for the areas we would be looking at in Lemington. And it as dated October 16th, 2009 .

MR. GRAYCK: I move the admission of Exhibit 19. MR. DUANE: No objection, Your Honor.

THE COURT: Plum Creek 19 is admitted.
(October 16, 2009 e-mail was hereby marked for identification and received into evidence as Plum Creek's Exhibit 19, as of this date.)

BY MR. GRAYCK:
Q. So what plans, if any, were made between you and either Matt Langlais and VLT to take a pre-harvest or a preinspection cruise of the Clough Brook North area?
A. I'm smiling at your term cruise. I think of it as us in a big car, but it wasn't like that. We set up a plan -this e-mail was part of that plan -- to go visit these stands together. We would do this routinely on areas that were submitted as harvest prescriptions. These amendments that
were submitted for areas to harvest. What the e-mail that you just had me read referenced a couple of different areas what we would be going and looking at. One of them of which was this Clough Brook North area. The plan had been written, submitted, and we were taking that plan that had been written to the woods as a group; Dan Kilborn, Matt Langlais, myself, the Landvest forester John Horton, I believe Richard Greenwood was along as well. And going and walking through the entire area, looking at the stands, looking at the prescriptions for the stands, the data that we were providing for the stands, as a group to discuss the silviculture proposed, and just kind of make sure we were all on the same page with that.
Q. And about what time was this occurring; what month? What year?
A. Well, that was in October I sent that e-mail. The site visit -- I believe it was in November of 2009.
Q. Okay.
A. I would say.
Q. Now, I used the word cruise. Is that -- what meaning does that word have to foresters?
A. Cruising is another word for inventory. So when I think cruise, $I$ think going out and taking plots to collect data about the stand.
Q. And while we'll hear more about it as a part of the case, what does it mean to take a plot? What do you -- what
is that? What are you referring?
A. You're measuring -- you're taking measurements of the trees in a specific place to then indicate what's there across the stand. So you do individual plot measurements, you measure the trees, how many are there, what size are they, what species, quality. And then from those plots, you extrapolate to the entire stand what is actually there.
Q. In other words, when you say that word extrapolate, if you could just explain that? It's not that you are literally counting everything.
A. Correct. In place of counting every single tree and measuring the diameter, and height, and species, and quality, which would take too much time, you can scientifically figure out how you can measure enough plots and then extrapolate that data out to represent what's actually in the entire stand with a fairly good level of confidence.
Q. Okay. Now I'm showing you what's been marked as Exhibit 20. Would you tell us what that is?
A. This is the initial harvest prescription. This is actually what we referred to as the harvest prescription fact sheet. It was a document that Landvest produced to put all the information about the stand, the prescription for the stand, and then some also conservation easement-related documentation in one format. It also includes a map that was submitted, again, to meet the UVA standards. And this would
be what we took to the field with us that day for the site visit before the area was approved.
(Draft harvest prescription fact sheet was hereby marked for identification as Plum Creek's Exhibit 20, as of this date.)
Q. And I'd like to -- well, actually, are there some handwritten notes on that document?
A. There are.
Q. What are those notes? Actually, whose notes are those?
A. Those are my notes.
Q. And what are they notes of?
A. Well, up in the upper right-hand corner there are a couple of combinations for the two gates going into the site. And then I made a note, include moose grouse here for Dan, talking about current stand conditions, which is something we noted that Dan would be -- Dan Kilborn -- that we, you know, wanted -- he wanted us to refer to that and make note of it in the documentation.

On stand 34 I wrote a note that says mention areas that will receive patch cut under the prescriptions, which would be the harvest prescription section of this. So I was making notes about things that we were talking about on the site that were changes that needed to be made, or the group had agreed should be made to this document before it became
final.
Q. So you had provided this document to -- to whom had you provided this document to prior to the site visit, or at the site visit you took?
A. This document would have been provided to Matt Langlais, to Dan Kilborn, and to Richard Greenwood.
Q. I move the introduction of Exhibit 20.

MR. DUANE: No objection to 20, Your Honor. Thank
you.
THE COURT: Do you want to remove the combinations of the locks? Those aren't necessary for the --

THE WITNESS: They've been changed.
THE COURT: Oh, they've been changed?
THE WITNESS: Yes.
THE COURT: Um-hum. So Plum Creek 20 is admitted.
(Draft harvest prescription fact sheet was hereby received into evidence as Plum Creek's Exhibit 20, as of this date.) BY MR. GRAYCK:
Q. So Chris, that was, in effect, a draft prescription that you took out on the site visit with the people you mentioned, right?
A. Yes.
Q. Okay. And what happened on the site visit?
A. We met; we drove up onto the site, very much like we did yesterday. In fact, I believe we parked in this same
location that was shown in Exhibit 52. It looked a little bit different at the time because no harvesting had occurred in quite a while up there. And then we proceeded to walk through, just determine a route that we wanted to walk, and walked through trying to cover all of the stands using a GPS, like we did yesterday, to know where we were on the site and within each of these stands. And taking that document along with us, looking at how is this stand described. Does it seem to be described accurately from the inventory that was done? What about the prescription? Does the prescription meet what we're seeing? Sometimes we talk about terminology, silviculture, the things that foresters like to discuss and bat around amongst ourselves as we come up with the best way to reach the objective for those stands. So we walked a loop, basically. Well, if $I$ remember right, it was somewhat a reverse of the route that we walked yesterday, only we went further to the south and to those stands that we didn't walk in yesterday. And we walked then up through the different -course, all of it was unharvested at that time, but those different stands, looking at the conditions in the stand and comparing them to that document -- the harvest prescription fact sheet.
Q. On that site visit, what additional information, if any, were you asked to provide?
A. We were asked to provide a map that gave a general

Idea of where, in stands that had multiple harvest prescriptions, harvest treatments -- and by that, I mean different silviculture that was going to be applied in the same stand, we were asked to provide a map that gave a general idea of where we thought the majority of that type of harvesting would occur. If there was a place in a stand that would receive primarily overstory removal, for example, we were asked to delineate that. And then, other than that, we agreed to change the prescription on a couple of stands to reflect the harvesting that we wanted to do out there and the condition of the current stands out there. So, basically, a collaborative process to arrive at something we could all agree to that would meet our objectives as landowner and satisfy the requirements of UVA and the VLT requirements under the easement.
Q. Okay. So I'm going to show you Exhibit 21. What's Exhibit 21?
A. Exhibit 21 is an e-mail from me to Matt Langlais, Dan Kilborn, and Richard Greenwood, copying John Horton with the updated maps I was referring to, where I said we -- John had updated these maps and we were providing them via e-mail electronic format. And I had mentioned to Matt on here that he should receive the amended UVA forms in the mail the next day, and then $I$ would be e-mailing those to Dan Kilborn.
(November 5, 2009 e-mail was hereby marked for
identification as Plum Creek's Exhibit 21, as of this date.)
Q. Okay, and again, who is Dan Kilborn?
A. Dan Kilborn is the stewardship forester for the Vermont Land Trust.
Q. And who is Richard Greenwood?
A. Richard Greenwood is the heavy-cut forester for Forest and Parks.
Q. And Matt Langlais?
A. Matt Langlais is the county forester for Essex and Orleans County.
Q. And does this e-mail identify the people who were on that site visit?
A. Yes.
Q. Okay.

MR. GRAYCK: I move the introduction of Plum Creek
21.

MR. DUANE: No objection, Your Honor. Thank you.
THE COURT: Plum Creek 21 is admitted.
(November 5, 2009 e-mail was hereby received into evidence as Plum Creek's Exhibit 21, as of this date.)
Q. So after you sent your e-mail and mailed in the revised documentation, what happened next?
A. We received the approvals from Matt Langlais, UVA, and the approval for the heavy cut, as most all of these prescriptions were heavy cut prescriptions, required that
heavy cut application. And we also received Dan Kilborn's approval for the prescriptions and for the construction of two winter roads, as they had requested; two of those roads we walked on yesterday.
Q. Okay. Now I'm going to show you Exhibit 22. And I'd like you to go through it page-by-page and tell us what each page is.
A. This is the amended harvest prescription fact sheet.
(Amended harvest prescription fact sheet was hereby marked for identification as Plum Creek's Exhibit 22, as of this date.)

So that after the changes were made that I referred to with the prescriptions. The harvest prescription fact sheet consists of four pages. It goes from describing the stand, the current stand conditions, some information about the harvest, the size of the area as 471 total acres in the stands, where it is, general information about the stand numbers.

And then a regeneration table that describes what was on the stand for regeneration based on the cruising that was done. Information about the elevation, the terrain there, surrounding landscape. It talks about where it is, how you get there, desired goals of the harvest, which are general goals and what the objective is of what we're trying to do.

Then the recommended prescriptions by stand, the
harvesting that was to be implemented on each stand.
And then it goes into how the layout would be done. It has some definition of the pre-harvest layout, how the designated timber -- how the timber would be designated for harvest.

And then stream and legacy buffer prescriptions. Some of that is related to the easement, some of that is related to AMPs.

Truck road conditions, just would be an opportunity to say if there was any work needed on the truck roads. Skid trails, how those will be laid out, the expectations around those. The landings that will be used. That will be a place to mention if any new landings were going to be created, or of any special information about the landings.

Any special regulatory conditions which in this case it says there were none.

Any permit requirements, and the heavy cut is mentioned here as a requirement to this -- part of this.

And then habitat retention designation. This is related to the goals -- the conservation easement goals, also the goals that were stated in the management plan, based on that habitat retention and how that will be implemented. Any threatened and endangered species; there's a place to note that.

Any signage that would be required or notifications
that are required. And in this case, it says intent to cut notification to Forest and Parks and VLT due to the UVA.

And then conservation easement conditions, it talks about many conservation -- conservation easement conditions that need to be met. It mentions the easement requires to sixteen inch or greater logs, coarse woody debris per acre. And so this is, you know, we looked at that picture of the large downed tree. I think that was near the end here. Right here. Exhibit 93, that would be an example of trying to meet this goal across the ownership of that course downed woody debris.

And then any special closeout requirements, and in this case, it says refer to the contract.

And then the actual current use UVA forms, which are really the description and prescription from timber harvest prescription fact sheet are identical to the prescription down here. This consists of three parts, really. Each stand has a description page which is referred to as form 2, page 1. It can be a little confusing, because there could be multiple form 2 page ones because of multiple stands, and then each -this gives information about the prescription for each of the stands.

And then there's a form 2, page 2, which gives the prescription which matches the prescription of the harvest, the prescription fact sheet that's really a copy and paste
function between these two formats. It describes which stand, the year that the harvesting is expected to take place, and the harvesting that will take place.

And then this is the page that has the place for the signature of the landowner and the county forester, and also a place to indicate who prepared the plan.

And then there are maps for -- two maps that go with the plan. There's a map that's on a photo-based map. It shows the stand delineation with stand numbers. It shows roads in the area. It has the same tables as the map that you've already seen; the map we used to draw our route yesterday. But this is submitted with the harvest area identified.

And then the map that is on a topographic that also has the harvest area identified. This is the 471 acres. And each of the stands has a number. It ties to a table down here. It describes the strata, which is what we were talking about what, the overall ten-year plan, which strata was it in, not what individual stand is it, but what was the type that it was inventoried as. And then the overstory type, that would be that specific stand, what is it. And then the prescription, and there codes for different prescriptions here, and the acreage of each stand that it applies to. And then a legend describing what's being displayed on this map. It has things like landings and ground. The road is
indicated. Streams are indicated.
And then, in this instance, there's a third map that I'll call this suggested treatment map. The map that I emailed to Matt, and Dan, and Richard Greenwood that John Horton created where he took that last map and just attempted to draw on here the areas that -- where he felt the bulk of the prescription would occur. So, for example, stand 43 had overstory removal as a prescription. It had two-stage shelterwood as a prescription. He indicated here that, in this box, which we referred to yesterday as the OSR box, and again, there's a picture from our site visit. This number 56 was looking back into that what we call the OSR box. That's the -- that's this area here that we walked through yesterday. So that's indicated on this map where --

THE COURT: But you interrupted yourself. You didn't complete describing what it means.

THE WITNESS: I'm sorry. The -- so he was attempting to show where the -- if there was an area that would receive predominately that treatment, that prescription, that overstory removal within that stand, he was attempting to display where that would occur.

THE COURT: Could you repeat that, please? What does the OSR box mean?

THE WITNESS: So the OSR box, when referring to this red outlined area, is a portion of stand 43 that the forester,

John Horton who wrote the plan, and when it was requested that we try to depict where the majority of that type of harvest would occur, this is where he indicated that he felt roughly the majority of this treatment would occur. BY MR. GRAYCK:
Q. And so by treatment, what is it you mean? By treatment? What --
A. Well, if I may --
Q. That exhibit right there, what's OSR?
A. OSR is an overstory removal.
Q. And so just tell the Court what's an overstory removal? What does that mean?
A. So an overstory removal is when you have established regeneration, trees, you know, seedlings already in place, and you've usually done a preparatory cut, you've done something to allow more light. You've taken trees, cut trees out to allow more light to reach the ground. You now have regeneration. Now you take those trees that you had left the first time off the top.

Ideally, in a textbook sense, you could imagine it
looking like just a sea of thirty-foot trees, little trees under bigger trees, and you cut all the bigger trees off. That's the overstory. You're taking all of those. You're cutting all of those and you're giving all the sunlight, nutrients, everything to that next crop of trees, those small
seedlings that are there.

What we saw yesterday in the OSR box just shows that there's variability in how that can be applied. I mean, in this case, obviously, these aren't small seedlings. That this -- an overstory -- an OSR was applied here. This was in the area that was identified for overstory removal. This is not alleged to be cut contrary. It's not little seedlings, either. So there's variability in how that is applied, how the outcome can look. But the intention is you're releasing -- you're allowing to grow trees that are onsite, established at a previous -- a prior time.
Q. And Chris, what's the number of the picture you referred?
A. This is 56.
Q. 56 , okay. So just to help further explain what OSR is, you've mentioned that there are essentially two cuttings, and another word might be treatments. Approximately how many years separate the two treatments?
A. They can really vary. In an ideal case, if you harvested, and you got regeneration, and -- you had a uniform stand, you harvested, you got your regeneration established, come back in five years and do your overstory removal.

In cases like we were looking at yesterday, with that type of variability, the stand that's there now was established without a lot of regard for the type of
silviculture we're talking about. It wasn't going in and thoughtfully necessarily harvesting. It was more extracting value. And so you have pockets that have bigger trees, and pockets that have really small regeneration right now, and different species in there. And overall, you look at it, you can still apply this overstory removal type technique, but it's not as clean looking. It doesn't look as textbook. And then you throw things in there like the ice storm and the other things that mother nature likes to throw at us -disease and that further impacts this, which is really why there were multiple treatments prescribed in -- within individual stands in this area.
Q. There are a couple things I still want to ask questions about to further explain what you just testified to. So when you said there was extractive harvesting on the prior occasion, what do you mean by that? What are you talking about?
A. The -- near the end of the time that Champion owned the property, they were probably thinking more about just getting the value now. Going in and taking what was valuable then, not necessarily creating value down the road for the future, which is at odds with silviculture sometimes. Because the value -- if you are -- if you have a stand that's not ready for that type of harvesting, for final harvest, or you just go in and just take the best trees, it's opposite of what
we've been talking about already, both -- you know, in the silviculture we were discussing you really want to leave better trees. You want to promote a better forest stand so you have more value in the future. If you cut your best trees now, then you're left with lower-quality trees.

Fortunately, the sites still tend to regenerate.
You have something to work with to move forward, but you don't have that quality current stand to work with to move forward.
Q. There's another phrase; high grading. What's high grading?
A. High grading is another term for that type of cutting where you would just go in, remove all the value, and leave the lower-quality, lower-value stems. You're just really trying to extract the value out, liquidate the value in a stand of trees.
Q. Okay. Now you've talked about overstory removal in terms of two treatments, two harvesting of trees. What's a two-stage shelterwood?
A. A shelterwood -- two-stage shelterwood is also -- we would refer to both of those as regeneration cuts. The overstory removal is the final phase of the shelterwood system. So in a shelterwood system, you would do a preparatory cut to establish a regeneration. And sometimes you might do more than one. It depends on the type of trees you're trying to regenerate, the rotation that you want as far
as going back in to cut again. But the intent is you get regeneration through seeds, through sprouts on the ground by letting more light to the ground. And then you go back, once you have that, and you cut the rest of the trees.
Q. And when you --
A. The overstory. And your regeneration comes up. And that's the overstory removal. The overstory removal is the final phase of the shelterwood treatment.
Q. Okay.

MR. GRAYCK: I'd like to move the admission of Exhibit 22.

MR. DUANE: No objection, Your Honor. Thank you.
THE COURT: Plum Creek 22 is admitted.
(Amended harvest prescription fact sheet was hereby received into evidence as Plum Creek's Exhibit 22, as of this date.)

MR. GRAYCK: We're not done with Exhibit 22. I just wanted to get it admitted. And now the court may have it at its disposal. We have extra copies of Exhibit 22, if I could approach?

THE COURT: That would be helpful.
MR. GRAYCK: Okay.
(Pause)
MR. GRAYCK: Your Honor, I've taken out the exhibits which have not yet been admitted, so I'd like to give the

Court a binder of the exhibits that have been admitted, 1 through 23.

THE COURT: All right.
MR. GRAYCK: So these are for the Court.

THE COURT: For the assistant judges? Because I've got the originals.

MR. GRAYCK: Yes.

THE COURT: Thank you.
MR. GRAYCK: Thank you. Okay.
BY MR. GRAYCK:
Q. All right, so Chris, now we're going to do some more questioning about Exhibit 22. Who required or who requested that you provide a harvest prescription fact sheet?
A. No on specifically requested the harvest prescription fact sheet. This was something that Landvest I think had been using on other consulting jobs that they do and has worked well. They just proposed it to us as a way to consolidate a lot of different requirements into one format.
Q. Okay. And going to the second page of Exhibit 22, that chart we now see. How many stands comprise the Clough Brook North Harvest Unit?
A. Six.
Q. Six. And the numbers of them?
A. Stand 24 , stand 34 , stand 43 , stand 44 , stand 46 and stand 54.
Q. Okay. The alleged cut contrary is alleged to have occurred on which stands?
A. It's alleged to have occurred in stand 34, stand 43, and stand 44.

THE COURT: 44?
THE WITNESS: Portion of 44, yes.
Q. Now of the three stands alleged to be cut contrary, 34, 43 and 44, what portions of those stands, in terms of all of them or less than the entire stand is alleged to be cut contrary?
A. Less than the entire stand on each of them is alleged to be cut contrary.
Q. Okay. So cut contrary is not with respect to all of stand 34,43 , and 44 , it's just with respect to portions of them, correct?
A. Yes. That's right.
Q. Okay. What harvesting, if any, was done in stand 24?
A. Stand 24 was harvested, and the harvesting was completed in it.
Q. I'm sorry? I didn't hear you.
A. The harvesting was completed in stand 24.
Q. Okay. And what allegation, if any, has there been that stand 24 was cut contrary?
A. There hasn't been any.
Q. Okay. And so what's your understanding as to the status of the harvesting done on stand 24?
A. It was -- it's fine. It was done according to the plan, and there's no contentions about it.
Q. Okay. What about with respect to stand 46? What portion of stand 46, if any, has been harvested?
A. Stand 46 has not been harvested at all.
Q. Okay. What about stand 54? What portion, if any, has been harvested?
A. Stand 54 has the small area we actually walked by yesterday, with just a few -- very few acres that stood along the boundary.
Q. And approximately how many acres is stand 54?
A. Stand 54 is 97.4 acres.
Q. Okay. So stand 24 is complete, yes?
A. Yes.
Q. Okay. Stand 34, if allowed to continue with the Clough Brook North harvesting, would there be any area in stand 34 that could be harvested?
A. Yes, there would be.
Q. Okay. If allowed to continue with the Clough Brook North harvest with respect to stand 43, is there any area at all, or not, that could still be harvested -- stand 43?
A. There's a small portion of stand 43.
Q. Okay.
A. Still to harvest.
Q. And with respect to stand 44, if Clough Brook North harvest was allowed to proceed, what portion, if any, approximately, could be harvested?
A. There's still a large portion of stand 44.
Q. When you say large portion, could you give me some idea as to what that means in terms of numbers?
A. There's approximately thirty acres, maybe a little less of stand 44 still to harvest.
Q. Okay. Was there an occasion on the site visit yesterday when the State asked to have an observation taken as to an area not being cut contrary and I believe I remarked, "Well, it hasn't even been harvested."
A. Yes. I remember that.
Q. What were we talking about? What stand were we talking about when that took place?
A. That was the eastern portion of stand 34.
Q. Okay.
A. Near the end of the day.
Q. Okay. Okay. Now, I want to go to what's identified as -- this is form 4. Okay? Management plan summary form on the left. And on the right it says form 4.
A. Yes.
Q. Yes? And in Exhibit 22. If you want to just show it to the Court so they see what we're talking about.
(Pause)

THE COURT: Okay.
MR. GRAYCK: Okay? Okay.
Q. Chris, what is form 4?
A. Form 4 is a form that summarizes the management activities that are prescribed on each of the stands involved in the proposed harvest area. So in this case, it lists the stand numbers of the six stands we were talking about. It lists the acreage for each of those stands; the condition, even aged or uneven aged, which refers to the structure of the stand that $I$ had mentioned earlier in the comparison of uneven-aged management versus even-aged; the predominate-sized class which each of these -- the next page has a definition for a lot of these blocks that are filled out. It has the definitions of the acres, and uneven age, and even age, but then also the forest types and a code for each of those, and the management and activity codes. So those relate to this page. So this is a summary of the key information for each of the stands from an inventory point of view, and the harvest prescriptions that are prescribed for those stands, and the scheduled or anticipated date of harvest of the stand.
Q. In fact, on form 4 at item 9, can you please read that out loud for us?
A. Item 9 says: "Stand information. This information is for data entry only and does not override what is in actual
Q. Okay. To what is this referring to as the actual plan?
A. The other forms that follow this, the form 2, page 1 descriptions, and the form 2, page 2 prescriptions for each of the stands.
Q. Okay. So now we're going to start talking about UVA form 2, page 1. All right? And so this is a UVA form, correct?
A. It is.
Q. Okay. And so the first form 2, page 1, is with respect to which stand?
A. It's with respect to stand 24 over on the far lefthand side under the Town of Lemington, there's a stand number, it say LM0324. That's stand 24. The last two numbers -- the first number -- the first letters indicate the town. The second numbers indicate the compartment or the general area in that town from the original ten-year plan map. And then the final number is the stand number, so in this case it's 24.
Q. Okay. And the next form 2, page 1, is with respect to which stand?
A. The next one is with respect to stand 34.
Q. Okay. All right. So now I want to ask you some very specific questions about form 2, page 1, with respect to stand 34. And I just want to make sure that I've done a
sufficient job -- okay.
MR. GRAYCK: Thank you, Your Honor.
Q. Okay. Now, there's an item here that says sand history. Can you explain to me what that means, and can you explain to us what it means by harvested by Champion Paper Company approximately twenty, twenty-five years ago. What's that all about?
A. This is an estimate of what had happened in the stand before. If you remember the exhibit with the stump, which was Exhibit 78 of the photos, that stump I had said was from a previous harvest. This would be referring to the estimate of when that previous harvest happened; so twenty to twenty-five years ago Champion was in this area. We see evidence of that. For example, these stumps, the regeneration -- the height of the trees that grew back from that harvest, things like that.
Q. Okay. Now it says forest health conditions. The stand has high-residual stand damage. Beech bark nectria complex. What does that mean? What do those two sentences mean?
A. There's -- yeah, there's two things here. So the objective here is to describe, as it says, any conditions that affect the stand from a health point of view. One of the things noted here is this high-residual standard damage. If you remember the picture of the --
Q. Just slow -- because my --

MR. GRAYCK: I have extra copies of the photos which have been admitted. I'd like to prove them to the Court, if that's acceptable.

THE COURT: Yes, that would be helpful. Thank you.
MR. GRAYCK: Thank you, Your Honor.
MR. CHENEY: Does Judge Teachout have a copy?
MR. GRAYCK: Your Honor, do you --
THE COURT: Yes, I have the originals.
MR. CHENEY: Okay.
A. So for example, on number 85, we were talking about scarring, and I mentioned there were two ages of scars there. BY MR. GRAYCK:
Q. Chris, just give the Court an opportunity to get to photo 85, okay?
A. Sure.
Q. I just want to -- okay, go ahead.
A. And the older of those would have occurred during that previous harvest. And that's one of -- that's a type of residual stand damage. That means the damage that was leftover from the last time the stand was harvested.

It could also be referring to breakage in the tops of trees. We've mentioned the ice storm had a -- caused a lot of breakage. But also past harvesting can cause breakage. It can have impact to roots. There can be compaction or just
cutting of the roots if there's rutting. That can cause a tree to be damaged and not grow well after the fact. So those are all types of residual stand damage.

Stand damage that occurred at the last time the area was harvested, and it was noted here that there was a high incidence of residual stand damage. Unfortunately, that's not uncommon from what I've seen on these former Champion lands. Especially the wounding in the base of the trees.

The other thing that's noted here is the beech bark nectria complex. This is a disease that affect beech trees and has pretty well made beech a worthless species for us from the point of view of logs and, you know, growing high-value products, because so much of it is killed by or susceptible to and infected by this nectria complex. And what happens is there an insect, a scale insect that attaches to the tree. And then disease is introduced through the -- through that insect. And it's very widespread; from the Maritimes, all the way over through our forests, unfortunately. But in our beech, in particular, we have a high incidence of this nectria, which either can kill a tree, or just can degrade the value of it by reducing -- by causing lesions, basically, on the bark of the tree that go into the tree. The value of the tree, like I said, is in that -- for a saw log -- is in that bottom part of the tree, and that's where this infects. So it causes real damage.

And the other thing that this disease has done is it's meant there really isn't a market for beech. Even if you have a really good, nice beech tree, if you cut it down and cut it as a saw log, there's not necessarily anybody that wants to buy it, because there aren't enough of them out there. So it makes beech a lower-value species. But this bark nectria complex is referring to that disease. So that was observed in this stand 34.
Q. Okay. And given that the stand had high residual stand damage and presence of beech bark nectria complex, overall, how would you characterize the health condition of this stand?
A. It was not a very healthy stand.
Q. Let's go onto where it says grand list description. What's the number there?
A. It says 86,226 .
Q. 262 ?
A. 62, I'm sorry.
Q. Okay. How many acres are -- to what is that 86,262 referring to?
A. That's referring to the total Plum Creek ownership.
Q. In?
A. In use value.
Q. In Vermont?
A. In current use.
Q. In Vermont?
A. In Vermont in current use.
Q. Yes. Okay. So it's -- does that number reflect the specific grand list description of stand 34 ?
A. No. There isn't a grand list description of stand 34.
Q. Okay. All right. Now let's go to stand description, and there's two categories. One's called even aged, and then it's called uneven aged. First, we've talked a little bit about this. Can you just explain again what's even aged?
A. The even aged and uneven aged are two different management strategies for growing and harvesting timber. Even aged is going in and cutting -- basically, you're keeping all of the trees pretty much the same age or the same size, with the exception of, at one point, when you're regeneration the stand, you might have two age classes out there; the big trees that are over top and the little seedlings that are coming back. But generally, you have two distinct age classes of trees. When you get more than that, then you start to go into uneven-age management, and there's a strategy in order to keep the stand more complex as far as age structure goes, size structure, the trees that are in it. And that involves doing a different type of management and required different data for UVA -- even aged versus uneven aged.
Q. In fact, you mentioned as required with by UVA -MR. GRAYCK: Your Honor, the State's trial exhibits at number 10 provide the use value program manual -- use value appraisal program manual 2006. And I have also in my exhibits, a little bit farther down the road, the same exhibit. I'd like to ask the witness question in relation to the manual. I'm happy to use the State's copy. I don't know what you want it marked as or numbered as, but I just would like to ask the witness some questions about this manual.

MR. DUANE: I think it should be offered and admitted, if there's no objection, and I would have no objection to it being admitted.

MR. GRAYCK: Okay. Okay. In that case, I guess what I would like to do is offer it at Exhibit 22A, and would move the introduction of Exhibit 22 A as the use value appraisal program manual.

MR. DUANE: No objection, Your Honor.
THE COURT: And is there a year?
MR. GRAYCK: 2006. Yes, Your Honor. Its effective date is March 31, 2006.

THE COURT: Okay. Plum Creek 22A is admitted.
(Use vale appraisal manual was hereby marked for
identification and received into evidence as Plum Creek's Exhibit 22A, as of this date.)

MR. GRAYCK: And if the Court would just allow me,

I'm going to get copies of this exhibit so that the board members have it as we proceed with the examination.
(Pause)
MR. GRAYCK: So I'd like to provide copies of Exhibit 22A.

THE COURT: Um-hum.
MR. GRAYCK: And these are three-hole punched, so if the Court would like to put them in the binders, they can.

And Your Honor, I don't know if you want the
official one or do you want this one?
THE COURT: Do we have one that's been admitted?
MR. GRAYCK: We moved it -- yes, there it is. I apologize.
(Pause)
THE COURT: Go ahead.
MR. GRAYCK: Thank you, Your Honor. I'd ask the Court if they could locate page 28 , as well as page -- well, it's 31. Page 28 and 31.

BY MR. GRAYCK:
Q. And Chris, if you could do the same? So page 28 should say minimum standards for forest management and regeneration effective April 15th, '06. And page 31 would say minimum standards for forest management plans effective 4-1506. Okay?

Chris, we're talking about right now the description
of the stand, correct?
A. Yes.
Q. Because we're on -- we're on what? We're on page 1 of form 2 for stand 34, right?
A. We are.
Q. Okay. And you just started talking about even-aged or uneven-aged management, correct?
A. Yes.
Q. Okay. Can you please find for us and show us, in the 2006 manual where it's going to discuss even or uneven aged with respect to forest management plans?
A. On page 33.
Q. Thank you.
A. Number 11.
Q. Okay. So when we look at UVA form 2, page 2, and we see it described even aged or uneven aged, how does that correlate to page 33 of the 2006 manual? Is it talking about the same thing, or is it talking about two different things?
A. It's talking about the same thing.
Q. Okay. So looking at the manual on page 33, it says long-range objectives must include at least the following. Even-age management. Present stand age and rotation age. What does -- what's that mean?
A. That means that you need, if you're doing even-age management, if you check that box, you need to indicate that,
that that was your choice. And then also give the present stand age, so the age of what is there, which is really an estimate. The way trees grow in the northeast, you can have very small trees that are very old, and you can have bigger trees that are the same age. So it's -- but it's an estimate based on knowledge of the size of what the current age of the stand is, and also the rotation age, which would be when you would expect to harvest that and start a new stand of trees.
Q. In fact, if you could look on the right-hand side of form 2, page 1 for stand 34, there's a heading: long-range objective. And what is the long-range objective for stand 34 ?
A. So it indicates even-age management with the present stand age between seventy and seventy-five, and a rotation age of eighty years.
Q. And how, if at all, is the information listed under long-range objective on form 2, page 1 for stand 34 related to page 33 of the 2006 manual?
A. Page 33 is part of the minimum standards for forest management plan. So this part of form 2, page 1 addresses that requirement that you give -- provide your long-range objectives and, under those, the type of management; even age or uneven age.
Q. Of the information you've just described, what portion of it, if any, is in the ten-year concept plan?
A. It's in the concept -- it's in the management plan
in concept. That this is the way these types of stands -like I said, there may be multiple options of how they will be treated, and the management plan -- the ten-year management plan talked about doing even-age management on quite a large number of acres in the first portion of the implementation of that plan.
Q. And so what portion, if any, is specific to stand 34 in form 2, page 1?
A. Nothing in the ten-year management --
Q. In -- in --
A. In the concept plan. The ten-year management plan would have been specifically saying that that's what we would do on this stand. It was a concept. It wasn't saying -- it was never intended to say, "This is what we'll do on each of these stands." That was left to the amendment, which is what we're looking at now. Which is, when we give the specific data about the stand that justifies the treatment.
Q. Okay. Now --

THE COURT: Excuse me. And what did the -- what was your testimony just now about what the concept plan said?

THE WITNESS: It gave a general idea of the management that would occur across the property based on the distribution of hardwood and softwood, and the condition of the stands. But it didn't go down to the specific stand level. It left that until the amendment.

THE COURT: All right. But did you say what that general plan was or not?

THE WITNESS: That's the approved ten-year management plan for the property.

THE COURT: Right. But did you identify anything specific?

THE WITNESS: No, I didn't.
THE COURT: Okay.
BY MR. GRAYCK:
Q. So now, if we look at what's listed as the schedule of treatment on form 2, page 1, what does that say?
A. It says type and year, and it says shelterwood as a number 3, and 2011.
Q. Okay. What does that mean?
A. The number 3 is the number that refers to the -that's the code for shelterwood, as we saw on the summary form.
Q. Can you show the Court where that 3 code is?
A. If you go back to the summary form, which was form 4, this form, that code, for stand 34 is the second stand listed, and it has management activities 3. 3 refers to a shelterwood.
Q. Okay. So now we go back into the middle. We've talked about even age, and it says forest height H3B. What's that mean?
A. That's a code that's used to find the -- the trees that are there, hardwood or softwood, and it's sort of a percentage -- a general percentage of those. So in this case, it's H, so it's greater than seventy-five percent hardwood in this stand. 3 is a size class. You have 1 through 4, so 3 would be on the small saw log size of that. It's a size -- it represents the size of the trees, the average trees that are up there. And the B is a density. So B describes -- an A would be fully stocked, $a \operatorname{B}$ is less trees out there, C would be even less trees, D would be a very scattered stock of trees.
Q. Okay. So stand 34 in UVA form 2, page 1, prior to harvest had what level of stock?
A. B level of stock.
Q. And now at the bottom there's two numbers; total BA and AGSBA. What do those terms mean?
A. BA is basal area. And this is a measure of the volume of trees on the site. And it's -- so this is saying that they're -- it's a measure -- it's actually a square-foot measure. So this is in square feet. This is eighty-two square feet and thirty-five square feet. And it refers to the area that the stem of the tree takes up, four and a half feet off the ground. We refer to that as diameter breast height. And it's a common term of measurement in forestry. That's the -- that's where you measure trees when you're inventorying
and things like that. You measure at diameter breast height, or DBH. So in -- what this is measuring is the area of that stem. The area that that stem is taking up in square feet.

And if you took an acre of ground, you would have eighty-two square feet of solid wood, basically, on that acre.
Q. And when you say stem, I always think of something little and thin, but what do you mean when you say stem?
A. The trunk of the tree.
Q. Trunk of the tree.
A. So the -- you know, on a twelve-inch tree, that we would be -- when we said it was twelve inches, we would be referring to that at four and a half feet off the ground. So twelve inches across in diameter. And if you cut it off right there, that area that the solid wood is taking up in square footage would be the basal area for that one stem. So if you put all the stems together on an acre, in this case, the measurements indicate there's eighty-two square feet. And we use those measurements to help inform our decisions on management and on prescriptions.

The second number, the thirty-five, the AGS is acceptable growing stock. So that's what we described earlier, the trees that have now, or can contain in the future a saw log in that lower portion of the tree. And those trees, in this case, thirty-five square feet of the total eighty-two are acceptable. Are trees that could grow into or now do
contain a saw log.
Q. And what's the relationship, if any, between acceptable growing stock and total basal area when the numbers in relation are eighty-two and thirty-five. What, if anything, are those numbers telling you as a professional forester?
A. Thirty-five is a low number for acceptable basal area. It limits your options of what you can do to carry this stand forward without carrying a lot of unacceptable poorquality trees. To me, it indicates this is time to regenerate this stand, to do something -- a type of harvest that would either start a new stand, or if you have the seedlings we were talking about before, to release those and let them become your next crop of trees on those acres. You have to remember part of that thirty-five may be trees that are mature and have saw logs that are not gaining any more value. So you wouldn't -- from a financial point of view, you wouldn't want to leave those now, because they are no longer gaining value. So your investment has reached its maturity in that specific tree. So a portion of this thirty-five, that number may -probably is quite a bit lower than thirty-five. It could be twenty or fifteen. You know, we don't know from this, the way the data is represented here. But I'm sure that a portion of those were actually trees that also needed to be harvested.
Q. And I think it was pretty obvious to everyone, but in relation to the area the stem takes up versus the healthy crown of a tree, you know, when you look at the given acre, if it has healthy trees on it, what's taken up most of the room; the crowns or the stems?
A. Yeah, the crown by far takes up -- so I mean, eighttwo square feet actually isn't a very big area. And a hundred square feet would be an easy number to work with. But a hundred square feet, that would be a fully-stocked stand in some instances where, when you walked underneath it, it would be all shady, because those crowns are so big, they're intercepting all the light that's coming down. So we use that, as I said, as an indicator. It helps inform our management decisions. But you have to realize the crown of the tree spreads so far beyond the stem of the tree, the bowl of the tree, that's what's taking up most of the room. And this is a surrogate that helps us to think about light and crowns and how we're getting the regeneration we want, creating the gaps we want, things like that.
Q. Okay. So now at the bottom of this form it has description of stand conditions. Can you explain to us, you know, what this is telling us, what this is telling you as a professional forester?
A. Sure. So this is -- there's specific categories above, and then this is kind of a summary of the condition of the stand right now. And for stand 34 it says stand 34 is a
well-stocked northern hardwood type. That means it contains species we associate with northern hardwoods. With total basal area of eighty-two square feet. Of that, thirty-five square feet is acceptable growing stock. The stand is dominated by sugar maple, yellow birch, beech, balsam fir and red spruce. So it gives the dominate species that we see out there. The mean stand diameter is 8.4 inches. The stand is weighted towards the medium saw timber class. So it's not big saw log trees, it's more that medium size. The current stand has a high level of residual stand damage, which we spoke about before, and a fair -- it says "about," it should be "amount" of crown dieback.
Q. What's crown dieback?
A. We saw crown dieback yesterday. I am not sure if any of these pictures really captured it. On Exhibit 67, you need to look at yours, I think, to see this, because it's on the margin of the photograph here. There's a crown -- there's a crown of the tree on the far right-hand side, the very top of the tree, and you can see branches that have no leaves on them. That's crown dieback. You'll have branches up there, no leaves on them, the crowns are in decline. There's a number of things that could cause that, but it's an indicator of load vigor in trees. Trees that aren't good, healthygrowing trees.
Q. And Chris, is this what you're referring to as --
A. Yes. This right here.
Q. Can you show it to the Court? Okay. And just -- I think you used another term of art. You said low vigor, am I right?
A. I did say low vigor. It's -- vigor is the health -overall health of the tree. Vigor relates to how well the tree is growing. A vigorous tree would be putting on growth and have a good crown. And if you -- if its crown started to get crowded by its neighbors and you thinned out around it, it would take off and continue to grow. So it's that idea of, you know, healthy, good-growing tree. Low vigor would be the opposite of that. You know, a tree that is either in decline, like is mentioned here, with the decline seen in the crown, or has obvious injuries or things that are causing the tree not to grow quickly. It could just be a tree that was always under other trees. It's what we would call a suppressed tree. And even if you give it lots of light, it won't respond, it won't grow, and all of a sudden it will take off and start becoming a vigorous tree.

So it's really a term of science, I would say, but I can understand why you would call it a term of art, because it involves understanding a number of conditions -- health conditions and past practices that could impact the vigor of the tree.
Q. The next sentence says the understory varies greatly
in stocking of acceptable regeneration with small pockets of sugar maple seedling and saplings in a patchy distribution around the stand. What does that mean?
A. So this is just documenting the fact that there's acceptable regeneration in this stand, but it's not everywhere. There's places that have it, places that don't. When it says acceptable regeneration, that's talking about acceptable species of regeneration. So there's certain things that aren't acceptable species; pin cherry, striped maple, those are not a tree species that will grow into a valuable product. They aren't an acceptable regeneration species. So the stock -- it says it varies greatly in stocking and it talks about pockets. So there's places with more regeneration, places with less regeneration, places with pockets that have a lot, pockets that have sugar maple seedling and saplings, patchy, scattered through the stand. So you should get the impression of just what it says, that patches throughout this stand have varying degrees of amounts of regeneration, types of regeneration, and that would make sense from the past harvest practice and not really thinking about a uniform treatment. You're thinking about just going in, cutting the valuable trees. So some places you might make a big opening, some places you might make no openings, and that would affect how much and the type of regeneration that would have come back and responded on that -- on these
different areas of stand 34.
Q. Chris, how, if at all, does this UVA form 2, page 1 for stand 34 describe a stand that is variable?
A. In the ways I just mentioned. Really, the stand conditions are where you read most of the variability, but the harvest history would indicate that this probably is going to be a variable stand. So those are two indicators.
Q. Okay. Now, I'd like you to go to the UVA manual, and this time, I want you to start at page 28, which is the minimum standards for forest management and regeneration. Okay?
A. Um-hum.
Q. Now, text begins on page 29. There is a paragraph that's headed practices.
A. Yes.
Q. Or a section that's headed practices on page 29.

There are three practices which are identified. Which of these three, if any, was applied to stand 34 ?
A. The regeneration, even-age management scheme.
Q. Okay. So in other words, it says regeneration, even-age management and uneven-age management. When we go to look at the prescription and we start reviewing it, what kind of harvest was prescribed? Regeneration? Even-age management? Or uneven-age management?
A. The prescription for this stand was -- well, it was
regeneration, even-age management.
Q. Okay. So can you read regeneration?
A. Regeneration says, for newly regenerated stands, the successful establishment of acceptable species must not be less than 350 stems per acre well distributed throughout the stand three years after the regeneration cut is made or for initial eligibility. 350 stems per acre equals an average spacing of eleven feet.
Q. Okay. Now I'd like you to turn to UVA form 2, page
2. Okay?
A. Um-hum.
Q. Can you show the Court where the management practice to be accomplished during the next ten year plan for stand 34? I just want to make sure we're all in the same place.
A. It's the second one down.
Q. Okay.
A. It says stand 34 in the far left.
Q. Okay. Tell us the treatment that's prescribed for stand 34. Read it out loud for us.
A. It says stand 34 will receive a two-stage shelterwood, even age UVA code 3. The stand lacks an acceptable amount of regeneration and the majority of the overstory is unacceptable growing stock. A low-density shelterwood with the residual basal area of thirty to forty square feet will be utilized to discourage the establishment
of beech in the understory. The shelterwood will be regular in distribution and will target sugar maple and yellow birch with large crowns to provide shade and seed distribution. The portions of stand -- portions of the stand will also receive one- to two-acre patches where quality and stocking are not -this should say "sufficient" -- are not sufficient for a shelterwood. The patches will not affect the overall stand residual basal area of thirty to forty square feet.
Q. Okay. First, how, if at all, does the stand description influence or determine the stand treatment that you just read. What's the relationship between the two, if any?
A. The stand description talked about the amount of acceptable growing stock, or the acceptable basal area that was out there. This is referring to doing a harvest that would leave, across the stand, an average of thirty to forty square feet. So that's a basal area measurement. It says that the -- it lacks acceptable amount of regeneration so there's -- it's recognizing there's places that don't have enough regeneration to just work with, and cut, and release at this point. It also talks about portions of the stand receiving of up to two-acre patches where there's not sufficient stocking and quality, so those issues we talked about with ice damage, previous logging damage, crown dieback, mostly beech, those areas would be the low-quality areas that
would receive -- be targeted to receive patches which are clear cuts.
Q. And how, if at all, does this treatment for stand 34 set about to achieve the goal for stand 34 as set forth in its description?
A. I'm sorry; I am not sure what goal you're referring to.
Q. Well, just to the extent that it's going to receive a two-stage shelterwood, why is it receiving that treatment?
A. To begin that regeneration process across the stand.
Q. And why --
A. So the shelterwood would establish regeneration where there isn't any and get that growing.
Q. And why regeneration? Why is that -- why is that the choice here?
A. There's not enough -- as I mentioned before, there's not enough quality in this stand, according to the numbers, and some of that, the quality is mature, so therefore, we need to restart the stand, get a good, vigorous stand growing so that we don't just have a stagnant stand of trees that's not gaining any value.
Q. Okay. In other words, it's to grow a new forest, at least with respect to this stand.
A. Yes.
Q. Okay. Then --

THE COURT: We'll stop now. It seems like an appropriate breaking point.

I do want to ask -- you may step down. I do want to ask one question now that we've had a number of exhibits admitted. And this is in relation to the memos -- pretrial memos that had been filed. One of the exhibits shows a 200-foot-wide strip of land deeded to VELCO's predecessor, apparently now owned by VELCO.

MR. GRAYCK: Yes, Your Honor.
MR. DUANE: Yes.
THE COURT: Is that east of all of the -- of the entire 471 Clough Brook area? West, I mean.

MR. DUANE: West.
MR. GRAYCK: West, Your Honor.
THE COURT: It's all west?
MR. GRAYCK: It's west.
THE COURT: But do I understand correctly from the maps that it bisects the 56,604 acres?

MR. GRAYCK: That is Plum Creek's position, Your Honor, yes.

MR. DUANE: Well, it goes -- I'm sorry, Your Honor, it goes through it.

THE COURT: And what is -- it goes through it.
MR. DUANE: Yes.
THE COURT: So but is --

MR. DUANE: But $I$ don't know if bisect is the --

THE COURT: Well, whatever.
MR. DUANE: It's not fifty-fifty.
THE COURT: Okay. I guess the question is, is the State taking the position that, despite the running of the strip, two-hundred-foot-wide strip through --

MR. DUANE: Yes.
THE COURT: -- the 56,604 acres, that the 56,604 is still all contiguous?

MR. DUANE: Yes, Your Honor.
THE COURT: Okay. And on what basis are you taking that position?

MR. DUANE: The State's interpretation of the Current Use Advisory Board's rules that talk about contiguity and land that's not contiguous.

THE COURT: Okay. But if you have another owner that has a parcel between two pieces, how are those two pieces contiguous?

MR. DUANE: Because the rules say that a power line does not make a parcel non-contiguous. And the actual VELCO document, in addition, factually, allows Plum Creek to cross, enter, harvest, log, go back and forth across that strip. They're not blocked off. And if VELCO was ever to give up that transmission corridor, the land reverts back to Plum Creek.

THE COURT: According to the deed?

MR. DUANE: According to the deed. And we had
looked at it quite thoroughly and took the position that it does not make the parcel non-contiguous. Thank you.

THE COURT: Okay. I'm not asking you to argue that point today. I just was -- a point was raised in Plum Creek's pretrial memo about the contiguous land, and not addressed in the State's memo, and then the exhibit came along.

MR. DUANE: Yes.
MR. GRAYCK: Understanding what Your Honor has just said, there's one point of clarification that $I$ would press the Court to be aware of. Attorney Duane used the word parcel in reference to the Current Use Advisory Board rules. I believe the Current Use Advisory Board rule that's specific to the right-of-way actually uses the word tract, and we will have those rules available for the Court, and we can then see whether it uses parcel or tract.

THE COURT: Okay. All right. You'll have an opportunity to --

MR. DUANE: Yes.
THE COURT: -- address that issue more fully later. I just was trying to get a general sense of positions. All right. Thank you.

MR. DUANE: Your Honor, excuse me. One question?
Perhaps the clerk can inform us. Assuming the courthouse will
be locked tonight, can we leave a number of our materials here on our tables or chairs? I don't know if there's any --

THE COURT: Yeah, that's fine. No one else is -MR. DUANE: I don't know if there's anything scheduled for tomorrow morning.

THE COURT: No, nothing else is scheduled.
MR. DUANE: Okay, great. And that would be okay if we did that?

THE COURT: That's fine.
MR. DUANE: Thank you very much.
THE COURT: And we'll continue at 9 o'clock.
MR. DUANE: Okay. Thank you.
COURT OFFICER: All rise.
(Proceedings concluded at 4:30 PM)

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| 11;167:12;169:9,17; | 83:5,21;84:2;88:1; | 29:23;45:12;53:9,10; | 28:18,18,19,23,25; | 1999 (1) |
| 173:1;174:20;177:6; | 103:11,12;104:7; | 95:8,10;118:4;127:2; | 29:3,6,19;182:3 | 15:2 |
| 180:15;181:10;184:23; | 118:25;130:18;154:6 | 143:16,19;144:11,14; | 10:27 (1) | 19th (2) |
| 187:10,24;190:2; | woody (5) | 167:18,22;177:6,13; | 59:3 | 66:3;68:3 |
| 191:3,15;192:13; | 121:15,15;130:1; | 185:14;196:6 | 10:45 (1) |  |


|  |  | 6;184:4;185:10, | 83:18,23;102:19,23; | 7 (15) |
| :---: | :---: | :---: | :---: | :---: |
| 2 | $\begin{gathered} \text { 220-acre (1) } \\ 22: 19 \end{gathered}$ | 11,16;186:7;187:20; | 103:7,9;104:1,2 | 17:21,23;18:3,17,25; |
|  |  | 188:12;191:25,25; | 54 (16) | :3,8,10,15;21:24 |
| 2 (30) | $\begin{gathered} 226(\mathbf{1}) \\ 22: 16 \end{gathered}$ | $\begin{aligned} & 195: 1,3,18 ; 196: 13,17, \\ & 19,20 ; 198: 3,4 \end{aligned}$ | $\begin{aligned} & 84: 4,7,14 ; 90: 8 ; \\ & 95: 20,21,24 ; 103: 22 \end{aligned}$ | 24:4;30:2,13;32:5; |
| 10:19,20;11:11; |  |  |  | 40:25 |
| 12:10,13,15;62:14; | $\begin{array}{r} 22: 16 \\ \mathbf{2 2 8}(\mathbf{1}) \end{array}$ | 350 (2) | $\begin{aligned} & 111: 17,18,18 ; 171: 25 ; \\ & 173: 8,10,13,14 \end{aligned}$ | $70 \text { (3) }$ |
| 163:18,20,23,23;176:4, | 22A (5) | 196:5, | $55(6)$ | 71 (2) |
| 5,5,8,11,20,24;184:4, 15,15;185:10,16,19; | $\begin{aligned} & 182: 14,15,21,24 ; \\ & 183: 5 \end{aligned}$ | 18:8 | $\begin{aligned} & 84: 12,20 ; 95: 21 ; \\ & 102: 19,23 ; 104: 4 \end{aligned}$ | 71 (2) 91:2;111:24 |
| 186:8;187:11;188:12; |  | 4 |  | 72 (4) |
| 195:2;196:9,10 | 23 (6) |  | 56 (7) | $91: 13,18,23 ; 112: 16$ |
| $2,500(2)$ | $\begin{aligned} & 134: 12,17 ; 135: 11, \\ & 13,15 ; 171: 2 \end{aligned}$ | 4 (15) | $165: 11 ; 167: 14,15$ | 72-12-10Excv |
| 2,500-(1) | 24 (10) | $\begin{aligned} & 10: 19,23 ; 11: 18 \\ & 13: 10 ; 42: 20 ; 43: 3,4,16 \end{aligned}$ | $\begin{aligned} & \mathbf{5 6 , 0 0 0}(\mathbf{3}) \\ & 32: 5 ; 41: 15 ; 42: 7 \end{aligned}$ | 73 (2) |
| 98:7 | $\begin{aligned} & 171: 24 ; 172: 18,19 \\ & 22,24 ; 173: 2,15 ; 176: 13, \\ & 15,19 \end{aligned}$ |  |  | 91:24;92:3 |
| 2,500-foot (2) |  | $\begin{aligned} & 13: 10 ; 42: 20 ; 43: 3,4,16 ; \\ & 174: 21,22 ; 175: 4,5,22 ; \\ & 187 \cdot 20 \cdot 188 \cdot 5 \end{aligned}$ | $\begin{gathered} \mathbf{5 6 , 4 0 4}(\mathbf{1}) \\ 27: 20 \end{gathered}$ | 74 (4) |
| 116:8,12 |  |  |  | $\begin{aligned} & 91: 6 ; 92: 12,17 ; \\ & 112: 20 \end{aligned}$ |
| 2:35 (1) | $\begin{gathered} 15,19 \\ \mathbf{2 5 0}(\mathbf{1}) \end{gathered}$ | $\begin{aligned} & \text { 187:20;188:5 } \\ & \mathbf{4 : 3 0} \text { (1) } \end{aligned}$ | 56,604 (14) |  |
| 150:4 | 116:10 | $202: 14$ | 27:15;29:21;30:10; | 75 (4) |
| 2:58 (1) | $\begin{gathered} 26(\mathbf{1}) \\ 114: 22 \end{gathered}$ | $\begin{array}{\|r\|} \hline \text { 4-15- (1) } \\ 183: 23 \\ \hline \end{array}$ | $\begin{aligned} & 33: 1,11,18 ; 39: 3,8,12 \\ & 76: 15 ; 130: 12 ; 199: 18 \end{aligned}$ | $\begin{aligned} & 92: 24 ; 93: 4 ; 94: 8 ; \\ & 112: 24 \end{aligned}$ |
| 10(6) | 262 (1) | 43 (32) | 76:15;130:12;199:18; $200: 8,8$ | $76 \text { (3) }$ |
| 20 (6) <br> $155: 18 ; 156: 4 ; 157: 7$, <br> 8 | 180:17 | $\begin{aligned} & 84: 16 ; 85: 5,17,22 ; \\ & 90: 8,22 ; 97: 22 ; 100: 9 \end{aligned}$ | 56,604-acre (2) | $93: 5,14 ; 113: 24$ |
| 8,15,17 | 26th (3) |  | 29:24;32:16 | 77 (2) |
| 200 (1) | 113:20;115:6;122:8 | $\begin{aligned} & \text { 102:11;104:20;105:10; } \\ & \text { 106:12;108:20,22; } \end{aligned}$ | $\begin{gathered} \mathbf{5 6 , 6 4 0}(\mathbf{1}) \\ 42: 10 \end{gathered}$ | 93:24;94: |
| 16:16 | 28 (5) |  |  | 78 (7) |
| 200-(1) | $\begin{aligned} & \text { 66:22;183:17,18,20; } \\ & 195: 9 \end{aligned}$ | $\begin{aligned} & 111: 18,18,19 ; 115: 25 \\ & 119: 9 ; 122: 15,17,19 \end{aligned}$ | $\begin{aligned} & 57 \text { (5) } \\ & 85: 11,15 ; 105: 8,9,25 \end{aligned}$ | $\begin{aligned} & 94: 13,18 ; 96: 9,10 \\ & 114: 9,10 ; 177: 10 \end{aligned}$ |
| 199:6 |  |  |  |  |
| 2000 (1) | 28th (1) | $123: 11 ; 165: 7,25$ | 58 (5) | 79 (2) |
| 22:3 | $\begin{gathered} 4: 23 \\ \mathbf{2 9}(\mathbf{2}) \end{gathered}$ | 171:24;172:3,8,14; | 85:19,24;86:1; | 96:15,207th (2) |
| 2001 (2) |  | 173:22,23,24 | 106:10,10 |  |
| 22:15;48:18 | 195:13,16 | 44 (14) | 59 (3) | 127:7,14 |
| $\begin{aligned} & 2005(3) \\ & 22: 15,18,19 \end{aligned}$ | 3 | 90:22;103:22; <br> 108:21,22;110:19; <br> 171:24;172:4,5,6,8,14; | 5:25;86:7,11 | 8 |
|  |  |  |  |  |
| $\begin{aligned} & 2006 \text { (8) } \\ & 22: 17 ; 137: 10 ; 182: 4, \end{aligned}$ | 3 (23) |  | 6 (6) | 8 (12) |
| $19,20 ; 184: 10,17$ | 10:19,22;11:14; | $46(4)$ |  | $21: 4,13,14,15,18$$22 \cdot 24 \cdot 23 \cdot 13,15,17$. |
| 185:17 | 12:19,20,21;14:1;18:4, <br> 12,19,19,20;57:2;61:8; | 171:24;173:5,6,7 | 17:1,7,8,15,17,19 |  |
| 2007 (2) |  |  |  | 8.4 (1) ${ }^{\text {26:20;36:13;41 }}$ |
| 35:17;56:12 | 67:18;187:13,15,18,21, | 126:10 | 86:17,2 |  |
| 2008 (6) | 21;188:5,5;196:21 | $\begin{aligned} & 23: 24 ; 40: 3,25 ; \\ & 161: 16 ; 164: 15 ; 199: 12 \end{aligned}$ | $\begin{aligned} & 87: 2,5 ; 106: 24 \\ & \mathbf{6 2}(\mathbf{6}) \end{aligned}$ | 192:7 |
| 46:18;47:6;49:2; | $\begin{gathered} \mathbf{3 0 - 6 - ( 1 )} \\ 4: 4 \end{gathered}$ |  |  | $\begin{aligned} & 80(5) \\ & 96: 25 ; 97: 4 ; 114: 17, \end{aligned}$ |
| 125:1,1;127:8 |  |  |  |  |
| 2009 (10) | 31 (4) | $\begin{array}{\|c\|} \text { 471-acre }(\mathbf{1}) \\ 40: 7 \end{array}$ | $\begin{aligned} & 87: 13,17 ; 107: 22,22, \\ & 23 ; 180: 18 \end{aligned}$ | $\begin{array}{r} 17,19 \\ \mathbf{8 0 0}(\mathbf{2}) \end{array}$ |
| 64:7;150:18;151:13; | $\begin{gathered} \text { 31-6-11 (1) } \\ 4: 6 \end{gathered}$ |  |  |  |
| 153:2,3,10,14;154:16; |  | $\underset{27 \cdot 8}{\text { 471-area }(1)}$ | 63 (3)87:22;88:3;107:9 | 27:22,22 |
| 159:25;160:19 |  | 5 |  | $\begin{aligned} & 81 \text { (5) } \\ & 97: 9,15 ; 115: 15,16, \end{aligned}$ |
| $\begin{aligned} & 2010(5) \\ & 66: 3 ; 68: 3 ; 113: 23 ; \end{aligned}$ | 33 (5) |  | $\begin{aligned} & 64(3) \\ & 88: 7,12 ; 108: 15 \\ & 65(4) \end{aligned}$ | 97:9,15;115:15,16, 17 |
| 66:3;68:3;113:23; <br> 114:22;118:20 | $185: 17,18$ |  |  | 812 (3) |
| 2011 (4) | 34 (67) | 5 (16) | 88:19,23;108:15,16 | 27:23;28:1;30:17 |
| 53:8,20,25;187:13 | 69:1,10,13,21;72:15, | 10:18,19,25;11:7,20; | 66 (4) | 812-block (1) |
| 2012 (5) | 16,20,25;73:3,20;74:3, | 13:4;16:13,14;17:9; | 89:2,6;109:7, | 27:19 |
| 38:19,21;39:19 | 4,6,12;91:4;97:22; | 18:10,19;43:16,20; | 67 (3) | 82 (4) |
| 50:17,22 | 98:6,14,22;100:19; | 44:4;159:25;160:19 | $89: 10$ $68(5)$ | 97:20,25;115:22,24 |
| 203 (1) | 101:3,23;102:5,11; | 5,000 (3) | 68 (5) | 82-(1) |
| 50:22 | 112:1;115:25;116:8; | 138:16;143:12,13 | 89:18,22;110:16,17, | 31:8 |
| 21 (7) | 117:16;119:23,23; | 50 (1) | 18 | 82,000 (1) |
| $159: 16,17,18 ; 160: 1,$ | $120: 16 ; 121: 21 ; 122: 5$ | 52 ${ }^{37} 1$ | $69(3)$ | $32: 8$ $\mathbf{8 2 0}$-acre (1) |
| $16,18,20$ | 15,16,20;156:20; | 52 (7) | 90:1,5;111:16 | 820-acre (1) |
| 22 (10) | $\begin{aligned} & \text { 171:24;172:3,8,14; } \\ & 173: 17,19 ; 174: 17 ; \end{aligned}$ | $\begin{aligned} & \text { 83:6,11,16,17; } \\ & \text { 102:19,23;158:1 } \end{aligned}$ | 7 | $\begin{aligned} & 30: 17 \\ & \mathbf{8 3}(\mathbf{5}) \end{aligned}$ |
| $\begin{aligned} & \text { 161:5,10;170:11,13, } \\ & \text { 15,17,19;171:12,19 } \end{aligned}$ | 176:22,25;180:8; | $53(8)$ | 7 | 22:7;98:4,10;116:5,6 |

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84 (2)
    98:12,16
84,000 (3)
    21:9;23:6;31:8
85 (6)
    98:20,25;116:13,14;
        178:11,15
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        37:5;99:4,10;117:13
86,000 (5)
    142:22,24;143:4,19,
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86,212 (6)
    9:11;21:3;32:21;
    34:4,24;37:5
86,226 (1)
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    23:3
87 (4)
    99:14,20;117:22,24
88 (3)
    99:22;100:2;118:21
89 (4)
    100:6,11;119:7,9
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9 (21)
23:19,20,21;24:2;
26:25;27:5,6,10,15;
28:10,12,12,15,20;
29:6,19;32:5;102:5;
175:22,24;202:11
9:06 (1)
4:1
90 (5)
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96 (6)
102:8,14,19,23;
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97 (5)
122:24;123:15;
124:14,16,18
97.4 (1)
173:14

IN THE VERMONT SUPERIOR COURT ESSEX COUNTY CIVIL DIVISION

PLUM CREEK MAINE ) Case No. 72-12-10Excv
TIMBERLANDS, LLC, ) 30-6-11ExCV Plaintiff,

- against -

Guildhall, Vermont

VERMONT DEPARTMENT OF
FORESTS and PARKS,
Defendant
FORESTS and PARKS,
Defendant.
PLUM CREEK MAINE
Case No. 19-4-11Excv
TIMBERLANDS, LLC, )
31-6-11Excv
Plaintiff,

- against -

May 30, 2013
9:03 AM
) Guildhall, Vermont
$\begin{array}{cl}\text { VERMONT DEPARTMENT OF TAXES, } \\ \text { Defendant. } \\ & \text { ) }\end{array}$
May 30, 2013
9:03 AM _)

TRANSCRIPT OF COURT TRIAL
BEFORE THE HONORABLE MARY MILES TEACHOUT, SUPERIOR COURT JUDGE

APPEARANCES:
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PROCEEDINGS RECORDED BY ELECTRONIC SOUND RECORDING.
TRANSCRIPT PRODUCED BY TRANSCRIPTION SERVICE.

Department
Letter from forester Jeff
Briggs
Letter from Jeff Briggs, AMP
forester
Email from Chris Fife re:
(Proceedings convened at 9:03 AM)
THE COURT: Please be seated. Good morning. Are you continuing with Mr. Fife's examination?

MR. GRAYCK: Your Honor, we do have a witness that we would like to take out of turn. I've discussed it with Attorney Duane, and he has no objection. The witness will address a discrete issue.

THE COURT: All right.
MR. DUANE: Your Honor, if I may; I was remiss yesterday in introducing to the Judges Steve Sinclair, who's sitting here with Assistant Attorney General Schwartz and I. Steve is the director of Forests for the Department of Forests, Parks and Recreation, and he's here on behalf of the State of Vermont with Thea and I.

THE COURT: All right.
MR. DUANE: Thank you.
THE COURT: So we will suspend Mr. Fife's
testimony and take your other witness out of turn.
MR. GRAYCK: Thank you, Your Honor. Jonathan Horton, please.

JONATHAN HORTON
having been duly sworn, testified as follows:
DIRECT EXAMINATION
BY MR. GRAYCK:
Q. Could you state your name, please?
A. Jonathan Horton.
Q. And where do you live?
A. I live in Deerfield, New Hampshire.
Q. And for whom are you presently employed?
A. The State of New Hampshire.
Q. And at whose request are you here today?
A. At the request of Plum Creek.
Q. When, if ever, did you work for LandVest?
A. I worked for LandVest from September of 2008 until December of 2010.
Q. Okay. And are you familiar, if at all, with the Clough Brook North Harvest?
A. Yes.
Q. Okay. And what participation, if any, did you have in the drafting of the prescription documentation for the Clough Brook North Harvest?
A. I did the initial inventory and also did the majority of the planning for the silviculture that took place in Clough Brook.
Q. Okay. Were you a participant in a site visit in about October of 2009 to Clough Brook North Harvest area?
A. Yes.
Q. Okay. And what, if any, discussions do you recall regarding the proposed treatment for Clough Brook North on that site visit?
A. I'm sorry, could you say that again?
Q. While on the site visit were there any discussions about what would be the appropriate treatment for Clough Brook North?
A. Yes. There were discussions about the appropriate treatment, but we had continued to discuss -- it was a large area, and we had continued to discuss between both parties what the appropriate treatment was. So there were lengthy discussions as to what the treatments for these specific areas should be.
Q. Okay. And I apologize, I should have asked you this first: what is your profession?
A. I'm a forester.
Q. And in what capacity were you employed by LandVest?
A. I was a staff forester, so a field forester.
Q. Okay. I'm going to have you take a look at a map which is part of what's been admitted as Exhibit 22. I'm just going to show it to you. Actually, why don't you look at this document in front of you.
A. Okay.
Q. Does that look familiar at all? THE COURT: Can you identify for the record what --

MR. GRAYCK: Exhibit 22.
THE COURT: All right.

BY MR. GRAYCK:
A. Yes.
Q. In fact, there are some --
A. My initials.
Q. -- initials J.C.H. Whose initials are those?
A. Those are my initials.
Q. Those are your initials, J.C.H., on Exhibit 22? The last page of Exhibit 22 there's a map. Do you see that?
A. Yes.
Q. What familiarity, if any, do you have with respect to this map?
A. I have a lot of familiarity with this map. I created this map.
Q. Okay. Can you tell me why you created this map?
A. It was of my own doing. I had taken the map and I brought it with us on a walkthrough to kind of familiarize the foresters with where we might do proposed silvicultural treatments.
Q. Okay. Now one page prior there is what appears to be a similar map. Do you recall which map you would have had on the site visit in October?
A. I believe it was this first map.
Q. Yeah. Can you show it to the Court, please? So when did you produce the second topo map?
A. It was between the first -- I believe we had a first
visit, and then a later -- a visit -- we revisited the site, and it was during the period in time between that we -- that $I$ created this map.
Q. There are letters with arrows. What was the purpose of adding the letters and the arrows which indicate treatments? Why did you do that?
A. It was to clarify where the silvicultural prescriptions that I had planned would take place.
Q. And what was your understanding as to the specificity or precise depiction of where those treatments would take place?
A. It's not very precise.
Q. And why not?
A. Because this was done on a program that was -- that doesn't necessarily use precise and accurate measurement. It was essentially using a computer as a crayon to draw around a map. It wasn't using any geographic information. It was more of a doodle than a GPS'd or actually located drawings.
Q. So how, if at all, was this map intended to convey that treatments would only occur where specified on that map?
A. I used it more as just to clarify the bottom -- the bottom of the map was confusing as to where these silvicultural treatments were to take place. So in order to clarify that, I used those to just show a general location as to where these silvicultural treatments would take place.
Q. Okay. And why was the bottom of the map confusing?
A. It just wasn't a very good representation of illustrating where these silvicultural treatments were going to be.
Q. Okay. And do you remember who requested that this map be produced? Or on the site visit was there a request that an additional map be produced?
A. I don't remember specifically if there was a request to produce a map.
Q. Okay. One -- a few more questions. Now you're Jonathan Horton, right?
A. Yes.
Q. Okay. And your dad is Jim Horton, correct?
A. James Horton; yes.
Q. James Horton. And for whom does your dad -- who is he employed by?
A. He works for the State of Vermont.
Q. In what --
A. Forests and Parks.
Q. In Forests and Parks? And is he a forester?
A. He's a forester as well.
Q. Is he a county forester?
A. No.
Q. But he's within the division of Forestry.
A. Yes.
Q. Okay. So if we see something later on that says Jim Horton, good chance is it's your dad.
A. Yes.
Q. Okay. Thank you.

MR. GRAYCK: Nothing further, Your Honor. THE COURT: Ms. Schwartz.

CROSS-EXAMINATION
BY MS. SCHWARTZ:
Q. Hi. I'm Thea Schwartz. I'm with the Attorney General's office.
A. Hello.
Q. I just have a few questions for you. So you were talking about a site visit that you were on in October of 2009?
A. Yes.
Q. And Matt Langlais, who was the county forester, was there with you?
A. Yes.
Q. And the purpose of the site visit was to discuss the prescriptions that you had proposed --
A. Yes.
Q. -- for the Clough Brook? And was to discuss the prescriptions and as to whether they were appropriate or not?
A. It was -- it was more of a -- we would do walkthroughs of these, and we would illustrate what we were
going to do by showing the foresters what was -- what was out there and what -- explain to them what we were thinking in a particular stand.

MS. SCHWARTZ: May I approach the witness? THE COURT: Yes.

BY MS. SCHWARTZ:
Q. I believe you were just looking at a map with Attorney Grayck?
A. Yes.
Q. Can you show us where you walked on the map?
A. I don't really remember where we walked. I know a general location as to -- or the point -- the part that $I$ do remember was we walked from this landing out and around, and then circled back up through the -- these stands.
Q. But you would have walked through Stand 43?
A. Correct.
Q. And in Stand 43 do you recall what you proposed? Was it overstory removal?
A. Yes.
Q. And did you prescribe anything else for Stand 43? I see on the map it says overstory removal here.
A. Yes. I can't remember if $I$ did prescribe anything else.
Q. Now is this -- and was there a map that you amended after this that you --
A. After this?
Q. -- made changes to?
A. I don't remember if there was a map that we -- I believe that was the last map that $I$ remember making myself.
Q. Do you recall if there was discussion about overstory removal in Stand 43?
A. I -- there were -- there was discussion. There were parts of the stand that didn't exhibit what would be an overstory removal. So there was discussion as to whether it was the correct treatment. I believe that's why I put the two-stage shelterwoods in the locations that I put them in.
Q. So there was some areas that were marked overstory removal on your initial map that you had proposed that wasn't appropriate for overstory removal? That was the discussion that you all had?
A. I believe from this -- from what I did on this map that that --
Q. And that would have been changed to two-stage shelterwood?
A. Yes.
Q. And would that have been an agreement among Matt Langlais, the county forester, along with Plum Creek, that those areas did not exhibit what was necessary to have overstory removal as a prescription?
A. It would have been -- yeah, it would have been a
verbal agreement based on discussions that we had on site. A lot of times we would discuss whether certain stands would receive the same treatment, or in certain areas where we felt the conditions didn't exist for that treatment we would use something more appropriate for those sites within that treatment. And those were normally verbal agreements between Matt Langlais -- sorry, I'm blanking on the Land Trust --
Q. The Land Trust was at the visit, too?
A. Yes.
Q. So there was a discussion between the Land Trust, the Forests, Parks and Rec and Plum Creek as to what would be the appropriate treatment?
A. Yes.
Q. And so you were all in agreement as to what would be the appropriate treatment?
A. I believe leaving the last field visit we were in agreement.
Q. That's it. Thank you.

THE COURT: Mr. Grayck?
REDIRECT EXAMINATION
BY MR. GRAYCK:
Q. Attorney Schwartz was asking questions about the different treatments. Do you recall?
A. Yes.
Q. Okay. To what extent does the variability, or did
the variability of the stand influence the treatments that were prescribed?
A. They greatly influenced the treatments. Variability was very evident in a lot of the stands that $I$ had worked in on this property. There -- you know, you'll reach pockets of a stand that don't exhibit the same -- or vastly differ from the rest of that same stand.
Q. Okay. Thank you.

THE COURT: Anything further?
MS. SCHWARTZ: Just one second, please.
No further questions.
MR. GRAYCK: Thank you, Your Honor.
THE COURT: That completes your testimony. You
may step down. Thank you.
(The witness was excused.)
MR. GRAYCK: Chris Fife?
THE COURT: You're still under oath from your
prior testimony.
CONTINUATION OF DIRECT EXAMINATION
OF CHRIS FIFE
BY MR. GRAYCK:
Q. Good morning, Chris.
A. Good morning.
Q. Yesterday when we left off we were just still talking about Stand 34. Yes? And --
A. Yes.
Q. Okay. And we were just beginning to look at the UVA form that has the treatment for Stand 34?
A. That's correct.
Q. And I'm just going to turn to that. Okay. So just to help orient the Court again, could you show the page of Form 2, Page 2 that we're looking at? The exhibit in 22.
A. Exhibit 22, and that's the page that says Form 2, Page 2 up on the right-hand corner, and has a list of stands on the left-hand side. The stand we were referring to at this point was Stand 34 in the middle. It would be the second one down.
Q. Okay. So the first sentence is "Stand 34 will receive a two-stage shelterwood even age UVA Code 3." What does that mean?
A. That's a prescription for silviculture for that stand, for that type of harvesting that would occur in that stand.
Q. Okay. And then it says, "The stand lacks an acceptable -- lacks an acceptable amount of regeneration and the majority of the overstory is unacceptable growing stock." What does that mean?
A. It's an indicator that there is not adequate regeneration across the stand right now to just release. It has a lack of acceptable, which would be commercial species or
approved species, of regeneration, and the majority of the overstories, or most of the trees in the overstory or that canopy above are unacceptable for growing stock, as we talked about yesterday.
Q. Okay, then it states "A low density shelterwood, with the residual basal area of thirty to forty square feet will be utilized to discourage the establishment of each in the understory." First, what is the portion that states a low density shelterwood with the residual basal area of thirty to forty square feet mean? What does that mean?
A. A shelterwood treatment can have a wide range of residual basal areas, depending on the objective: the species that are desired; the species that are on site currently; the stage that that stand is in, as far as the openings that already exist; the quality of the overstory. So a low density would be referring to the density of trees that are left after the harvest is done. Low density shelterwood would be down in the thirty to forty square feet remaining as basal area remaining. Sometimes even now some of the silviculturalists are talking about going down as low as twenty. And then the range on a shelterwood, depending on the species that are in that stand, could go up to eighty or ninety, probably eighty, really, in a residual, so you have a wide range. The low density is at the low end of the range. The higher density, more traditional shelterwoods are at the upper end of the
range in hardwoods.
Q. And then you said "Would be utilized to discourage the establishment of beech in the understory." Why discourage the establishment of beech in the understory?
A. Beech was mentioned in the description of this stand as an issue. There was a high percentage of beech that had the Nectria disease. Beech in this region is susceptible to that. And as I mentioned, it's not a high value species as far as growing into a high value commercial product. Beech does not respond as well as yellow birch and the other birches in sunlight, so by increasing the sunlight, leaving less trees in the overstory, helps to promote birch over beech in the regeneration.
Q. "The shelterwood will be irregular in distribution and will target sugar maple and yellow birch with large crowns to provide shade and seed distribution." What does that sentence mean?
A. The stand as described was variable. There were areas in it that had more density of trees, areas with less density of trees, areas with more quality trees, areas with less quality of trees in the overstory, areas that already did have some regeneration, even adequate levels of regeneration. And areas, obviously because this is a prescription for a shelterwood, that did not have adequate levels and needed to have regeneration established. So the irregular distribution
of this shelterwood would be an irregular application of that silviculture or that harvesting across the stand, so it wouldn't look the same everywhere it was applied on the stand.

And then the targeting of sugar maple and yellow birch with large crowns is targeting to leave, not targeting to cut, because it says that those large crowns would provide shade and seed distribution. So the intent being that where you're looking to have shade as part of the objective, in portions of this with that higher density of shelterwood, you would have more shade, you would want trees that have the large, live crowns.

If I may -- In our Exhibit 66, in the site visit photographs, we talked about the crown of this tree. It's a large, live crown. It exhibits the characteristics that you would ideally be looking for. This is the type of tree you would want to seek out to leave for shade. And also in this case, especially with the yellow birch, that will throw tens of thousands of seeds to help establish regeneration on the site.
Q. The next sentence is "The portions of the stand will also receive one to two acre patches where quality and stocking are not, it says, insufficient for a shelterwood." What correction, if any, should be made in that sentence?
A. I believe this sentence should read instead of "the portions", just "portions", and the "insufficient" should be
changed to "sufficient". In other words, "Portions of the stand will receive one to two acre patches where quality and stocking are not sufficient for a shelterwood."
Q. Okay.
A. Where the overstory trees that exist before the harvest are of low quality, or just there aren't enough of them at that time to do a shelterwood, even a low-density shelterwood, then the intent would be to take all of the trees and allow that to regenerate as a patch clearcut, in effect, is what it is.
Q. Okay. And the last sentence states "The patches will not affect the overall stand residual basal area of thirty to forty square feet." What does that mean?
A. The objective here -- it's a way to measure the outcome of the harvest. So on Stand 34, when the stand harvest is complete, the overall residual basal area across the stand will not be below thirty to forty square feet of basal area. So when the patches are taken into account that have a zero residual basal area, when everything's accounted for across the stand, the residual basal area will be targeted to be between thirty to forty square feet.
Q. Okay. Now yesterday we talked about the Forest Management Plan, which is Exhibit 14, and its adoption by Plum Creek as Exhibit 15. So with reference to the Forest Management Plan in Exhibit 14, how, if at all, does the
description of Stand 34 relate to the ten-year concept plan?
A. As I mentioned, the concept, or the management plan, the ten-year management plan, which is Exhibit 14, is the guiding document for the management on the Plum Creek timberlands for the ten years. We adopted it. Essex Timber had already begun this management scheme, but it addresses the type of management -- it provides the framework for the management that will occur.

So if you look in the Forest Management Plan, at page 16, my understanding is a forester in inheriting this plan, and then reading it, as the guidance for our management, if you look at the bottom of Page 16, it gives context to the current conditions. This plan was based on an inventory, a stratified inventory, which we talked about yesterday, as a less intensive inventory, but still covers the entire land base. So it's talking about conditions across the entire land base. And it says in the last bullet point on Page 16 "The hardwood resource has been high-graded through the historical use of diameter limit cuttings, and that effect has been the establishment of large blocks of regenerated, even aged hardwood and mixed wood stands, crudely referred to as twostoried." So that's a bit of description of what we were talking about yesterday, where the value was taken out. Lower value, lower quality stems and trees were left, done in a sort of picking here and there type of way that didn't apply
uniform silviculture across stands, and therefore left this, as it stated here, "Crudely referred to two-storied stands." I believe it says "crudely referred to", because it's very difficult in many cases to see two actual stories.

When you look at these stands, there's many more height classes. And if you can imagine, if we look at, again, the photographs at 56, Exhibit 56, again, this is looking into the overstory removal box, as we've been calling it, the overstory removal area. But there's many trees that are quite tall in this picture. There's also young, smaller trees in the regeneration underneath here. That would be -- this was referred to as a two-aged, or, as they said here, a twostoried stand, even though when you looked at it you saw really multiple levels, multiple heights of trees throughout. And I believe that's why they say "crudely referred to".

Again, if we turn the page to Page 17, we yesterday spoke about -- I spoke about beech and the issues with beech. And in fact it's identified on Page 17 on the bullet point at the top of the page. "The beech resource is in serious decline as a result of the beech Nectria disease." The 2006 inventory, which this plan is based on, further reinforces the view that as "Typically the beech tally fell into the UGS, or Unacceptable Growing Stock category, it has poor form and bigger". So beech was recognized as an issue and, again, that's a guiding concept in our management.

And then below the next bullet point, that paragraph in the middle of that page says that -- talks about the conditions and how they affect the decision-making, and that the silvicultural objectives will be directed toward improving and correcting these conditions through a sound program of early rotation activities. So, again, just the idea that there was correcting and -- what was the word that they used -- improving and correcting that was required in these stands. And that -- that just -- that would be expected, given the history -- the harvesting and the condition of many of these stands.

Then if we look at Page 35, it starts to talk more specifically about the types. And if I could at the same time refer you -- on Exhibit 22, if you still have that available, you may remember on the maps, at the bottom of the map, they talked about the chart at the bottom of the maps. The maps are the last page in the exhibit, the last and the second to last page. And the chart --
Q. Just one second, Chris.
A. I'm sorry. The chart at the bottom of the page has a stand number as the first column, which we've been referring to throughout the prescription discussion. And then it has the next column, says Strata (phonetic). And if we look at Stand 34, which is the second one down in the chart, the Strata is H3B. And I tried to describe what that code meant
yesterday a little bit. But that code then is what's being referred to here in the management plan. So if we flip back to Page 35 of the management plan, H-types are -- that $H$ of the H3B -- and H is hardwood, and it says that "The hardwood stands on this tract were targeted by the previous owner to take advantage of markets and have left stands with varying conditions of quality, health, and stocking. The long-term goal for the hardwood forest type will be to improve the overall quality and long-term value. Management on a stand level will vary depending on current conditions and previous treatments. As a result, some stands require no treatment other than time to appreciate in volume and value, while some stands will need to be rehabilitated or moved to regenerate due to issues of long-term viability and value." And I believe that's what we're talking about. It wasn't a stand we looked at and said we would just leave.

And then further on that, if we turn to Page 37, a couple pages further along, there's actually a description a little beyond halfway down on this page. They're calling these stands, these are the straight of the large conglomeration of individual stands, and for the H3B-slash-H2B it says that "The treatments, in general, will be overstory removal reserving clusters of crop trees, but for some healthy stands improvement thinning can be considered." And that's, as you know, pretty much it's what was the prescription for
this stand.
And then just -- finally, as well, still tying this prescription to the management plan, on Page 41 it talks about at the bottom of the page canopy removal justification.

Overstory removal is a canopy removal, as is clearcuts or patches. And it says that "Regeneration harvest will be used under two primary conditions. Condition one is where there is adequate advanced regeneration that is ready for release and overtopped by poor quality overstory. The goal will be to remove the overstory and release the advanced regeneration." That's the overstory removal that we've been talking about.
"Condition two is where stands have not adequately regenerated and the overstory is not growing at satisfactory rates, is in decline, or stocked with an unsuitable level of acceptable growing stock. The goal in these conditions will be to complete the seed tree, overstory removal, shelterwood or silvicultural clearcut, regeneration harvest strategy." And that's actually what was prescribed for Stand 34 through a shelterwood system with patches, which are clearcuts -- patch clearcuts, and for the very reasons that were stated in that paragraph. So this stand actually met quite well the conditions described for most -- for a number of the stands in this straight, or this larger grouping of stands.

> So that's how --

THE COURT: Could we just go over this
paragraph and what it says and means?
THE WITNESS: Yes, Your Honor.
A. So the paragraph is talking about its harvest strategies, is the heading that we're under here in the plan. And for the harvest strategy of canopy removal, the justification for that is one of two things. It's either A, regeneration, which would be establishing a new stand, the young seedlings to grow. Those would be your focus. Or rehabilitation, which would be trying to return the stand to a level of value and quality where you could manage it going forward.

And under regeneration it gives a justification for using this, that there's two primary conditions: the first one is where you have an adequate advanced regeneration, so you have seedlings already on site. They've already started to grow beneath the stand that was -- that's there, the overstory, the bigger trees, and it's ready for release and overtopped by poor quality.

THE COURT: What does "ready for release" mean?
A. Release is cutting the trees off the top, and release means releasing the small seedlings to grow. So they -- when you cut the trees off the top that are blocking the light from them, they receive the light. They're released to grow.

And that's the last part of that sentence. It says
"The goal will be to remove the overstory to release the
advanced regeneration," so to allow it to grow.
The second condition that's mentioned here is where stands have not adequately regenerated, and if you remember in the prescription that we were just looking at, it said there's not adequate acceptable regeneration. And in those cases, you still may decide to do a regeneration harvest when, it says, "The overstory is not growing at satisfactory rates, is in decline," which was mentioned in the stand description for Stand 34, "or is stocked with an unsuitable level of acceptable growing stock." We talked yesterday about the thirty-five square feet being an unacceptable level of -- an unacceptable level of acceptable growing stock to carry a stand forward.

And so the goal, the final sentence, the goal in both of these conditions, is to "Complete one of these treatments, a seed tree harvest, an overstory removal harvest, a shelterwood harvest, or a silvicultural clearcut harvest to regenerate the stand." Those are all -- all of those harvest types are focused on regeneration. So they're not focused on the bigger trees that are on site, so much as establishing young seedlings or releasing the young seedlings that are there. BY MR. GRAYCK:
Q. Do you still have more from the plan?
A. If I may, just one more section that relates to the
overstory removal.
On Page 45 -- Page 45 again is talking about the different types of cut. And it describes an overstory removal, which we were talking about the difference between the shelterwood and the overstory removal. "This silvicultural option would be quite common on the lands of Essex Timber Company -- now Plum Creek -- as many acres are found with two-age stands where the older and partially overtopping age class is often in poorer condition, and in many instances losing volume and value to decline and subsequent mortality. Further, these older age classes are often completely lacking in a suitable level of acceptable growing stock to warrant carrying them for a longer period in the rotation of the straight-up."

And then it goes on to describe the way these will often be implemented and the goals of the treatment -- this treatment option.
Q. And so how does what you just read relate to the treatment for Stand 34?
A. So if we turn back to Exhibit 22, which is the treatment, when we look at that page -- Form 2, Page 2 -actually, if $I$ have you look at the Form 2, Page 1 that we looked at yesterday, which says Stand 34 up in the corner, and it's I think about the fifth -- fourth or fifth page in. Seventh page in, I believe. It's this one. This reflects
that there's past harvesting by Champion which was described, the outcome of a lot of that in the overall plan, the health conditions of beech Nectria, the acceptable basal area level of only thirty-five square feet. And then down in the bottom it talks about the current stand having a high level of residual stand damage and a fair amount of crown die back; understory that varies greatly in stocking of acceptable regeneration; pockets of sugar maple, seedling and sapling, and patchy distributions of some places have good regen and some others don't. Very much matching to me the description that was in the approved management plan.

And then if we turn to Form 2, Page 2, on Stand 34 where we started today; on the prescription for this stand, it's a two stage shelterwood, which is one of the options that was talked about to regenerate these type of stands when you didn't have adequate regeneration. There wasn't an adequate level of seedlings already on the ground. So even though the description stated that there are areas that had adequate regeneration, in fact pockets of good acceptable regeneration -- sugar maple, yellow birch -- overall the prescription was to do a low-density shelterwood so that you would establish regeneration; small trees from seeds and sprouts in those areas that didn't have adequate regeneration right now.
Q. Okay. So that's what we've done with respect to Stand 34.

I'm going to ask you to turn to the UVA Form 2, Page 1 for Stand 43. And there's probably going to be some overlap of what we've already talked about on Stand 34 , so to the extent that there is you'll let us know. Okay? But I'm going to -- let's just go through it.

So with respect to stand history again --
A. This is -- it looks the same as the description page for 34. I have to look up in the corner -- top left-hand corner says LMO343.
Q. Okay, so stand history; what's it telling us?
A. The same as the other stands; that this was harvested by Champion Paper approximately twenty to twenty-five years ago.
Q. Okay. Forest health condition; what's it telling us?
A. Also the same as the previous Stand 34, that this stand had high residual stand damage from past logging and possibly the ice storm, other events, and the beech bark Nectria disease.
Q. Okay. What's the long range objective?
A. Over on the far right it talks about the long range objective being even age management with the present stand age of between seventy to seventy-five and a rotation age of eighty, which would be when you would start.

THE COURT: Could you point out on the map generally where 43 is?

THE WITNESS: Yes.
THE COURT: It's very hard to see on these maps
where the different stands are.
MR. GRAYCK: Your Honor, for demonstrative
purposes may we also present a large map of the stands?
MR. DUANE: No objection, Your Honor.
THE COURT: All right.
MR. GRAYCK: I'm sorry, Your Honor, we don't have it in the courtroom, so we'll just continue. BY MR. GRAYCK:
A. It is difficult to see, and Stand 43 is particularly confusing because it's sort of an octopus in a way. It is in the center here, where it's labeled, but there's an arm of it that comes up and it goes across the top on the far western part of the stand, up on the -- of the area, the proved area on the ridge. It also has a small arm that reaches up. So the black lines on this map are depicting the boundaries, or the black dotted lines are depicting the boundaries of the stand, and the number within that is the stand number. And this stand actually goes from here, in the middle of the -sort of the middle of the harvest area. It has this arm that reaches across, and also goes both ways along the ridge in a $T$ type of fashion. There's quite a -- it covers quite a bit of different geography on the site. And then Stand 34 wraps around the top with a large portion over here to the east, and
a large portion to the west, and then sort of a narrower connecting piece of the top.
Q. So going back to the Form 2, Page 1 for Stand 43, looking at the stand description, what is it telling us?
A. The stand description has even age checked on this, so, again, this is scheduled for even age management. The forest type is H3B. That was the type that was assigned through the typing of the overall forest in that forest inventory. The stocking level is at the B line. There's eighty-eight square feet of basal area total, and thirty-eight of that is acceptable basal area.
Q. And what does that relationship of eighty-eight total BA to thirty-eight BGS BA tell you?
A. It's -- this is a poor quality stand. Most of the basal area out there is in the unacceptable growing stock category.
Q. Okay. Can you look at the description of the stand conditions as set forth on Form 2, Page 1 for Stand 43 and tell us what it means. What's it telling us?
A. Actually, if I could just make -- I believe there's a mistake on this form, and I didn't catch it even on submission. And apparently the State didn't catch it, either. But from the map, which I believe would be the most -- should be an accurate place to look at this -- this stand is actually typed as an HS3B, and on here the forest type is listed as

H3B. I believe that's incorrect. I believe it should be HS. And the reason I believe that -- you'll remember we observed as we walked through Stand 43 on the site visit a lot of softwood out there, and it was now coming in the understory. I know there was softwood in the overstory, and the HS stand type indicates that it's a hardwood stand with a softwood component to it, versus more of a pure hardwood stand. So there's greater than twenty-five percent softwood in the initial stand out there. So I believe that forest type is an error on Form 2, Page 1.
Q. So now with respect to the description of stand conditions?
A. So the description of the stand conditions at the bottom says "Stand 43 is well stocked, hardwood dominated mixed wood type, total basal area of eighty-eight; of that, thirty-eight square feet is acceptable growing stock." So it's well stocked, it's stocked at the B-line, which is a good stocking for this type of stand if what you had was good quality. But the end of that sentence says that "The total basal area is eighty-eight, and only thirty-eight square feet of that is acceptable growing stock, is quality trees." And again, as I mentioned yesterday, acceptable growing stock also contains mature trees. So some of that thirty-eight square feet is likely in trees that have a saw log now that should be cut in order to not lose value or have that saw log just rot
on the stump.
The stand is dominated by yellow birch, balsam fir, white birch, red spruce and red maple. Those are the species that were predominant when the inventory was done. The mean stand diameter is eight-point-two inches. The stand is weighted toward the medium saw timber size class. So this is describing the average size of the trees out there -- at that four and a half feet off the ground that I spoke about yesterday. So on average this would be considered a medium sized class. It's not real big trees. We aren't in the fifteen inch type of trees. We're in this eight and a half or eight-point-two inch diameter class. That doesn't mean that all the trees out there are eight-point-two inches, as I'm sure you're probably aware. That's small trees and big trees, and they -- this is where the overall average falls out.

The white birch in the stand is in severe decline, means it's dying, it was noted in the tops, in the condition of the stems, that the white birch, which is a short-lived species, was beginning to really decline.

The majority of the balsam fir is mature. Again, that's also -- tends to be a shorter-lived species, an early species comes in, occupies a site, and then will die more quickly than the longer-lived species that follow it.

And then finally, it says "The majority of the stand has good stocking and red spruce seedlings and saplings in the
understory." So the indication there is that there's a good stocking of red spruce in the understory of the seedlings of red spruce on this stand.
Q. Now, just with respect to the stand cruise data; first of all, what's stand cruise data? What does that mean?
A. This is an indication of the work that was done for this individual stand in order to write the prescription for this stand. Stand cruise data is giving information on how the data was collected. It's a way to communicate to the county forester what was done out there. It says a prism factor or plot size. This was a prism cruise, and I think that later we'll get into the methods of cruising.
Q. But briefly summarize.
A. There's two methods of cruising: there's a fixed radius plot where you stop and you count the trees within a certain radius from where you are, and then that's used to extrapolate, as I mentioned before, across the stand of how much is there. There's a variable radius plot that uses as a prism. It's a ground piece of glass that is used to count trees, and it takes into account the diameter of the trees so you have a variable radius to your plot. You stand in the middle of the plot and you swing around with this prism, this piece of glass, and it indicates which trees are part of your plot and which trees are not. And then again you collect that data and extrapolate it across the stand.
Q. When you say indicates, how does it indicate? What you are doing with the prism?
A. The prism -- you hold the prism, because it's a ground piece of glass, a prism shape -- it's sort of thicker on one end, thinner on the other. When you look through it at a tree, the part of the tree you see through the prism will be offset from the part of the stem above and the part of the stem below. So you'll have a section that looks offset. And if the top and the offset portion on the bottom still are connected in your view through that piece of glass, above and below it and through the glass, then that tree gets counted as a tree on that plot.

However, if that section that's displaced appears to be floating out in space by itself, with the section above and below it disconnected from it, that tree is not part of the plot and is not counted. So what that does is based on diameter of the trees, it gives a variable radius to the plot. A smaller tree closer to you will still be counted, but if it's a little bit further away it will look displaced completely. And it's really a mathematical formula to represent what is there. It's another way of representing what's on a site for trees. You take enough plots that you have a confidence about what you have seen, about the data that you've gathered, a statistical confidence, and then those extrapolate out to the entire stand.

So again, instead of counting every single tree in a stand, which as you can imagine would not be practical, you sample trees on points and then extrapolate from that data to the stand level.

And in this case it's indicating this was a ten factor prism. I know it just says ten. Ten is understood to be indicating a ten factor prism there. That's -- the prisms, depending on how they're ground, how much of an angle is on that glass, adjusts the factor, and the factor adjusts whether smaller trees are counted or not counted. So the factor of prism is it's just an important piece of data for the county forester to understand how this was collected.

The number of points sampled is just what it says, so eight points in this stand. And then the date that those samples were done.
Q. Okay. So now let's turn to UVA Form 2, Page 2 with respect to Stand 43.
A. And this is the stand below 34 that we were looking at. This is the last one on that page, Stand 43 over on the far left.
Q. And what I'd like you to do is go sentence by sentence and explain each sentence to the Court.
A. "Stand 43 will receive a two-stage shelterwood, a 2SS, which is the short -- short for the 2-stage shelterwood, "even age, UVA Code 3". Just reiterating that code again
that's on the summary sheet. "And overstory removal, OSR, even age, UVA Code 4." So two different prescriptions: shelterwood prescription and an overstory removal prescription.
"Thirty to forty percent of the stand will receive an overstory removal, where the overstory is in severe decline, and the understory is well-stocked with seedling and sapling size red spruce". So the intent would be that thirty to forty percent of the area of the stand would receive an overstory or a removal treatment where these conditions exist. An overstory in severe decline, an understory that's well stocked with seedlings and saplings and red spruce.
"Then the remaining portion of the stand will receive a shelterwood", which is the second treatment that's listed in the first sentence. "The harvest will target atrisk and mature stems", so the lower quality, the unacceptable growing stock and the mature acceptable growing stock.
"The target residual basal area is sixty square feet". The harvest -- and the sixty square feet refers to the shelterwood, so the target residual basal area and the sections of the stand that receive the shelterwood will be sixty square feet. It's assumed that an overstory removal would have zero residual basal area, so it would be zero square feet.
Q. Why is that assumed?
A. You take all -- the definition of an overstory removal is to remove all of the trees in the overstory and the canopy, so you would not be measuring any trees after that harvest.

And our final sentence, "The harvest will release quality growing stock and provide gaps to promote regeneration." So the idea, the objective of this harvest to release the quality seedlings that are there, also to provide gaps, which gaps again would be openings so there'll be places here where there's not adequate regeneration, not adequate overstory, you'll have some gaps that will promote regeneration. And that speaks to that variability in all of these stands where there's usually cases where the overall prescription for the stand doesn't fit on a small set of the acres in the stand, and you try to adjust as you go so that you are treating each acre in the appropriate way to, in this case, regenerate the stand. Because again, these two -- twostage shelterwood and the overstory removal are both regeneration harvests. They're both focused on the next stand of trees.
Q. And you're talking about -- you were talking regeneration. Why does it promote regeneration?
A. The shelterwood, as I mentioned, promotes regeneration through seed and light. The overstory removal promotes regeneration through releasing the regeneration
that's there, and the gaps would promote regeneration by providing light to the ground where a seed exists to allow that to begin to regenerate.
Q. Now we went -- you went through the Forest Management Plan with respect to Stand 34 . Were there any other additional provisions of that plan which you'd like to highlight with respect to Stand 43?
A. No. I think all of the things that apply to the overarching principles of the ten year management plan, which doesn't actually approve any harvesting, but it guides the prescriptions for our harvesting, those same things that I pointed to before would apply to this stand and to the thought process that went into setting a prescription for, and implementing a prescription on this stand.
Q. Chris, what stand is the OSR box located in?
A. The OSR box is located in Stand 43.
Q. What repairing areas, or repairing zones, if any, are included within the OSR box?
A. There's -- turn to the map again -- the last map shows what we're referring to as the OSR box. This is a red outline in the center of the harvest area. The -- pretty much entire left-hand or western side of that box is a riparian area on Clough Brook. We actually -- when we left the landing we crossed that, and I believe -- on Exhibit 52, the picture of the landing where we parked the vehicles, actually what --
the trees right here that are in the back of that picture in the center, those are part of Stand 43, and also part of that OSR box. That's the riparian area you may remember when we walked to our first site, came back through the landing, took a right and started out a winter road and immediately had to cross a stream, kind of a difficult crossing, and that was the headwaters of Clough Brook. And this is the riparian area on Clough Brook.
Q. Chris --

THE COURT: Would you point that out again on the map, please?

THE WITNESS: Yes. That would be on the western side of this red box that says -- that has an OSR label in it.

THE COURT: All right. And just for
orientation -- the legend is too small for me to read what this black and white dotted line is and what the red and black dotted line is down below.

THE WITNESS: The black and white dotted line indicates a road that is -- I'm trying to see what it calls that, but that's the winter road that goes -- runs north and south through the block. This is a gravel road, the road we drove in, the red and black, to the point where we parked. The black and white is actually a winter road, only can be trucked on in the winter, it's not improved for summer
trucking. And that's also a snowmobile trail. But all of that actually is a snowmobile trail in the winter. And then there's two roads that aren't showing on here that we built for this harvest, and those are the other two winter roads, one that runs from where we parked in the middle over towards the east, and one that runs from the top of the hill back towards the southwest up the hill. We did not walk on that. We were just at the very mouth of that road, but we didn't spend any time on the site visit on that road. BY MR. GRAYCK:
Q. So Chris, I think you just pointed out to the Court that there's a riparian area in Stand 43 located within the OSR box. Am I right?
A. Yes, that's right.
Q. Okay. What prohibitions, if any, are there with respect to harvesting adjacent to a riparian or within a riparian buffer zone?
A. We would be required to follow the acceptable management practices on this portion of this stream. Actually, below this, south of this, we have a restriction under the conservation easement that we have a fifty foot no cut buffer on either side of this.

But in the area that we're discussing, and the area that was approved for harvest, we would follow the AMPs, which have a minimum of a fifty foot buffer. Depending on the slope
to the stream, it could be more. In this case a fifty foot buffer. Harvesting may occur in that buffer through selection of individual trees without making large gaps in the canopy. And you're not allowed to put equipment within twenty-five feet of the stream, you're not allowed to have soil disturbance within twenty-five feet, the idea being to prevent erosion, sedimentation into the water bodies.
Q. So if you had -- if there had been overstory removal throughout the area of the overstory removal box, what would have happened with respect to compliance with the AMPs that you just described?
A. We would have been in violation of the AMPs.
Q. Okay. Let's go to Stand 44. And if we go back to UVA Form 2, Page 1.

THE COURT: Again, before we start, can you point out on the map where 44 is?

THE WITNESS: Yes, Your Honor. On the last map, Stand 44 borders the red OSR box on the east. The black line that is its boundary runs to the west, follows down to the south, and back down to the east. So it's this box. Just -- predominately, most of the stand is to the west of this road that's running up and down through the east, near the center of the block. It has an arrow pointing to it that says ITH, pointing into the stand.

BY MR. GRAYCK:
Q. So now looking at UVA Form 2, Page 1 for Stand 44, again, if you could just speak to the stand history.
A. Again, the stand history notes the same thing, that this was harvested by Champion Paper Company approximately twenty to twenty-five years ago. Not surprising, they probably used the same road system and harvested these stands likely at the same time, so that's to be expected.
Q. The forest health condition?
A. Forest health mentions that it has high residual stand damage and beech bark Nectria complex, the same as Stand 34 and 43.
Q. And the long range objective?
A. Even age management with, again, a present stand age of approximately seventy to seventy-five years and a rotation age of eighty years.
Q. And the scheduled treatment?
A. Scheduled treatment says it's a shelterwood, number 3, and to occur in 2011.
Q. Okay. With respect to the stand description?
A. Stand description, again, is even age; the forest type is described as an H3A. The A indicates a higher density of trees initially. It's B-line stocking, so on the stocking chart this is falling still at -- at or just above the B-line. The mean stand diameter is seven-point-six, slightly smaller than the other two stands that we looked at. The total basal
area is ninety-seven square feet. The acceptable basal area is forty-two square feet.
Q. And what is the relationship? What does the relationship of those two numbers tell you about this stand?
A. Again, the majority of the basal area in this stand is unacceptable growing stock. But it does have a higher level of acceptable than the other two stands that we looked at.
Q. Okay. So now the description of the stand; can you please go through that and tell us what it means?
A. Stand 44 is a well stocked northern hardwood type with a basal area of ninety-seven square feet. Of that, forty-two square feet is acceptable growing stock. So I just described, again, a northern hardwood type that's an indicator of the species that would be expected out there. This is a hardwood section of the forest. The stand is dominated by sugar maple, yellow birch, beech, balsam fir and red spruce. So those are predominate species that were tallied when it was cruised. The mean stand diameter is seven-point-six inches, as indicated above. The stand is weighted toward the small, saw timber size class. So again, this is not the medium saw timber, but it's a small saw timber. The stand has a fair amount of acceptable stocking in -- I believe there's an "of" there that shouldn't be -- in the small saw timber size class. So I believe that sentence should read, "The stand has a fair
amount of acceptable stocking in the small saw timber size class", which would be an indication that when this stand was cruised, the individual doing the inventory saw that there was acceptable growing stock; that of this, forty-two square feet of acceptable growing stock, the good trees, if you want to call them that, the quality trees, many of those occurred in the small saw timber size class. So they weren't big trees, but they weren't on the smallest side of trees either. They were in the small saw timber size class.

And then finally at the bottom -- again, this was a ten factor prism that was used to do the cruising. Five points were sampled, and it was cruised 10/13/09.
Q. Now let's turn to UVA Form 2, Page 2 for Stand 44. And can you please go through the treatment sentence by sentence?
A. "Stand 44 will receive an intermediate thinning, ITH, in even age, UVA code 2. The stand is well stocked with small saw timber. However, many of the medium and large saw timber stems are in decline." So I mentioned it's an H3A, has higher stocking, higher density, more stems in it. And if I may, the site visit -- Exhibit 68 is a photograph of the uncut portion of Stand 44. Most of 44 is not cut. And we looked at a part of it when we were -- just before we started up the first real climb, kind of up the steeper high speed skid trail. So this is what it looked like. And the density -- you can see
there's a lot of stems there, they're close together. That's what density is referring to. So when it says that "The stand is well stocked with small saw timber, many of the medium and large saw timber stems are in decline," it's well stocked, it has a more dense stocking. In the smaller size classes, but where there's larger trees, many of them are not good quality. They're in decline.
"The thinning that is prescribed, this intermediate thinning, will target the at risk and mature stems and leave a target residual basal area of sixty square feet." So again -and I should step back. We haven't talked about intermediate thinning. An intermediate thinning is a harvest that's not focused on regeneration. It's focused on the stand that's there. It's still even aged, you still have predominately a single age in that stand, but you are not thinking about regenerating the stand at that point. You're thinking about growing the trees that are there into higher value products.

This stand is marginal for that treatment because of the low level of acceptable growing stock. If we're going -it says that "The thinning will target at risk and mature stems", which would make sense. We want to leave our better quality trees, take out the mature trees and the trees that are at risk. At risk means that risk of dying before we get back in there. They're the ones we were talking about with crown die back or scarring from the past harvest, this high
residual stand damage that was referred to in the description.
"And you'll target leaving a residual basal area of sixty square feet." If you remember in the description for this stand, Stand 44, the description says there's forty-two square feet of acceptable growing stock. So by definition this prescription will need to leave some unacceptable growing stock in order to meet the level across the stand of sixty square feet.

The final sentence says "The release, this release" -- again, if I can insert this -- this should say "This release will -- this will release and will allow to grow the small saw timber size class and open up gaps for regeneration." So again, the idea of gaps is mentioned, which would be openings where regeneration would be established. So even though this prescription isn't focused on regenerating the stand right now at this point, there's still a thought in the forester's mind that, you know, in areas of this stand where there's really poor quality, which is indicated by the description, there'll be some openings in order to get regeneration started when there's nothing to work with in the overstory.

So overall this is a thinning, we're going to target sixty square feet of residual basal area across the stand. We recognize that that sixty square feet will contain unacceptable growing stock, but we try to keep the
unacceptable trees that still will be worth something. Maybe it's a pulpwood tree that will never been more than a piece of pulpwood as far as a product goes, but it's also not going to die before we go back to do a shelterwood harvest and regenerate this entire stand.
Q. Okay. And Chris, how is the treatment that's authorized for Stand 44, how is the treatment a two age treatment?
A. This would be -- it's a single age treatment, so the stand is considered to be one age class. Fairly uniform. And the treatment is really -- the intermediate thinning is treating that one age class without seeking to establish the second age class. Although, as I mentioned in that last sentence, in those gaps you would be beginning to regenerate a second age class. Doing things like that also can lead you towards uneven age management down the road. If you can start to grow some more quality, you've already got one age class in the overstory, you regenerate some gaps that start to grow, and then potentially you could go back in if the quality is there, thin again, develop another age class.

Now if you have three, now you have something to work with to start towards uneven age management, if that was the landowner's goal.

In this case we're treating one age class. We're allowing for some amount of gaps to promote some regeneration
where there's just nothing to work with in this stand.
Q. Okay. Now in terms of the forest management plan, again you had identified provisions of that forest management plan. If you could just address the linkage between the description and treatment authorization for Stand 44 and the concept plan provisions.
A. Sure. Much of it is the same, and I won't go back over -- the things that applied to hardwood apply to this stand as well. This is a hardwood stand. The stand type -on Page 37, just above the middle of the page, talks about the H3A stand type. And it describes poor quality residual overstory in the last sentence. According to the simulation which was the model that was run -- they actually ran this through a computer model -- improvement thinning is not feasible. Forest type covers sixteen thousand, two hundred and thirty-seven acres. The treatment that is recommended in this type we're looking at is an overstory removal, removing clusters of crop trees, but for some healthy stands, improvement thinning can be considered. Operational cruises will determine implemented silviculture. And the operational cruise is the cruise that's referred to at the bottom of the prescription sheet that we were looking at.

THE COURT: I'm sorry, I --
THE WITNESS: Yeah, I'm sorry. It's right

THE COURT: Did you say Page 37?
THE WITNESS: Page 37, just above the -halfway down the page it says "Stand 3, H3A" --

THE COURT: Right.
THE WITNESS: -- sixteen thousand. And then
there's a description of kind of the overall for all these stands; what are the -- what do they look like. And then I've started at this -- where it says poor quality residual.

THE COURT: Okay.
THE WITNESS: And the simulation is the computer model.

THE COURT: Okay.
BY MR. GRAYCK:
A. And it says that improvement thinning is not feasible. However, in the treatment section just below that it says some healthy stands, improvement thinning can also be considered. As I said, this is a borderline stand to consider improvement thinning. But $I$ think in the discussion out there with the group it was considered there was enough quality in that small saw timber class throughout different areas of this stand to try to carry it forward.

And then if $I$ could just direct you to Page 46 of the overall management plan; this describes at the bottom of the page, improvement thinnings. This is what we're talking about. It says "In those stands in the straight or where
current stocking levels are represented by a sufficient basal area of acceptable growing stock, and that are at or near the A-line on the appropriate stocking guide, partial cuts in the form of improvement thinnings would be very appropriate. Goals of this option are release of targeted crop trees, improvement if the percentage of acceptable growing stock and the residual stand take out the unacceptable growing stock." Automatically the percentage of what's left that's acceptable will go up. "Thinning to the B-level stocking based on the appropriate silvicultural guide." That's the sixty square feet that's the target in this stand. "Limited site disturbance and residual stand damage." When we're doing a treatment like this, the last thing we want to do is damage all the trees we leave, or else we'll have left a whole bunch of unacceptable growing stock.

And then following page continues, describing how the silviculture -- how this harvesting will be implemented. "Cluster thinnings would be the preferred on the ground methodology", it says. Cluster thinnings would be removing groups of trees, little clusters to implement this thinning, clusters that were thin, clusters that weren't. "Concentrate removals so as to limit the impact on the residual stands and the soils." Just as I mentioned, you don't want to damage what you're leaving in this type of harvest, because those are your future crop trees. "Release of stems of crop tree
quality", and it names the species there that you would want to be targeting. So you're trying to grow things that will grow into valuable saw logs.
"To retain, as a goal, and all the minor species." So you're retaining some of these minor species and that speaks to diversity, really, just that you don't want to have just a homogonous one species forest out there. Really that's a goal directed at the easement, and the residual stand stocking recommendations, seventy-five to a hundred and ten square feet of mixed wood, and sixty to seventy square feet in the hardwood areas. Seventy -- or wide range -- seventy to a hundred and fifty in the softwood. So this is the thinning that's being prescribed for this stand.

And again, if $I$ could, just a correction that $I$ apologize I didn't catch initially, and I don't -- I guess the State didn't either, but on Form 2, Page 1, the description page for this, which is the first one we looked at -BY MR. GRAYCK:
Q. For which stand?
A. For Stand 44.
Q. Okay.
A. The treatment is listed as shelterwood. But on the actual prescription page --
Q. When you say prescription page, which form?
A. The Form 2, Page 2, the last page before the maps
that has the signatures on it. This stand is indicated as receiving an intermediate thinning, and that was our understanding.
Q. So is it fair to say there's a conflict between the description and the treatment authorization?
A. There is. And that may be because of the -- I'm not sure. This may be one of the stands. The prescription initially was a shelterwood and was changed to a thinning. That would be one explanation, but I'm not sure on that. But I am sure that 44, the intermediate thinning with these gaps was what was finally approved. My signature and county forester Matt Langlais's signature are on this prescription sheet.
Q. So does -- what goals, if any, does the ten year management plan outline in relation to total harvest volume? And again, that would be referring to Exhibit 14 , the concept plan.
A. Sure. I don't have the page memorized. The plan has a goal of a harvest level -- I better find the page.

MR. GRAYCK: Your Honor, do you want to just take --

THE COURT: We'll take our morning break now. I thought we might be finished with Stand 44 before the break, but we'll take it now and resume at five minutes of eleven.
(Thereupon, a recess in the proceedings took place at 10:36

AM. The hearing resumed at 10:56 AM)
THE COURT: Please be seated.
Mr. Grayck?
BY MR. GRAYCK:
Q. So Chris, the last question I asked was what goals, if any, does the ten year concept plan outline in relation to total harvest volume.
A. And I found the page $I$ was looking for. It's Page 40 in the management plan. And the second to last paragraph is talking about the harvest levels. Actually, the first paragraph talks about it. It's reiterated again at the bottom of the page. The end of the first paragraph on Page 40, "This plan calls for a harvest level between thirty thousand and forty thousand cords, covering about thirty-five hundred acres per year over the ten year period".
Q. And has Plum Creek been harvesting at those levels at all in 2010?
A. No, we didn't.
Q. And how, if at all, has -- how, if at all, has Plum Creek been able to reach the goals since 2010?
A. We haven't reached this level of harvesting that's documented or identified as a goal in the plan yet. We've been -- in 2010 we were about half of that volume. But we're working towards it though planning and trying to get ahead on our harvest areas that are plan approved and laid out.
Q. What financial goals, if any, are outlined in the plan?
A. Near the beginning of the plan it talks about financial goals. Page 17 discusses financial considerations.
Q. Just give the Court a moment to get there.
A. It refers to Essex Timber Company, but, again, these would apply to Plum Creek. "Essex Timber Company purchased its land in a competitive bid process, and it did so with the expectation of making a competitive rate of return on the capital committed. While the conservation easement removes all development value from the land, it also protects the landowner's right to manage the parcel as a working forest. The plan is in keeping with those principles. Essex Timber Company's returns thus far have been deliberately modest, but the timber management contemplated here intends to enable the land to produce a great volume of higher quality products indefinitely."
Q. And now one final note. Going back to the draft prescription that you had on the site visit prior to the harvest in -- do you have that exhibit?
A. Exhibit 20?
Q. Yeah. Do you have that?
A. Yes.
Q. Okay. Can you read out loud -- there was a note on that about moose?
A. On the first page I had written "Include moose browse here for dam."
Q. And so how, if at all, does the prescription for Stand 34 relate to your note about the moose?
A. I think the note about the moose was related to probably most of the prescriptions, because most of these were heavy cuts that would be -- they were regeneration harvests, so we're looking for regeneration. In the past moose had been a real problem eating the regeneration, so that you ended up with a stand of no value there. Your regeneration was basically killed. I think there's a picture actually from yesterday. If you look at the difference between the softwood in Exhibit 76, there's small softwood in the understory in the background, and they look -- you can see the green lens and that classic kind of Christmas tree shape to them.

On 78, Exhibit 78, which is the one -- the picture with the stump, but beside the stump is actually a little stick that has a few green twigs growing on it. That's a fir. That should look the same as those other softwoods in the other picture. The reason it doesn't is the moose have browsed that, and they -- when they were at their worst, their highest levels -- I say worst because I'm a forester, and they do a lot of damage to the regeneration, cause problems for us in that way -- when they were at those highest levels they were wiping out regeneration of fir and hardwoods, to the
point where sites would not regenerate, or if they did regenerate, their regeneration would be no good by the time it reached basically the snow depth. They would browse it during the winter, browse it and browse it again and again at snow depth, and just end up with these bushy-looking seedlings or saplings that are not going to ever have any value. So the note to mention moose browse would have applied to each of these prescriptions as a note on just the idea of what we anticipate, how we're thinking about that, just commenting that it was something that was thought of as we did a regeneration harvest.

Fortunately, the wildlife department seems to feel that they have the permit numbers at the right level now, the hunting permits. Plum Creek is doing what we can to attract hunters onto our property where we know we have higher moose levels to keep those levels in check. And we're seeing -we're not seeing the issue in -- we're not seeing a problem with it. There's certainly moose browse on our sites, but we have -- there's an acceptable level when you have twenty to thirty thousand seedlings regenerating per acre, then it's okay if the moose eat some of those. But you don't want them to eat all of the seedlings.

So that's where the moose browse comment would have been just noting that moose could potentially be an issue, had historically been an issue here, and addressing that in the
Q. Okay. I'm going to show you what's been marked as Plum Creek Exhibits 33, 34, and 35. Let's just start with 33. So what is Exhibit 33?
A. Exhibit 33 is a map of another harvest. It went with another proposed harvest --
Q. Okay.
A. -- in Ferdinand. It was called the South America Pond STA Harvest.
Q. And who prepared the exhibit?
A. LandVest prepared this.
Q. Okay. And how reliable, if at all, is LandVest in preparing such an exhibit?
A. They seem to do a pretty good job at creating these maps.
Q. And generally what information does it contain that is relevant to this case?
A. This is an area -- this stand is Stand 30 in Ferdinand, Compartment 2. It's a six hundred and four acre stand, so it's a very large stand. Everything that's blue on the map there is part of the stand. And the last page is the prescription page, the Form 2, Page 2 that we were reviewing for the Clough Brook Harvest, this would be the same Form 2, Page 2. But for this stand, it says that this will receive group selection cuts not to exceed two acres in size, and
treating a third of the total acreage. It describes how those groups will be located, targeting pockets of mature and declining stems with poor form that lack -- and lacking acceptable regeneration; targeting the removal of beech when possible to promote the regeneration of yellow birch and sugar maple. A harvest layout will be designed to avoid pockets of established acceptable regeneration.

And then it goes on. The acceptable generation and pockets with high levels of acceptable pole stocking. The stand has a high percentage of legacy trees that have been reserved from the last harvest. These will be identified and maintained if located in a patch for wildlife (indiscernible). They're just talking about leaving some large trees out there. The significance is that this is a treatment that will be implemented in two acre blocks, up to two acre blocks, treating a third of the stand. So there will be two acre patches across a third of this six hundred acres.
Q. And how is it illustrated on the map? What's the significance of the map in relation?
A. There's no illustration of where those two acre patches would occur.

MR. GRAYCK: We'd move -- Plum Creek to move the introduction of Exhibit 33.

MR. DUANE: No objection, Your Honor.
THE COURT: Plum Creek 33 is admitted.
(Harvest map for Ferdinand was hereby received into evidence as Plum Creek Exhibit 33, as of this date.) BY MR. GRAYCK:
Q. I'm going to show you Exhibit 34. And just briefly, what is Exhibit 34?
A. Exhibit 34 is a copy of a harvest plan and maps, the photo map and the prescription map for Maidstone North in Brunswick and Maidstone, Vermont.
Q. And again, what's the point of this map in relation to the treatment relative to what, if any, is shown on the map relative to the treatment?
A. On the map and on the harvest prescriptions, a number of these stands have indicate that they will receive different treatment within the stand. For example, if we look twothirds of the way down the list, Maidstone 1 -- I'm sorry, Maidstone 16, down near the bottom, indicates it will receive improvement thinning and shelterwood, but doesn't indicate where those different treatments will occur. Also, one indicates it will receive patch clearcuts, but it doesn't indicate where in the stand those clearcuts will occur. MR. GRAYCK: Plum Creek would move the introduction of Exhibit 34.

MR. DUANE: No objection, Your Honor. THE COURT: Plum Creek 34 is admitted.
(Harvest map of Maidstone was hereby received into
evidence as Plum Creek Exhibit 34, as of this date.) BY MR. GRAYCK:
Q. And lastly Chris, Exhibit 35. What map is it, and how does the treatment relate to the map?
A. This is, again, another past harvest area on Plum Creek in the towns of Averill and Lewis. This map represents the treatments that will occur according to stand, and it actually does indicate the general area where a patch cut will occur and also where strip clearcuts will occur, which would be cuts that treat -- take everything, are clearcut in a linear fashion that would cut all of the trees, treating a third of the stands that are indicated. That also was referenced on the prescription document. These are a representation of where these strips would be to give an idea of what you would expect to see on the ground, but the strips don't occur exactly as straight lines in exactly the location indicated on the map.
Q. Chris, how, if at all, does the map show, with blueprint-like precision, what you would see post-harvest?
A. It doesn't. It was never intended to be a blueprint. This is an indication of where these treatments would occur to give an idea of the general layout of the harvest on this area.

MR. GRAYCK: Plum Creek would move the introduction of Exhibit 35.

MR. DUANE: Your Honor, just a question, if $I$ may. Does the Averill Exhibit 35 also include the Form 2, Page 2 for the prescriptions for the Averill land, as well as the harvest prescription fraction for the Averill land?

MR. GRAYCK: It has what you have in front of
you --
MR. DUANE: So all -- it's not just the map?
MR. GRAYCK: What you have in your book is
what's been offered. Yes.
MR. DUANE: Great. And just to -- thank you. So we have no objection.

And if I may inquire of Attorney Grayck, with regard to Exhibit 34, which has been admitted, with regard to the towns of Brunswick and Maidstone, those also include the prescriptions for those towns as well? Everything that's in here?

MR. GRAYCK: Everything you have is what's been admitted. So it's UVA Form -- that's the Form 4.

MR. DUANE: Yeah, but Form 2, Page 2?
MR. GRAYCK: Yeah. What you have is what's been
offered to the court.
MR. DUANE: Okay. Thank you.
THE COURT: Plum Creek 35 is admitted.
(Harvest map for towns of Averill and Lewis was hereby received into evidence as Plum Creek Exhibit 35, as of this
date.)
MR. GRAYCK: And Your Honor, I have copies of those exhibits for the court members if they would like them. THE COURT: Okay. Is the top one the original? MR. GRAYCK: No. The originals have been provided to the clerk. There's --

THE COURT: Okay.
MR. GRAYCK: There's three.
THE COURT: All right.
MR. GRAYCK: If Your Honor doesn't want one -THE COURT: I'm going to give one back, just to avoid confusion. Thank you.

BY MR. GRAYCK:
Q. So Chris, now that the court members have the exhibits we just gave, do you have 33, 34, and 35 ?
A. I do.
Q. So just -- now that the court members have it, will you just point out on the map what you were saying in terms of how it depicts prescriptions?
A. Sure. On 33, which is the Ferdinand harvest, the large six hundred acre stand, this would have -- the prescription is to have groups up to two acres in size, that we would be removing all of the trees scattered over this, treating a third of the stand. The groups are not depicted on that map. On stand -- on Exhibit 34, which is the Brunswick
and Maidstone, Vermont map, the -- Maidstone is to the southeast, Brunswick is to the north -- I'm sorry -- southwest and Bruinswick is to the northeast. There's two things here, there are stands that have multiple prescriptions:
improvement thinning, shelterwood. Brunswick 17, for example, that does not indicate where the break would be between those two prescriptions. There's also prescriptions for clearcut here. For example, Maidstone 1 shows this patch clearcut. That's a thirteen acre stand over here on the boundaries in Maidstone. And the prescription page for Maidstone 1 -- it describes the size of those patches, but the patch is not indicated on the map where it will be located.
Q. Chris, would you show that to the Court, please.
A. The clearcut is not indicated in the stand. It's just showing that it will receive that treatment. Brunswick 10, Stand 10 is the same. Stand 10 's up here, says it will see patch clearcut.

And then on Exhibit 35, the final map we were just talking about, this is in Averill and Lewis, and there's the prescription in this stand, in some of these stands for strip clearcut, and the strips are actually represented on the map how they -- to give an impression of how they would be laid out, as well as a clearcut here that crosses the boundary between the two towns. That's that square indicating a clearcut. So in this case there was an indication given, but
again, not the intention that this would be how it looks on the ground. And in fact it is not how -- that clearcut does not look like a square box on the ground as implemented. These strips are not in exactly the location they show on this map due to terrain and wet ground and other factors that were taken into account during layout.
Q. And who approved those prescriptions in Exhibit 33, 34 , and 35?
A. These were all approved by Matt Langlais.
Q. And how, if at all, have the prescriptions -- have they been carried out?
A. The prescriptions have been implemented. Almost all of the Averill one is complete. The Maidstone and Brunswick piece is complete. And the South America Pond STA and Ferdinand is not complete. It's approximately a third of that, maybe a little more, has been implemented.
Q. Okay. And how, if at all, do these prescriptions reflect the typical specificity of the prescriptions that have been authorized?
A. This would be a pretty good cross-section of how, in some cases, we would show something on a map, in other cases we would just show that an area would receive a treatment. We tried to give indication in the narrative on the Form 2 prescription. If it's a portion of a stand that will be treated and it can be identified, we try to give some
narrative about where that will occur. So these are a good representation of the varying types of plans that have been approved.
Q. Okay. It's already been admitted, so just -- well, Exhibit 22, which is for the Clough Brook North; so what constitutes the treatment that was authorized for Clough Brook North with respect to the stands? Which document do we look at to know exactly what was authorized for treatment?
A. The Form 2, Page 2, where we went through the prescriptions -- this is -- these two pages for this harvest are signed by myself for Plum Creek and Matt Langlais for the State as the county forester, so these are the authorized prescriptions for those areas.
Q. Okay. Now when did county forester Langlais give his authorization for the Clough Brook North forest -- harvest?
A. November 16 th of 2009 .
Q. Okay. And then what approval came in next? In looking at Exhibit 23, which has been admitted, what approval was that?
A. This is the notice of determination regarding the heavy cut application, so this would be the notice that we were approved under the heavy cut.

THE COURT: I'm sorry, I guess I missed the question. Could you repeat the question so I know what the answer is about?

MR. GRAYCK: Yes, Your Honor.
BY MR. GRAYCK:
Q. Chris, after you received county forester Langlais'S approval, what was the next approval you received from the Department of Forests, Parks and Recreation?
A. The next approval was the notice of determination for the heavy cut, so an approval for the heavy cut prescriptions on Clough Brook.
Q. In other words, would you have proceeded without receiving Exhibit 23?
A. No.
Q. So after you received these approvals, what was the next step in the process?
A. After we received the approvals, then we needed to contract with the logging contractor to implement this harvest along with -- prior to and along with that the LandVest foresters would have been beginning to do the layout once we had the approval for our harvest prescriptions, any layout that was required for those prescriptions. So if you -again, if you remember yesterday, we saw a couple of -- I'm sorry, not yesterday -- on the site visit we saw a few indications of that layout that was done. One of those is this picture of 92 , the blue X on the tree, I mentioned that in this case in the shelterwood it was a mark to leave, so the foresters marked the trees with a blue $X$ that they wanted
left, and the trees that were not marked were to be cut. That was how the shelterwood -- that was the plan to implement the shelterwood harvest.

We also had -- the riparian buffers were identified.
Q. And this is all falling under the general category of laying out the prescription?
A. Yes, it is. Remember the picture; this is Exhibit 77, the blue $S B$ on the tree marking the boundary. So while LandVest was doing a layout, I was looking for a contractor to harvest the site. We had some contractors, logging contractors, working on us at the time, but we needed to scale up for the winter harvest to bring on a new logging contractor. So I, through asking around, and working actually with LandVest, they had provided a list initially of some contractors they work with. So when we started this -- when I started this process of looking for a contractor, one of the contractors on that list was WELOG out of Colebrook. I went and spoke with the owner, Malcolm Washburn, negotiated a contract with him, and put this Clough Brook North harvest area under contract with WELOG to harvest that winter.
Q. Okay. Now I'm showing you Exhibit 24; if you could briefly state what that is.
A. This is an email exchange between Dan Kilborn, the Vermont Land Trust stewardship forester, and myself setting up a visit to look at the jobs that were active, the winter jobs
that were active. Identifying 26th of January is the date that we could get together to do that. This was a fairly common -- or very common practice. We actually did this on most of the active harvests, Dan Kilborn and I. And often representatives from the State, Matt Langlais and Richard Greenwood, as well as the LandVest forester would get together during the active jobs and go out, look at how things were going, make sure the silviculture was being implemented as everybody had expected. Just a general touching base and keeping in communication about what was going on on the logging jobs.

MR. GRAYCK: So I'd move the introduction of Exhibit 24.

MR. DUANE: No objection, Your Honor. THE COURT: Plum Creek 24 is admitted.
(Email exchange was hereby received into evidence as Plum Creek Exhibit 24, as of this date.)

MR. GRAYCK: I have two copies for the Court. BY MR. GRAYCK:
Q. So that email is reflective of the correspondence that January 26 th was set for a visit to Clough Brook North, right?
A. Yes, Clough Brook North and another harvest in Lemington.
Q. Okay. And what about Vermont Land Trust? What
communication, if any, did you receive from the Vermont Land Trust with respect to the Clough Brook North harvest?
A. We received an approval letter -- we received an approval and then a letter following up. Dan always provides us with the letter saying here's your approval, and had also approved the construction of the two winter roads that $I$ mentioned earlier.
Q. And I'm showing you Exhibit 25. And what's that?
A. That's a copy of the approval letter for this and a few other harvest areas.

MR. GRAYCK: Plum Creek moves the introduction of Exhibit 25.

MR. DUANE: No objection, Your Honor.
THE COURT: Plum Creek 25 is admitted.
(Approval letter was hereby received into evidence as Plum Creek Exhibit 25, as of this date.)

BY MR. GRAYCK:
Q. Okay. So please describe for me the events of January 26 th, beginning in the morning when you met with county forester Langlais. What happened?
A. So we met together as a group on the morning of January 26 th at the Lemington town office. It was where we had arranged to meet. Dan Kilborn, Matt Langlais, county forester, Dick Greenwood, myself, Kevin Lemere that LandVest had hired to replace Jonathan Horton. Jonathan Horton had
left LandVest in December.
Q. What about a representative from the Vermont Housing Conservation Board?
A. Billy Coster from the Vermont Housing Conservation Board also joined us that day. He was invited by Dan Kilborn to come along. He hadn't had the chance to get out on harvest operations, and as part of the Vermont Housing and Conservation Board their involvement in conservation easements, he was interested in seeing the management on the easement, just how the easement was being implemented. So he came along as well.
Q. What about Dick Greenwood? Did you mention him?
A. Yes.
Q. Okay. So where did you start on the morning of January 26th?
A. So we met at the town office in Lemington. We drove up actually into an area we referred to as Willard Stream, Meacham Swamp area. We had a harvest going on in that area, an active winter harvest with another logging contractor. We spent the majority of the morning on that harvest. Two or three different areas really on that same harvest, looking at the harvesting that was going on, discussing the silviculture, just again, as I said, making sure that things were occurring to everybody's satisfaction, to their expectations according to the plan.

When we finished reviewing that site, we drove down and around and back in, kind of on the other side of the ridge, so where we were in the morning was on one side of the ridge, the Clough Brook North harvest area is on the other. We drove up in to Clough Brook North.
Q. By what time did you reach Clough Brook North? What time of the day is it by then? What portion of the day?
A. It was about halfway through the day. I guess around noon, maybe a little bit after noon.
Q. Okay.
A. I'm not 100 percent sure. We parked our vehicles. There was an active logging job going on, of course. There were actually -- I refer to them as sides, and when I say that, those are individual parts of the harvesting operation. So in this case -- and they would entail a piece of equipment that's cutting the wood, a piece of equipment hauling the wood out of the woods, and the processing that's going on from those. We had a processor in forwarder side, which were -the processor actually cuts the trees in the woods, lays them down, strips the limbs off in the woods, and cuts the trees into the length of the product right there in the woods. And then what we call affectionately a buggy, but it's a machine with a bunk on the back they load the logs into and drive them out to the landing. There's one of those operating, there were two feller bunchers, which are a large piece of equipment
with a rotating saw head. It's a mechanical piece that goes -- walks up to the tree -- the operator walks it to the tree, cuts the tree, and then lays those down, grapple skidders come and grab the trees that are laid down, they back up to them, grab a hold of those bunches and pull them back out to the landing to be processed. So in that case the limbs are taken off the trees at the landing, and then some returned onto the trails or -- in the smaller trees, and some of the tops chipped for bio mass.

So it was a busy place. There were three, and then actually a hand crew was working there as well, so there was a lot going on. We started close to where we went on the site visit, and that landing we parked at. We walked out to the east, we made a loop through the stands that were being harvested on the eastern side of the job, we came through Stand 34 and 43. Again, in somewhat of a zigzag fashion, but similar in reverse to kind of what we did on the site visit. And then we came up into Stand 34 at the landing. It would be this landing with the -- this is Exhibit 87, the landing with the culvert, the old culvert that was there, kind of partway down the hill. There was one landing further up the hill than this.

We came out to this landing. Of course everything was snow covered. The streams were open. We'd had a very heavy rain the day before, one of those January rains. I
would say unusual, but they really don't always seem to be that unusual. It had opened up the streams, but things had frozen back overnight and it was very cold again that day. We walked up through Stand 34, we walked along the stream that came out of that landing. It was getting later in the day. At that point Matt Langlais expressed concerns about the harvesting, the level of harvesting in Stand 34 , the number of trees that had been cut, and also about the AMPs with the crossings of that stream and around that landing -- the stream channel, as I mentioned on the site visit, and the number of crossings.

We got to the top of the hill. We looked at a crossing that was not a crossing authorized by LandVest or Plum Creek that the logging contractor had actually just gone and crossed the stream, put brush in the stream and just crossed it on their own, which is not per our normal procedures. So we found some issues that raised concerns for all of us on the site visit.
Q. And specifically Chris, just to be clear, what did you see that was the source of concern for everyone? What was there?
A. Well, as $I$ said, it was two things: one immediate concern was the questions and the issues around the AMPs. You know, crossings and places where equipment had gotten too close to that small stream. We -- that was violation. That
was against the AMPs. We wanted to take care of anything like that as quickly as possible.

And then the other thing that was causing concern was the level of harvesting, the number of trees that were cut in that portion of Stand 34 that we were looking at. And we -- as we had gone through the landing, one of the things that caught our attention as a group was there were trees with blue X's marked on them that were in the piles of wood on the landing, waiting to go to a mill. And as I mentioned earlier, the implementation of this shelterwood cut was supposed to be done by marking blue X's for the trees to leave. So it was obvious that some amount of trees that were supposed to be left had been cut and processed, and of course that raised a big red flag for -- had other trees been cut and processed and already gone to mills that had been marked? These mechanical operations are -- things move quickly, they cover a lot of ground quickly, so it's important to figure out what was going on and to try to correct matters as soon as possible. And, you know, frankly --
Q. Chris, just in that pile, approximately how many trees marked blue did you see? How many were there when you see this?
A. If I remember correctly, there were about half a dozen. Six or ten trees.
Q. Okay. Keep going.
A. So -- and given the concern of trees being cut that were supposed to be left in that stand, my immediate thought was we need to figure out where we're at with regards to the prescription across this stand.
Q. Okay, Chris. By what time in the afternoon are we at? You know, where are we in the day now?
A. It's pretty late in the day. We walked up that stream and through the cut right up to the top. Again, where we walked with the site visit on the -- what would be the western boundary of the stand. By the time we came back down to that landing, as I recall, it was starting to get dusky. This is wintertime, so the days are quite short anyway. It was cold, we were tired. It was late in the day.
Q. And what concerns did county forester Langlais express to you?
A. He was concerned about the trees that were cut, that had been marked to leave; about the level, the volume, the residual basal area in that portion of Stand 34; that it might be too low. And he expressed most concern about the AMPs and the compliance with AMPs, that those things that seemed like they could create issues get taken care of right away.
Q. Okay. And what about VLT forester Kilborn? What concerns, if any, did he have?
A. The same concerns.
Q. And in response to these concerns what did you --
what did you do?
A. Well, $I$-- as soon as we finished our site visit -- I mean, I shared the same concerns that Matt Langlais and Dan Kilborn did about this area. I went to Malcolm Washburn's house, the logging -- the owner of the logging company, told him that we -- that it seemed there were issues or AMP issues that needed to be taken care of immediately on the job, and that I wanted to meet with him in the morning out on the site to review the harvest and what was going on out there, and that until we -- that at that point I wanted harvesting stopped on Stand 34 so we could get a handle on where we were at with the prescription. He agreed to meet me out there in the morning and to have an excavator there first thing to remove any crossings that weren't needed anymore, fix the issues. The one in particular up near the top of the hill in that stream, that there was a place the skidders had gotten close to the stream and made a rut, and the concern was that in the spring runoff might be able to divert and start -divert the stream down the skid trail instead of staying in the stream channel. Matt Langlais had requested that we put a berm, a small berm there to prevent that from being able to happen, just smooth those ruts. So he was made aware of that and -- Malcolm was -- and did that the next day, took care of those issues.
Q. Okay. Now Chris, where did the conversation with

Malcolm Washburn take place?
A. At his home.
Q. Okay. So about what time were you at his home?
A. Oh, I'm guessing that would have been 6:30, somewhere around then.
Q. Okay. And when had your day started?
A. 5:30.
Q. 5:30 what?
A. A.M.
Q. And you were at Malcolm's at 6:30 PM?
A. Yes.
Q. Okay. Where did you go after Malcolm -- Malcolm's office?
A. I went back to my house.
Q. Okay. Now I'm going to show you Exhibit 26 . Where did you go after your house?
A. Well, this is actually an email from me to Matt Langlais, Dan Kilborn --
Q. Just wait a sec -- where did you go after Malcolm's place? You went to your house. Where did you go after your house?
A. I went to my house.
Q. And after your house did you go the office or did you stay at home?
A. My house -- I was working out of my house at the
time.
Q. Okay. That's fine. So you're at your house.
A. Yes.
Q. What's Exhibit 26?
A. So Exhibit 26 is an email from me to Dan Kilborn, Matt Langlais, Richard Greenwood, and Billy Coster, copying Kevin Lemere, so the people that were on the site visit, just summarizing what we saw.
Q. Okay.

MR. GRAYCK: I want to move the introduction of
Exhibit 26.
MR. DUANE: No objection, Your Honor.
THE COURT: Plum Creek 26 is admitted.
(Email from Chris Fife was hereby received into evidence as Plum Creek Exhibit 26, as of this date.)

BY MR. GRAYCK:
Q. So Chris, I want you to look at the Exhibit 26. I want you to read the email that you sent. I want you to read it for us.
A. So the email says "Thank you to each of you for your time and input today in the field. The interaction around of implementation of silvicultural prescriptions, AMPs, layout, and operations is very helpful for me as we move forward with management of this land base. I was glad that you were able to meet Kevin and hear his thoughts on the operations. If
you're like me, even though we saw a lot of good things today, the final stop on WELOG's mechanical job will be what's consuming most of your thoughts. Please understand that Plum Creek takes our obligations seriously, whether to UVA and the State of Vermont, the conversation easement, or the implementation of AMPs to protect water quality. These commitments drive how we do our business each day, as well as who we partner with to manage our land. Harvesting and brook buffers and cutting trees contrary to the silvicultural prescription for the block will not be tolerated. I met with Malcolm Washburn this evening to explain the problems we found, and we're meeting on the job first thing tomorrow morning. Thanks for your cooperation and working through these issues. I'll keep you updated on our progress. Chris Fife."
Q. Approximately what time did you send that email?
A. 8:30 PM.
Q. PM. Okay. Why did you send the email?
A. I wanted to express my feelings about what we had seen, just to let people know that follow-up was ongoing as I said it would; that we were taking this seriously and responding immediately.
Q. What did you do the next day?
A. The next day I met with Malcolm Washburn, as I indicated in this email. I met him in the morning on the site
and went over what we had discussed the day before, the issues with both the harvesting, the trees we had seen that were cut that should not have been cut, the -- again, the prescription of how this was supposed to be cut. Looked at the AMP issues that had been identified around that one landing and the stream crossings above it. He already had the excavator there and had started to remove crossings and stabilize the areas around them, so that work was already ongoing.
Q. So, I just want to be clear. So the work you just described was in response to what?
A. This was in response to the visit the day before. The group visit.
Q. Okay. Keep going, please, about what happened on the 27th. Keep going. What you did on the 27 th.
A. So after I got with Malcolm -- honestly I can't remember what -- where I went after I got done with Malcolm.
Q. That's all right. I'm going to show you Exhibit 27. What's Exhibit 27?
A. Exhibit 27 is a follow-up letter that $I$ wrote dated the 27 th to -- I actually sent this to Dan Kilborn, Matt Langlais, and Richard Greenwood was copied on this, as well as Billy Coster.
Q. How did you send it to them on the 27th?
A. I put it in the mail.
Q. And did you use email as well?
A. I did.
Q. Okay.

MR. GRAYCK: I'd like to move the introduction of Exhibit 27.

MR. DUANE: No objection, Your Honor.
THE COURT: Plum Creek 27 is admitted.
(Follow-up letter and email was hereby received into evidence as Plum Creek Exhibit 27, as of this date.) BY MR. GRAYCK:
Q. Chris, why did you send this letter?
A. Again, this was my way of trying to follow up, trying to summarize to everybody what we had seen, what the concerns were, the commitment, my personal commitment, as well as my commitment of Plum Creek to make sure that things were done right on the site, and to let folks know some of the things that were already in progress before the site inspection, but also some of the new policies we intended to implement, and things we intended to do as a follow up.
Q. Okay. Now, as an experienced forester how, if at all, can you make an estimation as to an area's residual basal area based upon what you see?
A. I think an experienced forester probably has a gut feel from taking enough plots with actual prism to know looking around what kind of basal area is there.
Q. Okay. But how do you accurately determine what a
stand's residual basal area is?
A. You would have to take plots across the stand. I mean, a gut feel doesn't tell you what is there. The only way to tell you what is there is to actually measure across the stand to see what the numbers add up to.
Q. Okay.
A. If you're standing -- for example yesterday, we saw a lot of -- I'm sorry, on the site visit we saw a lot of variability areas with very few trees, areas with many trees. I mean, if those all occur in the same stand, if I just looked at the area with many trees $I$ would over represent in my own mind the basal area; if $I$ looked at the area with few trees I would under represent it. So you really have to do it through a scientific process of taking plots; enough plots to have confidence in your answer and extrapolating those to the stand.
Q. So look at the second paragraph of your January 27 th letter. What are you expressing in that second paragraph? What's being expressed in that paragraph?
A. The objectives -- and some of what we -- for Stand 34, the residual basal area objectives -- some of what we saw, both in Stand 34 as far as right where we were, the basal area there.
Q. Okay. So based upon what you saw on January 26 th, what concerns did you have on January 27 th?
A. I was concerned because portions of the area had obviously had trees cut that were not supposed to be cut, so the residual basal area was lower than intended in those areas. And I was afraid that that could affect the overall residual basal area for the stand and make it so we couldn't meet the prescription.
Q. In fact, can you please read the last sentence on the first page of the January 27th letter? What does it say?
A. "In addition, we will cruise Stand 34 immediately to determine the overall residual basal area."
Q. What does that sentence mean?
A. We were going to immediately have -- I had already contacted LandVest to have them cruise Stand 34 , put plots in a systematic way to determine what the stand residual basal area was at that point.
Q. Why were you interested in the overall residual basal area? Why did you want to know that?
A. Well the prescription for the stand said that the overall residual basal area for that stand would be between thirty to forty square feet.
Q. Show the Court where it says that. On the exhibit, show the Court.
A. Well, in my letter $I$ reference it in the second paragraph: "Harvest prescription calls for a two stage shelterwood with a residual basal area of thirty to forty
square feet". That's the second paragraph.
Q. Okay. Show the Court on Exhibit 22 where it says what the requirement was. I want you to show the court.
A. On Exhibit 22, on Form 2, it's the one with the prescriptions on it, the first page of Form 2, the middle prescription was for Stand 34. This would be this page, the one with the stands listed in order down it. The stand number is off to the left. Stand 34 and the prescription says -- the last sentence of that says "The patches will not affect the stand residual basal area of thirty to forty square feet." So it described what would happen, it described the shelterwood, how it would be implemented, described these one to two acre patches, and then it says that the overall stand residual basal area would be thirty to forty square feet. So measured across the stand when we were done harvesting, it would be thirty to forty square feet on average of basal area, across that stand.
Q. So going back to that last sentence on the first page -- of Exhibit 25 -- 26 -- I'm sorry, 27 ; so what's that last sentence referring back to?
A. This is referring back to the stand prescriptions. Basically what $I$ was saying is we'll cruise this stand immediately to see where we're at with regard to the prescription.
Q. Okay. Flip the page of Exhibit 27. Okay. When you
turn over the page of your letter you talk about changes that you made prior to inspection. Could you please just explain to us what you're talking about in that first section of the back side of the January 27th letter? What's going on?
A. I mention changes, a few changes that $I$ made prior to the inspection, but after this stand was laid out, so the layout before the harvest on this stand was already done. But on other areas that we were laying out for harvest, these are things we were already beginning to implement. Of these, the first one is all stream buffers are now flagged fifty feet out on both sides of the stream. Any trees to be cut within the buffer are marked. This was a change we made to try to eliminate confusion. Before this we had been flagging the center line of streams. The operator of the equipment or the crew cutting the trees would see the blue flagging and now they needed to stay fifty feet back. We just felt like clarifying that by putting the flagging at fifty feet out, even though it meant twice as much flagging, or marking of those buffers, made it more clear where they were. So that was something that had already been implemented.

Second bullet point says Plum Creek has provided all woods foremen for our Vermont harvesting contractors with GPS units with harvest boundaries, including blue line streams loaded. The blue line streams referred to here are the streams that are in the easement with a fifty foot no-cut
buffer on either side. Those tend to be the larger streams that show up on topo maps. Those maps or what were used to develop that layer. So those streams, as well as the harvest boundaries, loaded on a GPS unit that they can have as they oversee their harvest on Plum Creek.

The third bullet point, contractors will only cross streams at designated locations. This was already in the written documentation, but this was a reiteration of the fact that a forester would identify all stream crossings, so we wouldn't have issues. We would not tolerate things like happened where the logging contractor just decided to cross the stream without authorization from us as the landowner or LandVest foresters.

And then in that section, finally, one LandVest forester will be responsible for Plum Creek. That -- LandVest had people coming and going, as mentioned this morning by John Horton. He had worked for LandVest and left LandVest in December. So just before this they had brought on a new forester, and they assigned that forester specifically to Plum Creek as the lead forester, so that all Plum Creek issues, or all Plum Creek planning would go through that forester. We wouldn't have multiple different foresters with LandVest that all had a little piece in the planning.
Q. Okay. Now the next section it states: "In addition, in response to the issues identified yesterday, we are doing
the following." I want you to go through each one, step by step, and explain what they mean and what we're doing.
A. Okay. So the first one says, "As mentioned above, immediately cruise Stand 34 to determine the overall residual basal area." I had already spoken with LandVest, asked them to do this. They had a plan in place to start within a day or so, and I had stopped harvesting -- stopped the contractor from doing any more harvesting on Stand 34. So there wouldn't be any changes to that stand so we could measure and find out what the basal area was.

The next bullet point, "Review AMPs related to stream buffers and crossings with all logging contractors in Vermont this week." So we -- I went out personally and had the other foresters go out to all logging contractors that were working on Plum Creek property at the time and take the AMP book, the guidelines for logging jobs, and review it page by page with them to be sure there was no confusion about our expectations or what was required for us as a landowner and UVA, and really for them, as they did logging in Vermont.

Next was to "Distribute additional GPS units so that each harvester has one." Harvester there refers to the feller buncher or the equipment doing the cutting. We obtained and loaded harvests on that. So if we had more than one GPS -- I'm sorry -- more than one feller buncher or piece of equipment doing cutting on a larger job, we could have each of
them have a GPS unit in the cab of that piece of equipment so they could reference where they were. They have a map, they have the GPS, they could reference where they were on the site.

The next bullet point says, "Renew the practice of stump marking leave trees." In this instance the mark to leave, the X's on the trees, were the only mark. And one of the ways you can be sure after somebody cuts trees that are marked whether they were cut or not is if you mark a mark on the stump. So when you paint the $X$ you also squirt a mark on the stump which doesn't get cut. It's down low to the ground. And if you see stumps in this case with marks, you would know that a tree was cut here that was supposed to be left. That practice was not followed on the Clough Brook North harvest, and it was -- we recognized that was one of the things that could have helped in figuring out really how many trees that were marked to leave actually got cut. We didn't have a good handle on that, other than the ones that were in the pile that we saw on the landing.

And then finally, the LandVest forester who painted within the stream buffer will no longer do unsupervised layout on Plum Creek. If he marks on Plum Creek it will be with another LandVest forester and under their direct supervision. LandVest has identified that particular forester may have created some confusion on the logging job because instead of
stopping his marking in all cases at the fifty foot buffer, he marked through that -- into that buffer as though it was part of the harvest block, which then of course logically could cause the contractor, the logging contractor, to cut trees within that -- too many trees within that stream buffer.
Q. Okay. And --

THE COURT: We'll stop for lunch now and
continue at 1:00.
(Thereupon, a break in the proceedings took place at 12:01 PM. Hearing resumed at 1:01 PM)

THE COURT: Please be seated.
Mr. Grayck.
BY MR. GRAYCK:
Q. Chris, when we left off you were looking at Exhibit 27, the back page or second page where your signature is, and you had just finished going through the bulleted items with respect to issues identified yesterday and were doing the following. So why did you identify those issues? Why did you write that in the letter?
A. These were all things $I$ was -- wanted to communicate to the -- both Matt Langlais and Dan Kilborn with the Land Trust, as far as being on the same page with what we were doing as a company to change practices to help continue to get better with what we were doing in the field, kind of implement the best practices, and also follow up on the questions and
concerns of the day before.
Q. Why don't you look at the next paragraph in your letter? Can you just read that?
A. "It's worth stating that Plum Creek has higher expectations than this for all our logging contractors, and we are very disappointed with this new contractor's performance on this portion of the harvest block. I am actively working to resolve these issues."
Q. Okay. What were you doing?
A. I was working with WELOG to -- and Malcolm Washburn, the owner, to address the issues that had come up to try to find out what the root of these problems was and make sure this didn't happen in the future.
Q. And on January 27 th what was the status of the harvest with respect to Stand 34 ?
A. I had stopped all harvesting in Stand 34.
Q. What, if any, harvesting has been done to Stand 34 since the conclusion of work on January 26, 2010?
A. There hasn't been any more harvesting. There was wood that was cut on that date that was pulled to the landing and processed, but the cutting was pretty close to the skidding, so that was probably a day or a day and a half more that was left to do.
Q. Okay. Can you please read the last paragraph?
A. "Despite the issues that we identified yesterday on

LM030109, I hope you will recognize the pattern of good practices employed on Plum Creek over the past year in Vermont and our desire to constantly improve. We -- I -- value your input as a forester and partner in management and continue to strive to be responsive to your requests. Sincerely, Chris Fife."
Q. Why did you write that?
A. I wanted to know -- the State and Matt to know that I was looking to continue to be cooperative, that I thought this relationship of working together, although we were new to it really still was an important one, and one that was workable, and that $I$ valued and wanted to continue to cultivate.
Q. What response, if any, did you receive from county forester Langlais in response to this letter?
A. I didn't receive any response.
Q. What did you next do with respect to the Clough Brook North harvest area in terms of inspection and managing of the harvest?
A. Well, I had contacted my boss, Tim Durrell, the evening before, on the 26th, and I -- he came over, we inspected the area together. So I was out there inspecting. LandVest had gone back out to continue inspecting the active jobs, which is a normal part of what we do in managing logging jobs and overseeing them. And them Tim came out, and Tim and I went out on the job together.
Q. And what day approximately was that?
A. It would have been -- I believe it was around February 2nd, something like that.
Q. Within a week of when -- of January 26 ?
A. Yes.
Q. Okay. And what was the result of your inspection with your supervisor, Mr. Durrell?
A. We went out, we inspected the job together and decided to shut the job down completely, cease all harvesting on that job, and let things sit until we could resolve the questions that had come up on the site visit on the 26 th.
Q. So by approximately what date was all harvesting, the Clough Brook North job terminated?
A. I'm sure that it was all terminated by February 5th --
Q. Okay.
A. -- of 2010 .
Q. And what, if any, harvesting has been done at Clough Brook North since that time?
A. There hasn't been any harvesting since that time.
Q. Okay. Now in your letter you said that you were going to have all of Stand 34 cruised to determine the overall residual basal area. Did that occur?
A. Yes, it did.
Q. And I'm going to show you what's been admitted as

State's C, the LandVest Stand 34 cruise results.
MR. GRAYCK: Does the Court have that? Do the
Court members have a copy of that?
THE COURT: Of what?
MR. GRAYCK: Of -- it's been admitted as State Exhibit C, the LandVest Stand 34 cruise results. I had intended to make --

THE COURT: Oh, that's right.
MR. GRAYCK: I had intended to make it Plum
Creek --
THE COURT: 28.
MR. GRAYCK: -- Exhibit 28.
THE COURT: Yup. Okay.
MR. GRAYCK: But I'd like -- I have additional copies of it if the Court would accept at this time so that my client --

THE COURT: I do have it. The additional copies would be helpful.

BY MR. GRAYCK:
Q. So the document you have in front of you has been admitted as Exhibit State's C. What is Exhibit State's C again?
A. This is the results of the cruise of the processing and results of the cruise that LandVest did on Stand 34 for us.
Q. Okay. And what's the result of the LandVest cruise of Stand 34 that's provided for in Exhibit State's C?
A. The basal area, the residual basal area on the entire stand is thirty-five.
Q. And can you show that page where that is to the Court?
A. It's Page 6 of 6 . It would be the last page that has data on it. Total acres a hundred and thirty-eight. That's the total stand acres, with a hundred and forty-one plots. And the basal area is -- it says "mean basal area per acre, thirty-five."
Q. And what did that tell you?
A. That told me that across the stand we were in compliance with the prescription still, which called for a residual basal area between thirty and forty square feet.
Q. Okay. Now part of the cut contrary involves that compliance or lack thereof with the accepted management practices. I'm showing you Exhibit 29. What's Exhibit 29?
A. This is a letter from AMP forester Jeff Briggs, state forester, documenting a site visit that we took on Clough Brook.

MR. GRAYCK: Move the admission of Plum Creek
29.

MR. DUANE: No objection, Your Honor. THE COURT: Plum Creek 29 is admitted.
(Letter from forester Jeff Briggs was hereby received into evidence as Plum Creek Exhibit 29, as of this date.) BY MR. GRAYCK:
Q. Exhibit 29 makes reference to a visit held on February 9th, 2010. Can you please describe -- or can you please tell us who was -- who met on February 9th, 2010, and where did you meet?
A. That was a visit to the site with Matt Langlais; Reginald Smith, who was the ANR enforcement officer, environmental enforcement officer, Jeff Briggs; and -- I'm trying to remember -- I don't remember who else was there. Myself, for sure.
Q. Can you read the first sentence of the second paragraph of the February 18th letter?
A. It says, "On February 9th, 2010, Matt, Reginald Smith, ANR environmental enforcement officer and I met with you on site. There was too much snow to observe the underlying soil and water conditions. We did observe that some remedial work had been done in the buffer area where the violation occurred and near the landing. We were also able to observe that you had taken out two of the -- two crossings of the brook, but there were areas of disturbed soil and had no water bars in place. In addition, we looked at the area up top where a skidder had driven through the brook."
Q. Okay. So what is this paragraph referring to?
A. This was a site visit, as I said, with both Reg Smith, Matt, and Jeff Briggs, where we went back to the site to look at the issues identified by Matt Langlais on the January 26 th site visit. And we visited -- we mostly spent our time around that landing with the crushed culvert, the one that I've shown the picture of.
Q. My next question is how, if at all, did the AMP violations and their locations in this letter -- which of them did we see yesterday, if any? Two days ago on the site visit.
A. The area that we visited was in that landing. And I will find the picture. We visited the area around Exhibit 86, which is the landing. Exhibit 87 was also a picture of that landing area with the culvert. We looked at where the stream channel comes in behind the landing in this general landing area, because there's a stream close by on this -- what would be the southern side of the landing. Then we walked up the stream behind the landing, looking at the crossings. And we did this in reverse order on the site visit. So we were up top by those crossings.

This would be -- and Exhibit 80, the area where it was a wet, grassy area. We stood there. Plum Creek believed that the AMP issues were lower -- just below that, at a crossing which is shown on Exhibit 81. So this was the area referred to here where a skidder had driven through the brook. They had just put some loose brush there and crossed this.

And also the -- so that's the area that was remediated and closed out, brush removed, reseeded the encroaches.
Q. Now what does the remainder of this letter address of Exhibit 29?
A. Jeff mentions that we agreed to a return visit, and then talks about the specific violations relating these to the AMP guidelines from the AMPs for logging jobs. And there's two -- two sections of that, AMPs that apply during the logging job referred to at first, and then AMPs apply at closeout. Those are ones that would be expected to be done before the job was left when you're -- we -- when everything's done we call that closeout work, when you're finishing the job, closing it out, so it stays stabilized through until the next time you are working in that area.
Q. Okay. Now the letter states "We referred this case to Reginald Smith, environmental enforcement officer, who will be working with all parties involved to insure compliance with the State of Vermont's water quality laws." What further contact, if any, have you had with Reginald Smith?
A. I haven't had any.
Q. I'm now showing you what's been marked as Plum Creek 30. What is that?
A. This is another letter from Jeff Briggs, the AMP forester, following a final site visit on April 19th of 2010. MR. GRAYCK: Plum Creek moves the introduction

MR. DUANE: No objection, Your Honor.
THE COURT: Plum Creek 30 is admitted.
(Letter from AMP forester Jeff Briggs was hereby received into evidence as Plum Creek Exhibit 30, as of this date.) BY MR. GRAYCK:
Q. Okay. The first paragraph of the April 27 th letter refers to a site visit on April 19th.
A. Yes.
Q. Do you recall that site visit?
A. I do.
Q. Okay. Who was on that site visit?
A. Gary Sayborn, who is a forester with the Agency of Natural Resources; Reg Smith, who was the State enforcement officer; and Jeff Briggs.
Q. And who else was there?
A. Mark Doughty.
Q. Okay. And what did you go look at?
A. We went back and inspected the site, looked at the areas that were identified as issues, AMP issues on the first visit, looked at the closeout that had been done, the crossings that had been pulled, the way those had been seeded and mulched. Basically the implementation that had been done of the AMPs and the stabilization of the site. We looked at water bars. We looked at multiple water -- stream crossings.

So all the stabilization measures that had been completed.
Q. Okay. And who had Plum Creek hired to assist with remedial AMP measures?
A. We hired Alan Poirier, who is a contractor that does AMP type of work, as well as road building and other excavating work for us.
Q. And what work did he do at the site?
A. Alan did the AMP work, the closeout work, so he used a small excavator to put in water bars on skid trails that needed water bars because of the steepness. He put -- pulled the crossings that needed to be pulled. Basic closeout of the job as he would do for us on any of our other jobs. Smoothed ruts in some places where there was some rutting that needed to be smoothed. And then spread hay and seed on the encroaches of the crossings. Put the water diversions on the winter roads so that they were stable.
Q. Now what was your understanding on receipt and review of this letter with respect to the status of the alleged AMP violations?
A. My understanding was that we were in compliance and there were no more AMP issues that needed to be taken care of on the site.
Q. Looking at the second page of the letter, do you see the four bolded items?
A. Yes.
Q. Forester Briggs characterized them as, you know, a reiteration of the main points. Could you please address the four bolded items and what response, if any, Plum Creek has and has done in response to those four items?
A. Sure. The first one is "The need for pre-harvest water quality AMP planning that specifically involves the crew on the ground that is doing the work. We understand that you and Gary will be working together to put together a logger training session focusing on this subject." We had conducted logger training every year. We do a springtime -- what we call a -- kind of like a mud breakfast, when the loggers are not in the woods working. We get them together. One of the things that we train on is AMPs and the implementation of those. We have not had Gary at any of those. He's -- right after this was very busy with the rewrite of the AMPs, and hasn't been able to cooperate with us on that in person, but -- so we've done that.

As far as the first sentence, "The need for preharvest water quality AMP planning that specifically involves the crew on the ground that's doing the work", we have a preharvest checklist that one of the items on there is to review the AMPs during a walk-though of the site with the contractor so that the logging contractor knows where the water courses are, knows where any special sites are. Anything unusual on the site is identified and noted on that inspection form. And
one of the items on there is that the logging contractor has been given or has produced a copy of the AMP rules to show that they have those and have access to them in order to reference them during the job.

The second item there, "The need for better oversight by Plum Creek. We understand that Plum Creek is hiring another forester to oversee operations in Vermont which should help." One of the changes that we've made was to bring our Vermont operations more in line with how we do our business in other states. We have gotten away from using a contractor for planning and layout and hired our own foresters. At this point we were hiring one other forester besides myself. We now have four foresters, including me, working out of the Colebrook office managing the Vermont and New Hampshire land.
Q. And as a result of hiring those foresters, you said you've moved away the model of using outside consultants. Who are you -- who are you referring to, or who was the outside consultant?
A. LandVest was the outside forestry consultant that we were using for the planning and layout purposes. So now we're doing all of that in-house ourselves, which is how we -that's really our business model of how we do things in other states.

Third, "Our concern that the scale of harvesting
that Plum Creek operates at and with the harvesting plans it has for the future in Vermont, that a higher level of AMP water quality compliance be adhered to going forward." I think that really is addressed in the initial items. AMPs are high on our list anyway. As a third party certified company, we need to pay attention to those things. We have no intention to violate AMPs and no benefit from violating them. Losing our certification would be a major blow, so it's not something that we want to risk. We want to be an exemplary landowner, someone that others point to and say that's the way it should be done.

So I understand the concern that was expressed here by Mr. Briggs, and I think that we have -- we have addressed that. I think it's part of the culture of Plum Creek to try to be at that level of excellence around environmental issues. And we have not had water quality AMP issues since these were cited.

As far as the scale of harvesting that there's a concern about, you know, the scale of harvesting was laid out in the approved forest management plan, and that scale of harvesting we still to date have not reached the levels mentioned in the forest management plan. But certainly one of the reasons for that is wanting to make sure that we comply on the environmental side and don't expand the operation beyond what we can handle and can supervise, taking care of the AMPs
and that side of things first.
And then the fourth point there just is our shared commitment to work together. And as I said, I think that's been proven out. This happened in 2010. We're still working with the agency. We're still going through the UVA process and the approval process on all our harvests. We're still implementing AMPs on all jobs that we operate. We're still seeking input from the county forester, the Vermont Land Trust forester, other state foresters. We're trying to work cooperatively on this and other projects, so I feel that we do have a commitment to work together, and that that's been proved out since 2010.
Q. I'm showing you what's been marked as Plum Creek Exhibit 31. What is that?
A. This is an email that $I$ sent to Jeff Briggs, Matt Langlais, Gary Sayborn, Reg Smith and Dan Kilborn, copying Tim Durrell, letting them know that all the closeout was complete; all the AMP closeout was complete on Clough Brook.

MR. GRAYCK: Move the introduction of Exhibit
31, Plum Creek 31.
MR. DUANE: No objection, Your Honor. THE COURT: Plum Creek 31 is admitted.
(Email from Chris Fife re: closeout of Clough Brook was hereby received into evidence as Plum Creek Exhibit 31, as of this date.)

BY MR. GRAYCK:
Q. Chris, what do the AMP rules require for a winter crossing a stream?
A. A winter crossing of a stream -- it has to be frozen crossing. You can use brush or pole crossing. So you can basically put brush, poles, wood into the crossing and use that to skate across the stream. That has to be removed and the channel, you know, opened and the banks stabilized when the logging job is finished.
Q. So I take it you've just described the conditions under which it's permissible to cross a stream under the AMP rules during the wintertime.
A. Yes.
Q. Okay. Did you attend the meeting between -- or a meeting with the Vermont Land Trust officials and Forests, Parks and Recreation officials on February 18th, 2010?
A. Two separate meetings; yes.
Q. Could you tell me about the first meeting?
A. We -- Tim Durrell and myself went to the BHCV office to meet with the Vermont Land Trust and BHCV in Montpelier to follow up on the Clough Brook North site visit and the -- get more input from them, find out what follow-up they might want to see from that, basically just to reach out to them and see how we could work cooperatively to address their concerns.
Q. And what was the next meeting?
A. The next meeting we then left Montpelier, we drove to St. Johnsbury on the way back, met with members of the Department of Forests, Parks and Recreation. Ginger Anderson, Matt Langlais -- I don't recall if anybody else from Forest and Parks was there -- myself, Tim Durrell and Mark Doughty.
Q. At that time what did you learn from FPR officials as to the status of its investigation or pursuit of a UVA cut contrary violation for the Clough Brook North harvest?
A. At that time we were given a draft of the cut contrary that Matt Langlais had been working on, and that was the first that $I$ had heard of it. We until then didn't really know that that was the way this was progressing.
Q. I'm going you Exhibit 32. What's that?
A. These are copies of the letter that I received from Steve Sinclair with the memorandum to Ginger Anderson from Matt Langlais requesting removal of -- or documenting the UVA violation and requesting removal of the acreage.

MR. GRAYCK: Plum Creek moves the admission of
Exhibit 32.
MR. DUANE: No objection, Your Honor.
THE COURT: Plum Creek 32 is admitted.
(Letter from Steve Sinclair was hereby received into evidence as Plum Creek Exhibit 32, as of this date.) BY MR. GRAYCK:
Q. Do you have Exhibit 32 in front of you, Chris?
A. Yes, I do.
Q. Okay. We're going to go through this page by page, okay? What's the first -- I'm sorry.

So Exhibit 32; when did you get this?
A. I received this -- I believe the postmarked envelope is in here -- this is May 24 th it's postmarked. I would have received it May 25 th or 26 th.
Q. Can you show the Court the last page of the exhibit so they can see where the postmark is?
A. Right here.
Q. What, if any, of the correspondence that's dated prior to the postmark did you receive prior to the postmark?
A. I received the draft of Matt's -- Matt Langlais's inspection with the map that is in here. But we did not receive anything until that date as far as anything final that Matt had done, or any of the rest of the documentation in here.
Q. Okay. So the first page of what you received; it's a letter from Steve Sinclair?
A. Yes.
Q. Okay. And what -- what did this letter tell you?
A. He said that Matt's field work was complete and he had done his write-up. The write-up and copies of the maps and plans which were posted -- posted April 30th were forwarded to Waterbury for review. They were sent to

Department of Taxes, Property and Valuation and Review, recommending that the property be removed from UVA for harvesting contrary to the management plan.
Q. And what about the second paragraph?
A. He stated that until actions related to the potential UVA violation are completed, Forests, Parks and Recreation will not be in a position to approve any new activities in the area referred to as Clough Brook North.
Q. All right. Second page of Exhibit 32; what's that -what is that?
A. That's a photocopy of the envelope that was in this packet, which I -- was paper clipped to Matt's inspection.
Q. They sent you an envelope in the envelope?
A. Yes.
Q. Can you turn the page, please?
A. Yes.
Q. Okay. What's the next document in Exhibit 32?
A. This is a letter from Matt Langlais saying "Please find enclosed a copy of the report to Ginger Anderson, chief of forest management, recommending the lands owned by Plum Creek Maine Timberlands, LLC be removed from the Use Value Appraisal program. Inspection of the 2009-10 harvesting operations found that a hundred and thirty-nine-point-fivefour acres have been cut contrary to the forest management plan on file. Recommendation for discontinuance is also
predicated on -- upon failure of Plum Creek to implement the minimum acceptable standards for maintaining water quality AMPs during forest management operations."
Q. Okay. So as a result of this letter what was your understanding of the State's conclusion with respect to the harvest activities at Clough Brook North?
A. That a hundred and thirty-nine-point-five-four acres was cut contrary, and that we were going to have the land described removed from UVA for a period of five years.
Q. Okay. Could you turn the page, please? What's the next page?
A. The next page is the memorandum from Matt Langlais to Ginger Anderson, chief of forest management, regarding UVA violation Plum Creek Maine Timberlands, LLC, hundred and thirty-nine-point-five-four acres cut contrary. And it goes on to describe Matt's report of what he did, what he found, including the AMP violations that he alleged.
Q. And what, if any, data have you received from the State of Vermont with respect to the location of the AMP violations?
A. There's a map -- the next page in here is a map.

That map has green triangles that represent AMP violation sites. That's -- this map is all I have received as far as --
Q. Can you please show the map to the Court?
A. This map is what $I$ have received.
Q. When we were on the site visit and there was disagreement as to the location of the alleged AMP violations, what was the basis of your opinion as to the location of the AMP violations?
A. Violation -- the first site that the State took us to is indicated on Exhibit 75, the photograph that was at the top of the hill in a grassy area. We stopped there, and Matt said that this was a location of an AMP violation. When you look at the route we took, which --
Q. It's Exhibit 97?
A. You need to do a little --
Q. Just wait for the Court, please.

MR. GRAYCK: If the Court needs extra copies, we have them available.

THE COURT: I think we only have the one. I don't -- did you get -- oh, you did. Okay. Never mind. We're fine. Thank you.

MR. GRAYCK: Your Honor, is one extra copy
required? We're concerned that we missed one binder.
THE COURT: Okay. That might be so. We're all
set.
MR. GRAYCK: Thank you, Your Honor.
BY MR. GRAYCK:
Q. Please continue, Chris.
A. The site we stopped at was right along the boundary,
just crossing here. And if you compare shapes, that's really probably the easiest way to figure it out. And I'll hold this up. But down here on the inspection report there's a fairly recognizable shape of the stand line that is this. You can recognize the same stand line. This is based on the same data. This was all the same base data. So this stand and this stand match. We were right against this stand line where we stopped. These orange triangles indicate that stop when we talked about the AMP violation. And if you look at the map that we were provided, there's no green triangle anywhere near this stand boundary up there. That's why I was surprised when we went to that site, and Matt Langlais said that was a site of an AMP violation.
Q. So with respect to the AMP violation, so going back to the April 26 th memorandum from Ginger -- from Matt Langlais to Ginger Anderson, there's an item on that first page that says SPAN number. Do you see that?
A. Yes.
Q. Could you please flip to Exhibit 16 and find me the tax bill for the town of Lemington? Can you compare the SPAN number listed on the town of Lemington tax bill in Exhibit 16 to the SPAN number identified on the April 26 th memorandum from Matt Langlais to Ginger Anderson?
A. They're the same.
Q. Thank you. Can you please go to -- in Exhibit 32 to
the March 24 th letter to Michelle Wilson from Virginia Anderson?
A. Yes.
Q. Can you please read that letter?
A. "Dear Michelle: This is a request -THE COURT: Can you wait just a minute? THE WITNESS: I'm sorry. THE COURT: What is it?

BY MR. GRAYCK:
Q. Do you want to hold it up and show it to the Court?
A. It's a letter dated May 24 th to Michelle Wilson -THE COURT: What exhibit is this in?

MR. GRAYCK: It's in Exhibit 32, Your Honor.
It follows the ortho photo with the AMP violations.
THE COURT: May 24 th?
THE WITNESS: May 24 th.
THE COURT: Okay.
THE WITNESS: Should be behind the --
THE COURT: Okay.
BY MR. GRAYCK:
Q. Can you read that letter?
A. "Dear Michelle: This is a request to have a portion of a forest UVA parcel in Essex County removed from the Use Value Appraisal program. Attached to this letter is documentation by Matt Langlais, Essex, Caledonia county
forester, regarding an adverse inspection that found a hundred and thirty-nine-point-five-four acres of the property was cut contrary to the owner's UVA plan. I also submit a copy of the report that documents the prompt resolution by Plum Creek of the AMP issues mentioned in the text of Matt's memo to me. Plum Creek is Vermont's largest landowner enrolled in UVA with parcels in several towns in Essex County. The SPAN number for this parcel is 34-108-10039. Please call me or Matt if you have any questions."
Q. What's your understanding as to the parcel that's identified as SPAN 34810810039?
A. That would be referring to Lemington.
Q. And how many acres in Lemington?
A. I need my list. Being nine thousand, nine hundred fifteen.
Q. When did you learn that the State proposed to disqualify fifty-six thousand, six hundred and four acres of Plum Creek land from the UVA program?
A. I received a letter from the Department of Propety Valuation and Review.
Q. Approximately when?
A. I don't recall.
Q. If we showed you State's Exhibit A, does that help refresh your recollection?
A. Yes.
Q. So about when did you learn that it was fifty-six thousand?
A. So this was July 9th of 2010.
Q. And if you flip it to the next -- to the next
exhibit; what's that?
A. It's the appeal decision.
Q. And if you flip that page, State's Exhibit A, what's it showing?
A. This is a list of the acres to be discontinued and their SPAN numbers, towns that they're in.

THE COURT: What are you referring to?
THE WITNESS: State's Exhibit 8.
MR. GRAYCK: I thought it was A.
THE COURT: I have A, but it doesn't have a list of SPAN numbers.

MR. GRAYCK: Okay. I apologize. This is -I'd like to admit into evidence as Plum Creek 32A, a July 9th, 2010 letter from William Johnson, Director of Property Valuation and Review, to Corporate Tax Department and Plum Creek.

BY MR. GRAYCK:
Q. And I'll show you this letter. Did you ever recall seeing that?
A. Yes.
Q. And what is it?
A. This is the letter that $I$ received from the Corporate Tax Department, or from the State Department of Taxes concerning the discontinuance.
Q. And what did you learn from that letter?
A. That they intended to remove fifty-six thousand, six
hundred and four acres of Plum Creek property from the Use Value program.

MR. GRAYCK: Plum Creek moves for the introduction of Exhibit 32A.

MR. DUANE: No objection, Your Honor. THE COURT: 32A is admitted.
(Letter from Vermont Tax Department was hereby received into evidence as Plaintiff's Exhibit 32A, as of this date.)

MR. GRAYCK: Your Honor, may I have a moment to confer with my client? THE COURT: All right.

MR. GRAYCK: Thank you.
THE COURT: Are you asking for us to take a
total break, or just -- you just want to speak briefly?
MR. GRAYCK: Briefly, Your Honor.
THE COURT: Okay.
(Thereupon, a brief pause in the proceedings took place.) MR. GRAYCK: Thank you, Your Honor. I'm finished with my examination of Mr. Fife; my direct exam. THE COURT: Mr. Duane?

MR. DUANE: Thank you, Your Honor.

## CROSS-EXAMINATION

BY MR. DUANE:
Q. Good afternoon, Mr. Fife.
A. Good afternoon.
Q. How are you?
A. Good.
Q. Mr. Fife, when you first became involved with Plum Creek up here in Vermont on the Vermont lands in late 2008, you began having meetings with Matt Langlais and other folks from the Department of Forests, Parks and Recreations, correct?
A. Yes.
Q. And some of those meetings involved talking about the Current Use program and what was required for someone who's enrolled in the Current Use program, correct?
A. Yes.
Q. Okay. Now the large landowner alternative program that you talked about earlier in your examination by Attorney Grayck; that went into place around the time that you became involved with Plum Creek's operations up here, correct?
A. I'm not sure about that.
Q. Isn't it true that the large landowner alternative -that is, the alternative plan for landowners of more than five thousand acres, is very helpful to large landowners, correct?
A. Yes.
Q. And there are only a handful of large landowners -that is, holdings of more than five thousand acres in the State of Vermont, correct?
A. I'm not sure.
Q. About a half a dozen? Does that sound about right to you?
A. I don't know.
Q. Do you know much about the Current Use program?
A. No, I didn't.
Q. Do you know how many forest owners there are enrolled in the Current Use program?
A. No, I don't.
Q. Now the large landowner program -- which Plum Creek is enrolled in, correct?
A. Yes, we are.
Q. If Plum Creek was not in that large landowner protocol or procedure, Plum Creek would have to do a forest management plan every ten years for its entire eighty-two thousand acres, correct?
A. Can you clarify that question?
Q. If Plum Creek was not in the large landowner program, Plum Creek would have to do a forest management plan for its entire holding every ten years, correct?
A. As we do now.
Q. Yeah. But that's the conceptual plan.
A. Yes.
Q. And isn't it true that if you own five thousand acres or, in particular, eighty-two thousand acres, you might never even get to some of the places that you own in that plan, correct?
A. Can -- can you clarify what you mean by get to?
Q. You might not even go in and harvest or do a sale --
A. Yes.
Q. -- or cut any timber --
A. Yes.
Q. -- on some parts of your land.
A. Yes.
Q. For many years.
A. Yes.
Q. And so not having to do a ten year plan for your entire holding saves you, as you testified, time and money, correct?
A. Yes.
Q. And so it's a good deal for the large landowners, correct?
A. It makes sense.
Q. It makes sense. And that was Matt's brainchild, wasn't it? In other words --
A. I don't know that.
Q. -- he came up with that. Isn't that correct?
A. I don't know.
Q. Now Plum Creek had been in the Current Use program since 2001, correct? Or the land had been in the Current Use program since 2001, correct?
A. Yes, that's correct.
Q. When Essex Timber Company bought it.
A. That's my understanding, yes.
Q. And enrolled it. Now when you're practicing silviculture, and I think you stated -- correct me if I'm wrong -- that when you're practicing silviculture you're manipulating the forest to receive a certain outcome or goal, correct?
A. Yes. That's correct.
Q. So when you go in and harvest or cut, you don't do it on a willy-nilly basis, correct?
A. We do it with a plan.
Q. And you don't do it haphazardly, correct?
A. Correct.
Q. And you don't do it randomly, correct?
A. Correct.
Q. And you don't go in and cut and cross your fingers and hope for the best and see what happens, correct?
A. That's correct.
Q. You have a plan that has an outcome, and you use
scientific principles to attempt to achieve that outcome, correct?
A. Yes.
Q. You just don't hope you get lucky and everything kind of turns out okay, correct?
A. Correct.
Q. Okay. And isn't it true that what you're trying to do when you do silviculture -- and you're a professional forester, correct?
A. I am.
Q. When you're doing silviculture you're trying to create the conditions on the ground, in the forest, to achieve your goal, correct?
A. Yes.
Q. Now when the Clough Brook North tract was being proposed for harvest, it was a collaborative process, wasn't it, between Plum Creek, the State of Vermont, the Vermont Land Trust, the Vermont Housing Conservation Board, correct?
A. Yes.
Q. You did a draft of a prescription.
A. Yes.
Q. And the Vermont Land Trust got a chance to look at it, correct?
A. Yes.
Q. And the State of Vermont, through Matt Langlais, got
a chance to look at it, correct?
A. Yes.
Q. And then you all went out into the field, correct?
A. Yes.
Q. And some recommended changes were made, correct?
A. Yes.
Q. And you came up with a final plan, correct?
A. Yes.
Q. And Matt approved that, correct?
A. Yes.
Q. Now there was a conceptual plan. Mr. Fife, let me show you what's been admitted into evidence as Plum Creek Number 15. And I have my binder copy here.

MR. DUANE: And Your Honor, if I could approach
the witness I'll show him this document.
THE COURT: All right.
BY MR. DUANE:
Q. And Mr. Fife, do you recognize Plum Creek Number 15?
A. I do.
Q. And that -- this is the Current Use Management Plan signature page for Plum Creek?
A. Yes.
Q. And this document takes the Essex Timber Company conceptual plan and puts it into the alternative procedure for landowners of more than five thousand acres.

MR. GRAYCK: Objection --
A. No.

MR. GRAYCK: -- Your Honor. The document speaks for itself. Mr. Duane is suggesting a conclusion as to the consequence of this document. The document speaks for itself.

THE COURT: The objection is overruled. He may testify as to its significance and effect, if he knows. BY MR. DUANE:
Q. And so I'll try to restate my question as accurately as I -- as I can, Mr. Fife.

This document recognizes that it was the Essex
Timber Company plan, correct?
A. It does.
Q. And then Plum Creek agrees to enroll in the alternative large landowner protocol, correct?
A. May I?
Q. Yes. Thank you.
A. No, I don't believe that's what that page is doing.
Q. And what do you think the page is doing, if I may?
A. I think this page is adopting -- is Plum Creek adopting the approved ten year management plan that was Essex Timber management plan before that.
Q. And this document is signed by Tim Durrell on behalf of Plum Creek?
A. Yes.
Q. And I think you've testified before he was your boss at the time?
A. That's right.
Q. And doesn't the signature -- could you just read for me, please, just so I don't misrepresent what it says -what's it say right there where -- in the second sentence, under the bolded language signatures?
A. Okay. It says, "I have elected to adopt the plan developed by Essex Timber Company, LLC, and understand and agree to the above requirements of the Use Value appraisal large landowner alternative forest management plan strategy for continued eligibility in UVA.
Q. Okay. So this document does certify that Plum Creek has elected to -- has agreed to the requirements of the Use Value appraisal large landowner alternative plan strategy, correct?
A. Yes, it does.
Q. Okay. Thank you. So when Plum Creek submits amendments to its forest management plan, as you testified earlier this morning regarding the stands in question, those are very specific prescriptions on a stand by stand basis, correct?
A. Yes, they are.
Q. Okay. And that's what the landowner is supposed to
follow when they go in the woods and harvest, correct?
A. Yes, they are.
Q. And if there's a dispute between what the conceptual plan says and what the prescription actually calls for, it's the on the ground prescription that controls what the landowner is supposed to do, correct?
A. Yes, I think so.
Q. Thank you. Now you testified about forest management plans in Ferdinand and in the towns of Maidstone and Brunswick and in the towns of Averill and in towns of Lewis, correct?
A. I did.
Q. And those plans were recently approved by Matt Langlais, correct?
A. No.
Q. They weren't?
A. Could you clarify the question?
Q. Well, thanks.
A. Maybe be more specific as far as recent. I'm not sure what you mean by recent.
Q. Okay. Thank you.

MR. DUANE: Again, Your Honor, if I could
approach the witness?
THE COURT: All right.
MR. DUANE: Thank you.
BY MR. DUANE:
Q. Mr. Fife, I'm going to show you again from my binder, but I'll represent that it's the same document that's been admitted, okay?
A. Yup.
Q. And I'm going to stand up here and I'll show you

Number 34. And this has to do with the towns of Maidstone and Brunswick in Vermont.
A. Yup.
Q. And here's a --
A. That's this one.
Q. There's a prescription, and it's approved by Mr.

Langlais on January 12th, 2012, correct?
A. Correct.
Q. Okay. And the plan having to do with Averill was approved in 2009, correct?
A. Correct.
Q. And the plan for the town of Ferdinand was approved in 2008, correct?
A. I don't think so, no.
Q. No?
A. That one's 2009 as well.
Q. Okay. Thank you very much.

And those plans in relation to the maps that were attached to it show that Matt, on behalf of the Department, is a flexible person to work with, correct?
A. In -- can you be more specific?
Q. Well, in terms of the map not being exactly what's in the prescription, Matt approved that anyway, didn't he?
A. No.
Q. Didn't you testify that there were differences between what was on the map and what was in the prescriptions in some of those exhibits?
A. No.
Q. When you first came on board in late 2008 you were the only forester for Plum Creek for Vermont, correct?
A. Yes, I was.
Q. And so Plum Creek may be the largest landowner in the United States, correct?
A. Yes.
Q. And Plum Creek is the largest landowner in the State of Vermont, correct?
A. Yes.
Q. And Plum Creek owns eighty-two thousand acres in the State of Vermont, correct?
A. Eighty-six thousand.
Q. With the extra four.
A. Correct.
Q. Eighty-six thousand, two hundred and two, or two hundred and --
A. Yes.
Q. -- twelve.
A. Twelve.
Q. Plus or minus, as we may say. And there was only one forester, correct, at that time when you came on board for all that land.
A. Can you be more specific? When --
Q. You were the only forester on the ground in Vermont for Plum Creek when you first started, correct?
A. I was the only Plum Creek employee on the ground.
Q. You were contracting with other people, correct?
A. Other foresters, yes.
Q. Okay. But not directly employed by Plum Creek, correct?
A. Correct.
Q. Okay. And Plum Creek is a 1.3 billion dollar company, correct?
A. I will trust you on that one.
Q. Okay. Thank you very much. And now they have four foresters.
A. Yes.
Q. And things have improved, correct, in your mind with regard to the management of that land vis-à-vis Current Use and your easement with the Land Trust, correct?
A. I don't think I can answer that question. Can you --
Q. Do you think things have improved since 2008 and 2009
with regard to the relationship with the State, despite the fact that we're here today?
A. I think that our relationship has continued to develop, and that we have a working relationship that's functioning.
Q. Thank you. Now the accepted management practices for forestry and logging jobs in Vermont; you're familiar with those?
A. Yes, I am.
Q. And in fact that's been admitted as an exhibit, correct?
A. Yes.
Q. Okay. And are you familiar with those rules and regulations? Are you familiar with the AMP rules and regulations?
A. Yes.
Q. And do you use them regularly?
A. Yes.
Q. Have you read them?
A. I have read them.
Q. Have you read them more than once?
A. I have read them more than once.
Q. And those are the same regulations you I believe testified you gave to some of the logging contractors so that they'd actually have a copy, correct?
A. That's correct.
Q. And let me show you a copy of what's been marked and admitted as Plum Creek 18.

MR. DUANE: And I'll represent to the Court
that this is a copy of the AMP book.
BY MR. DUANE:
Q. You've seen this before?
A. I have.
Q. This is the book.
A. May I?
Q. Yes, you may. Thank you.
A. Not that I doubt it.
Q. Oh, no.
A. It looks like the book.
Q. Okay. And in fact it's got a nice orange cover so you won't lose it out in the woods.
A. That's right. Especially in the wintertime.
Q. Okay. Great. And the purpose of these rules and regulations is to protect water quality in Vermont, correct?
A. Yes.
Q. And it -- and these regulations -- well, let me just have you read from the exhibit. What's -- what's number -I'm looking at Page 3, Number 1, Introduction. What does that say, Mr. Fife?
A. It says, "A violation occurs only if there's a
discharge. If no discharge occurs, the logger or landowner cannot be fined or prosecuted for not having the AMPs in place."
Q. Okay. Thank you. That's Number 1 on Page 5. And if you look -- could you read, please, into the record at the bottom of Page 5 the paragraph that begins "In summary". Could you read that, please?
A. Sure. "In summary, a logger or landowner is liable to legal action only when a discharge takes place and either no permit has been obtained or the AMPs have not been followed. Thus, the AMPs are not only basic to sound forestry, they also legally protect the logger or landowner during and after timber harvesting."
Q. Thank you. So it's true, isn't it, that if a logger or landowner doesn't follow the AMPs, and there's a discharge into the water, that that's against the law in the State of Vermont, correct?
A. Yes.
Q. And there were discharges up at Clough Brook North, correct?
A. Yes.

MR. DUANE: Your Honor, may I approach again? THE COURT: Yes. MR. DUANE: Thank you.
Q. Mr. Fife, let me show you -- again, this is from my binder, but it's Exhibit 29, Plum Creek 29, and it's a letter to you from Jeff Briggs. And you just testified about this letter, correct?
A. Yes.
Q. And you received that letter.
A. I did.
Q. And Jeff noted that there were one, two, three, four, five AMP violations, correct?
A. He did.
Q. And then in order to close out the job there was another one, two, three, four, five AMP issues that needed to be addressed, correct?
A. Yes.
Q. And you acted upon that letter.
A. Yes.
Q. And you hired somebody to fix those water quality discharge violations, correct?
A. Yes.
Q. And when Jeff sent you that closeout letter, again dated April 27th, Jeff stated to you, did he not, that -- and again, it's the letter of April 27th from Jeff Briggs to you -- that the State's intention is to enforce the law and remediate the violations in a timely manner, correct?
A. Yes. Remediate and rehabilitate in a timely manner,
yes.
Q. So the enforcement division of the Agency of Natural Resources worked cooperatively with you, did they not?
A. Is Jeff Briggs enforcement?
Q. He's in the Agency of Natural Resources --
A. Yes.
Q. -- correct?
A. Yes.
Q. And what happened here was not sent to some law enforcement state's attorney's office for prosecution for water quality violations, was it?

MR. GRAYCK: Objection, Your Honor. It's an argumentative question.

THE COURT: Overruled.
BY MR. DUANE:
Q. This was not sent to any kind of criminal law enforcement for violation, was it?
A. I'm not sure what Reg Smith -- he's an enforcement officer -- I thought he was law enforcement for the Environmental Division, but $I$ could be wrong about that.
Q. But these two letters are from Jeff Briggs, right?
A. They are, yes.
Q. And he's a forester?
A. He is.
Q. And he works with the Agency of Natural Resources?
A. He does.
Q. And he enforces and oversees the AMP water quality laws?
A. Yes.
Q. And he worked cooperatively to remediate the situation, correct?
A. Correct.
Q. And yet there were violations and Plum Creek paid to have them fixed, correct?
A. We did.
Q. When we went out to the site at Clough Brook North on January 29th, 2010 with the Land Trust, the Housing and Conservation Board and Matt Langlais to do an inspection, that's the time when you went to the landing and you saw the blue marked trees that should have been left to stand cut and processed and on the landing, correct?
A. Yes.

THE COURT: Do you mean January 26th? You said 29th.

MR. DUANE: I said 29th?
MR. GRAYCK: Yeah, you did.
MR. DUANE: And -- the 29th; thank you.
THE COURT: Do you mean the 26 th?
MR. DUANE: Oh, 26th; yes. Thank you.
BY MR. DUANE:
Q. And during that time around January 26 th there was a lot of logs coming off those stands in Clough Brook North, correct?
A. Can you define a lot?
Q. About sixty loads a week. Is that about right?
A. No, it wouldn't have been that high.
Q. Stand 34 was a hundred and thirty-seven acres, or one-thirty-eight perhaps. Is that right?
A. I think so. The improved portion was, yes.
Q. So that the Stand 34 harvest description indicated it was a hundred and thirty-seven, hundred thirty-eight acres, correct?
A. It did.
Q. Okay. And by early 2010 ninety acres of that one-thirty-seven had been cut, correct?
A. Yes.
Q. More than half of Stand 34 had been cut.
A. Yes.
Q. And Stand 43 was a hundred and fifteen acres, correct?
A. Yes.
Q. And about forty acres of that had been cut, correct?
A. That sounds right.
Q. About a third, correct? And Stand 44 was about thirty-seven acres, correct?
A. Correct.
Q. And eight acres of Stand 34 had been cut, correct?
A. That sounds about right.
Q. About a quarter or a fifth of that stand.
Q. Yes. Yup.

THE COURT: I'm sorry; what was the question and answer regarding 34 again?

MR. DUANE: I believe, Your Honor, that I had asked the witness that Stand 34 was a hundred and thirtyseven, hundred and thirty-eight acres, and in early 2010 at the time of the visit on January 26 th, that ninety acres of that one-thirty-seven had been cut. And I believe the witness answered --

THE WITNESS: Yes.
MR. DUANE: -- in the affirmative.
May I, Your Honor?
THE COURT: Yes.
MR. DUANE: Thank you.
BY MR. DUANE:
Q. And Mr. Fife, in the Clough Brook North tract, in addition to Stands 34, 43 and 44, there were three other stands, correct?
A. Yes.
Q. Stand 24, correct?
A. Yes.
Q. Stand 46, correct?
A. Yes.
Q. And Stand 54, correct?
A. Yes.
Q. And work had been going on -- by work, I mean timber harvesting -- had been going on in those three other stands, 24, 46 and 54, correct?
A. No.
Q. There was no timber harvesting going on at those three stands?
A. Correct.
Q. Had timber harvesting happened on those three stands?
A. On one of those stands.
Q. Which stand was that?
A. Stand 24 had been harvested. Stand 54 had barely, just a little piece that we saw on our site visit; negligible. And Stand 46 had not been harvested at all.
Q. And Stand 24 and 54 there was -- they are not involved in this adverse inspection report appeal, are they?
A. No.
Q. And Matt went out and looked at those two stands as well, correct?
A. As far as $I$ know.
Q. Okay. Now you were at the meeting in St. Johnsbury,

Anderson, and perhaps Cathy Decker was also there on -- in February 19th, 2010, correct?
A. Correct.
Q. And that's when Matt and the Department told you about the cut contrary on Clough Brook North, correct?
A. Yes, that's correct.
Q. And were you surprised by that?
A. Yes, I was.
Q. Isn't it true, though, about a year before that, in April 2009, you were at a meeting at Matt's office in St. Johnsbury, and he asked you to -- took you aside to talk to you about what was going on with regard to Plum Creek and its holdings in Vermont, correct?
A. I'm sorry, I don't recall that.
Q. Do you recall meeting with Matt about a year prior to 2010 that if Plum Creek had violations, or additional violations of its forest management plans, that its entire fifty-six thousand acre parcel could be excluded from Current Use?
A. No, I don't. We didn't have any violations before this.
Q. Please correct me if I'm wrong, but didn't Matt tell you that the consequences that Plum Creek would be in the hundreds of thousands of dollars of lost tax benefits if things did not improve with regard to its harvesting practices
in Vermont?
A. I don't remember the conversation you're talking about at all.
Q. Now when you say there were no prior violations, wasn't there a thirty acre violation up in Averill, Vermont in 2009?
A. We never received any citation of a violation from the Department.
Q. I know you didn't receive a citation, and I guess that's kind of my point. Wasn't there -- didn't Matt notify you or tell you that there was a thirty acre cut contrary in Averill in April -- in February of 2009?
A. Dan Kilborn notified me of that, and Matt was there.
Q. Dan Kilborn, being the forester for the Vermont Land Trust?
A. Yes, the Vermont Land Trust forester.
Q. And Matt was there when Dan said that to you.
A. Yes.
Q. And the State of Vermont did not take any action to file an adverse inspection report with the Tax Department regarding that Averill cut contrary, correct?
A. No, they didn't.
Q. And has it been your experience that the Department of Forest and Parks tries to work with landowners in helping them comply with rules and regulations?
A. I think they try to.
Q. Wasn't there also a cut contrary violation of a forest management plan in Brighton back in 2009 of about ten acres?
A. Again, there was no citation of any cut contraries in Brighton that I'm aware of.
Q. And so -- and there was no citation, was there?
A. No citation.
Q. There was no -- excuse me. I'm sorry to interrupt. There was no adverse inspection report filed, was there?
A. No.
Q. There was no action by the Tax Department to exclude Plum Creek's holding because of the cut contrary in Brighton, was there?
A. I'm not sure if it would be considered a cut contrary if nothing was filed.
Q. No legal action was taken by the State of Vermont with regard to that violation in Brighton, correct?
A. Nobody took any legal action.
Q. And is that an example of the State, particularly with Matt, trying to work cooperatively with landowners regarding compliance with Current Use?
A. I think we were all working cooperatively.
Q. Now with regard to the LandVest cruise of Stand 34, you received that from LandVest, correct?
A. Yes, I did.
Q. Again, I'm going to look at my binder, but I'll represent that it's the same document.

MR. DUANE: Your Honor, may I approach the witness?

THE COURT: Yes.
MR. DUANE: Thank you very much.
BY MR. DUANE:
Q. So Mr. Fife, I want to show you what's in my binder, and this document says 550 Plum Creek Clough Brook North Stand 34. That's the LandVest document that was admitted into evidence either as State's C or another document that Attorney Grayck presented to you, correct?
A. Okay. Yup.
Q. Is that right?
A. Yes.
Q. Okay. And I'm going to direct your attention -- this is Page 6 of 6 , and then there's 1 of 1 . Page 1 of 1 of this document --
A. Um-hmm.
Q. -- shows that the residual basal area mean Plum Creek Clough Brook North Stand 34 is nineteen-point-five-nine acres, correct?
A. Can you clarify the acreage?
Q. Hundred and thirty-seven acres.
A. This is on the cut portion. That's correct.
Q. Okay.

THE COURT: I'm sorry. I couldn't tell what you're referring to.

MR. DUANE: Your Honor, I'll walk over to the
Court --
THE COURT: All right.
MR. DUANE: -- if that's appropriate. The
document has Page 1 of 6, and then there's -- it's followed by a Page 1 of 1.

THE COURT: Right.
MR. DUANE: And I was referring the witness to Page 1 of 1 , where it says "Mean", and then it has "Basal area per acre", and it says "Nineteen-point-five-nine."

THE COURT: All right.

MR. DUANE: That's what $I$ was directing his
attention to.
BY MR. DUANE:
Q. And Mr. Fife, you were at the office in St. Johnsbury when you met with Matt and other folks from the Department of Forests and Parks, and Mr. Doty was there, correct?
A. Correct.
Q. And when Matt presented his draft, isn't it true that Mark said to him words to the effect of, "That's exactly what we came up with"?
A. I don't remember that, but Mark could testify that that was so.
Q. And at the time of that review by both the State and LandVest on behalf of Plum Creek, or at least at Plum Creek's direction, ninety acres of that a hundred and thirty-seven acre stand had been cut, correct?
A. I don't have that acreage in front of me. I haven't done that breakdown of the harvested acres, but it sounds -it sounds about right.
Q. Okay. Thank you. And when you went out to inspect the Clough Brook North tract on January 26 , setting aside the AMP violations, when you looked at the harvesting violations you saw problems, didn't you?
A. Can you ask that -- you're asking me two questions there.
Q. Sorry. Setting aside the AMP violations, when you went and looked at the timber harvesting that had been taking place on those three stands, you, as Plum Creek's forester, saw problems with regard to compliance with the forest management prescription, correct?
A. I was concerned there could be problems.
Q. So much so you went to Mr. Washburn's home that night and told him he needs to get out there and start fixing things, correct?
A. The AMPs, yes.
Q. And Tim Durrell, your boss, and you -- I'm sorry, I'm assuming that -- forgive me -- decided to stop the harvesting activity there for a while.
A. Yes. Correct.
Q. And you've been working with Matt since late 2008, correct?
A. That's correct.
Q. Matt Langlais, the --
A. Yes.
Q. -- the county forester? And it's your opinion, isn't it, that Matt's a fine forester, correct?
A. I think Matt does his job well.
Q. Didn't -- do you remember having your deposition taken by me?
A. I do.
Q. Okay. Do you remember me -- do you remember -excuse me. I'm going to look it up. Do you remember being asked the following question and given -- and giving the following answer? Question: "What's your opinion of Matt Langlais as a forester in terms of his professional capability?" Answer: "I'm probably not the best one to judge. I mean, I think he -- he seems like a fine forester." Do you remember saying that?
A. I do.
Q. Okay. And do you also remember testifying with
respect to that question and giving an answer "So far as I can tell he seems to be competent to do his job." Do you remember that?
A. Could I see it? I -- I think I remember saying that, yes.
Q. Okay. Would that help you refresh your memory if I show you this?
A. Yes.

MR. DUANE: Your Honor, can I approach the
witness?
THE COURT: Yes.
MR. DUANE: Thank you.
BY MR. DUANE:
Q. Mr. Fife, I'll direct your attention to Page 88 -well, let me show you the document. This is your deposition?
A. $\mathrm{Um}-\mathrm{hmm}$.
Q. Christopher Fife; that's you?
A. Yes.
Q. That's your signature?
A. That is my signature.
Q. Thank you. And so Page 88; there's the question I asked you.
A. Um-hmm.
Q. Do you recall me asking you that question?
A. Yes.
Q. And now I'm going to turn to Page 89. And can you just read that right there?
A. "Discussion about forestry issues together. So far as I can tell he seems to be competent to do his job."
Q. Thank you.

MR. DUANE: Your Honor, I have no further questions for the witness.

THE COURT: All right.
Mr. Grayck?
MR. GRAYCK: Excuse me, Your Honor, just one moment.

THE COURT: All right.
(Thereupon, a pause in the proceedings took place.)
REDIRECT EXAMINATION
BY MR. GRAYCK:
Q. Chris, you were asked questions about the AMPs. Do you recall?
A. Yes.
Q. Okay. Could you go to the UVA 2006 manual? That is Exhibit -- that is Exhibit 22A.
A. I'll need a copy.
Q. Pardon?
A. I don't have a copy.
Q. Do you have -- okay. You don't have a copy. I'll get you one. Here you go. Can you go to Page 29?
A. Yup.
Q. Okay. And at the bottom, again, it says "Erosion Control and Water Quality." Am I right?
A. Yes.
Q. Okay. And what's that section then referring to?
A. It refers to the acceptable management practices for maintaining water quality on logging jobs; the AMPs that we were talking about.
Q. Okay. And just look at the page again. What's your understanding as to the extent to which you are required to comply with the AMPs under the 2006 UVA manual?
A. It says that we must -- shall be employed to the maximum practicable extent on all enrolled parcels. So wherever possible -- I mean, the intent is to imply -- to apply the AMPs as the job is ongoing, to apply them in your planning, and to apply them on closeout, as I described. But as -- with anything, there's probably times when it's not practicable to apply a specific AMP, especially when discharges are considered to be a limb across a stream. Because a limb in a stream counts as a discharge, just the same as sedimentation counts as a discharge. So the discharges that were referred to were discharges of slash that was followed across the stream. On the 26 th, on the site visit, I didn't observe any discharge of sedimentation, mud, into streams. And when I was out there with Mr. Briggs, he
said "It's not worth arguing about. I can find a discharge on any logging job in the State of Vermont." So I didn't argue about it.
Q. Okay. Now what's your understanding with respect to county forester Langlais's intent to comply with the 2006 UVA manual? Do you think he tries to comply with it?
A. I think so.
Q. Okay. Let's look at Form 1, the 2006 manual. Could you find that, please?

MR. GRAYCK: Can the Court find it also? THE COURT: Yes.

BY MR. GRAYCK:
Q. Got it?
A. Yeah.
Q. Have you ever received a Form 1 with respect to the Averill Harvest that Mr. Duane asked you about?
A. No.
Q. Have you ever received a Form 1 with respect to the Brighton Harvest that Mr. Duane asked you about?
A. No.
Q. Do you think Matt Langlais -- or how, if at all, do you think Matt Langlais tries to comply with the UVA 2006 manual?
A. In the application of silviculture?
Q. Yeah.
A. I think he looks to see that the guides we're using for our silviculture meet the requirements, that we meet the standards for our maps and our plans.
Q. And how do you rely upon what you received from county forester Langlais to gauge Plum Creek's harvesting activities in Vermont?
A. Well, he's our feedback from the State of Vermont. So what he provides to us is taken as important and considered in our planning and in what we do.
Q. Okay. Let's look at Form 1 in particular. Can you explain what you believe Form 1 is for?
A. It appears to be an inspection report that the -- I think that a forester, a state forester, could use inspecting a landowner who is enrolled in UVA.
Q. So if county forester Langlais did an inspection and he had concerns, what would your expectation be with respect to the receipt of a UVA Form 1?
A. I would expect some kind of written documentation of his concerns.

THE COURT: We'll take our afternoon break at this point and continue at 3:00.
(Thereupon, a break in the proceedings took place at 2:42 PM. Hearing resumed at 3:00 PM.)

THE COURT: Please be seated.
Mr. Grayck?

MR. GRAYCK: Thank you, Your Honor.
BY MR. GRAYCK:
Q. So, Chris, you were asked some questions about the ten year master plan. Right? What's your understanding with respect to Plum Creek's obligation to maintain qualification in UVA upon the expiration of the ten year period which commenced with FPR's approval of Exhibit 14, which was the Essex Timber Company Forest Management Plan, which is now Plum Creek's Forest Management Plan?
A. Plum Creek will be required to submit another updated forest management plan for the next ten year period.
Q. Okay. And so really, the question is whether it's under a large landowner alternative or not under a large landowner alternative if Plum Creek wants to stay in UVA, correct?
A. Yes. That's correct.
Q. Okay. Now I'm showing you what's marked as Plum Creek Exhibit 48. Can you just tell me what it is?
A. This is a letter from Virginia Anderson to Dan Singleton, along with a heavy cut permit.

MR. GRAYCK: Plum Creek moves the introduction of Exhibit 49.

MR. DUANE: No objection.
THE COURT: Did you say no objection?
MR. DUANE: No objection, Your Honor. We just

THE COURT: Plum Creek 48 is admitted.
(Letter from Virginia Anderson to Dan Singleton was hereby received into evidence as Plum Creek Exhibit 48, as of this date.)

MR. GRAYCK: And two copies for the Court, Your
Honor.
BY MR. GRAYCK:
Q. So Chris, who is Dan Singleton?
A. Dan Singleton was a forester that had worked for -worked on Essex Timber Company land, and then was hired by LandVest, worked for LandVest for a time as a forester on Plum Creek's land.
Q. Okay. Was Mr. Singleton ever employed directly by Plum Creek?
A. No, he wasn't.
Q. So as this letter is addressed to him in Fairfield, Maine, what was your reaction to that?
A. It was obvious there was confusion, probably because of the address on the heavy cut application and his name.
Q. Okay. I want to refer you to the third paragraph of the letter. Can you read the third paragraph for me?
A. It says, "On this application the number of plots sampled for both regeneration and inventory are not to standards. The team OUVA exemption was designed to allow
applicants more time to produce detailed stand information, including adequate field plots on which to base activity decisions. This system was designed to facilitate field operations, but it is an internal policy and can be rescinded in favor of the more detailed ten year management plan for each stand on each enrolled parcel. This may be critical, given the number of heavy cut applications that may be generated from your operations."
Q. Now when it says team OUVA exemption, to what is that referring to?
A. I believe that's referring to the large landowner strategy.
Q. And the large landowner strategy as you understand it, I believe, is Exhibit 15; Plum Creek 15?
A. Plum Creek 15 is the signature page which refers to the large landowner alternative forest management plan strategy for continued eligibility. That's the one signed by Tim Durrell and Matt Langlais.
Q. When did Mr. -- when did Matt Langlais sign Exhibit 15? What's the date on it?
A. November 7th of 2008 .
Q. And what's the date on the letter to Mr. Singleton?
A. February 13th of 2009 .
Q. So it's, what, approximately two years from when you take on the large landowner alternative to the letter?
A. Not even.
Q. Not even?

THE COURT: I'm sorry. I missed whatever
meaning of that was, so could you back up again?
MR. GRAYCK: Sure, Your Honor. If you could
look at Exhibit 48, Your Honor?
BY MR. GRAYCK:
Q. And Chris, if you could look at Exhibit 48 again. That third paragraph; what's it telling you? Not with respect to the forestry practices, but what's it telling you with respect to Plum Creek's status or continued eligibility under the large landowner alternative? What's it telling you?
A. Well, it says it -- this strategy is an internal policy, and it can be rescinded in favor of a more detailed ten year management plan. It sounds like at any time if we don't meet the requirements under the large landowner strategy, then we could be required to go back to meeting the requirements of the program without the land owner -- large landowner strategy.
Q. If Ms. Anderson had decided to carry through with what she stated in this letter, and she had rescinded Plum Creek's enrollment under the large landowner alternative, in favor of a more detailed ten year management plan for each stand on each enrolled parcel, what would it have taken for Plum Creek to produce such a plan? What would you have had to
A. It would have been a huge undertaking. I mean, every stand on our property would have to be individually cruised to the standards that we talked about for the amendments, and then submitted for review. And any harvesting that we wanted to do would have had to be submitted at that time. So it would be a huge -- huge process.
Q. What was your reaction, if any, to the statement by Ms. Anderson in this letter that the large landowner alternative is an internal policy and can be rescinded. What was your reaction to that?
A. I think we -- that was my understanding of the policy, and that, you know, we -- as it had been explained, we just needed to work with the State and with Matt and Ms. Anderson to meet the requirements to continue to be enrolled in this strategy.
Q. Now when you're out doing the field inspection and there's a discussion amongst you and Mr. Kilborn and Mr. Langlais, and suggestions are made as to changes in the prescription, what's the consequence, or what could be the consequence if you decline to make the changes that county forester Langlais wants?
A. Probably the plan wouldn't be approved.
Q. And what does that mean if it's not approved?
A. We can't harvest.
Q. Can't harvest what?
A. Can't harvest that site that we've -- there's a plan for.
Q. The prescription?
A. Correct. Yes.
Q. Okay. Now going to Exhibit 29; in Exhibit 29 which are described as violations?
A. The first five items that are referenced.
Q. And the remainder? What are they?
A. Those are AMPs that need to be applied at closeout. So when the job is completed.
Q. When the job is what?
A. Completed.
Q. Okay. And if you could remind us; what are the three phases of, you know, the AMP practice that you employ? Describe that again.
A. I describe it as the planning phase where you think about how you will implement the AMPs and implementation and then closeout. So closeout is the last phase, where you're doing all the stuff to button the site up so that there isn't erosion in the interim time when you're not doing any activity out on the site.
Q. Okay. Now with respect to stream crossings, how do you decide on whether to cross a stream?
A. Well, the -- kind of the first rule of thumb is you
try not to cross streams if you don't have to. If you can bring wood to a landing without crossing streams you try to do that. Depending on the size of operation and the terrain and where the wood needs to get to the landings, you have to cross stream crossings, then you try to keep those to a minimum.

MR. GRAYCK: Thank you, Your Honor. I'm done.
THE COURT: Anything further?
MR. DUANE: Briefly, Your Honor. Thank you. RECROSS-EXAMINATION

BY MR. DUANE:
Q. Mr. Fife, with regard to Plum Creek's submission of plans for approval to the Department, and Matt in particular, for harvest approval, the State has approved nearly eight thousand acres for harvest by Plum Creek, correct?
A. I'm not sure of the acreage.
Q. But not one plan submitted by Plum Creek has been disapproved by the State, correct?
A. They have been disapproved until amendments have been made.
Q. And after the amendments have been made, no plans have been disapproved or denied, correct?
A. Correct. When we have put the changes Matt requested, he's approved them.
Q. Thank you.

THE COURT: Anything further?

MR. GRAYCK: Nothing further, Your Honor.
THE COURT: Okay. That completes your testimony. You may step down. Thank you.
(The witness was excused.)

MR. GRAYCK: I'm just shifting gears for a moment, Your Honor. I'll be right back. (Thereupon, a pause in the proceedings took place.)

MR. GRAYCK: Okay, Your Honor. We'd call Mr.
Robbo Holleran.
ROBBO HOLLERAN
having been duly sworn, testified as follows:
DIRECT EXAMINATION
BY MR. GRAYCK:
Q. What is your name, please?
A. Robbo Holleran.
Q. And --

THE COURT: Excuse me. Would you please spell
both your first and last names?
THE WITNESS: Robbo, R-O-B-B-O Holleran, H-O-L-
L-E-R-A-N.
BY MR. GRAYCK:
Q. And is Robbo a nickname or is it your name?
A. It's a nickname.
Q. And what's your -- what's your legal name?
A. Robert.
Q. Okay. Mr. Holleran, what is your profession?
A. I'm a consulting forester.
Q. And could you please tell us, what is your educational background?
A. I have a degree in forestry from the University of Maine, and quite a bit of continuing education.
Q. And what year did you receive your degree from the University of Maine?
A. 1982.
Q. And what was it in?
A. Forestry.
Q. And could you please describe your experience as a professional forester?
A. Well, I made the mistake of starting my own business fresh out of college, so I've been in business for thirty years. And I manage about fifty thousand acres of land, mostly in the southern half of Vermont, but into northern Vermont and all three adjacent states. I'm licensed in Massachusetts, certified in New York. And the forester that works for me is in the process of getting a New Hampshire license.
Q. Okay. And what professional forestry organizations, if any, are you involved in?
A. I'm involved with the Vermont Forest Products Association; the Vermont Forestry Foundation; the Associated

Industries of Vermont Forest Policy Task Force; Tree Farm; probably others.
Q. And what recognition, if any, have you received from your professional peers?
A. Well, I've been elected as president of the Vermont Forestry Foundation, and I've been a director of the Forest Products Association for about twenty years.
Q. Could you please describe silviculture?
A. Silviculture is described as both an art and a science, as Chris has mentioned. The -- it's like agriculture, and silvi refers to forest. So it's the culturing of forests to provide specific objectives. And it's definitely a science, but it's also -- it's not quite crisp in the sense that it's also an art with variations in soils and genetics and the way trees behave at different ends of their range and so on. There's an art to it.
Q. Okay. I'm going to show you what's been marked as Plum Creek Exhibit 36. I just want you to tell me what it is.
A. This is my complete report from September 15, 2011, from my initial review of the Clough Brook North harvest area.
Q. And who prepared the exhibit?
A. I did.
Q. Generally what information does it contain that is relevant to what you did or observed in this case?

MR. DUANE: Your Honor, I'm going to object. I
think the witness is not qualified to testify about what's relevant and what's not relevant. Perhaps it's just a question of wording, but we would object to the question. MR. GRAYCK: I'll rephrase the question. THE COURT: Okay.

BY MR. GRAYCK:
Q. Robbo, what information does that exhibit contain that addresses the issues which are before the Court?
A. It includes my opinion and the supporting information to arrive at that opinion.
Q. Okay. Opinion with respect to what?
A. To the harvesting and whether or not it complies with the forest management plan.
Q. Okay.

MR. GRAYCK: Your Honor, at this time I'd move the introduction of Exhibit 36.

MR. DUANE: No objection, Your Honor.
THE COURT: Plum Creek 36 is admitted.
(Robbo Holleran's Report dated 9/15/11 was hereby received into evidence as Plum Creek Exhibit 36 , as of this date.) BY MR. GRAYCK:
Q. Okay. So you now have Exhibit 36 in front of you, okay, Robbo?
A. Okay.
Q. All right. THE COURT: I would prefer formal names in court.

MR. GRAYCK: I apologize, Your Honor.
BY MR. GRAYCK:
Q. Mr. Holleran --
A. Yes.
Q. -- if you could turn to Exhibit 2 of Exhibit 36. What is the silvicultural guide to northern hardwood forest types?
A. It's a booklet that we commonly refer to as the guide, silvicultural guide. It includes -- well, we have a guide like this for each forest type. For example, for white pine, for hemlock, for spruce and fir, and the northern hardwood guide also includes the mixed wood forest types and applies to something like eighty percent of Vermont's forests. So it's the one that we use all the time. It includes the specific recommendations and the thought process for arriving at those recommendations for different kinds of silvicultural treatments from $A$ to $Z$. And then it's a concise thing to quote; for example, if you're saying that you're doing a particular treatment you say "as described in the guide Prescription J, or Prescription M."
Q. Okay.
A. Or whatever it is.
Q. How, if at all, is it relied upon professionals in
your field?
A. It's relied upon heavily.
Q. And how, if at all, is it relied upon by the UVA program?
A. In the program manual it lists acceptable sources of supporting information, and it's the first citation.
Q. Okay. Now what edition of the guide are you looking at?
A. The 1987 edition is what's in use.
Q. And what is your understanding with respect to the preparation of a revised edition of the guide?
A. Bill Leek, who is an author of this guide and the previous guide, has asked me to assist in preparing the current revision, which should be published in the next year.
Q. What is the difference, if any, in the practice of silviculture in natural stands compared to pine plantations, for example?
A. Well, pine plantations are fairly simple. When we talk about even age management in northern hardwoods in this area compared to a pine plantation in Georgia, where you know the trees were all started the same day in a nursery, they were all planted the same week in the forest, when you say that's even aged it really is all the same age. The stands are uniform. It's almost like a cookbook type of recipe. When you say you're going to thin that stand, you might take
out every third row, and it's very crisp. And then when you say, well, we're going to do a shelterwood, you might take out the next row. And when you're doing the overstory removal you'd take out the last third row, or something like that.

Whereas our natural hardwood stands, especially with
a history of active management and let's say extractive high grading over the last hundred years, they're extremely diverse. We're working with a lot of variability within the stands.

And the other important difference is the pine plantations, by nature of the word plantation, they're planted stands. Somebody goes out and plants a tree. And with our natural stands, we're working with the native species, and what we're doing is we're influencing the amount of light, shade, disturbance to develop the next stand without planting trees.
Q. Okay. What is your familiarity with Use Value appraisal?
A. I'm very familiar with Use Value.
Q. And how many forest management plans have you prepared with respect to qualification in the UVA program?
A. Many hundreds of plans.
Q. Many hundreds?
A. Yes.
Q. And how many forest management plans under the large
landowner category strategy have you prepared?
A. None.
Q. Please describe your understanding of the UVA large landowner category alternative.
A. Well, for comparison, the typical landowner in Use Value, my typical client has between a hundred and two hundred acres. I have a few larger clients with larger holdings than that, but the typical plan for, say, a two hundred acre lot might be divided into four or five stands. The plans are updated every ten years. We have to go out and remeasure the whole forest, write a new plan that will have the specific information for all forest stands, let's say, and schedule the treatments. It might say no treatment in that stand, in that stand, and we're going to thin this one, and do an overstory removal in that one. So the large landowner requirement recognizes that on a large property the areas that you're not going to treat are certainly eligible, but don't need a refinement of detail for a plan, is my understanding.
Q. Okay.
A. And so then the amendments are filed that basically comply with the same requirements that a two hundred or four hundred acre landowner would have to do to do a harvest on their land.
Q. Okay. With respect to Exhibit 36 , what investigation did you undertake in connection with the preparation of your

September 15 th report?
A. Well, we started by doing an initial cruise where we were given maps from Plum Creek of the stands that were harvested, and we did a moderate intensity cruise where we had a plot every four acres across the four stands that were essentially harvested: Stand $24,34,43$ and 44 . So we harvested -- we sampled those stands across the entire stand with about one plot every three and a half acres. And then in looking at that and talking about what was in contention, we decided to go back and provide more detailed information on the alleged cut contrary areas so that we could better understand the issues where there was disagreement on their compliance.
Q. And how did you set up your initial cruise?
A. We use a fairly simple computer mapping program called DeLorme Topoquads, and probably not quite as sophisticated as the folks at Plum Creek or the State, and -but we laid that out on a -- basically on a grid on the Topoquad software, created GPS locations where the points needed to be taken, and then we went out and collected the data.
Q. With respect to the collection of the data, what portion, if any, of the stand was it done on?
A. The initial review was done across the entire stand.
Q. And why did you sample across the entire stand?
A. Because the stand is the unit of measure for forest management.
Q. And when you say the stand is the unit of forest management, what, if anything, in the UVA 2006 manual forms the basis of your opinion? And we're going to have to give you the manual.

MR. GRAYCK: It's been admitted, Your Honor. BY MR. GRAYCK:
A. Okay. I'm going to be looking around Page 28 or 31. So I think there's a place that says this more clearly, but on Page 32 and 33 it goes into detail about exactly what is required for each forest stand in terms of sampling data, stand description, objectives and treatments.
Q. And that's in which portion of the 2006 manual?
A. It's in the Minimum Standards for Forest Management Plans.
Q. And so is that portion of the manual pertaining to the preparation of a plan for qualification, or the preparation of a harvest? What's -- what's that portion of the manual pertaining to?
A. This portion applies to the management plan.
Q. Okay. And just -- could you please compare it to the Minimum Standards for Forest Management and Regeneration? What's -- what are these -- what are these two portions of the manual doing that is different?
A. One sets the standard for the paperwork that's required for initial eligibility or continuing eligibility, and then the other Minimum Standards for Forest Management and Regeneration would be applicable to the implementation of these plans.
Q. Okay. So what type of sampling did you do for the initial cruise reported in Exhibit 36?
A. We did variable radius point sampling with a prism, as Chris mentioned.
Q. And did you bring your prism to court today?
A. It's in my truck.
Q. Okay.
A. I can -- I can explain it --
Q. Could you please explain --
A. -- without the prism.
Q. Yeah. Why don't you go ahead? I mean -- go ahead. Briefly.
A. Real simple way to explain this: if you hold your arm up and hold your thumb up, the prism reflects an angle that's about the same as the angle of the width of your thumb. And so if you hold your thumb up and picture that, say, Mr. Grayck is a tree, then Mr. Grayck appears larger than your thumb at this distance, and he would be considered as in the plot. Whereas -- let's -- we need somebody a little further back -- Mr. Langlais's head is just a little smaller than my
thumb, so a tree that size would be considered out of the plot. So the size of the plot is based on the diameter of the tree. And the mathematics that make this work are staggering, but it's so simple to use, because each tree that you count in your plot counts as ten square feet in basal area. So when you're, say, marking an area to be harvested and you say, well, I have a residual goal of sixty for this stand, you can mark and then you can check yourself. You just stand in that one spot and you can just go around with a prism and say, oh, there's -- there's six trees here, there's five trees here, there's seven trees here that are in the plot. That's, you know, in the ballpark of what we're looking for.

And then the specific data that we collect is more involved than that, but each tree with a ten (indiscernible) of prism counts as ten square feet of basal area.

Just one more thing to mention, because I know there's a learning curve probably for you folks in terms of all the forestry language. With basal area, if a -- we count basal area in square feet. You've heard that mentioned so far. And a fourteen inch circle is almost equal to one square foot. You know, a twelve inch circle is a little small. A fourteen inch circle makes about one square foot. So if the trees were all fourteen inches, then square feet of basal area would be the same as trees per acre. So when we say there's eighty-eight square feet of basal area, it's like saying
there's eighty-eight trees per acre if they were fourteen inches. But a ten inch circle for ten inch trees is about a half of a square foot, so that's closer to our average. So just in terms of ways to think about it, when we say a basal area of eighty square feet per acre, it's like a hundred and fifty trees per acre.

So that just helps give you a framework, I think, for thinking about basal area.
Q. Now you described the initial inventory work you did. What subsequent inventory work did you do in connection with the preparation of your report at Exhibit 36?
A. We went back out and took additional plots in the area that was given an adverse inspection, because that was controversial. We wanted to understand what was going on in those areas more thoroughly, so we went back out so that we would have a total of about one plot per acre in those areas. And that's a very intensive sample. Just for comparison, the initial management plan has about one plot for every ten acres.
Q. And who assisted you in conducting the intensive cruise of the contrary area?
A. My employee, Ben Viseri (phonetic), who had worked for me for six years. He has a degree in forestry also. And then Steve Hardy, who's another consulting forester that I contracted with to work with me on that.
Q. I'll show you what's been marked as Exhibit 37. What's Exhibit 37?
A. This is the subsequent report that $I$ wrote on -finished on September 22nd, 2011.
Q. And who prepared Exhibit 37?
A. I did.
Q. And what's the subject matter of Exhibit 37?
A. I had received the report and data information from the State, and so this is my response to the State's information.

MR. GRAYCK: Plum Creek moves the introduction of Exhibit 37.

MR. DUANE: No objection, Your Honor.
THE COURT: Plum Creek 37 is admitted.
(Robbo Holleran's subsequent report dated 9/22/11 was hereby received into evidence as Plum Creek Exhibit 37, as of this date.)

MR. GRAYCK: There's two copies for the Court, Your Honor.

BY MR. GRAYCK:
Q. Now Robbo, I'm showing you what's been marked as -I'm sorry -- now, Mr. Holleran, I'm showing you what's been marked as Exhibit 38. And what is Exhibit 38?
A. Exhibit 38 is my report on the regeneration that we did on October 16 th of 2012.
Q. And who prepared Exhibit -- who prepared the report in Exhibit --
A. I did.
Q. And what's the subject matter of it again?
A. Review of the regeneration in Stands -- in portions of Stands 43 and 44.

MR. GRAYCK: Plum Creek would move the
introduction of Exhibit 38.
MR. DUANE: No objection, Your Honor.
THE COURT: Plum Creek 38 is admitted.
(Robbo Holleran's report on regeneration dated 10/16/12 was hereby received into evidence as Plum Creek Exhibit 38, as of this date.)

BY MR. GRAYCK:
Q. And Robbo, I'm also going to show you what's been marked as Plum Creek 39. And what is Exhibit 39?
A. This is a letter $I$ wrote this May regarding a certain map that we called Exhibit 8, which probably is called something else now.
Q. Okay. And who prepared the exhibit?
A. I did.
Q. And what is the subject matter of Exhibit 39?
A. It's a review of that particular map and how it applies to the prescription and compliance with the prescription.
Q. And which portion -- which map; which portion?
A. It refers to the overstory -- the overstory removal box that we talked about in Stand 43.
Q. Okay.

MR. GRAYCK: Plum Creek moves the admission of Exhibit 39.

MR. DUANE: No objection, Your Honor. THE COURT: Plum Creek 39 is admitted.
(Letter dated May 2013 regarding overstory removal was hereby received into evidence as Plum Creek Exhibit 39, as of this date.)

BY MR. GRAYCK:
Q. Robbo -- Mr. Holleran --

MR. GRAYCK: I apologize, Your Honor.

BY MR. GRAYCK:
Q. Mr. Holleran, what's the summary of your opinion with respect to whether Plum Creek has complied with the prescription for Stand 34?
A. I think they have.
Q. Okay. What is the description of Stand 34?
A. We're going back to the management form, and that's Exhibit 1 in my folder in the Exhibit 36 , so $I$ don't know if you call that 36-dash-1 or something like that. So we're back to the Form 2, Page 1 from the management plan. And this is the approved version, Stand 34
Q. And briefly, if you could summarize, given Mr. Fife's testimony.
A. Yes. This has all been gone through. The important things to point out -- the total basal area is eighty-two. With northern hardwoods you can almost think of it in terms of a percent stocking, because around a hundred is a normal number. You might have a hundred and thirty or a hundred and fifty in an extremely overstocked forest. So this is eightytwo. It's like eighty-two percent stocking is one way to think of it. It's not exactly correct, but just in terms of thinking about stocking. The acceptable growing stock is only thirty-five. It's way below what would be considered a manageable amount of acceptable growing stock.

And the summary paragraph at the bottom of the page is fairly crisp. "Stand 34 is a well stocked northern hardwood type with a total basal area of eighty-two square feet. Of that, thirty-five square feet is acceptable growing stock. The stand is dominated by sugar maple, yellow birch, beech, balsam fir, red spruce, typical species for that area. The main stand diameter is eight-point-four inches. The stand is weighted towards the medium saw timber size class. The current stand has a high level of residual stand damage and a fair amount of crown die back." We noticed that when we were out on the site visit. "And the understory varies greatly in stocking. They have acceptable regeneration of its small
pockets of sugar maple seedling and saplings in a patchy distribution around the stand."
Q. Okay. Now looking at Exhibit 2 to your report -- so that's Exhibit 2 to Exhibit 36 --
A. $\mathrm{Um}-\mathrm{hmm}$.
Q. -- which is the guide --
A. Silvicultural guide.
Q. -- silvicultural guide; what does the silvicultural guide recommend for a stand in this condition? And if you could please refer the court to the page of the guide you're referring to.
A. I'm going to go to about Page 25 of the guide; 25 and 26. And --
Q. Just give the Court a moment to get to there, please.
A. Yup. So for twenty-five pages the guide has talked about the concepts of forest management, and basically with even aged management, like a pine plantation, the stand started at some point. It has grown. And then with even aged management, eventually you're basically clearing the old trees and planting new trees, which is not what we're doing. But then at this point in the guide there's a key, to make it simple for us simple-minded foresters, where -- when you start with -- on Page 25, underneath these charts, it starts with the top -- at the top of the key here -- it says, "If you have pole timber and saw timber stands with a mean deviation of
overstory trees four inches or more." So that's where our stand is, based on the information we have. And the Question 1 is, "Is your objective uneven aged management?" And we say in -- basically one of the problems with this guide is it starts with the preposition that you know whether or not you want to do even aged or uneven aged management. It also doesn't really take into consideration the understory, which is part of what we're revising.

But in this guide we start with the question "Do you want to do uneven aged or even aged management?" In this case we're doing even aged management. So you go down to the bottom of Page 25 and you get back to 1, Objective even aged management.

So then Question 2, the stocking of acceptable growing stock is less than the $C$ line for the appropriate type -- and if that's yes, you'd go to I. If it's no, you'd go to the next line. But the acceptable growing stock is thirtyfive, and the A line -- the C line for a stand in that condition is about forty-five. So it's below the C line; significantly below.

So we'd go to Prescription I, and on the -- two pages over, Page 27, in the upper left-hand corner, now we're in this list of prescriptions. So these are the different options for what you might do. And the --
Q. Give the Court a moment to get to the page.
A. Yup. And as $I$ was saying, the way the guide is used, when you get to this conclusion, foresters talking to foresters, I can just say, oh, we're using Prescription I. And whoever the county forester, or whoever is, has this book, and when $I$ say Prescription $I$, what goes with it is all of this whole discussion before it. So it's just part of our language.

Prescription I says "Acceptable growing stock is inadequate. Plan to regenerate the stand with clear-cutting, strip-cutting, or shelterwood cutting when commercially feasible." So it just means you don't have enough good trees to grow, it's time to start over.
Q. Okay.
A. And it gives you those three options.
Q. Please read the prescription for Stand 34 from UVA Form 2, Page 2. And again, if you could tell the Court where it's located in your report.
A. Okay. Form 2, Page 2 is back here. Okay. We're going to back to the Form 2, Page 2, which is in the Exhibit 1 category here towards the back. And it's the prescription that we're on now?
Q. Yes, for Stand 34.
A. So that's the Form 2, Page 2, and so this is the prescription for Stand 34. Stand 34 --
Q. Robbo, which page are you on for your exhibit?
A. It's Exhibit 1-13.
Q. Of Exhibit 36.
A. Yes.
Q. Go ahead.
A. "Stand 34 will receive a two-stage shelterwood, 2SS, even aged Code 3. This stand lacks an acceptable amount of regeneration and the majority of the overstory is unacceptable growing stock. A low density shelterwood with a residual basal area of thirty to forty square feet will be utilized to discourage the establishment of beech in the understory. The shelterwood will be irregular in distribution and will target sugar maple and yellow birch with large crowns to provide shade and seed distribution. Portions of the stand will also receive one to two acre patches where quality and stocking are not sufficient for shelterwood." I'm reading in the changes that I think are assumed typographical errors here. "The patches will not affect the overall stand residual basal area of thirty to forty square feet."
Q. Okay. So what does the prescription require?
A. Well, going back to the guide, the guide talks about regenerating the stand, and gives a few different options. And just to explain what two-stage shelterwood means for comparison, we all know what a clear-cut looks like. That's pretty easy to describe. There's no trees left. There might be a few trees. A shelterwood is a process where a portion of
the stand is harvested so that the new trees are going to be established with a certain mixture of sun and shade. And that mixture might be very shady if you're looking for certain species of trees. It might be very sunny if you're looking for other species of trees. There's a wide range of treatments that we call shelterwood. And a shelterwood can be done in various numbers of stages. The two-stage shelterwood is the simplest. The first cut you're cutting it to establish the regeneration with some scattered amount of overstory, and then the second stage is the overstory removal. So I know you've heard both of those terms. I just want to put them into context.

So two-stage shelterwood is that first establishment
cut. It implies that you don't already have the regeneration, and you're cutting it to get regeneration to start. And in this case, especially battling beech regeneration is an important part of forest management in the northeast. Beech is a low value tree. It's almost just a weed, except that you can sell it for pulp or firewood. So we -- unless you're trying to grow beech for bear habitat or something like that. But from a commercial timber standpoint, beech can -especially with very shade-based systems -- and I work with a lot of landowners with small woodlots. They don't want to have a lot of daylight in their woods, and they're growing beech and straight maple for that next regeneration -- that
next generation forest.
So a low density shelterwood gives you a lot of daylight, and in my opinion that's an important way to combat existing beech and hobblebush and straight maple regeneration that's already present. It gives you a lot of disturbance to the site.

So what's required for the prescription is a fairly low density shelterwood with irregular spacing of trees, so you would expect to see quite a bit of variability; some areas more fully stocked, some areas fairly open. And then it also includes one to two acre patch cuts, so those would be clearcuts that would be up to two acres with no trees, and areas with more trees. And I think the controling language here is that the overall stand residual basal area should be somewhere near thirty to forty to be considered acceptable.
Q. Okay. So briefly, what's the overall goal of the prescription?
A. To start a new forest.
Q. Okay. What is the accepted range for residual basal area in a two-stage shelterwood cut?
A. It could be a very wide range. It could be as low as twenty and as high as eighty. It could be even higher in a mixed wood or a softwood forest type.
Q. And what is the accepted basal area for a patch cut?
A. It would be zero.
Q. And what are the regeneration requirements for a twostage shelterwood or a patch cut?
A. When you are doing the harvest there would be no regeneration requirement at the time of harvest.
Q. And how, if at all, does the prescription require a uniform treatment?
A. I think the prescription requires specifically a disuniform treatment.
Q. Okay. What indications are there, if any, that indicate the stand was spatially irregular?
A. Well, back in the description, a couple of pages back, the Exhibit 1-9, first of all, the fact that it was harvested by Champion --

THE COURT: Doesn't $1-9$ refer to Stand 43? THE WITNESS: Oops. Correct. Thank you, Your Honor. BY MR. GRAYCK:
A. Stand 34, Exhibit 1-8. The harvesting by Champion tended to be irregular, just from what I've seen. I also looked at some older aerial photography, and you could see the spatial irregularity of the -- of this whole area. Also, things like residual stand damage and beech bark problems would not tend to be uniform across the stand. They would be -- you would only have beech (indiscernible) where you have beech, and so that would tend to be irregular.

Further down on the bottom it mentions crown die back and pockets of maple seedlings and saplings also are indicative of spatial variability.
Q. Okay. And what did you find for total stand basal area?
A. If you go to the beginning of my report, on Page 2 there's a summary table, Table 1, and right at the beginning of the table at the top the stand numbers down the left-hand side, the categories across the top. In the third column is the stand total basal area, and for Stand 34 I found the total basal area to be forty-seven-point-four with thirty-nine points.
Q. Okay. And what did you find the residual basal area to be in the portion that Forests, Parks and Recreation has alleged was cut contrary?
A. That's the second column on this table, and it was about ninety-one acres, and I found the residual basal area to be twenty-eight-point-five in that portion of the stand.
Q. And what was the general condition of the residual trees in this area?
A. Could we have the pictures? There's a stack on my bench there. Where I was sitting there's a file.

We saw these areas on our field trip. And when we consider that the initial stand was very low quality based on the numbers in the description, the residual trees looks
pretty good. They were straight, they were good quality stems, and they had reasonably good-sized crowns. I've got to get in the right stand here.

Oh, here's a nice picture; Picture Number 71. That's right in the real low density portion of the stand on that upper elevation, east facing slope. The -- and you can see that the crowns are all nice, full crowns. You know, they're just starting to leaf out, so they're not green yet. And the trees are mostly nice, straight, good quality stems.
Q. And what was the condition of the regeneration in this portion of the stand?
A. The regeneration was abundant. We did not do a very quantitative analysis of the regeneration here because it was not controversial. You walked through it and saw it. You couldn't take three steps without stepping on a young tree. Heavy to sugar maple and yellow birch. There was very little beech out there. In our detailed cruise we found just a few little pockets of beech. We tried to show you some on the tour, and we only walked by a few. And the -- there's a scattering of spruce and fir in there. Some red maple, some white birch. We did see some shad, some willow, and a fair amount of mountain ash on the higher -- higher elevations. So it was a very high proportion of the desirable commercial species, and enough diversity to keep it very interesting.
Q. Okay. And to what portion of Stand 34 does the

State's residual basal area apply?
A. My understanding is the State only cruised the allegedly contrary portion, which was about ninety-point-five acres.
Q. Okay. And I'd like to look at Exhibit 4 to Exhibit
36. And if you could please turn to Paragraph 6 of that. First, do you know what that -- what's that document?
A. Okay. This is the decision memorandum from Acting Commissioner Clark, which -- I guess my understanding is she is confirming the adverse inspection report from Matt Langlais.
Q. Okay. And could you please go to Paragraph 6 of that -- of the decision?
A. Yes.
Q. What does it state?
A. Paragraph 6 -- everybody ready for that? "Although the unit --
Q. Rob, I'm sorry. I didn't know if the Court had it. I'm sorry.
A. Ready to go?
Q. Go ahead.
A. Okay. "Although the unit of measure for forest management purposes and Use Value appraisal is the stand, management can alter the unit enough to create different stands. As a stand is a contiguous group of trees
sufficiently uniform in age, class, distribution, composition and structure, and growing on a site of sufficiently uniform quality to be a distinguishable unit, the harvesting in Stand 34 has created two separate stands, as that area harvested has a very different age, class, distribution, composition and structure now, compared to that area left untreated. They are no longer the same stand. Therefore, they should be sampled and evaluated separately.
Q. And how, if at all, do you agree with this conclusion?
A. Well, that's a complicated question. If I was going out there today to write a management plan for that parcel, obviously the area that was shelterwood cut is very different from the area that was not cut. So you'd say, yes, this is different from that. However, in this case, there's already a stand that's been established and approved by the State as a unit, and that's the unit of the management plan. So to come in and -- what was the question again? I think I'm getting off track.
Q. Well, do you agree with the portion of the decision that talks about the creation of two stands?
A. So I don't think it applies to the way the prescription needs to be evaluated.
Q. Okay. And why is the harvesting not created two separate stands relative to the prescription?
A. Because the prescription applies to a certain area, and that area is that area.
Q. Okay. Now how did Forests, Parks and Recreation characterize the harvest in terms of silvicultural application and the condition of residual trees?
A. Okay. It's in this document somewhere.
Q. With respect to crown size?
A. Yes. All right. Well, I guess it's still that same set of paragraphs that's -- it's on the next page from what $I$ was reading. It's still Bullet Point 6. And -- okay. Okay. "Additionally, the residual trees comprising this basal area are at best intermediate stems in the ten to twelve inch diameter class that lack the crown size necessary to provide the shady conditions, even if the desired residual basal area target was met." So they're saying that the trees didn't have adequate crowns, and that they were intermediate from the original -- intermediate in crown position, which means not dominant or co-dominant in the crowns.
Q. And what did FPR allege about considering shade trees a kilometer away?
A. So that's in the same section. In the same paragraph further up it says, "The notion that the goals and objectives of the shelterwood treatment were met by considering shade from trees over a kilometer away in the uncut portion of the stand as providing the necessary microenvironmental condition
as a misapplication and complete misunderstanding of the principle of the silvicultural practice."
Q. And how, if at all, do you agree with the FPR contentions there?
A. I don't agree. First of all, we saw those crowns.

They were not small crowns. If the average stand diameter was eight inches before the harvest, the trees that are ten inches and larger are above average in diameter, they're going to be above average in crown size. We saw that yesterday. And the shelterwood treatment allows for wide range of basal area. So some areas that are as low as twenty would be considered a low density shelterwood. Some areas that are as high as sixty would be a higher density shelterwood. And so we're not saying that it's going to be thirty or forty on every acre, and that the shade somehow from a tree a mile away is going to come over here and give us that magic thirty to forty number. What I'm saying is that if we're measuring -- if the requirement is to have thirty to forty square feet across the entire stand, then you're going to have to count trees at this end of the stand and at that end of the stand, because the stand is large and almost a mile across.
Q. Okay. And could you please describe the unharvested portion of Stand 34?
A. Back to my initial report. We did break out the data separately. We cruised the whole stand --
Q. Before you begin, what page of your report are you at?
A. I'm sorry. I'm on Page 2, that Table 1.
Q. Of Exhibit 36?
A. Of Exhibit 36.
Q. Go ahead.
A. We found the uncut portion of Stand 34 to have a residual basal area of eighty-three, which was very close to the initial description. But the acceptable growing stock was a much higher proportion there. It was about seventy. So most of the trees remaining in that end of the stand were healthier and better trees to grow. Higher proportion of sugar maple, less yellow birch. And one aspect of that is the ice storm of 1998. I don't know if you folks remember that, but as a forester it left a bright impression. The east facing slopes tended to take it hard in 1998, and we saw evidence of that on our site visit. So the west side of the stand faces more to the east. The east side of the stand, because it's in a bowl, faces more to the west. And so the eastern side of the stand didn't suffer as much from the ice storm as the west side.
Q. All right.
A. So it was better quality --
Q. We're talking about the unharvested portion of Stand 34. Please describe it.
A. It's better quality, fully stocked, you know, B level stocking or a little higher, and mostly sugar maple.
Q. Okay. If Forests, Parks and Recreation's conclusion that the residual basal area of nineteen-point-seven is correct, how, if at all, does the harvest comply with the prescription?
A. The prescription calls for an irregular treatment. Where some areas are going to be zero, and some areas are going to be thirty to forty, and some areas are going to have to be above thirty to forty to have an average of thirty to forty across the stand. So if you separate out a portion that includes the zeroes, then an average that's below your total target for the stand is going to be an obvious conclusion for a portion of the stand. So you have low density shelterwood that's going to be twenty, thirty, forty through that area, and patch cuts. So an average stocking of nineteen-pointseven or the nineteen-point-six that LandVest found, or the twenty-eight-four that $I$ found, are all within a range of acceptable treatment based on this prescription.
Q. Okay. Now if Forests, Parks and Recreation's residual basal area of nineteen-point-seven is correct, and the remaining unharvested portion of Stand 34 is harvested to a residual shelterwood basal area of fifty-two, what would the resulting basal for the entire stand be?
A. Okay. This is a mathematical question, and it has to
do with weighting the average of so many acres at fifty-two and so many acres at nineteen-point-seven, and it comes up to an average of thirty-point-five.
Q. Why is it important to measure across the stand?
A. Because the prescription is for the stand as an area.
Q. So was the overall goal of the treatment in Stand 34 met?
A. In the harvested area? Yes.
Q. And what is your opinion with regard to whether Plum Creek has complied with the prescription for Stand 34?
A. I believe they have.
Q. Moving to Stand 43: what's the summary of your opinion with respect to whether Plum Creek has complied with the prescription for Stand 43?
A. I believe they have.
Q. Okay. Could you look at UVA Form 2, Page 1, the Stand 43, which is going to be Exhibit Page 1-9 of Exhibit 36. Again, if you could briefly describe the description of Stand 43.
A. This stand was very similar in the sense of the history and the treatment, the ratio of acceptable and unacceptable growing stock. The basic difference is this stand included more of a softwood component; a little spruce and fir mixed in.
Q. Okay. Now going to the silvicultural guide: what
does the guide recommend the stands in this condition? If you could please direct the Court to the page of the guide you're going to refer to.
A. Okay. This is -- this is the same as what we had before. We go through the key in the same way on Page 27 of the guide. So it brings us to Prescription I. Because your acceptable growing stock is below the sea level, the stand is economically viable, or commercially feasible is the phrase they use. So the guide recommends to regenerate the stand with clear-cutting, strip-cutting, or shelterwood cutting when commercially feasible.
Q. Okay. Now could you please turn to the treatment authorized for Stand 43 at Form 2, Page 2. It's going to be Exhibit Page 1-13 of Exhibit 36. What is the treatment prescription for Stand 43?
A. Okay. This is -- as Chris has gone over this, this is a fairly complicated prescription. This is not a take out every third row type of prescription, and it fits this kind of a variable forest. "Stand 43 will receive a two-stage shelterwood even age Code 3, and overstory removal, even age Code 4. Thirty to forty percent of the stand will receive an overstory removal where the overstory is in severe decline and the understory is well stocked with seedling and sapling sized red spruce. The remaining portion of the stand will receive a shelterwood. The harvest will target the at-risk and mature
stems. The target residual basal area is sixty square feet for the shelterwood portion, I would presume there. The harvest will release quality growing stock and provide gaps to promote regeneration."
Q. Okay. So how -- please describe OSR.
A. Okay. As we were saying --
Q. Wait, wait, wait. Please describe the OSR in terms of what portions of Stand 43 of the applicable (indiscernible) practice and what should be found after the harvest.
A. As we were saying, the process of regenerating a forest with the shelterwood treatment, the initial harvest we call an establishment cut, especially if it's a two-stage shelterwood. You might remove the overstory in three or four stages, but that gets a little more complicated. So once you have an understory, the harvest of the overstory is called the overstory removal. So as far as the prescription here points out that where you -- where the overstory is in particularly bad shape, and particularly where there's spruce regeneration, that those are the areas recommended for overstory removal.
Q. And what should be found after the harvest?
A. There should be regeneration after the harvest.
Q. Okay. And would you describe two-stage shelterwood in terms of what portions of Stand 43 would be applicable to this practice and what should be found after the harvest?
A. Well, we've already talked about the shelterwood
method. It includes a range of treatments that would be varied, based on the species that are present, the site. And you would expect to have remaining overstory trees that would be at least reasonably good seed trees of desirable species, and the basal area on those shelterwood portions might range from as low as twenty to as high as eighty. This gives us a target of sixty. It also mentions gaps in that shelterwood portion, so that would account for areas like a group that would be -- maybe didn't have acceptable regeneration, didn't have acceptable overstory, so you'd have a -- basically a patch cut there to give regeneration and full sunlight.
Q. Okay. Now we have to talk about gaps. Can you describe gaps in terms of what portions of Stand 43 would be applicable to this practice --
A. Okay.
Q. -- and what should be found after the harvest.
A. I interpret gap there to be the same as a group; a group selection, which generally would be these patch cuts of one to two acres. It's a reliable way to regenerate northern hardwoods, especially birches. And that would be done, as I said, where there's not an -- not acceptable overstory trees to leave, and you don't have advanced regeneration all ready to go. And so actually, in a lot of those areas, you tend to have a poor quality understory, like hobble bush or beech or straight maple, and so you actually want to disturb those
areas, like rototilling the garden to get something established there.
Q. Okay. Now I believe when you started out you described the description for Stand 43 as being complicated. Am I right? Okay. Why is it complicated? What -- why? Tell us why.
A. Well, it goes into the art of silviculture; that these are not uniform stands, they're not all one specie, they're not really all one age. Part of it is the history, that these areas have been harvested repeatedly. And so there's a lot of variation. And some of the areas -- when we think of overstory removal, typically you do your first stage of the shelterwood cut, and you come back five or ten or fifteen years later, and you have small seedlings that are one, two, three feet tall. Ideally with spruce they're shorter than the depth of the snow, so one foot, two foot is nice to doing overstory removal for spruce.

But we saw some of those understory trees on our field trip yesterday, or Tuesday, and some of them were six and eight inches in diameter and thirty-five feet tall and covered over by seventy foot tall hardwood trees. So this is -- it's -- it's not a textbook forest.
Q. And how, if at all, does what you just described define the meaning of variability?
A. Yes. It's a variable forest, and those are all
Q. No.
A. Just to wrap this up?

THE COURT: It's the end of the court day.
We'll stop now --
MR. GRAYCK: Okay. THE COURT: -- and continue at 9:00 tomorrow. MR. GRAYCK: Thank you, Your Honor.
(Proceedings concluded at 4:26 PM)

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| wrote (3) | 27:22;29:2;31:3,18; | 1998 (2) | 66:18;67:10 | 106:13,19,21,23,25; |
| 81:19;169:3;170:17 | 32:10;42:14;43:1; | 186:14,16 | 24 (9) | 107:4;108:9,17; |
|  | 52:16;60:15;64:8,10; | 19th (3) | 68:21;69:13,15,17; | 111:25;112:13;165:11 |
| X | 129:23;130:4;140:18, | 98:24;99:8;137:2 | 135:24;136:7,15,18; | 32A (4) |
| X's (3) | 13,13;147:8,15,18; | 2 | 24th (5) | 33 (11) |
| 75:8,11;89:7 | $148: 10,11,17 ; 171: 22$ | 2 (55) | $\begin{aligned} & \text { 107:6;112:1,11,15, } \\ & 16 \end{aligned}$ | $\begin{aligned} & 58: 3,3,4,5 ; 59: 23,25 \\ & 60: 2 ; 63: 15,20 ; 65: 7 \end{aligned}$ |
| Y | 180:7;186:3;188:16 | 15:7,7,8,9;27:21,21, | 25 (9) | $165: 11$ |
|  | 1.3 (1) | 22;28:12,12;29:1;31:3, | 70:8,12,14,16;85:19; | 34 (86) |
| year (19) | 127:15 | 18;32:10;36:16,16; | 173:12,12,23;174:12 | 14:25;15:3,11,13; |
| 39:9;53:14;54:6,15, | 1:00 (1) | 42:14;43:1;45:13,13, | 25th (1) | 19:15;20:1;22:24; |
| 15;92:2;101:10; | 90:8 | 17;52:16,25,25;58:19, | 107:7 | 24:18;26:9;27:19,23; |
| 118:16;122:22;137:9, | 1:01 (1) | 22,22,23,24;62:2,3,19, | 26 (12) | 28:12,25;29:3,8,15; |
| 15;149:4,6,11;151:5; | 90:10 | 19;65:23;66:9,9;85:4, | 78:15;79:4,5,11,13, | 30:24;36:18;39:5; |
| 152:15,23;157:7; | 10 (2) | 5;160:7;171:24;173:3, | 15,17;85:19;91:18; | 43:11;56:4;58:3;60:4, |
| 161:14 | 64:16,16 | 4;174:14;175:16,16,18, | 93:4;142:11;173:13 | 5,6,22,24;61:1;62:13; |
| years (16) | 10/13/09 (1) | 18,19,19,23,23;180:6; | 26th (18) | 63:15,25;65:8;73:16, |
| 20:5;29:12;43:5,14, | 45:12 | 186:3;188:16;189:13, | 69:1,21;70:19,22; | 18;74:4,7,75:5;76:18; |
| 15;109:9;117:19,24; | 10/16/12 (1) | 13 | 71:15;83:24;92:20; | 77:11;83:21,22;84:9, |
| 118:14;151:24;157:16; | 170:11 | 2:42 (1) | 93:11;97:4;107:7; | 13;85:6,8;88:4,8; |
| 158:7;162:7;163:10; | 10:56 (1) | 148:22 | 111:15,22;133:18,23, | 91:15,16,17;93:22; |
| 168:23;192:14 | 54:1 | 20 (1) | 24;134:1;135:11; | 94:1,6,24;95:2;125:6; |
| yellow (12) | 100 (1) | 55:21 | 146:23 | 134:7,10,17;135:2,7,9, |
| 17:10,15;18:4,17; | 72:11 | 2001 (2) | 27 (11) | 21;139:24;140:11,22; |
| 28:20;33:2;44:17;59:5; | 10's (1) | 119:4, | 81:17,18,19;82:4,6 | 164:6;171:18,20,25; |
| 172:18;176:12;181:16; | 64:16 | 2006 (8) | 8;85:19,25;90:15; | 172:15;175:15,22,24, |
| 186:13 | 1-13 (2) | 21:20;145:19 | 174:22;189:5 | 24;176:5;179:18; |
| yesterday (22) | 176:1;189:14 | 146:11;147:5,8,22 | 27th (12) | 180:10;181:25;183:4; |
| 4:10;14:24;16:4; | 12:01 (1) | 165:4,14 | 81:14,14,20,23; | 185:23;186:7,25; |
| 19:22;20:14,23;21:16; | 90:9 | 2008 (7) | 83:17,25;84:8;86:4; | 187:22;188:6,10 |
| 23:1;26:10;27:23; | 12th (1) | 5:9;116:9;125:18; | 91:14;99:7;131:21,22 | 34-108-10039 (1) |
| 32:22;33:9;56:12; | 125:12 | 126:9;127:25;143:5; | $28 \text { (3) }$ | 113:8 |
| 67:20,21;83:7;87:25; | 13th (1) | 151:21 | 94:11,12;165:9 | 34810810039 (1) |
| 90:17;91:25;97:9; | 151:23 | 2009 (11) | 29 (12) | 113:11 |
| 185:9;192:19 | 14 (5) | 5:21;10:14;66:16; | 95:18,18,23,25;96:2, | 35 (11) |



IN THE VERMONT SUPERIOR COURT ESSEX COUNTY CIVIL DIVISION

PLUM CREEK MAINE TIMBERLANDS, ) Case No. 72-12-10 ExCv
LLC,
Plaintiff,

- against -

VERMONT DEPARTMENT OF FOREST ) 1:49 PM
and PARKS,
Defendant.
PLUM CREEK MAINE TIMBERLANDS,
LLC,
Plaintiff, )

- against -

VERMONT DEPARTMENT OF TAXES, ) $1: 49 \mathrm{PM}$
Defendant.
Case No. 19-4-11 Excv
31-6-11 Excv
Guildhall, Vermont

June 3, 2013

TRANSCRIPT OF COURT TRIAL
BEFORE THE HONORABLE MARY MILES TEACHOUT, SUPERIOR COURT JUDGE

APPEARANCES:

DAVID L. GRAYCK, ESQ., and KIMBERLY B. CHENEY, ESQ.
Attorneys for the Plaintiff
MICHAEL O. DUANE, ESQ., and THEA J. SCHWARTZ, ESQ.
Attorneys for the Defendant

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New York, NY 10040
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PROCEEDINGS RECORDED BY ELECTRONIC SOUND RECORDING.
TRANSCRIPT PRODUCED BY TRANSCRIPTION SERVICE.
(Proceedings convened at 9:02 AM)
THE COURT: Please be seated. First, I do want to apologize for the fact that this morning was taken away from you, although you indicated that you thought that you would be able to finish the case in the remaining time, but then secondly, for the late start this afternoon. It was an unfortunate series of events that meant that I had to remain to finish some emergency criminal matters.

So it should not detract from the amount of time available for you. We'll figure out how to handle that one way or the other, but $I$ don't mean it to diminish at all the opportunity of any of you to present the case thoroughly. So we are in the direct examination of Mr. Langlais.
(Matthew Langlais resumed the witness stand at this time.)
THE COURT: Ms. Schwartz.
MS. SCHWARTZ: May I ask the witness to take Exhibit
1 of Plum Creek's -- I mean Trial Binder 1 of Plum Creek's exhibit?

THE COURT: All right. And you are still under oath from last week.

THE WITNESS: Thank you.

## CONTINUED DIRECT EXAMINATION

Q. Good afternoon, Mr. Langlais.
A. Good afternoon.
Q. Were we discussing Stand 43 on Friday when the day
A. Yes, we were.
Q. What were the treatments prescribed for Stand 43 in the Harvest Prescription Amendment to the Forest Management Plan?
A. Stand 43 called for two prescriptions; an overstory removal in one portion of the stand and a two-stage shelterwood in the other portion of the plan.
Q. Is the location of where those treatments were to occur in Stand 34 marked on the map -- I'm sorry. Is the location of where those treatments were to occur in Stand 43 marked on the map that is part of Exhibit 22, the Harvest Prescription Amendment?

MS. SCHWARTZ: Mr. Langlais is looking at Exhibit 22.
A. Yes, it is.
Q. Was that map amended as a result of your field review in 2008 which Jonathan Horton testified to?
A. Yes, it is.
Q. Was the prescription for Stand 43 changed to include overstory removal and shelterwood?
A. It was changed to include shelterwood. During our field visit prior to the harvest, we found that Plum Creek would not be able to successfully implement the overstory removal due to a lack of red spruce regeneration. We therefore requested that they change their prescription to
include two-stage shelterwood where they didn't have that regeneration resulting in this map.
Q. Did you include -- in your Adverse Inspection Report the acres for Stand 43 that were cut contrary, did you include any of those acres that were prescribed overstory removal?
A. No. In reviewing that area for my Adverse Inspection Report, I thought that they had the required amount of regeneration, so did not consider that portion of the stand to be cut contrary.
Q. How did you determine which acres were cut contrary in Stand 43?
A. I determined it through an inventory calculating basal area values as well as doing a regeneration inventory.
Q. Did you conduct your inventory in Stand 43?
A. Yes, I conducted the inventory in Stand 43.
Q. Was there snow on the ground when you conducted your inventory?
A. No, there wasn't. I waited until end of March and early April for the snow to go so that I could view the regeneration.
Q. Are the dates that you visited the property, stand 43, to conduct your inventory recorded in your Adverse Inspection Report, which is Exhibit 32?
A. Yes.
Q. And what were those dates?
A. March 17th, 2010 and April 13th, 2010.
Q. And can you explain where on your Adverse Inspection Report you are finding those dates?
A. Yes. No. 2 -- the second page for No. 2, Clough Brook North Harvest, LM-03-01-09, Stand LM-03-43, Section B, Inspection Findings.
Q. How many acres did you determine were cut contrary in Stand 43?
A. 40.15 acres.
Q. And when you visited Stand 43, what did you do there for your inventory?
A. I first delineated the area using a GPS. I then set up a systematic grid sampling and used that systematic grid sampling to perform the inventory. The data collected from the inventory points were entered into the State of Vermont's forest examination software, and the resulting numbers that came out of that were used to compare back to the harvest prescription, the NE-603 standard guide that we use and the overall Forest Management Plan.
Q. As a result of your inventory, what was the residual basal area that you found in acres that you determined cut contrary?
A. I found 23.3 square feet of basal area. The goal was sixty square feet of basal area, and with sixty square feet of basal area, a shelterwood harvest is trying to get at a
residual canopy closure of eighty percent, so sixty square feet of area -- basal area equates to eighty percent crown cover, so when I looked at those results and compared those residual basal areas back to the chart that NE-603 provides, I found that ninety percent of the plots did not meet the canopy closures required for successful implementation.
Q. When you say successful implementation, please explain successful implementation of what?
A. That the prescription was followed.
Q. And the prescription was for what?
A. A two-stage shelterwood.
Q. Okay. Also I note in your Adverse Inspection Report, Exhibit 32 on Page 2 in the same section which you were looking at, B, Inspection Findings, after it says 23.3 square feet of basal area, can you please read after that?
A. Yes. "23.3 square feet of basal area and 15.38 percent of regeneration plot stocked."
Q. What does 15.38 percent of regeneration plot stocked mean?
A. Yes. I did one point per acre according to the appropriate silvicultural guide to gauge regeneration. The prescription states -- stated that the goal of the harvest was red spruce regeneration, and to confirm my initial belief that there wasn't enough red spruce regeneration, I did an inventory to look at that.
Q. Did you find enough red spruce regeneration?
A. No, not at all. I found two plots stocked with a red spruce seedling -- sapling, excuse me.
Q. Are you familiar with Mr. Holleran's opinion as to whether Stand 43 was cut contrary?
A. Yes, I am.
Q. Did you review that opinion?
A. Yes, I did.
Q. Did you analyze it?
A. Yes, I did.
Q. Were you in the courtroom when Mr. Holleran testified?
A. Yes, I was.
Q. Do you agree with Mr. Holleran's finding?
A. No, I do not.
Q. Did you accompany Mr. Holleran on a regeneration of Stand 43 that he testified to?
A. Yes. Mr. Grayck invited me along to accompany Mr. Holleran on his regeneration cruise. I agreed to go along. And the reason that I don't agree with Mr. Holleran's results is I was able to witness firsthand his methodology, and what I found was that his methodology had substantial bias in his sampling.

Mr. Holleran used a methodology to find his sample locations using a recreational grade GPS unit, and I believe he testified that it's accurate to about thirty-five square
feet or thirty-five feet, so that gave Mr. Holleran about a 850-square-foot area in which to locate his sample points.

The bias came in that I witnessed Mr. Holleran consistently walking around in that 850-square-foot area arbitrarily locating his sample points, and when we arbitrarily locate our sample points, the data then becomes in question.
Q. What kind of regeneration did Mr. Holleran include in his data?
A. Mr. Holleran included regeneration that was not there immediately after the harvest. I witnessed him counting first-year seedlings that would not have been there on site right after I had done my regeneration cruise because they became established after the harvest. I also witnessed him counting stems that were from sprouts, and when small trees and stumps get cut, trees will sprout from the stump, and these trees would not have been there directly after the harvest. However, they were there three growing seasons later when Mr. Holleran did his regeneration cruise.

The UVA Program Manual requires that for overstory removals, the -- that there be 350 stems immediately after the overstory has occurred, and that's because the focus of an overstory removal is to pull the overwood after the next feature stand has become established.
Q. When you say first-year regeneration, what size would
that be?
A. The balsam fir that $I$ was looking at that he was measuring were two to three inches in height.
Q. Do you agree or disagree with Mr. Holleran's conclusion on the residual basal area that he found for Stand 43?
A. No. Mr. Holleran found substantially more basal area than -- than I found. I believe his results were 53.6, and that could possibly be attributed to his sampling methodology once again which included substantial bias.

MS. SCHWARTZ: May I please ask the witness to
approach the map that's labeled D for identification purposes? THE COURT: Yes.
(The witness left the stand at this time.)
Q. Mr. Langlais, please look at the map. What do the green triangles on the map represent?
A. The green triangles on the map represent locations where we found water quality violations.
Q. All right. Do those green triangles reflect the AMP violations you recorded in your Adverse Inspection Report?
A. Yes, they do.
Q. Please point on the map to the location of Stand 44.
A. Stand 44 is right here.

MS. SCHWARTZ: The witness is pointing to the bottom third of the map left of the center of the map. Thank you.
(The witness resumed the stand at this time.)
Q. Let me direct your attention to Exhibit 22, the Harvest Prescription Fact Sheet which is part of the Harvest Prescription Amendment to the Forest Management Plan.

Three-quarters of the way down the page under the bold heading of Current Stand Condition, do you see where it says Stand 44?
A. Yes.
Q. Can you please read through the description of Stand 44 and, in your opinion, tell us what it -- how it describes Stand 44.
A. Certainly. "Stand 44 is a well-stocked northern hardwood type with a basal area of ninety-seven square feet. Of that, forty-two feet is acceptable growing stock. The stand is dominated by sugar maple, yellow birch, beech, balsam fir, red spruce. The mean stand diameter is 7.6 inches. The stand is weighted towards the small saw timber size class. The stand has a fair amount of acceptable growing stock in -in the of" -- I believe that's not correct -- "in the small soft timber size classes."
Q. Are you pointing at the "of" as not being correct?
A. Correct.
Q. So when this says well-stocked, what does well-stocked mean?
A. Ninety-seven square feet is a fair amount of stocking in a forest. It's well above the B line approaching the A
line stocking.
Q. Can you explain what $A$ line stocking is?
A. Certainly. Do we have the NE-603?
Q. I believe it has been admitted into evidence as part of Exhibit 36. I would have to check on what sub-exhibit it's in. You should have it in the binder. Can the witness grab the next trial binder? And it's Exhibit -- Sub-Exhibit 2. It would be Exhibit 36, Sub-Exhibit 2.
A. So in the Northern Hardwood Stocking Guide, in order for foresters to know where their stand is -- I'm sorry. This is Page 17.
Q. This is Page 17 of Exhibit 36, Sub-Exhibit 2.
A. So in order -- the way that foresters use this stocking guide, we have a basal area per acre on this left axis, and then across the top of the chart are mean stand diameters, so in order to know -- specifically for this stand, we know that it's ninety-seven square feet, so we're just about at this hundred line, and it's about a 7.6-inch mean stand diameter.

So as you can see, it's -- this stand is wellstocked. There's a lot of trees there. It's approaching the A line, which is overstocked. When we perform intermediate treatments, we usually want to bring that stocking level down to this B line or this quality line in younger stands.
Q. What is an intermediate treatment?
A. An intermediate thinning is a commercial operation where you're trying to put the growth of your -- the growth of the stand into your best quality trees, so you're making crown space around your crop trees, your best trees and thinning it out so that you're putting all of your future value and growth into those best trees.
Q. When you say "commercial operation," what do you mean by that?
A. Sometimes we can do these thinnings non-commercially where we're simply going in and taking -- taking out firewood or just dropping trees and leaving them on the ground. This was an operation that is -- was commercially viable, meaning that there were enough big trees that could come out to make it commercially worthwhile to thin that stand.
Q. Please describe what it would be when those trees -enough big trees were removed what the stand would then look like.
A. You would see a fully stocked stand at this B level stocking. For Stand 44, the prescription stated that they would reduce it to that $B$ line stocking, and that's -- that's the quality line. That reduces your stocking enough so that trees can expand their crowns, expand their -- their boughs.

However, it doesn't reduce the stocking so much that the trees would become susceptible to form sprouts, which is adventitious buds on the -- on the base of the tree, that if
the trees get too much sunlight, they will push those out, and that causes a decrease in the value of the tree.
Q. Let me direct your attention to Page 2 of Exhibit 22, which is the Harvest Prescription Fact Sheet for the Harvest Prescription Amendment to the Forest Management Plan. Please look under the bold heading Recommended Treatment Prescription, and on the bottom of the page, it says Stand 44. Can you please read through that and, in your opinion, explain what it means.
A. "Stand 44 will receive an intermediate thinning. This stand is well-stocked with small saw timber. However, many of the medium and large saw timber stems are in decline. The thinning will target at-risk and mature stems and leave a target residual basal area of sixty square feet. This release the small saw timber size class and open up gaps for regeneration."

This tells me that there was enough quality there that they could implement the harvest for which they chose and that the target for trees to be removed are that which they state.
Q. What was the targeted residual basal area?
A. Sixty square feet.
Q. It also says, "This release the small timber size class and open up gaps for regeneration." What does gaps for regeneration mean?
A. The term gap comes from the ecological idea of a tree-fall gap, and it's -- it's a -- it is a concept where a tree falls in the forest, it opens up a gap because there's no -- there's no longer shade over that spot, and that gap can create some regeneration, so the removal of one tree creates a gap.

Because the harvest prescription didn't include any statement that there would be large areas of gaps which would be required in the UVA Program Manual, as we require anything over quarter of an acre to have a statement as to how many there would be and a size range of those gaps, this -- this statement is saying that there wouldn't be any larger gaps but just simple tree-fall gaps.
Q. In your opinion, is eight to nine -- would eight to nine acres be a gap?
A. Absolutely not.
Q. Mr. Langlais, did you determine that Stand 44 was cut contrary?
A. Yes, I did.
Q. How did you make this determination?
A. I went out with my GPS and went around the boundary as evidenced by overcutting and, within that area, set up a systematic grid sampling system, conducted the basal area points, entered those points into the State of Vermont's forest examination software and reviewed the results in
comparison to what the harvest prescription called for, the silvicultural guides, the UVA Manual and the overriding Forest Management Plan.
Q. Did you use standards to make your determination?
A. Yes, I did.
Q. And what were those standards?
A. Those standards that $I$ just described.
Q. Did you visit this property to do your inventory?
A. Absolutely.
Q. Do you know what day you visited the property to do this inventory?
A. Yes, I do.
Q. What document are you referring to?
A. If you could point me to the --
Q. Your --
A. -- Adverse Inspection Report?
Q. Yes, it's Exhibit 32.
A. Yes, I conducted the inventory on March 26, 2010.
Q. How many acres did you determine were cut contrary in Stand 44?
A. 8.47 acres.
Q. Did you make a determination as to the residual basal area in the cut contrary acreage?
A. Yes. I calculated a residual basal area of 16.3
square feet, far below the sixty square feet required.
Q. And how many inventory points did you take?
A. I took one point per acre, so I did eight.
Q. And if you could look at the bottom of your Adverse Inspection Report, which is Exhibit 32, it says with 4.60 standard error. Is that the standard error that you have explained previously for Stand 43 and 34?
A. Yes, it is. It's our confidence limits.
Q. Did you review Mr. Holleran's opinion regarding whether Stand 44 was cut contrary?
A. Yes, I did.
Q. Did you analyze it?
A. Yes, I did.
Q. Do you agree with it?
A. No, I do not.
Q. Why do you not agree with it?
A. I don't agree with it due to the sampling methodology which I described earlier. If he had used that same sampling methodology that I witnessed him using, that substantial bias could play a heavy role. I believe Mr. Holleran found twice as many trees with a average basal area of thirty-six in his inventory.
Q. When you say "average basal area," do you mean residual basal area?
A. I'm sorry. Residual basal area.
Q. Do you agree with his conclusion as to whether the
stand was cut contrary or not?
A. Well, yeah, Mr. Holleran's thirty-six square feet of basal area, his findings agree that sixty square feet was not made.

MS. SCHWARTZ: May I approach the witness?
THE COURT: Yes.
Q. Let me show you what has been admitted into evidence as State's Exhibit 6. (Indiscernible) excuse me. Do you recognize this document?
A. Yes, I do.
Q. What is it?
A. This is a -- results of an inventory conducted by LandVest at the direction of Plum Creek after our January 26 field visit where we found that the area was likely out of compliance with its Forest Management Plan.
Q. When were you first made aware of this LandVest data?
A. I was first made aware of this data at a meeting at our office on February 19th, I believe, where Plum Creek had asked to sit down with us to discuss the Clough Brook treatment, and Mr. Dorrell, Tim Dorrell mentioned this inventory.

I had explained to Tim that I had just completed my inventory of Stand 34 and that I had found that they were far below their intended residual basal area. I stated that we had found 19.7 square feet of basal area, and I believe Mr.

Dorrell was looking at this when he stated that's exactly what we found.
Q. Who else was at the meeting on February 19th? And is that 2010?
A. Yes, it was. My direct supervisor, Kathleen Decker, and her supervisor, Ginger Anderson, were at that meeting as well as Chris Fife, Mark Doty and Tim Dorrell.
Q. Did you discuss this data with Mark Doty?
A. I -- no. Mr. Dorrell spoke about this data.
Q. Did you agree with -- I'm sorry. Did you review the data after?
A. Yeah, when I got a copy of this, I reviewed it and fully agreed with Mr. Dorrell that it is exactly what we came up with for basal area.
Q. So is it that -- your opinion that the LandVest Plum Creek data for Stand 34 conforms to your data?
A. Yes, absolutely.
Q. Why is that?
A. They took a tremendous number of plots. Their -their statistics are accurate, and it reinforms me that my data is -- is subject to be relied on as well because this supports it.
Q. How does this LandVest Plum Creek data for Stand 34 support or not support your opinion regarding Plum Creek's violation of their Forest Management Plan for Stand 34?
A. Yes, for that portion of Stand 34 that we both measured in that area that we considered cut contrary, these inventories are dead on.

MS. SCHWARTZ: Excuse me for one moment, please. May
I please mark this as State's Exhibit F? Thank you. May I approach the witness, please?

THE COURT: Yes.
BY MS. SCHWARTZ:
Q. Let me show you what's been marked as State's Exhibit
F. Do you recognize this document?
A. Yes, I do.
Q. What is this document?
A. This is a inventory completed by a company out of Maine called Dirigo. The Vermont Land Trust, in overseeing their easement on this parcel, required Plum Creek to hire an independent third party to inventory the Clough Brook harvests.
Q. Do you know why would the Vermont Land Trust require a third party to inventory -- to do this inventory?
A. Yes. They -- they wanted an independent view of the harvesting that had taken place.
Q. Do some of the lands included in this inventory include areas of the Clough Brook North tract?
A. Yes, it includes Clough Brook, but it's also three other locations where cut contraries had occurred.
Q. Do you know what those --

MR. GRAYCK: Objection, Your Honor, and I move to strike the answer. The question -- the specific question was with respect to Clough Brook North. The witness answered areas in addition to Clough Brook North.
Q. Do some of the lands include --

THE COURT: Are you withdrawing the question?
MS. SCHWARTZ: Yes. I'm sorry.
THE WITNESS: Sorry.
BY MS. SCHWARTZ:
Q. Do some of the lands included -- in this inventory include Clough Brook North tract?
A. Yes, it does.
Q. Do you know when approximately the Dirigo cruise of the Clough Brook North tract was conducted?
A. I believe it was August of 2011.
Q. Sometime in late 2011?
A. That sounds about right.
Q. Have you reviewed the Land Trust/Dirigo cruise data?
A. Yes, I have.
Q. How did you review this data?
A. This data was not submitted on a stand level basis, so I did have to use some methodologies to extrapolate these points from -- from their overall data set in order to allocate them to the specific stands where they were.

I used a process called georectification. I took their stand map showing their -- showing their point locations, and using the Geographic Information System, I was able to overlay them and line up the respective boundaries and was able to then allocate those points to the specific stands in which they -- they were in.
Q. Did your review of the Dirigo/Land Trust cruise data contribute to your opinion regarding whether Plum Creek complied with its Forest Management Plan for Stand 34, 43 and 44?
A. Yes, the Dirigo inventory data for Stand 34, they came up with a residual basal area of 17.7 square feet, which lines up directly --
Q. Mr. Langlais, just yes or no.
A. I'm sorry.
Q. So I ask the question again. Did your review of the Dirigo/Land Trust cruise data contribute to your opinion regarding whether Plum Creek complied with its Forest Management Plan for Stands 34, 43 and 44?
A. Yes. MS. SCHWARTZ: I'd like to offer into evidence what has been marked as the State's Exhibit $F$. THE COURT: Mr. Grayck?

MR. GRAYCK: May I inquire, Your Honor? THE COURT: Yeah.

## VOIR DIRE EXAMINATION

BY MR. GRAYCK:
Q. What was the date of your Adverse Inspection Report?
A. The date of my Adverse Inspection Report was April 26, 2010.
Q. What was the date of the Dirigo cruise?
A. It was late 2011. I apologize. I don't know the exact date.
Q. It was certainly after you had filed your Adverse Inspection Report?
A. Yes, it was.
Q. Is there information in this exhibit other than Clough Brook North?
A. Yes, there is.

MR. GRAYCK: Your Honor, we would object on two grounds: First, the Adverse Inspection Report had already been filed it sounds like months if not over a year prior to this cruise work being done. In addition, this exhibit contains information which is not relevant to the issues before the court.

MS. SCHWARTZ: This is a de novo hearing, so we can put in additional evidence; and second, we'd be happy to remove the other data from the other areas cut contrary.

THE COURT: That can be done?
MS. SCHWARTZ: I think they're separate pages in the
document.

THE COURT: Okay. Mr. Grayck?
MR. GRAYCK: The testimony was specific to the Adverse Inspection Report, so I don't see how the document has any relevancy to the Adverse Inspection Report produced months, if not a year, prior.

THE COURT: The objection is overruled. His testimony was that it contributed to his opinion, which the Court understands to be his opinion as expressed today. However, the objection is sustained if it commingles data as to some of the areas at issue here, and with information about other places, that will be confusing, so the objection is sustained until a redacted version can be reoffered.

MS. SCHWARTZ: I believe if we take the last three pages off of the document. May I approach the witness?

THE COURT: Um hum. (Pause).
MS. SCHWARTZ: May I approach the witness?
THE COURT: First show it to Mr. Grayck. And this is -- you've now removed some pages and this is what you're offering?

MS. SCHWARTZ: I have removed the last three pages, and I'm now offering this document.

THE COURT: Any objection?
MR. GRAYCK: In addition to what's already been made, no, Your Honor.

THE COURT: Okay. State's $F$ is admitted.
(An inventory of Clough Brook harvests completed by Dirigo was hereby received into evidence as Defendant's Exhibit $F$, as of this date.)

MS. SCHWARTZ: Will you please mark this as admitted?

Thank you. May I approach the witness?
THE COURT: Yes.
BY MS. SCHWARTZ:
Q. Mr. Langlais, how did the Vermont Land Trust/Dirigo cruise data contribute to your opinion that Plum Creek violated their amended harvest forest -- I'm sorry, harvest prescription for Stand 43, 44 and 34?

MR. GRAYCK: Your Honor, objection. Again this information can -- I believe is being offered to bolster an opinion that was reached back in April of 2010 , so 1 object to the question since it's trying to expand the use of this document beyond I believe what the Court has allowed it to be used for.

THE COURT: Well, we're taking a lot of evidence about things that were explored and analyzed after the original Adverse Inspection Report. Are you arguing that the evidence of the state should be limited to that date but that you can introduce evidence after that date?

MR. GRAYCK: Yes, Your Honor, given that the state has introduced the decisions from the administrative
authorities and has maintained the position that those establish the presumption of compliance and that the burden of proof is solely upon Plum Creek to disprove the administrative decisions, and therefore the data and information which is the basis for those decisions is the decision -- is the information which the State is relying upon, and anything after that date can't be used to persuade the Court that Plum Creek has failed to override the deference and the presumption which attaches to the respective administrative decisions.

THE COURT: If the Court determines that Plum Creek has introduced sufficient evidence to overcome the presumption, then just like in a property tax appeal, isn't it wide open that the Court has to make a determination about the facts, period?

MR. GRAYCK: I believe that is the law, but Mr. Duane, when we were discussing his motion made at the conclusion of the Plum Creek direct case, disputed my assertion that that was exactly -- that the legal status was exactly as you described, and Mr. Duane's position was that the burden of proof and -- that there was no shifting of burden of proof and that it solely remains upon Plum Creek to establish that it did not cut contrary in reference to the respective administrative decisions as supported by the Adverse Inspection Report.

THE COURT: Okay. So you're taking this position
sort of defensively in response to the State's position even though your own is that everything should be admissible; is that right?

MR. GRAYCK: Well, I take the position that -- given the precedent as set forth by the Vermont Supreme Court and what the State -- and the position that the State has maintained throughout the proceedings that the burden of proof is solely upon Plum Creek, and as a result, our case has always been based upon the decisions, which is how this appeal commenced with the State introducing those decisions and asserting that they caused the burden of proof to shift permanently to Plum Creek.

THE COURT: Okay. I am going to be sorting that out later, but in the meantime, we'll take the evidence, so the objection is overruled.

MR. GRAYCK: Thank you, Your Honor.
BY MS. SCHWARTZ:
Q. Mr. Langlais, how did the Vermont Land Trust/Dirigo cruise data contribute to your opinion that Plum Creek violated their Forest Management Plan with regard to Stand 34?
A. The Land Trust/Dirigo data supported my contention that Stand 34 was cut contrary with their findings.
Q. How did it support your conclusion?
A. It supported my conclusion with its determination of 17.7 square feet of basal area, which was very, very close to
my 19.51 for that area that was consistent.
Q. This residual basal area that you are referring to?
A. Yes.
Q. That's the basal area after the cutting --
A. Yes.
Q. -- occurred? What was your conclusion with regard to Stand 43 as to how the Dirigo cruise data contributed to your opinion that Plum Creek violated its Forest Management Plan in that stand?
A. The Dirigo data lined up very, very close to my data. I believe Dirigo found 2.3 square feet more than $I$ had found, which is minimal. In Stand 43, I had 23.3 square feet, and I believe the Dirigo data found 26.1 or 26.2 square feet of basal area.
Q. How did the Vermont Land Trust/Dirigo cruise data contribute to your opinion that Plum Creek violated their Forest Management Plan with respect to Stand 44?

MR. GRAYCK: Your Honor, I just want to have, for the record, a continuing objection.

THE COURT: Okay. You won't need to repeat it again. It's --

MR. GRAYCK: Thank you, Your Honor. THE COURT: -- accepted as a continuing objection. MR. GRAYCK: Thank you, Your Honor.
A. For Stand 44, the Dirigo data supported my conclusions
that that area was not at sixty square feet of basal area as well. I believe Dirigo had slightly higher basal area. I believe they found 31.1 square feet of basal area. BY MR. SCHWARTZ:
Q. What was the finding of your opinion as to regard to Stand 44 and the residual basal area you found with respect to your inventory?
A. Yes, my inventory was 16.3 square feet. I was asked to accompany Dirigo on their inventory for one of their days, and I did accompany them, and I found that they did not use the standard from the UVA Manual that requires that only trees that are touching for the main crown canopy be counted. I witnessed them counting suppressed trees, so that's my belief that there's a difference between my 16.3 and their thirty-one square feet.
Q. What is a suppressed tree?
A. It's a tree the same age as the trees in the overstory. It simply doesn't have the capacity nor ever had the capacity to -- to be a tree that we could definitively say would be there in the future.
Q. Overall, did you agree with the findings of the LandVest/Dirigo cruise -- I'm sorry. Overall, did you agree with the findings of the Vermont Land Trust/Dirigo cruise as to the residual basal area for the stands on Clough Brook North?
A. Yes --

MR. GRAYCK: Objection, Your Honor. What findings?
Object to the form of the questions. I'm not clear what findings are being referred to.

MS. SCHWARTZ: With regard to the residual basal
areas for the three stands at issue.
THE COURT: The objection is overruled.
A. Yes, I agree with the Dirigo findings of residual
basal areas for Stands 34, 43 and 44.
MS. SCHWARTZ: May I have one moment, please?
BY MS. SCHWARTZ:
Q. You were here when Chris -- were you here in the courtroom when Chris Fife testified that he was surprised to receive the draft Adverse Inspection Report?
A. Yes, I was.
Q. Let me show you what is marked and admitted into evidence as Exhibit 36, Sub-Exhibit 4.

MS. SCHWARTZ: May I approach the witness, please?
THE COURT: Yes.
Q. What is Exhibit 36, Sub-Exhibit 4?
A. This was the decision of the Department of Forest, Parks and Recreation's appeal of Plum Creek Maine Timberlands.
Q. Can you speak up, please, Mr. Langlais?
A. I'm sorry. This is the decision written by the Commissioner of the Department of Forest and Parks regarding
the appeal of Plum Creek Maine Timberlands.
Q. That's what's on appeal in this case; is that correct?
A. Yes, it is.
Q. Let me direct your attention to Page 6 of Exhibit 36, Sub-Exhibit 4. Under the heading of Conclusion, can you please read the second sentence?
A. "As noted by the county forester" --
Q. That's you?
A. Yes.
Q. Continue, please.
A. -- "we have provided Plum Creek with a considerable amount of technical assistance, both reviewing plans and prescriptions as well as field advice, and have overlooked past infractions."
Q. Thank you. When did you first become involved with working with Plum Creek with regard to their enrollment in the Use Value Appraisal Program and their understanding of its requirements?
A. My very first meeting with Plum Creek took place directly after they purchased the property. Tim Dorrell, Chris Fife and Mark Doty asked to meet with me in my St. Johnsbury office where we talked about the requirements of the UVA Program and specifically what it entails, what Plum Creek had gotten themselves into in purchasing this land and what their requirements are when they take over a UVA-enrolled
parcel.
Q. Do you recall what the discussion was with regard to the specific requirements?
A. Not -- not exactly. It was a lengthy meeting, and I'm sure that we covered all of the elements of the UVA Program Manual.
Q. You testified that you had met earlier on the land with Jonathan Horton to do a field review of the Clough Brook North tract pre-harvest?
A. Yes.
Q. Is that correct?
A. Yes, it is.
Q. Are there other times on other tracts that make up part of the 56,000-acre parcel of Plum Creek that you visited with Jonathan Horton or others of Plum Creek to discuss pre-harvest reviews?
A. Oh, absolutely. Up until the time of the Clough Brook harvest, I had spent eleven days in the field with Plum Creek foresters. Additionally, we've calculated that department staff has expent fifty-one person days directly working with Plum Creek educating them about their requirements to remain eligible in the Use Value Program.
Q. Do you recall in particular what any of those -- where any of those pre-harvest reviews took place?
A. Yes. Pre-harvest reviews took place in Averill early
that year, Lemington --
Q. Is Averill part of the 56,000-acre parcel at issue?
A. Yes, it is.

THE COURT: In what year? THE WITNESS: That would have been late 2008, early 2009 .
Q. Do you recall what the discussion was in April when you conducted your pre-harvest review?

MR. GRAYCK: Objection, Your Honor. I don't see the relevancy how discussions regarding a harvest in Averill is related to the issues which are on de novo appeal to the court, and the issues on appeal were set forth by Plum Creek in its statement of questions which it was required to file under Rule 74.

THE COURT: Ms. Schwartz?
MS. SCHWARTZ: Plum Creek brought in other UVA towns
that are not directly involved in Clough Brook North with regard to Matt's forest -- approval of harvest prescription amendments, and it is relevant in the response to that.

Plum Creek also brought other UVA cut contrary situations up in Reading and Pomfret when Mr. Holleran was testifying, and Matt's working relationship with regard to Plum Creek and its continuing eligibility for the Use Value Appraisal is directly relevant standing alone to provide immediate context to Plum Creek's case in chief and to the
basis for his Adverse Inspection Report that we are here about today and which is on appeal.

And lastly, Mr. Fife testified that he was surprised to receive the Adverse Inspection Report, and also the Forest, Parks and Rec decision, that's what's on appeal and that's why we're here, and we heard Mr. Langlais read that he -- that as part of that decision, Commissioner Clark noted that he had provided a considerable amount of technical assistance both reviewing plans and prescriptions as well as field advice and had overlooked past infractions.

THE COURT: Before I hear from Mr. Grayck again, what is the line of inquiry that you're starting? Were you intending to introduce evidence about several different places where there had been pre-harvest meetings? What's the scope of what you're getting into?

MS. SCHWARTZ: I am not intending to introduce evidence, only testimony as to Mr. Langlais' meeting with Plum Creek as well as in reference to the amount of technical assistance he provided and the field visits and his overlooking of past infractions.

THE COURT: Right, but my question is what level of detail are you planning to get into with respect to that general subject area?

MS. SCHWARTZ: Not great detail. I'd like to discuss a few -- ask him about a few of the times that he met with

Plum Creek and what he found.
THE COURT: Mr. Grayck?
MR. GRAYCK: Your Honor, the examples which were submitted in the course of Mr. Holleran's testimony were admitted to show the past administrative practice with respect to whether parcels or portions thereof had been excluded. It was only allowed into evidence for that limited purpose. What the State is attempting to do is to turn this into a trial within a trial, prior harvesting activities for which it can produce no evidence with respect to Plum Creek having been served with, quote, unquote, "past infractions".

There is no UVA form that I'm aware of which exists which would have triggered Plum Creek's rights under the statute to contest whether -- what Mr. Langlais and what the Commissioner claims to be past infractions. I can't control the language that the Commissioner used in that decision, but the statement "past infractions" represents a legal conclusion. Plum Creek's never had an opportunity to contest whether there have been past infractions because it's never been served with the appropriate paperwork required by the UVA Manual and the statute to trigger its rights to contest.

THE COURT: The objection is overruled. We've already heard a fair amount of evidence about the interaction between Plum Creek either employees or agents and the state -county forester, Vermont Land Trust personnel, others involved
in this complex deal starting when Plum Creek purchased in the fall of 2008, so we will permit testimony concerning the communications and interactions that took place pre-harvest. MS. SCHWARTZ: Thank you.

BY MS. SCHWARTZ:
Q. Please describe your -THE COURT: Although there might be some limit on level of detail. That's why $I$ was asking you about level of detail.
Q. Mr. Langlais, did you meet with Plum Creek to do a post-harvest review on their land in Averill?
A. Yes, the very first post-harvest review that the Vermont Land Trust, myself and Plum Creek took was on a harvest in Averill.
Q. Do you recall who from the Land Trust was there?
A. Yes, it would -- Dan Kilborn from the Vermont Land Trust.
Q. Who from Plum Creek was at that visit?
A. Chris Fife was at that visit as well as Dan Singleton, who worked for Plum Creek as their LandVest forester.
Q. Did you go to the site to do the field review?
A. Yes, we did.
Q. What did you find during your field review?
A. We found that about thirty acres of a 204-acre stand did not appear to have been cut to the prescription. It
called for a shelterwood harvest, and as we walked through that area, there were no shelterwood trees left.

MR. GRAYCK: Your Honor, I object and again will move to strike the answer to the extent that it went beyond a request for a description of what was found. Mr. Langlais is glossing it with his conclusion as to whether it's a matter of compliance, and this is going to bring us to a trial within a trial where we're going to be litigating whether there were, quote, unquote, "past infractions," so I have to object again and move to strike.

THE COURT: The object is sustained. We're not going to have little mini trials on what actually happened on these other places. You -- my ruling was that you may describe meetings and interactions and general outcomes but not the specific details about the bases for outcomes.
Q. Mr. Langlais, did you file an Adverse Inspection Report at Averill -- for the Averill site?
A. No, I did not.
Q. Why did you not file an Adverse Inspection Report?
A. I didn't file an Adverse Inspection Report -MR. GRAYCK: Your Honor, I'm going to object again.
A. -- due to the newness of the --

THE COURT: You have to stop when there's an
objection.
THE WITNESS: I'm sorry. I'm sorry.

MR. GRAYCK: The question seeks to elicit why an Adverse Inspection Report wasn't filed, and that is now moving us to where the witness is going to describe discretionary judgments with respect to another harvest and whether or not the conduct necessitated him to take certain actions, and that brings us right back to a trial within a trial.

THE COURT: The objection is sustained. My ruling was that you may ask about interactions and communications between the Plum Creek people, State people on these issues, so you may ask him about conversations that he had with people from Plum Creek about whether or not there would be an inspection report, but you may not ask him about the specific substantive content of his own opinions about that. Do you understand the difference?

MS. SCHWARTZ: Yes.
THE COURT: You can ask about communications back and forth between the two sides but not the question you just asked.

MS. SCHWARTZ: Okay. Thank you. BY MS. SCHWARTZ:
Q. Did you have conversations with Plum Creek regarding your not filing an Adverse Inspection Report for the Averill site?
A. Yes, we discussed what we were seeing in the field and the importance of following their Forest Management Plan.
Q. Did you visit again the Averill property with Plum Creek at a later date after your post-harvest review?
A. In Averill, we visited another site at a -- on a different date where we again talked about the importance of following their Forest Management Plan.
Q. Did you have any specific discussions with Plum Creek staff regarding the Acceptable Management Practices for water quality?
A. Yes. You know, as I mentioned, you know, up until this Clough Brook harvest, we had spent considerable time and taxpayer dollars working with Plum Creek, fifty-one person days, and a considerable amount of that time was talking about the water quality rules. We had one pre-harvest inspection where I invited along our chief water quality person out of our Waterbury office, Gary Sabourin, to specifically talk to them about their needs to comply with the AMP's.
Q. Do you recall what Plum Creek's response was to Mr. Sabourin's discussion of their need to comply with AMP's?
A. Yes. Tim Dorrell specifically asked if there was an industrial standard that was different than the standard everyone else had to follow.
Q. Do you recall Chris' testimony -- Chris Fife -- Mr. Fife's testimony earlier last week with regard to his not recalling the -- your discussion of call -- your talking with him as to the consequences of failing to comply with the
adverse -- I'm sorry, with the Use Value Appraisal Program requirements?
A. Yes, I do recall that testimony.
Q. Did you have a conversation with Mr. Fife regarding the consequences of failing to comply with the Use Value Appraisal Program requirements?
A. Yes, specifically.
Q. When did you have that conversation?
A. Yeah, in April of 2009, Chris was in my office for a meeting with other department staff for our annual partners' meeting. That's a meeting that all of the landowners that are part of the former Champion lands gets together once a year. And in having Chris in the office, I took the opportunity, knowing that he was going to be there, to prepare some numbers for him, and after his meeting, I invited him into my office and presented to him the importance of following their Forest Management Plan.

Due to what I perceived to be problems in their implementation, I calculated for Chris the entire 56,000 acres that could be removed if they continued to not follow their Forest Management Plan and presented to him the lost revenue in tax benefits specifically.
Q. How did you arrive at the lost benefit impact?
A. I used the --
Q. And approximately how much was it?
A. It was approximately 800,000 dollars, $I$ believe, at that time, and I calculated it using the data from the property valuation and review, which we have access to their data -- their data.
Q. Did you talk to -- you talked to Mr. Fife, you just testified, about the 56,000 acres. Were you here earlier when folks testified that Plum Creek owned 84,000 plus or minus acres in the state of Vermont?
A. Yes, I was.
Q. Why isn't the 84,000 acres plus or minus being disenrolled, if you know?
A. Because it's discontiguous. Where we had been discussing in the field the problems with the implementation, I was calculating just the contiguous area for where we were having those field discussions.
Q. Mr. Langlais, did Plum Creek itself ever initiate any meetings with you and other department staff regarding the interactions between Plum Creek and the State?
A. Yes, I believe we have.
Q. Do you recall what those -- when those meetings were?
A. No, not specifically.
Q. Do you recall what occurred at those meetings?
A. Yes, I think so.
Q. What was that?
A. I believe we discussed eligibility requirements and
what Plum Creek needs to do to maintain their eligibility in the UVA Program.
Q. Do you recall who would have -- who attended those meetings from the State?
A. I believe it could possibly be myself, Kathleen Decker from my office, Ginger Anderson.
Q. Thank you. MS. SCHWARTZ: One moment, please. If I may have a moment? THE COURT: You may. MS. SCHWARTZ: May I please have this marked as Exhibit G, I believe? Thank you. May I approach the witness? THE COURT: Yes.

BY MS. SCHWARTZ:
Q. I'm showing you what's been marked as State's Exhibit
G. Do you recognize this document?
A. Yes. I believe I prepared this document.
Q. What is this document?
A. This was a proposal to my superiors in our Waterbury office for a alternative planning strategy for large landowners.
Q. Is this the large landowner alternative that has been discussed over the last few days in court?
A. Yes, it is. MS. SCHWARTZ: I move to admit this document that's
been marked as Exhibit G. May I approach the witness? THE COURT: Yes. Does Mr. Grayck have a copy? MS. SCHWARTZ: Yes, he does.

MR. GRAYCK: One moment, Your Honor, if I might. (Pause).

MS. SCHWARTZ: It's in your Trial Binder 3. It's part of your Exhibit 50, I believe.

MR. GRAYCK: Yes, I'm aware of that. I want to -- I believe it's being offered as this constitutes the official alternative as adopted by Forest, Parks and Recreation, and I simply want to compare it to --

THE COURT: That's fine. We'll take our afternoon break now. We'll take a break until twenty past 3. THE CLERK: All rise.
(A recess was taken at 3:01 p.m., until 3:16 p.m.)
THE COURT: Please be seated. We normally end the court day at 4:30, but because of the late start, we can go on until 5:15 today. Does that inconvenience anyone?

MS. SCHWARTZ: That's fine.
MR. DUANE: Thank you, Your Honor.
THE COURT: All right.
MR. GRAYCK: May I address the Court on the offer of admission of Exhibit G?

THE COURT: Yes.
MR. GRAYCK: So Plum Creek objects for two reasons.

I need -- I have not -- I'm not aware as to whether the State is offering Exhibit $G$ as a practice under Section 801, paren, (7) of the Administrative Procedure Act -- that would be 3 V.S.A. 801, paren (7) -- whether it's being offered as a procedure under 3 V.S.A., Section 801, paren, (8), or whether it's being offered as a rule under 3 V.S.A., Section 801, paren, (9).

In addition, Your Honor, we think there's a completeness objection in that the offer is part of a broader packet of documents which I was given by the Agency of Natural Resources in no, what appear to me, logical order, and therefore I believe that the entirety of the documents which were provided to me, which included this Exhibit $G$, should be admitted, so I have -- I have two objections with respect to its admission.

THE COURT: Ms. Schwartz?
MS. SCHWARTZ: We're offering it for what it is, and we have no objection to the entire packet that Mr. Grayck refers to being admitted into evidence.

THE COURT: When you say "what it is" --
MS. SCHWARTZ: It's none of the above that he read. We're offering it as the alternative UVA plans for selected large landowners. The title -- it doesn't matter whether it's a practice or procedure or --

THE COURT: Well, let's start first with the
completeness issue. So you're saying that you have no objection to offering the entire packet?

MS. SCHWARTZ: No, we have no objection.
THE COURT: All right. So let's find out first if Mr. Grayck agrees with you that what you're offering is the entire packet is the entire packet. You need to produce it.

MS. SCHWARTZ: It's Exhibit 30 of their trial
exhibits, $I$ believe.
MR. GRAYCK: (Indiscernible).
MS. SCHWARTZ: It's Exhibit -- oh, Exhibit --
MR. GRAYCK: Well --
MS. SCHWARTZ: -- 50 .
THE CLERK: (Indiscernible).
MR. GRAYCK: Yeah, (indiscernible).
MS. SCHWARTZ: I offer the entire packet into evidence.

THE COURT: So is this another --
MS. SCHWARTZ: This is part of Exhibit G.
THE COURT: Why don't you two just confer for a moment and take a look at what you each have and -- (Pause).

MR. GRAYCK: So we have agreement on the packets

THE COURT: Which is what?
MR. GRAYCK: What I would call Plum Creek 49 and 50.
I don't know what the State wants to call it.

MS. SCHWARTZ: I began with State's Exhibit G. THE COURT: Okay. But as I understand it, $G$ is now being withdrawn and something else is going to be offered? MS. SCHWARTZ: Yes. THE COURT: Okay. So we're not talking about State's G anymore.

MS. SCHWARTZ: Talking about Exhibit -- State's
Exhibit H. Exhibits $H$ and I.
THE COURT: So Mr. Grayck, have you looked at $H$ and
I?
MR. GRAYCK: Yes, Your Honor.
THE COURT: Do you have any objection to them on
completeness grounds?
MR. GRAYCK: No longer anymore, Your Honor.
THE COURT: Okay. And then what about the other issue that you raised as an objection?

MR. GRAYCK: I believe that issue remains before the Court to the extent that the agency is offering this as evidence of something it did in its official capacity. If that is what it did, then under the Administrative Procedure Act, when an agency acts in a formal manner, based upon how it does so, there is a different level of legal classification and legal status which attaches to the document and --

THE COURT: Aren't you raising issues now about what the significance of it is or how it should be treated, how it
should be addressed by the Court --
MR. GRAYCK: And --
THE COURT: -- and as separate from admissibility?
MR. GRAYCK: And my only objection was I believe to the way it was being characterized as what it was. I have no objection if the Court takes the documents and reserves for itself a determination as to the legal status of the documents. I -- so with that said, I understand what the Court is saying.

THE COURT: Okay. So State's H and I will be admitted, and then we'll see if there are questions that raise issues about --

MR. GRAYCK: Thank you.
THE COURT: -- admissibility. (Pause).
(The entire packet of documents from ANR and the
Alternative UVA Plans for Selected Large Landowners were hereby received into evidence as Defendant's Exhibits $H$ and I, respectively, as of this date.)

MS. SCHWARTZ: Could you please mark these as Exhibit
H and Exhibit I? (Pause). May I approach the witness?
THE COURT: Yes.

## CONTINUED DIRECT EXAMINATION

BY MS. SCHWARTZ:
Q. I'm showing you what's been marked and admitted as State's Exhibit $H$ and I. Could you please look in Exhibit I?

THE COURT: Do you have other copies of those that he could use so those could be used here?

MS. SCHWARTZ: We have two other copies.
THE COURT: Okay.
MS. SCHWARTZ: Can I approach the bench?
THE COURT: Yes. It would be better if he uses those and we have the admitted ones. Okay.

MS. SCHWARTZ: Here's the other copy. Would you like (indiscernible)?

THE COURT: Yes. Thank you.
BY MS. SCHWARTZ:
Q. In Exhibit I, Alternative UVA Plans for Selected Large Landowners, the document on the right, it says $1 / 13$ on the top right corner. Have you found that document?

THE COURT: Did you say $13 ?$
MS. SCHWARTZ: Yes, on the top right corner, it says
1/13, and it's entitled Alternative UVA Plans for Selected Large Landowners.
A. Yes.
Q. Have you found it, Mr. Langlais?
A. Yes, I have.
Q. What is it?
A. This is the alternative planning strategy which I proposed to my superiors in order to allow large landowners to utilize a different methodology for developing their Forest

Management Plans.
Q. Let me direct your attention to Paragraph 2 of the document. The third sentence reads, "The average parcel size for enrolled forest land is 110 acres in the UV" -- and that -- does that refer to the average parcel size in the UVA Program?
A. Yes. That's statewide.
Q. Based on your knowledge of the UVA Program, as a Vermont county forester, is that 110-acre parcel average still basically correct?
A. Yes, it is.
Q. Mr. Langlais, do you know how many forested parcels that there are in the UVA Program?
A. Roughly 14,000.
Q. And if you know, is that the total number of parcels in the UVA Program?
A. No. The total number of parcels is about 17,000. The difference is in the enrollment of agricultural parcels.
Q. With regard to the Large Landowner Alternative Strategy that we've been talking about over the last couple of days, after you conceived of this concept, to whom did you propose it to in the Department of Forest, Parks and Recreation?
A. I proposed this to Ginger Anderson, the Chief of Forest Management.
Q. Did it get reviewed by others within the department?
A. Yes. While $I$ was developing it, I ran it by others within the department as well as consulting foresters outside of the department that this would impact their land holdings.
Q. Did you get feedback from others in the department on this -- your proposal?
A. Yes, I did.
Q. Did you consider those comments?
A. Most of them I did, yes.
Q. When you say "most of them," what do you mean by that?
A. There was some push-back from some of my counterparts in other areas of the state that didn't agree.
Q. Okay. And did you get comments back from the large landowners and consulting foresters that you mentioned?
A. Yes. The two largest consulting firms in Essex County, Jim Wood of North Country Environmental and Forestry and Richard Carbonetti from LandVest, I sent them drafts and had them review it and provide comments back to see if it would be something that they would be interested in.
Q. Mr. Langlais, what portion of your time as the county forester do you devote to reviewing Plum Creek's timber operations?
A. A considerable amount of time. There are about a third of the total acreage -- acreage enrolled in UVA for Caledonia and Essex counties.
Q. Why have you spent a considerable amount of time reviewing Plum Creek's timber operations?
A. I've spent a considerable amount of time because their Forest Management Plan calls for harvesting at rates that those lands hadn't seen in a number of years. The Forest Management Plan calls for increasing it. Under Essex Timber Company, they were operating at about 7,000 cords a year. The new Forest Management Plan increased that to 45,000 cords a year, so it's a tremendous amount of harvesting, and so it takes a lot of time to review those harvest plans and work with them.
Q. When you review those harvest plans, do you discuss with them the requirements of the UVA Program and the requirements of their Forest Management Plan?
A. Absolutely. Mostly in our field visits.
Q. And today is there a substantial amount of harvesting on the Plum Creek land?
A. Yes. Today Plum Creek is following through with its goal of meeting 45,000 cords a year. Last year, I believe Plum Creek accounted for forty-five percent of the total volume harvested in Caledonia and Essex counties in the UVA Program.
Q. Did what you observed as county forester on Stands 43, 34 and 44 on the Clough Brook North tract of Plum Creek's 56,000-acre parcel encourage and assist in the preservation
and conservation of that land for future productive forest use?
A. No, not at all.

MS. SCHWARTZ: No further questions.
THE COURT: Mr. Grayck?
MR. GRAYCK: Thank you, Your Honor. CROSS-EXAMINATION

BY MR. GRAYCK:
Q. Good afternoon, Mr. Langlais.
A. Good afternoon, Mr. Grayck.
Q. Mr. Langlais, you're familiar with the UVA statutes?
A. Yes, I am.
Q. And you would consider yourself possessing substantial expertise with their application and interpretation?
A. Yes, I try.
Q. And you're familiar with the Current Use Advisory Board Rules?
A. Yes.
Q. In fact, the Current Use Advisory Board Rules are part of the 2006 manual, aren't they?
A. I believe they are.
Q. In fact, the -- why don't we turn to those Current Use Advisory Board Rules in the manual. If we went to Exhibit -Volume 2 -- go to Volume 2. We should find the 2006 (indiscernible). Exhibit 36 -- Exhibit 5 of 36 . Could you
find for me the Current Use Advisory Board Rules? Does your copy not have -- okay.
A. It doesn't have it.
Q. Here.

MR. GRAYCK: If I may approach the -- is that okay? MR. DUANE: Yeah.

MR. GRAYCK: Your Honor, may I?
THE COURT: Yes. But are you implying that Exhibit 5

MR. GRAYCK: I've got 5 .
THE COURT: -- Exhibit 36 is not identical to Exhibit
22A?
MR. GRAYCK: No, I just recalled that it is Exhibit

THE COURT: Okay.
MR. GRAYCK: -- and I apologize, Your Honor.
THE COURT: Okay.
MR. GRAYCK: I should be referring to this as Exhibit
22A. I apologize.
THE COURT: Okay.
MR. GRAYCK: So that's Exhibit 22A.
BY MR. GRAYCK:
Q. So Mr. Langlais, of Exhibit 22A, I believe it's Appendix G. If you could find that, please. Okay. So those are the Current Use Advisory Board Rules. I'm sure you have
occasion to apply them frequently in your responsibilities as the county forester?
A. Yes.
Q. And you're familiar with the terms and requirements of these rules?
A. Yes.
Q. And you routinely apply them in the course of your duties. Yes?
A. Yes.
Q. Mr. Langlais, could you please turn to Page 6 of 10 of the Current Use Advisory Board Rules? Do you see what is set forth there as Rule (c) and it's a sub of Rule 2?
A. Yes, I do.
Q. Okay. Could you please read out loud Rule (c)?
A. Rule (c). "A tract of qualifying land shall be considered contiguous for the purposes -- for the purpose of determining eligibility for Use Value Appraisal even though divided by a right-of-way, highway or town line."
Q. Now, my understanding it's the State's position that the VELCO power line which bisects or divides the VELCO -which divides the Plum Creek property is covered to this -- is covered by this rule; am I correct?
A. I believe you are.
Q. Could you please identify for me what is the tract of qualifying land for purposes of Rule 2(c)?
A. I'm sorry. Could you rephrase that?
Q. Could you please identify for me the tract of qualifying land with respect to Plum Creek's property and its application to whether the VELCO power line causes the tract to not be contiguous? What is the tract being referred to in this rule? What's the acreage of the tract?
A. 56,000 acres.
Q. So am I to understand that the tract being referred to in this rule is the same acreage which has been determined to be the parcel which is to be disqualified if the Director of Property Valuation and Review decision is upheld by this Court?
A. Yes.
Q. Now, current use -- I'm sorry. Strike that. Exhibit 22A, it contains the UVA statutes, correct?
A. Yes, it does.
Q. Okay. And my understanding is that the statutes begin at what's identified as Page 12 of the 2006 manual or Page 11 of the 2006 manual? It's identified in the lower right-hand corner. Yes?
A. Yes.
Q. Okay. Now, could you please read for us the definition of 32 V.S.A., Section 3752, managed forest land?
A. "Managed forest land means, A, any land, exclusive of any house site, which is at least twenty-five acres in size
and which is under active, long-term forest management for the purpose of growing and harvesting repeated forest crops in accordance with minimum acceptable standards for forest management; or $B$, any land exclusive of any house site which is, I, certified under Subsection 6306(b) of Title 10; 2, it is owned by an organization that is certified by the

Commissioner of Taxes as a qualified organization as defined in 10 V.S.A. $6301(a)$ and, for at least five years preceding its certification, was determined by the Internal Revenue Service to qualify as a Section 501(c)(3) organization, which is not a private foundation as defined in Section 509(a) of the Internal Revenue Code; and 3, is under active conservation management in accord with standards established by the Commissioner of Forest, Parks and Recreation."
Q. Okay. Now, looking at the definition of 9, paren, (a) and its reference to minimum acceptable standards for forest management, where is that phrase defined in Section 3752?
A. I'm not sure.
Q. Could you please look at 32 V.S.A., Section 3752, paren, (13)? Do you see that?
A. Yes, I do.
Q. Mr. Langlais, could you please read that out loud for us?
A. "Minimum acceptable standards for forest management refer to certain standards established by the Commissioner of
the Department of Forest, Parks and Recreation."
Q. With respect to the issue that's before the Court, Mr. Langlais, can you please tell me what are the certain standards established by the Commissioner of the Department of Forest, Parks and Recreation which are applicable?
A. It's I believe the Use Value Appraisal Program Manual.
Q. And by that, you mean the 2006 manual?
A. Correct.
Q. Is there anything else?
A. Within that manual are specific references.
Q. And what are those specific references, Mr. Langlais?
A. They're U.S. Forest Service silvicultural guides, technical handbooks and textbooks.
Q. Mr. Langlais, can you please direct us to the list of the items you just described?
A. Certainly. It would be Page 78, Appendix A.
Q. So just so $I$ understand, Mr. Langlais, you're telling me that the certain standards established by the Commissioner with respect to the minimum acceptable standards for forest management include the twenty-six items in Appendix A?
A. Yes.
Q. And those are all certain standards?
A. Yes.
Q. And those are all the certain standards you regularly apply?
A. Yes.
Q. Are there any other additional certain standards which you apply to Plum Creek with respect to the determination of your cut contrary conclusion?
A. No, I don't believe there were.
Q. Mr. Langlais, are you familiar with a publication -- I believe the last author's name is Smith?
A. David Smith, yes.
Q. Mr. Langlais, have you ever seen this book?
A. Yes.
Q. Did you rely on any portion of this book for your determination that Plum Creek had committed a cut contrary?
A. I used a definition from that book to -- in my discussions with Plum Creek during field harvest reviews.
Q. Yes, but my question is did you rely upon any portion of this book in reaching your determination that Plum Creek had committed a cut contrary?
A. I relied on the definition for an irregular shelterwood in that publication, yes.
Q. Is this book one of those listed in the appendix to the 2006 UVA Manual which defines the acceptable standards? Is this book on the list?
A. No, I don't believe it is.
Q. Mr. Langlais, can you please turn to 32 V.S.A., Section 3755, paren, little (b), paren, little (3)?
A. Yes.
Q. Are you familiar with that provision?
A. Yes.
Q. It includes the use of the word tract; am I right?
A. Yes, it does.
Q. If you'll allow me, I'll read, and you'll let me know if I've quoted it incorrectly. Okay?
A. Please do.
Q. I'm beginning with the portion that states, "There has not been filed with the Director an Adverse Inspection Report by the department stating that the management of the tract is contrary to the Forest Conservation Management Plan or contrary to the minimum acceptable standards for forest or conservation management." Did I read that correctly?
A. Yes, you did.
Q. Thank you. What is the tract being discussed in that provision as it pertains to this appeal?
A. I believe that it's synonymous with the word parcel.
Q. So it's your conclusion that tract, as being used in this sentence, is referring to 56,604 acres?

MS. SCHWARTZ: Objection. Mr. Langlais is a smart man, but the question calls for a legal conclusion.

MR. GRAYCK: I believe, Your Honor, he's testified that he's -- as part of his duties on a regular basis, he applies the UVA statutes and rules and that this is
fundamental to his conclusion that he reached an adverse inspection, and I'm simply asking him to identify what constitutes the tract.

MS. SCHWARTZ: He's asking him to interpret a statute.

THE COURT: The objection is overruled. He may be asked about his implementation of the statute and rules and his understanding of them as they apply to this particular case.

BY MR. GRAYCK:
Q. Do you remember the question or shall I repeat it?
A. Please repeat it.
Q. Okay. Could you please tell me what is the tract at issue in this -- in this appeal with respect to Plum Creek as used in 3755 which I read and you confirmed I have properly read?
A. On the 56,000 acres.
Q. Okay. And is it your understanding that that's also consistent or identical to the definition of parcel which the Director of Property Valuation and Review has found fit to disqualify, correct?
A. Could you please state that again?
Q. Your identification of the 56,000 acres as the tract for purposes of the statutory provision we've been discussing --
A. Um hum.
Q. -- that is the same as the parcel which the Director of Property Valuation and Review proposes to disqualify from the Use Value Program, correct?
A. I believe so.
Q. Now, we continue on in 32 V.S.A., Section 3755, and if we go to, paren, little (c), and set within that provision is the sentence, and please correct me if I'm wrong, "If that department finds that the management of the tract is contrary to the Conservation or Forest Management Plan or contrary to the minimum acceptable standards for Conservation or Forest Management, it shall file with the owner, the assessment officials and the director an Adverse Inspection Report within thirty days of the inspection." Do you see that?
A. Yes, I do.
Q. Okay. The Adverse Inspection Report that you filed in compliance with that provision, could you identify it for us, please?
A. The 56,000 acres.
Q. Yes, I understand that. I'm talking about the actual date of the report.
A. The date of the report?
Q. Yes.
A. April 26, 2010 .
Q. And that Adverse Inspection Report has been admitted
into evidence. Yes?
A. Yes.
Q. Okay. And so that Adverse Inspection Report is discussing the tract for purposes of the provision I just -- I just asked you about?
A. Yes.
Q. Mr. Langlais, we've talked at length about -- Mr. Langlais, turning to that Adverse Inspection Report, can you please tell me where it references 56,000 acres?
A. It references 56,000 acres where I've written next to Lemington contiguous with lands in Bloomfield, Averill, Avery's Gore, Lewis, Brighton, Morgan and Brunswick.
Q. Okay. And that's the reference that you're relying on to say that the Adverse Inspection Report is representing 56,000 acres?
A. Yes.
Q. And the specific activities --

THE COURT: I'm sorry. Would you please point that
out in --
THE WITNESS: Yes. On Page 1 of the Adverse
Inspection Report --
THE COURT: Okay.
THE WITNESS: -- under -- the first line under the memorandum, there is landowner, span number and then parcel town.

THE COURT: Okay.
BY MR. GRAYCK:
Q. So Mr. Langlais, I'd like you to have in front of you Exhibit 22. Now, as I understand it, Exhibit 22 constitutes the amendment to the Plum Creek Conceptual Management Plan; am I correct?
A. Correct.
Q. Okay. And the only document that you signed is UVA Form 2, Page 2, correct?
A. Correct.
Q. And your signature on UVA Form 2, Page 2 is your authorization of the treatments set forth on UVA Form 2, Page 2, correct?
A. Correct.
Q. Now, the third map which we've referred to as containing the OSR box, which $I$ believe is the last page, do you see that?
A. Yes, I do.
Q. Okay. My understanding is that that map was produced after the field visit which you had with Mr. Horton, Mr. Fife, yourself and maybe others and that that map was produced after the field visit which took place in October, mid-October?
A. Correct.
Q. Okay. In the area encompassed by the OSR box that we've talked about a lot, it includes a riparian buffer zone,
correct?
A. Correct.
Q. And you know that it violates the AMP's to conduct an OSR in a riparian buffer zone, correct?
A. Correct.
Q. Did you intend that by acceptance of this map to authorize $O S R$ in the riparian buffer zone?
A. I didn't authorize OSR in the buffer zone, no. They have to follow the AMP's, which clearly state that you can't do an OSR --
Q. Okay.
A. -- in a riparian zone.
Q. So if we were just looking at the map, however, I don't see any exclusion for the riparian buffer zone in the OSR box; am I right?
A. Correct.
Q. So if one was just looking at the map, one could get I believe a mistaken impression that you had authorized OSR treatments throughout the entire area represented by that box, correct?
A. One could get that impression, yes.
Q. But that would be a mistaken impression, wouldn't it?
A. Correct, it would.
Q. And it would be one that would conflict with the AMP's, correct?
A. Yes, it would.
Q. So you'd agree with me there's a conflict between what's shown on that map and what the AMP's require. Yes?
A. Yes, there is a conflict.
Q. And so it was smart of Mr. Fife to ensure that there was no harvesting in the riparian buffer zone notwithstanding that map which shows OSR treatment authorized in a riparian buffer zone, correct?
A. Correct.

MR. GRAYCK: Excuse me for one moment, Your Honor.
Q. Mr. Langlais, the Essex Timber Company Forest

Management Plan, which I believe is Exhibit 14 --
A. Yes.
Q. -- that's a concept plan; am I right?
A. It is an overriding plan for the parcel. It's conceptual in that it doesn't have stand-specific information. However, it provides the direction for the management that is to take place when the stand-specific data comes in for specific harvests.
Q. Does it authorize any harvesting?
A. It does not authorize any harvesting.
Q. It's referred to in Exhibit 15 as a concept plan; am I correct?
A. Yes.
Q. The prescription amendment is the implementation of
the concept plan, correct?
A. Correct.
Q. Do you recall the hearing held with Commissioner Clark?
A. Yes, I do.
Q. And my understanding was that Commissioner Clark was acting commissioner. Do you know that that's the case?
A. Yes, it was.
Q. And my understanding is that Commissioner Clark does not have a forestry background; am I right?
A. You're correct.
Q. I believe maybe she has an accounting background or a business management background?
A. I believe so.
Q. Now, prior to the hearing with Commissioner Clark, do you recall meeting with her to discuss the upcoming Plum Creek hearing before her?
A. Not specifically I don't.

MR. GRAYCK: I'd like to have this marked, please.
Q. I'm showing you what's been marked as Exhibit 100.
A. Thank you.
Q. That's your name at the top, correct?
A. Yes, it is.
Q. Do you see how it's an e-mail from Steve Sinclair?
A. Yes, I do.
Q. Do you see that you're included as among the recipients of that e-mail?
A. Yes, I do.
Q. Can you please read what's contained in that e-mail?
A. Certainly. This is from Steve Sinclair to Meghan Purvee, who's our staff counsel, Commissioner Clark, myself, Mike Duane and Corinne Richardson. The statement is, "We need to have our pre-hearing planning meeting. Corinne, can you please check calendars and with Matt. Thanks."
Q. Do you remember receiving this e-mail?
A. Yes, I must have received this e-mail.
Q. Okay. Do you remember attending a pre-hearing planning meeting as described in the e-mail?
A. I don't recall the meeting. I apologize, but I --
Q. No, no need to apologize.
A. -- I was there. I must have been.
Q. No need to apologize. Now, you would agree with me that the e-mail from Mr. Sinclair to the recipients is referring to the hearing that was eventually held before the Commissioner, correct?
A. Correct.

MR. GRAYCK: Plum Creek would move the introduction of Exhibit 100. MS. SCHWARTZ: We have no objection. THE COURT: Plum Creek's 100 is admitted.
(An e-mail from Steve Sinclair was hereby received into evidence as Plum Creek Exhibit 100, as of this date.) THE WITNESS: Oh, I'm sorry.

BY MR. GRAYCK:
Q. Now, you attended the hearing with Commissioner Clark. Yes?
A. Yes, I did.
Q. Do you recall taking notes of that hearing?
A. Yes, I did.
Q. Do you have your notes with you?
A. I do.
Q. Could you please get them out? (Pause). Do you have your notes in front of you?
A. I do, sir.
Q. My understanding is that your notes were taken on first page to be done in 2010, and the second page would be address and phone directory?
A. Correct.
Q. Thank you. I just wanted to make sure. Mr. Langlais, it's my understanding that your notes include the following: Variability issue; sampling does not reflect this at LV intensity; make sure to talk about this with Sarah. Did I read your notes correctly?
A. That's what that states.
Q. And it states that you were going to talk to Sarah
about this, correct?
A. It indicates that $I$ should try to talk to Sarah about this.
Q. And did you?
A. I don't recall what this statement was about to be quite honest.
Q. Okay. But it's certainly a note that you wanted to follow up with her after the hearing with her regarding an issue that was discussed. Yes?
A. It certainly seems that way, yes.
Q. Thank you, Mr. Langlais. Now, in the course of the conduct of your duties, you make an attempt to assist
landowners in compliance with the UVA statutes; am I right?
A. Correct.
Q. And you've testified regarding the extensive amount of time that you've spent with Plum Creek; am I right?
A. Correct.
Q. And Plum Creek is the largest landowner in Use Value Appraisal, correct?
A. Correct.
Q. And because they're qualified under a concept plan, each harvest needs to be reviewed, right?
A. Correct.
Q. Mr. Langlais, do you remember the circumstances of how you ended up being part of the January 26 visit to Clough

Brook North? Do you recall how that came about?
A. It probably came about as all of our other post-harvest field visits have come about.
Q. Okay. And when you say "post-harvest," it was actually -- the harvest was ongoing, wasn't it?
A. True. Yes.
Q. Okay. All right. I'm showing you what's been marked as Exhibit 101.
A. Thank you.
Q. Is that your name at the top?
A. Yes, it is.
Q. And this is an e-mail from Dan Kilborn to you dated

January 15th, 2010, correct?
A. Yes, it is.
Q. Okay. Do you remember receiving this e-mail?
A. Not this specific e-mail, but I'm sure I did receive it.
Q. Okay. Do you see the sentence that begins "I have to touch base"? Do you see that?
A. Yeah.
Q. Can you read that out loud?
A. It states, "I have to touch base with Chris on the 26th, today, so I will mention that I think it would be a good idea if you could come along, too" --
Q. And you got this e-mail?
A. -- "talk to you soon. Dan."
Q. I'm sorry?
A. "Talk to you soon. Dan."
Q. Yeah. You got this e-mail. Yes?
A. Yes, I did.
Q. And this is from -- this is from your -- you know, your files. It's got your name on it, right?
A. Yes.
Q. Okay.

MR. GRAYCK: I move to admit Plum Creek 101.

MS. SCHWARTZ: Can we --
MR. GRAYCK: Oh, I'm -- I apologize.
MS. SCHWARTZ: -- can we see a copy, please?
MR. GRAYCK: Of course. I apologize.
MS. SCHWARTZ: The State has no objection.
THE COURT: Plum Creek 101 is admitted.
(An e-mail dated 1/15/10 was hereby received into evidence as Plum Creek Exhibit 101, as of this date.)

BY MR. GRAYCK:
Q. So it's my understanding then that the 26 th had been identified by Mr. Kilborn at VLT for an inspection and that he thought it would be fortuitous if you come along, too, correct?
A. Correct, as -- correct.
Q. Okay. And in fact, Mr. Kilborn and yourself and Mr.

Fife have an extensive working relationship, correct?
A. Yes, we do.
Q. And my understanding is notwithstanding this appeal that all three of you have continued to work professionally with each other; is that right?
A. Absolutely.
Q. Okay. Now, my understanding is that you received Mr. Fife's letter of January 27, 2010, which has been admitted as Exhibit 27, and in that letter, Mr. Fife makes reference that he's going to have LandVest cruise all of Stand 34. Do you see that?
A. Yes.
Q. Is it fair to say that when you received that letter, in your mind, you had already concluded that the issue, if there was an issue, wouldn't necessarily apply to all of Stand 34, correct?
A. Yes, because there were uncut portions of Stand 34.
Q. And were there portions of Stand 34 which had been cut but were ultimately determined to be cut contrary?
A. I think I would have realized that during my field inspection.
Q. Yes, I understand that. I'm just simply asking now whether there were portions of Stand 34 which were cut but which you decided were not cut contrary.
A. Yes.
Q. Yes.
A. Inevitably.
Q. Yes. Okay. And so when you did your inventory work, to determine whether there was a cut contrary, in your mind, you had already decided that there was some areas which you needed to check up on but other areas you didn't, right?
A. Due to that first walk-through on the 26 th, yes.
Q. Absolutely. Absolutely. So that you had seen the stand, and in your mind, you had decided there's a portion over there that doesn't strike you visually to be in conflict with the prescription, so you need to focus on what you think is in conflict with the prescription, correct?
A. Correct.
Q. And then ultimately when you would do your inventory work, you would just inventory what you thought had been cut contrary?
A. I based the GPS-ing that I did on the -- on the evidence of overcutting.
Q. Okay. So I think what you're telling me, and please correct me if I'm wrong, that you used a GPS to inventory the area that you thought could be cut contrary?
A. Correct.
Q. But that there was some other area which you had decided wasn't cut contrary and therefore didn't need to be inventoried, right?
A. Correct.
Q. Okay. And I can understand that the reason why you wanted to focus on what you thought was cut contrary was because that's what gets reported to the Property Valuation and Review; am I right?
A. If it ultimately is considered to be an adverse inspection, yes --
Q. Okay.
A. -- that's what would go to $P V$ and $R$.
Q. That's what goes to PVR. So when you go out there, your focus is on trying to decide what needs to get sent to PVR, correct?
A. No, my focus is determining whether or not the stand has been cut contrary.
Q. And in the course of doing that, determining what acreage needs to get sent to PVR. Yes?
A. Not at that time, no.
Q. When?
A. After the adverse inspection has occurred -- after the inspection has occurred and the preparation of the Adverse Inspection Report.
Q. Okay.
A. That's when it's determined what -- what acreage is eventually sent over to $P V$ and $R$.
Q. Okay. So the results from your inventory work is
taken and reviewed, and you reach a conclusion as to what you think was cut contrary; am I right?
A. Yes.
Q. And that's the acreage in the Adverse Inspection Report which is then reported to PVR, right?
A. Yes.
Q. And in this instance, the Adverse Inspection Report didn't include all the acreage in the stand; am I right?
A. Correct.
Q. It only included what you thought was cut contrary and therefore needed to be reported to PVR because that's the portion which is subject to the land use change tax, correct?
A. Yes.
Q. Now, with respect to NE-603 -- which sometimes we call the guide; am I right?
A. Correct.
Q. Okay. Am I right that the guide is simply that, it's a guide?
A. Yes, it's a guide for forest managers to employ.
Q. I'm sorry?
A. It's a guide for forest managers to employ when practicing under the UVA Program.
Q. And that there's many other options. Yes?
A. Yes, there are other options.
Q. Mr. Langlais, could you please look at Form 2, Page 2
for Stand 34? And that would be in Exhibit 22. Okay?
A. Yes.
Q. It begins "Stand 34 will receive a two-stage shelterwood." Yes?
A. Correct.
Q. Now, a patched clear cut will have a residual basal area of zero, correct?
A. Correct.
Q. And the treatment authorized for Stand 34 only says that portions of the stand will also receive one- to two-acre patches, correct?
A. Yes.
Q. And there is no specific target, correct?
A. The target is reflected in the residual basal area.
Q. Well, there could be five patches, correct?
A. There could be if it did not affect the overall residual basal area of thirty to forty square feet.
Q. And if there were fifteen patches, you would have to determine whether the prescription had been met, correct?
A. Yes.
Q. And you would have to do an averaging; am I right?
A. No, actually. All you would need to do is measure the basal area of the stand to see that it came to the thirty to forty square feet that was prescribed.
Q. In fact, the last sentence of the Stand 34 treatment
states, "The patches will not affect the overall stand residual basal area of thirty to forty square feet," correct?
A. Correct.
Q. And that means that the two-stage shelterwood will contain areas above thirty to forty square feet to offset the zero basal area measurements in the patches themselves, correct?
A. No, not specifically.
Q. Mr. Langlais, do you remember me taking your deposition on October 31st, 2011?
A. I do.

MR. GRAYCK: May I approach the witness, Your Honor? THE COURT: Yes.
Q. Mr. Langlais, I'm showing you the transcript of your deposition book, and at the back, there is an errata sheet with signature?
A. Yes.
Q. Do you recognize that signature?
A. Yes. That is my signature.
Q. That's your signature. Okay. I'm going to hand you this deposition.
A. Thank you.
Q. And I'm going to ask that you turn to Page 79 of your deposition. Do you see that, Page 79?
A. Yes, I do.
Q. Do you see there's a question that begins at Line 10?
A. Correct.
Q. And there's an answer that ends at Line 16. Do you see that?
A. Correct.
Q. Can you please read the question and answer from Line 10 to Line 16?
A. Certainly. Question, "The last sentence states the patches will not affect the overall stand residual basal area of thirty to forty square feet. What does that mean?" Answer, "It means that the two-stage shelterwood contain areas above thirty to forty square feet to offset the zero basal area measurements and the patches themselves."
Q. And that was your testimony, correct?
A. Correct.
Q. Okay. Therefore, because if you're trying to hit between thirty and forty and some areas are going to be less than zero, then some areas have to be greater than at least thirty, correct?
A. Correct.
Q. Because eventually you're going to average the entire stand to see if it's thirty to forty, correct?
A. Yes. (Pause). MR. GRAYCK: Apologize, Your Honor. I've lost a pad. (Pause).
Q. Mr. Langlais, the guides that are set forth and incorporated into the UVA Manual as the certain standards, is it possible that they contradict with each other on a given issue of silviculture?
A. It could possibly happen.
Q. I mean, there's twenty-six of them -- twenty-seven of them?
A. I'll take your word for it.
Q. And the UVA Form 2, Page 2 that you signed at least for Plum Creek didn't specifically reference any of those guides; am I right?
A. No, they left them out.
Q. I'm sorry. So they -- what you signed doesn't specifically reference any guides, correct?
A. What I signed doesn't specifically -- where they should have filled in the specific guide, they did not, and I signed that form, yes.
Q. Okay. But nevertheless, you signed it; am I right?
A. Correct.
Q. And you returned it to Plum Creek; am I right?
A. Correct.
Q. And so it was returned to Plum Creek without any specific guides referenced; am I right?
A. The guides are specifically referenced in the program manual.
Q. Yes, I understand that, but I'm asking you about whether the guides, if any, were specifically referenced in the document you signed. Are any of the guides included in what you signed?
A. No.
Q. Mr. Langlais, you accompanied Mr. Holleran on the regeneration cruise; am I right?
A. I did.
Q. And that was at my invitation, correct?
A. Correct.
Q. And so as necessary, you've been able to access the property to do what you need to do for this case?
A. That was the last time I had been on the property.
Q. And if you need -- and has there been any prohibition or obstacle to you visiting the property if that's what you wanted to do?
A. I don't believe there has.
Q. Okay. And in fact, as I said -- as you said, I mean, I invited you to go along with Mr. Holleran on the regeneration cruise, right?
A. Correct.
Q. And that was to facilitate the two of you sharing information, correct?
A. Correct.
Q. Okay. Mr. Langlais, in the course of your
investigation of the alleged cut contrary, you took the time to observe the property. Yes?
A. Correct.
Q. And you have a Bachelor's of Science degree in wildife management; is that right?
A. That's correct.
Q. And I take it you consider yourself skilled in recognizing land use activities that could be evidence of environmental harm; am I right?
A. Certain portions, yes.
Q. Certain portions. And my understanding is that you had concerns about what the AMP violations might have done to streams; am I right?
A. Correct.
Q. Okay. With your attorney's permission, I'm showing you Exhibit 51.

THE COURT: Did you say 51?
MR. GRAYCK: Yes, Your Honor --
THE COURT: Five-one?
MR. GRAYCK: -- I did say five-one, yes.
BY MR. GRAYCK:
Q. Matt, just -- do you recollect what that document is?
A. Yes, this is from our deposition.
Q. Right. And I'm trying to do this with -- again with your attorney's permission to save us a little time. Do you
recall what that's -- what is shown on Exhibit 51?
A. I believe it's the streams going through the area.
Q. And it's the streams going through the area that you thought were adversely affected; am I right?
A. Correct.
Q. Okay.

MR. GRAYCK: Plum Creek moves to admit Exhibit 51. MS. SCHWARTZ: No objection.

THE COURT: Plum Creek 51 is admitted.
(A document from Matthew Langlais' deposition showing adversely-affected streams was hereby received into evidence as Plum Creek 51, as of this date.)

BY MR. GRAYCK:
Q. Now, in looking at Exhibit 51 and the streams that you thought were adversely affected, are you able to tell whether they extend off of the Clough Brook North harvest area?
A. I must assume that they do.
Q. But in looking at what you drew, okay, are you able to see the blue lines that you drew on the exhibit? Do you have a copy of it in front of you?
A. No, I don't.
Q. I apologize.
A. Thank you.
Q. You see how there's blue lines on it?
A. Yes.
Q. Yes. And you drew those lines; am I right?
A. Yes. I think you asked me to draw them during the deposition.
Q. And you graciously -- you graciously agreed. Thank you. Those lines, as I recall, represented your identification of the streams that you thought had been adversely affected by the Clough Brook North harvest; am I right?
A. Correct.
Q. Okay. Are you able to discern from what you've put on that map in the blue lines whether those lines extend off of the Clough Brook North harvest area?
A. Yes, they would continue off of the Clough Brook harvest area.
Q. In fact, it would continue within the Clough Brook North watershed; am I right?
A. Yes.
Q. Okay. Now, do you know what the acreage of the Clough Brook North watershed area is?
A. No, I don't.
Q. Do you believe that the Clough Brook North watershed area extends to the entire 56,604 acres which Property Valuation and Review proposes to disqualify?
A. No, I don't believe it would.
Q. So to some extent, what you consider to be the
A. Correct.
Q. And it certainly couldn't extend upstream of Clough Brook North, the harvest location, right?
A. It certainly could if the water quality violations impeded fish passage.
Q. Could it exceed beyond the headwaters of Clough Brook North -- of Clough Brook river stream?
A. Yes.
Q. And how far?
A. I couldn't venture a guess right now.
Q. Okay. But you didn't do any further investigation with respect to harmed wildife with respect to what you observed from Plum Creek at Clough Brook North; am I right?
A. No. I would not have needed to for filing an adverse inspection.
Q. But as a employee of the Agency of Natural Resources in the Department of Forest, Parks and Recreation, as an employee of the Division of Forestry, you're certainly familiar with other departments of the Agency of Natural Resources, aren't you?
A. Yes, I am.
Q. And that includes the Department of Fish and Wildlife, doesn't it?
A. Yes, it does.
Q. And in fact, in your office in St. Johnsbury, are there members of the Department of Fish and Wildlife who are stationed in St. Johnsbury?
A. Yes, there are.
Q. And if you thought there was problems with Clough Brook North, you wouldn't hesitate to go talk with them; am I right?
A. I think that I would let it work through the enforcement officer to extend that invitation to Fish and Wildlife to work through that.
Q. And that's Reg Smith; am I right?
A. Yes, Reg Smith.
Q. Environmental Enforcement Officer Reg Smith; am I right?
A. Correct.
Q. Have you had any conversations with him regarding this Clough Brook North since the original incident arose in January of 2010?
A. No, I don't believe I have.
Q. Okay. And, of course, if you had thought that the harvesting occurred above the elevation of 2,500 feet, you would have sought out the district coordinator for Act 250 in the St. Johnsbury office, wouldn't you have?
A. Possibly, yes.
Q. Yes. And the district coordinator is Kirsten Sultan, isn't it?
A. Correct.
Q. Yes. You know Kirsten, don't you?
A. Yes, I do.
Q. So if you were taking your inventory of Clough Brook North and you thought there was an Act 250 violation, you'd go talk to her, right?
A. Possibly, yes.
Q. Okay. And as I recall, there's also a stream alteration engineer in the St. Johnsbury office or at least there used to be. His name is Barry Cahoon?
A. Correct.
Q. Does he still work there?
A. I couldn't tell you.
Q. Have you seen Barry lately?
A. He comes in and out at strange hours.
Q. Okay. But he was certainly working there at the time of the Clough Brook North --
A. He might have been in Waterbury at that time.
Q. Okay. But if you thought that a stream had been substantially damaged, you could have consulted with him or at least put him on notice?
A. Yes, and again I relied -- relied upon our AMP foresters, Jeff Briggs who contacted Reg Smith, to do that.
Q. Okay. And ultimately AMP Forester Briggs communicated with Plum Creek; am I right?
A. Yes, he did.
Q. And that correspondence is already in evidence. Yes?
A. Yes, it is.
Q. Thank you. Mr. Langlais, could you turn to the UVA Manual again? And the UVA Manual is Exhibit 22A. Now, you can understand how an enrolled property owner in UVA relies on this manual just like you do, correct?
A. I'm sorry. I'm not finding it. You said 22A?
Q. Do you need another copy of the 2006 manual? Did we give you one? I believe maybe you put it in -- is it possible --
A. It's missing from where it states it should be.
Q. Okay. Could you check Exhibit 36 or 35? Perhaps it was -- I believe it's right in front of you if I just -- see if we can help solve the mystery of the missing --
A. Okay. I'm sorry
Q. -- manual -- the missing manual. Okay?
A. Right in front of me.
Q. Right in front of you. Yes?
A. Yes, it is.
Q. Okay. Thank you. The manual has a UVA Form 1, correct?
A. Yes.
Q. Okay. And I'm just going to ask that we give everyone a chance to turn to it. It's Page 38; am I right?
A. Correct.
Q. Okay. And UVA Form 1 is a Current Use Program Conformance Inspection Report; am I right?
A. Correct.
Q. Okay. Do you regularly use or did you regularly use this form while the 2006 manual was in effect?
A. Yes.
Q. And you know what this form is for, correct?
A. I do.
Q. Okay. Did you issue any UVA Form 1's to Plum Creek?
A. No.
Q. Could we go to the Essex Timber Company -- I'm sorry. Exhibit 14. What was the Essex Timber Company Forest Management Plan but which is now the Plum Creek Forest Management Plan. Are you there?
A. Yes, I am.
Q. Could you go to Page 51, please? Are you there, Page 51?
A. Yes.
Q. Okay. It's headed Residual Stand Objectives. Yes?
A. Yes, it is.
Q. Okay. Now, Attorney Duane did an illustration on the blackboard. Do you see it?
A. Yes, I do.
Q. Do you recall it?
A. Yes, I do.
Q. Okay. Could you please turn to Page 53? Do you see the top diagram on Page 53?
A. Yes.
Q. And it illustrates a clumped retention zone, does it not?
A. Yes, it does.
Q. And the rest of the box is bare, isn't it?
A. Yes, it is.
Q. And this is part of the Essex Timber Company Forest Management Plan, correct?
A. Yes, to me --
Q. And it's part of the plan which you approved for Essex Timber Company, correct?
A. Yes, for its specific purpose.
Q. And it's also the plan which Plum Creek adopted with your approval, correct?
A. Correct.
Q. Thank you.

MR. GRAYCK: Your Honor, may I have a moment with my

THE COURT: All right. (Pause).
Q. Mr. Langlais, there's been talk of ice damage to the
stands. Do you recall testimony to that effect?
A. I heard that, yes.
Q. And in your cruising, in your site visits, have you seen evidence of that ice damage?
A. Yes, I have.
Q. And the stands have also been described as variable. Do you recall?
A. I recall that Plum Creek described them as variable.
Q. And variability is a function of species. Yes?
A. Any number of components.
Q. Yes. Species?
A. Species, correct. Yes.
Q. Age?
A. Yes.
Q. Yes?
A. Yes.
Q. Vigor?
A. No, I wouldn't believe vigor would be --
Q. Okay.
A. -- an issue with variability.
Q. Crown size?
A. Yes, you could have variable crown sizes in a stand.
Q. And whether it's hardwood type or a softwood type?
A. Correct.
Q. And you're aware that the prior practices of Champion
have been described as extractive or hydrating?
A. Some people have said that, correct.
Q. Okay. And you've done cruising of various portions of the former Champion land?
A. I cruised 9,000 acres that was purchased by the State.
Q. And then I assume that you have sufficient skill to distinguish harvesting that was done twenty-five years ago as opposed to harvesting that's been done within the past five years. Yes?
A. Yes.
Q. So if you wanted to ascertain to what extent the stand had been harvested by Champion, you're sufficiently skilled to do so; am I right?
A. Yes.
Q. Now, my understanding of the Commissioner's decision is that it, in part, states that as a result of the activity undertaken by Plum Creek but which had halted that new stands have been created; am I right?
A. Correct.
Q. Could you please show me in the UVA -- in the 2006 UVA Manual where it allows the State to divide an existing parcel into two on its own accord?
A. On Page 32, near the bottom of Page 32 on No. 5, our definition of a stand which states, "A group or groups of trees sufficiently uniform in age class distribution,
composition and structure and growing on a site of sufficiently uniform quality to be a distinguishable unit."
Q. Okay. Now, that's contained in the portion of the 2006 manual which are the standards for Forest Management Plans; am I right?
A. Correct.
Q. Okay. And those standards are what someone uses when they're drafting a Forest Management Plan; am I right?
A. Correct.
Q. Okay. But what I want you to point out to me is where it's authorized in the 2006 manual that the State, that FDR, that used you as the county forester have the authority to identify the creation of new stands in the course of a harvest which has been authorized.
A. The harvesting that has occurred has created two different stands because it no longer meets the definition that the department uses to define a stand.
Q. But doesn't that determination need to be made at the conclusion of the harvesting?
A. It can be made at any time those conditions or those components are no longer similar. At any point they become dissimilar, they are then two different stands.

MR. GRAYCK: One more moment, Your Honor, if I may.
(Pause). Thank you, Your Honor. Nothing further. THE COURT: Okay. Ms. Schwartz --

MR. GRAYCK: Just -- no, I apologize. I've been -THE COURT: Oh.

MR. GRAYCK: -- I've been paged by senior counsel. BY MR. GRAYCK:
Q. Mr. Langlais, I believe you testified that you used the David Smith publication as part of your determination of the cut contrary; am I right?
A. Yeah, to define the irregular shelterwood term.
Q. Okay. If I was a landowner and I was trying to figure out what you rely upon to make your decisions, how would I know you use the David Smith publication if it's not in the list in the 2006 manual?
A. Because that's a book that all foresters take when they go to forestry school, and landowners usually reply -landowners usually rely upon foresters to prepare their Forest Management Plans, and that's a -- that's a staple textbook in all forestry curriculum.
Q. Mr. Langlais, I'm going to show you your deposition from October 17th, 2011.

MR. GRAYCK: Your Honor, may I?
THE COURT: Yes.
Q. Is that your signature at the bottom?
A. Yes, sir.
Q. Thank you. I'd like you to read beginning at Line 6 and concluding at Line 18, if you may.
A. Thank you.
Q. Thank you.
A. Question, "If I was a landowner and I was trying to figure out what you rely upon to make your decisions, how would I know you use the David Smith publication if it's not in the list in the 2006 manual and it's 2009? How would I know you used the David Smith book if it's not listed here?" Answer, "You wouldn't specifically. The David Smith book is just one reference that I used. I used many of the references listed in this 2006 appendix. Does your Adverse Inspection Report reference the publication The Practice of Silviculture by David Smith?" Answer, "No."
Q. So basically what you're saying is that you get to pick and choose which guides you want to use to make a cut contrary determination; is that correct?
A. No, sir.

MR. GRAYCK: Thank you, Your Honor. Nothing further.
THE COURT: Ms. Schwartz?
MS. SCHWARTZ: Your Honor, we don't have any
questions for Mr. Langlais. Thank you.
THE COURT: All right. That completes your
testimony. You can step down. Thank you.
THE WITNESS: Thank you.
MR. DUANE: Your Honor, with that, the State rests its case in chief.

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| 21;74:3;75:10;82:4,15; | 65:7;76:9,25 | 80:22;91:22;92:15,22 | 40:24;48:2;58:13; | 90:17,18 |
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| three (7) | $4: 3,9,11 ; 12: 23$ | $76: 10$ | 86:12;92:12;93:5;94:7, | $25: 11 ; 27: 20 ; 28: 8,16$ |
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| ```violation (2) 19:25;86:7 violations (4) 10:18,20;81:12;84:6 visit (9)``` | $\begin{gathered} \text { who's }(\mathbf{1}) \\ 67: 6 \end{gathered}$ | $\begin{gathered} 76: 7 ; 77: 6 ; 78: 12,18 \\ \text { zone }(9) \\ 63: 25 ; 64: 4,7,8,12, \\ 14 ; 65: 6,8 ; 89: 7 \end{gathered}$ | 88:12 | $\begin{array}{r} 43: 15 \\ \mathbf{3 : 1 6}(\mathbf{1}) \end{array}$ |
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|  |  |  |  | 3:30 (1) |
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> IN THE VERMONT SUPERIOR COURT ESSEX COUNTY CIVIL DIVISION
PLUM CREEK MAINE ) Case No. 72-12-10ExCV
TIMBERLANDS, LLC, ) 30-6-11ExCV
Plaintiff, ) Guildhall, Vermont
- against -
June 4, 2013
VERMONT DEPARTMENT OF ) 8:47 AM
FOREST and PARKS,
Defendant.
)
Defendant. )
PLUM CREEK MAINE ) Case No. 19-4-11ExCv
PLUM CREEK MAINE
TIMBERLANDS, LLC,
8:47 AM
Case No. $\begin{aligned} & 19-4-11 \text { Excv } \\ & 31-6-11 E x C V\end{aligned}$
Guildhall, Vermont
Plaintiff,
- against -
PLUM CREEK MAINE ) Case No. 72-12-10Excv
)
)
Guildhall, Vermont
TRANSCRIPT OF COURT TRIAL
BEFORE THE HONORABLE MARY MILES TEACHOUT,
SUPERIOR COURT JUDGE
APPEARANCES:
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PROCEEDINGS RECORDED BY ELECTRONIC SOUND RECORDING.
TRANSCRIPT PRODUCED BY TRANSCRIPTION SERVICE.
(Proceedings convened at 8:47 AM)
THE COURT: Please be seated. Good morning.
MR. MICHAEL DUANE: Good morning.
THE COURT: Mr. Grayck?
MR. DAVID GRAYCK: Thank you, Your Honor. Mr.
Holleran, please?
ROBERT HOLLERAN
having been duly sworn, testified as follows:
REBUTTAL DIRECT EXAMINATION
BY MR. GRAYCK:
Q. Good morning Mr. Holleran.
A. Good morning.
Q. You've been here to hear the testimony of County Forester Langlais?
A. Yes.
Q. Okay. And you heard his testimony in response to your reports?
A. Yes.
Q. Okay. And you've heard his criticisms of the protocol for basal area plots?
A. Yes.
Q. Could you explain your protocol for basal area plots; the reports you've done?
A. The -- the whole process of forest sampling provides an estimate and not a true value. If you were sampling a --
let's say a tank of maple sap for the sweetness and you mix it all up, it's remarkably uniform. One sample will do to give you a reliable estimate. Forests, on the other hand, are much more diverse than that, and one of the things that we do is we take a number of plots to average for a -- a better estimate.

The protocols that a forester might use in sampling a forest, there's a range of things that we might do. You notice that all of us used a ten-factor prism, for example. There's other factors and reasons to use other factors for different types of cruises. We all use the GPS to go find our plots. We all -- I'm sure that all the foresters that were involved in these cruises are skilled at deciding which trees to accept as in or out of plots, and locating their plots, setting up the cruise.

The -- there are a number of biases that can be put into a cruise by improper procedure. And probably the most important one is how to handle borderline trees. And if you're just doing a management plan type of cruise, or even a timber inventory, it's common procedure to -- with the prism, you can tell which trees are clearly in and clearly out, but there's a tree that is just right on the edge of the plot for its radius -- for the tree's diameter. And what we used is a research quality protocol for that where you actually measure the distance from the plot center to the tree. You measure the diameter of the tree to the nearest tenth of an inch. And
you compare that to a table to determine whether the tree is in or out. I haven't heard anybody else mention how they handle borderline trees. But that's what we did --

THE COURT: Would you repeat that please?
A. It's a procedure for determining borderline trees called limiting distance where when you -- as I explained, if you hold up your thumb and you've got a tree that's just exactly the size of your thumb, in essence, and it's not clearly in or out of the plot, we measure the distance from the center of the plot to the tree to the tenth of a foot. We measure the diameter of the tree to the tenth of an inch, and there's a ratio that's in a table that we carry with us in the field and look at the table and see that the tree is 10.4 inches, and the distance is 44.2 feet, and then you can see oh, this tree is clearly in or out of plot.

And the reason that's important is trees aren't always perfectly round so if you're looking at the wide side of the tree, it might appear in, but it's out. If you're looking at the narrow side of the tree, if it's oblong, then it might appear out when it's in. And as I said, I didn't hear anybody else mention what they did for protocol for borderline trees.

Now, there's several other kinds of bias. For example, if you have plots that are at the edge of a stand, there are no -- or along a road -- what we did for that is, if
the plots fall right at the edge of a truck road, or a landing, we would move perpendicular to the edge of that area that's not part of that forest until the plot was completely in, the minimum distance that we would need to move so that the plot would be outside of that road. But at the edges of stands, especially with the irregular shapes of some of these sample areas, you have a lot of plots that would be close to an edge. And one protocol would be to move, say, perpendicular to that edge a fixed distance fifty or a hundred feet, or something like that. We elected not to use that type of a protocol, but to take the plots where they fall and measure the trees even if it included one or two trees that were outside of the stand so to speak.

And we did that for a very important reason. If you -- if say you're at something that you think is a stand boundary, and you elect -- you take the plot there but don't count, say, the two trees that might be across the stand boundary, but you're not sampling the whole plot, and that brings in a worst bias in my opinion.

But the other thing is edges are often different. And if you, by protocol, move every plot, say, a hundred feet away from an edge, then you're not sampling that edge. And if the edge is different, you're missing an important part of the sample, especially with these irregular and narrow sampling units in some cases. And one example of that would be the
edges, for example, might be more shaded. And in a shaded environment, you might have more shade-tolerant trees like sugar maple or spruce. And especially in a regeneration survey, if you moved all your plots away from the edge, you wouldn't necessarily be sampling all of the perimeters of that area.

And Mr. Langlais' specific criticism of my protocol had to do with possibly moving the plot to some kind of a more favorable position within the accuracy of the GPS. So I don't know if you've ever used a hand-held GPS, or a GPS maybe in your car, but you notice when in a vehicle GPS, if you're in a parking lot, the GPS doesn't quite know really where you are or where you're headed sometimes, or if you pull off of the road. With a hand-held GPS, it shows a point that is your location. And in this case, it shows the predetermined point from our cruise setup that is our plot location. And as you're walking to it, there's some inaccuracy. And as you stop moving, it gets more accurate. So you'd walk to -- you'd walk towards the plot, but it's kind of moving around you, and what we would do is walk around until the plot and until my location crossed over the plot center. And as soon as it -- as soon as it told me the first time that $I$ was on the plot, I would stop right there and take the plot. And that involved a little wandering and Matt witnessed that.

Now, his conclusion is that I may have been moving
the plot around to get a more favorable location for that plot but I had already reviewed these areas and done a preliminary regeneration survey and was aware that there were probably at least ten thousand trees per acre in the regeneration strata. And with the threshold of 350 , it would be ludicrous to move my plot around to try to gain one or two more trees on a plot. And then to -- to apply that to the basal area plots, we want a true and representative sample to give as best estimate as we can of the basal area. So it's again ludicrous to think that we moved the plots around to gain a few trees on some of the plots.

And along with that $I$ would like to say that this has probably been the most looked at piece of forest land in Vermont in the last few years. We've heard about four different samples taken in these areas. Landvest cruised, I think, all of stand 34. I don't know if they looked at the other stands. Dirigo from Maine was cruising with nothing to do with this case or the use value or anything like that. My understanding is they were looking at regeneration, I think, in relation to overstory basal area. And so their points they covered some of the same areas that we covered, but they weren't sampling the same areas that we're talking about, so their numbers are not really particularly valid.

But $I$ just find it interesting that Mr. Langlais was in perfect agreement with Landvest and thought they did a
great job, and he was in agreement with Dirigo when Dirigo's plots were within the same kind of estimate on some of the areas. But on the areas where Dirigo's numbers were significant different than Mr. Langlais, all of a sudden he's suggesting that maybe -- that maybe they had some kind of an improper protocol. So --
Q. Mr. Holleran you testified as to your experience. I would like to ask you when, if at all, have you used the same or similar methods you just described in your other work with other county foresters?
A. We do at least thirty, maybe forty, management plans every year that involve similar cruising, but at a much lower intensity; usually one plot every four to ten acres depending upon the landowner's interest there. And my work has never been called into question.
Q. Could you identify some of the county foresters who've reviewed your work and approved forest management plans that you've prepared?
A. Well, most of my work is in the four southern counties which have five county foresters. And so Sam Schneski is the one I work with most of the time close to home, and Bill Guenther, Jon Bouton, Kyle Mason is the new guy down in Bennington County, and Chris Stone is in Rutland County, but also Dave Paganelli, Russ Barrett. Those would be the seven county foresters I work with the most.
Q. Now, we've heard testimony with respect to the guide; the Bill Leak Guide NE-603. Can you explain how NE-603 uses discretionary language in comparison to the program manual; for example, in regards to regeneration? And in that respect, if you could turn to Page 16 of the guide, and also have available the program manual at page 29.

THE COURT: Okay, the --
MR. DUANE: Your Honor, I'm sorry, excuse me,
objection. This appears to be general evidence rather than rebuttal. These guides were discussed in their case in chief.

MR. GRAYCK: Your Honor, I believe that there was cross-examination of Mr. Langlais on the topic of the guides, the role they play, and to what extent there are conflicts in the guide, other guides, and the program manual.

MR. DUANE: Your Honor, I believe that came out in the case in chief. I'm not sure what the rebuttal question is, if any.

THE COURT: What is the rebuttal question?
MR. GRAYCK: The rebuttal question is to respond to Mr. Langlais' testimony regarding conflicts between guides and the program manual specifically in respect to the issue of regeneration which we've been discussing.

THE COURT: It's a pretty general question just to respond to Mr. Langlais'.

MR. GRAYCK: Okay. I'll -- I'll --

THE COURT: You can narrow the question. MR. GRAYCK: Yup. Okay.

BY MR. GRAYCK:
Q. Mr. Holleran, you heard Mr. Langlais testifying that the specific requirement for regeneration is in NE-603. Okay?
A. Yes.
Q. How, if at all -- or could you please explain in response to that testimony with respect to where you think the requirement for regeneration is located?
A. I'd like to open up the -- the guide which is Exhibit 2 of Exhibit 36 and I'd just like to read a paragraph and a half to explain to offer the type of language that's used. So on page 16 of the guide, I'm just going to read the first sentence of the second paragraph under regeneration where it says: "One approach to evaluating regeneration following clear cutting is to take a series of circular plots, each one seven hundredth to one, one thousandth acre in size."
Q. Okay.
A. Matt and I both did that.
Q. Okay.
A. And then on the top of the second column, so the next paragraph, it says: "Data from shelterwood cuttings in the lake states indicate that at least five thousand well distributed seedlings per acre three to four feet tall should be present before the removal cut. After the removal cut, the
regeneration can be evaluated using the plot system described for clear cutting."
Q. Okay.
A. And now I'd like to turn to the program manual which I have as Exhibit 5. And the page number Mr. Grayck?
Q. 29. And the Court has it as $22(a)$.
A. So in the program manual under regeneration on page 29, and we've looked at this before, it says: "For newly regenerated stands, the successful establishment of acceptable species must be not less than 350 stems per acre well
distributed throughout the stand three years after the regeneration cut is made or for initial eligibility."
Q. And in response to Mr. Langlais' criticism that you improperly used the 350 standard, when if at all, have other county foresters accepted that as the regeneration standard?
A. I've never seen any other standard used than -- than the program manual.
Q. So to clarify and make it clear, in response to his criticism, have any other county foresters ever denied or rejected your usage of the 350 standard on page 29 of the program manual?
A. No.
Q. Mr. Langlais testified regarding the gaps. Do you agree with his definition?
A. The definition of gaps is poorly defined, and in
looking at a number of treatises, gaps are not mentioned in any 603 which is the applicable guide to this forest type. There are -- all different books have different definitions, so I believe that the applicable definition is found in the program manual in the minimum standards for management plans, so it's going to be page maybe 33 -- 34.
Q. 34. We'll just give the Court a moment to get there. Okay.
A. So I'm going to read that second paragraph. "It is recognized that the practice of forestry is both art and science, and that specific silvicultural treatments often differ from place to place within a stand due to normal stand variability. Even so, it is the responsibility of the landowner to supply enough detail about the proposed stand prescription that it can be effectively evaluated by the Department of Forest, Parks and Recreation. If the silvicultural prescription calls for the creation of openings larger than one quarter acre in size, provide a statement of the intent and size range of the openings and an estimate of the residual basal area between the openings."

So I believe that that language makes it clear that gaps can certainly be as large as one quarter acre without being further defined, as they were in stand 34 , for example.
Q. Okay. Now, Mr. Langlais testified about shelterwood, do you recall?
A. Yes.
Q. Okay. In response to that testimony, can you please tell us what is the acceptable basal area range for a twostage shelterwood treatment?
A. Two-stage shelterwood can have a wide range of residual basal areas. It can be as high as eighty, or it may be even higher for softwood stands. For hardwood stands, it would tend to be in the eighty range down to as low as twenty as an acceptable treatment for two-stage shelterwood.
Q. Okay. Now, regarding stand 34, Mr. Langlais testified that essentially the wrong trees were left, do you recall?
A. Yes.
Q. Okay. How, if at all, do you disagree with that testimony?
A. Well, if you'll recall, Mr. Langlais drew the beautiful artistic rendition on the board there showing those giant crowns like the oak tree out on the green, and if you'll remember in the forest, it didn't have trees like that to start with. It tended, in the uncut areas that we saw, the crowns were more moderate in size. But there's a -- there is a range in crown sizes and we have names for them, of course, because we're foresters; we have names for everything. And we call the larger crowns dominate; they kind of dominate the crown. The ones that are not quite as big as the largest are
called co-dominant. The next category is called intermediate, which would tend to be the ones that are in the main canopy but definitely struggling. And then the suppressed trees would be the trees that don't reach the main canopy of -- of the crown. And sometimes those are defined as trees of the same age that are definitely runts, but you could also say that an understory that's younger is also suppressed underneath the overstory so Mr. Langlais suggested that the larger trees were cut, and the smaller runty trees were left, I think was the general thrust of his testimony.
Q. Now, in -- in illustrating your testimony, can you please turn to photo Exhibit 71? Again, in response to Mr. Langlais' testimony, can you please show to the Court how -what's depicted in photo Exhibit 71 illustrates your answer?
A. This is part of our site visit where we walked through, and this is the more heavily cut portion with the patch cuts on that west side of stand 34. And you can see that basically every tree in this picture was a main-canopy tree with a full rounded crown all the way around. There's one tree here that's more of a co-dominant or possibly intermediate tree but the -- as we just looked through the whole forest, almost every tree there has a nice big crown.
Q. And could you please turn to photo Exhibit 82? And could you please explain how, if at all, that the photo illustrates your response to Mr. Langlais' testimony?
A. So this also shows the majority of the remaining trees have main, you know, large crowns in the main canopy. You've got kind of a leave group here that's going to include smaller crown trees, but you can see that the trees at the edge are the full-size crowns, that these trees are larger than average here. These are not the small runty trees left.
Q. And if you could please turn to photo Exhibit 83. And explain how, if at all, that photo is responsive to Mr. Langlais' testimony?
A. Again, the same situation as we scan through this. You see mostly trees with large full crowns.
Q. And turning to photo Exhibit 84, could you please explain how that photo illustrates your response to Mr . Langlais?
A. Again, the same situation here. You can see one tree here that's a suppressed or intermediate tree that was left, but the majority of the trees are definitely main-canopy trees with full crowns.
Q. And turning to photo Exhibit 86, could you please explain how that photo illustrates your response to Mr . Langlais' testimony?
A. The same here. The main trees that you see are overstory trees with full crowns. There's a few understory trees that remain in this area, but that wasn't particularly typical.
Q. And again turning to photo Exhibit 87.
A. This is back down on the landing with a view off into the forest, and you have a long range view, but you don't see spindly ratty crowns covering the area.
Q. Turning to photo Exhibit 91 could you please explain how it illustrates your response to Mr. Langlais' testimony?
A. This is over on the east side where it was more sugar maple, and again you can see the -- the picture chops off a lot of the crowns, but into the distance you see full crowns on most of the trees.
Q. And lastly turning to photo Exhibit 94, would you please explain how it illustrates your response to Mr . Langlais' testimony?
A. Again, in that sugar maple section, you can see the trees in the background are all full crowns. The one in the foreground looks like a co-dominant tree, but it's kind of chopped off there.
Q. Now, Mr. Langlais testified that the wrong trees were left. That the small trees were left improperly, am I right?
A. Yes.
Q. Okay. Did Mr. Langlais -- did Mr. Langlais' cruise measure any trees smaller than eight inches?
A. According to my review of Mr. Langlais' results, the average diameter of the stand was eight inches and yet he measured no trees on thirty-six plots that were smaller than
eight inches.
Q. So can you please explain why that's an inconsistency?
A. Because the trees that were smaller than eight inches must have been cut to leave trees that were eight inches and larger.
Q. Because how does the stand description illustrate that there were small trees there to begin with?
A. Well, if the tree of average basal area is eight inches, then you're obviously going to have trees smaller than eight inches and larger than eight inches. And the smaller than eight inches were not in Mr. Langlais' results.
Q. Mr. Langlais testified regarding overall stand residual basal area. Would you explain the phrase overall stand residual basal area?
A. I --

MR. DUANE: Your Honor, objection. Again, I think
this is general evidence. It doesn't appear to be a question in rebuttal. We covered this on -- in case in chief when Mr. -- I believe --

THE COURT: Sustained. You may re --
A. It's plain English.
Q. No, no, no.
A. Oh, I'm sorry.
Q. The question was sustained.
A. Oh, sustained, I'm sorry.
Q. Mr. Holleran?
A. Yes?
Q. Do you recall Mr. Langlais' testimony regarding overall standards of the basal area?
A. Yes.
Q. Okay. And do you recall the criticisms he made of how you were using the phrase in your analysis?
A. I -- I think the gist of his testimony was that the -- that he thought it was most appropriate to sample just the portions that had been harvested.
Q. And in response to that?
A. That overall stand basal -- overall stand basal area refers to the overall stand.
Q. And what has been your experience with respect to other county foresters and their interpretation of that term?
A. The stand has always been the measure of unit -- of the unit of measure.
Q. Now, do you recall Mr. Langlais' testimony where he states that Plum Creek failed to execute the prescription properly and, therefore, didn't fulfill its purposes?
A. Yes.
Q. Okay. What is your response to Mr. Langlais' testimony regarding Plum Creek's execution of the primary purpose of the stand 34 treatment?
A. Well, the primary purpose was to regenerate the stand with two-stage shelterwood and patch cuts. So it requires two different kinds of treatments. And I think as we look through those pictures and see the adequate crowns for shelterwood condition, suitable basal area for a range of shelterwood treatments, and occasional areas where the basal area was lower than what you would consider a shelter-wood treatment that would be the required gaps for the -- in groups for the prescription, that -- that the individual acres meet -- meet the prescription. The stocking for that portion is low, according to Mr. Langlais' data, but that it requires measurement across the stand to comply with the prescription language where it refers to overall stand residual basal area.
Q. Okay. Turning to stand 43. Mr. Langlais testified that the cut contrary portion of stand 43 did not satisfy requirements of two-stage shelterwood or overstory removal. Can you respond to his testimony that it didn't comply with two-stage shelterwood?
A. I believe Mr. Langlais looked at the forty-acre portion of stand 43 and applied a standard of shelterwood treatment across the entire forty acres and determined that this particular forty acres is not all shelterwood so it doesn't comply.
Q. Now, could you --

THE COURT: I'm sorry. Could you repeat that?
A. I believe that Mr. Langlais looked at the forty acres that he determined was cut contrary to the management plan, and he took the entire forty acres and used a measuring stick of two-stage shelterwood treatment and said this entire forty acres is not satisfactory implementation of a two-stage shelterwood.
Q. And what about responding to his testimony regarding overstory removal?
A. I believe he looked at the entire forty acres and applied a measuring stick of overstory removal and determined that the entire forty acres does not satisfy the requirements for an overstory removal.
Q. And in response to that testimony, how did you evaluate the forty acres in relation to the two treatments you just described?
A. When you look at each individual section of stand 43, you can clearly see either released understory shelterwood conditions, or the occasional gap as allowed in the prescription.
Q. And the gap would be which kind of prescription?
A. The prescription allows for gap treatments, and I believe the gaps are defined in the program manual.
Q. Okay. Now, do you recall what Mr. Langlais' testimony was with regard to whether OSR treatment could happen outside the OSR box?
A. I believe Mr. Langlais did testify that OSR treatment would be allowed where the understory was adequate.
Q. Okay. Now, you heard Mr. Langlais' testimony with respect to what are acceptable species in the stand, do you recall?
A. Yes.
Q. Okay. And could you just say what you recall of that testimony?
A. Well, it's a -- it's a hardwood dominated mixed wood stand, and I believe he used the phrase that it would -- it would like to grow or would want to grow soft wood, and while that sounds a little strange, I can perfectly understand that. I might say the same thing. We do kind of think that we know what the forest would like to do, and there are some areas that are more prone to -- are better sites for growing one specie or another and some portions of stand 43 are obviously regenerating well to softwoods, but the stand is a long strange shape, diverse stand from the bottom of the valley to the top of the ridge, with a range of soils. And it is a hardwood dominated mixed wood stand. It included a higher proportion of hardwoods and softwoods initially. Some portions have a higher proportion of softwood regeneration. Some portions have a higher proportion of hardwood regeneration. And particularly, yellow birch is well suited to those sites. The softwood tends to grow in either the
wetter sections or areas with less nutrients. The sugar maple, as we found, for example, on the east side of the stand 34, that's a richer site with sugar maple. But on the west side of stand 34 , you'll remember it was mostly yellow birch, which is better suited to that heavier cutting in the patch cuts, and low density shelterwood. And on that west side of stand 43 in the adjacent areas, yellow birch is a perfectly acceptable species for that forest type.
Q. Okay. Now, do you recall Mr. Langlais' testimony regarding patchy -- patchiness? Patches and patchiness, do you recall that?
A. Yeah, there was discussion about the variability in stand 43.
Q. Okay. And what was your understanding of Mr . Langlais' testimony with regard to the patchy arrangement of two-stage shelterwood, overstory removal, and gaps in stand 43?
A. Well, I don't really remember exactly what he said about that, but my recollection is that in analyzing the forty acres as either all two-stage shelterwood, or all overstory removal, he was not accepting the obvious variability in that section of the stand.
Q. Okay. In response to that testimony, can you please turn to photo Exhibit 55 and explains how it illustrates your testimony in response to Mr. Langlais' testimony?
A. Well, this is part of the overstory removal box, and you can see different heights of spruce trees indicating probably older and younger trees. And while this is not a typical overstory removal type of situation -- usually in an overstory removal, the trees are young small trees, two, three, four, five feet tall, sometimes a little taller. Some of these are obviously thirty and forty feet tall; some older trees. So you can see a patchy arrangement in the heights of the spruce trees.
Q. Can you please turn to page 56, photo Exhibit 56, and continue with your explanation?
A. Again, $I$ think this is the north end of the overstory removal box looking south, and you see some hardwoods, some softwoods, you've got the skid trail that we walked on. And you can see around behind here the trees are shorter, there's a lot of daylight coming through, so it's an indication of irregular nature of the area.
Q. And continue with photo Exhibit 57?
A. And this crosses over into the allegedly cut contrary portion. And again, you can see shaded areas, sunny areas, hardwood areas, tall trees, short trees.
Q. And how, if at all, does that illustrate patchy arrangement?
A. I think that's a beautiful picture of patchy arrangement.
Q. Can you turn to photo Exhibit 57?
A. That's 57.
Q. I'm sorry 58?
A. This is a little further over in the same area just north of the overstory removal box. And again you can see the patchy arrangement with tall trees, short trees, openings, understory released. And most of these different areas are a quarter of an acre in size.
Q. And turning to photo Exhibit 59.
A. Again, the same situation here. Mostly released understory but some overstory trees. That's -- that's probably a skid trail. So you can see various situations.
Q. And turning to photo Exhibit 60?
A. Here, the presence of lager trees spaced out is an example of shelterwood group in -- in this patchy arrangement.
Q. Photo Exhibit 62?
A. This is a look at the regeneration, and while it's very short, some of this is -- these fir trees I remember looking at these fir trees, and even though they're small trees, they're more than three years old, so these are established seedlings that would be released in an overstory removal type of situation.
Q. And photo Exhibit 65?
A. Can $I$ stop at 64 for a minute?
Q. Yes.
A. And this is a riparian zone, an uncut portion Of -- that was considered cut contrary. We're looking to the north. We're standing right on the boundary so the area to the north we're looking at here is in the allegedly cutcontrary area, and it's obviously fully stocked.
Q. And now turning to photo Exhibit 65?
A. This is back up on the road where we were looking up the boundary from stand 44 to stand 43. And again, you can see scattered overstory trees with large crowns, some overstory spruce and understory spruce, and new regeneration. So it's -- it's very patchy.

THE COURT: Could you repeat what the overall point is that -- his point about patchiness and your point about patchiness? Somehow it got lost.
A. All right. In -- in -- I think Mr. Langlais acknowledged the diversity, or what's the word I'm looking for -- the diversity of arrangements in the stand. However, in the forty acres that he alleged to be cut contrary, he didn't make allowance that some acres, or quarter acres, or three-acre sections might be a satisfactory implementation of overstory removal, and some sections might be adequate implementation of shelterwood method. And I think the pictures make it quite clear that this is far from uniform and needs to be --
THE COURT: Can you say it again? I don't
understand --
THE WITNESS: Okay.
THE COURT: -- what you're saying.
MR. GRAYCK: Your Honor, may I just ask a clarifying question?

THE COURT: Okay.
MR. GRAYCK: Okay.
THE COURT: Both -- I'm trying to understand what Mr. Holleran's characterization is of Mr. Langlais' testimony and what Mr. Holleran's own position is.

MR. GRAYCK: Okay.
BY MR. GRAYCK:
Q. So Mr. Holleran, I think what you're telling us is that within the forty acres that's at issue, one way to analyze it's compliance is to look at the entire forty acres and evaluate whether it complies with a single kind of treatment; correct?
A. Correct.
Q. Okay. And that my understanding of Mr. Langlais' testimony is that first he takes the two-stage shelterwood treatment measuring stick, and he looks at the forty acres, and he says nope, it's not two-stage shelterwood across forty acres; correct?
A. Correct.
Q. Okay. Then he takes the OSR measuring stick and he
says, nope, it's not OSR across forty acres; right?
A. Correct.
Q. Okay. And therefore, he concludes because the forty acres are neither all overstory removal or all two-stage shelterwood, it is cut contrary. Is that your understanding?
A. That's my understanding.
Q. Okay. My understanding of your testimony is that, if you take the OSR measuring stick, and you take the two-stage shelterwood measuring stick and you hold onto both of those measuring sticks at the same time as you survey the forty acres, you're going to find questions which meet the measuring stick for $\operatorname{OSR}$ and portions which meet the measuring stick for two-stage shelterwood; is that right?
A. Yes.
Q. Okay. And that that is an acceptable method to confirm compliance based upon the wording and requirements of the treatment prescription for stand 43?
A. Especially --
Q. Am I -- am I explaining it correctly?
A. Yes, you're explaining it well but it's within the context of the stand.
Q. And within the context of the stand, okay. So to help make it clear to the Court, given what -- what we've just discussed, can you turn to the prescription for stand 43 and explain why, in response to Mr. Langlais' testimony, you
believe it's appropriate to have both the OSR measuring stick and the two-stage shelterwood measuring stick as you evaluate the forty acres which he found contrary?
A. On the form 2, page 2 prescription the --
Q. Let's give the Court a moment to get there. And the full prescription is Exhibit 22. And we're talking about stand 43; am I right?
A. Yeah.
Q. Okay. Give the Court a moment to get there. Okay?
A. So --
Q. Please -- please proceed.
A. So I know we've looked at this before, so just to summarize, the prescription clearly calls for thirty to forty percent of the stand to receive an overstory removal, sixty to seventy percent to receive a two-stage shelterwood. Target residual goal for the shelter-wood portion is sixty, which is obviously going to have some areas above sixty and some areas below sixty. And that will also include gaps to promote regeneration.
Q. Okay. And so in the context of the prescription -prescription for the stand, and in relation to whether OSR can occur aside of the OSR box, why is it appropriate to have the two measuring sticks when you're looking at the forty acres?
A. The -- the forty acres was obviously fairly heavily cut. The overstory removal box accounts for just over twenty
percent of the stand. The prescription allows forty percent overstory removal, so obviously there's allowable other overstory removal acres. They're not all in one big patch; I believe that we've seen that. The pictures show it. We saw it walking through that there are sections of overstory that are released that account for this part of this portion of allowable overstory removal. And the remainder fits that definition of shelterwood with -- gets -- with a mix of sun and shade to provide conditions for new regeneration with occasional gaps as allowed for it in the prescription.

MR. GRAYCK: Your Honor, have I addressed the Court's concerns?

THE COURT: That's sufficient, yes.
Q. Rob, are there additional photographs which would continue to illustrate what we've talked about?
A. I think we've seen it.
Q. Okay. That's what $I$ wanted to confirm. Thank you. Now, again responding to the criticism or -- or Mr. Langlais' testimony that the program manual requires a different methodology with respect to the measurement of regeneration of three years, why is your opinion that the program manual requires regeneration be evaluated three years after harvest?
A. Well, we just read the program manual language, and it's very clear that that is "must" and "shall" and "will,"
compared to the Northern Hardwood Guide, which is a guideline, and says one option is this, and you can do it this way, or you might do it that way, or you should do it this way, but that the control -- that the firmer language is in the program manual.
Q. Okay. Now, Mr. Langlais believed that a prescription for stand 43 was not carried out and that the purpose of the treatment for stand 43 was -- was not complied with. Can you please respond specifically to his testimony regarding stand 43 and whether the purpose and the requirements prescription were carried out?

MR. DUANE: Objection, Your Honor, this again appears to be general evidence rather than specific questions about something Mr. Langlais said. Because we've covered all of this in the cases in chief.

THE COURT: Sustained.
MR. GRAYCK: I'll rephrase the question. THE COURT: Yes.

BY MR. GRAYCK:
Q. In addressing the forty acres that we've been talking about and keeping in mind Mr. Langlais' testimony, how does your explanation of how the forty acres can be measured, how does that demonstrate compliance with the prescription?

MR. DUANE: Your Honor, I'm sorry; objection. It seems to be general evidence that was covered in both cases in
chief and the question is not eliciting something that's proper for rebuttal evidence.

THE COURT: You do need to narrow it down.
MR. GRAYCK: Okay. I will --
THE COURT: He's rebutting something specific that
Mr. Langlais said. You need to get out --
MR. GRAYCK: Okay.
THE COURT: -- what it is that Mr. Langlais said that he's rebutting.

MR. GRAYCK: Yep, understood, Your Honor.
Understood.
BY MR. GRAYCK:
Q. Mr. Langlais, again, his testimony was related to how the forty acres should or should not be measured; correct?
A. I'm not sure.
Q. Well, you've -- you've described how, within the forty acres, there's portions which are OSR, and portions which are two-stage shelterwood; yes?
A. Yes.
Q. Okay. And if that's the methodology which is used, does the harvest comply with the prescription, notwithstanding Mr. Langlais' testimony that the proper methodology is to evaluate the forty all for either OSR or all two-stage shelterwood?
A. The -- the overriding goal of both prescriptions, or
all three allowable treatments in the area, were for replacement of a poor quality old declining stand with new regeneration either through overstory removal or two-stage shelterwood, and I think the regeneration results clearly show successful implementation of both of those treatments.
Q. Thank you. Now, turning to stand 44, can you describe what Mr. Langlais' criticisms were of your analysis of stand 44?
A. Well, $I$ think his main criticism was that my basal area estimate varied widely from his.
Q. And do you recall what his testimony was about the three different estimates of residual basal area?
A. I don't want to put a lot of weight on Dirigo's numbers because they're completely taken out of context. I don't know if his plots -- if their plots were located across the same sample area, but I heard the number thirty-one mentioned for residual basal area, and Mr. Langlais, I believe, found sixteen. And you'll recall -- well, in our tour, we didn't go the way we thought we were going to go; we didn't get as good a look at stand 44 as we had hoped to -but it was very patchy. There were definitely sections with more trees, sections with less trees, and it's also the transitional boundary between the hardwood stand and the mixed wood stand where you had understory patches in stand 44 that could be released, and it's not a crisp boundary like the edge
of a pine plantation. So -- I think I'm getting off the track.
Q. Well, with respect to these different basal areas --
A. Yep.
Q. -- okay? -- specifically in response to Mr. Langlais' testimony, what's your experience as a forester with respect to these different values that he reported and the characterizations which he put on them?
A. That sampling basal area is an estimate, and especially with such a small area that's very irregular in distribution, and only having six or eight or ten plots for any of us who cruised that area, I would not expect to have a lot of agreement about the numbers. That it doesn't surprise me that we found divergent estimates there. But what's obvious is that the treatments were irregular, and I think in this case it's important to consider that the harvest was stopped in midstream. There's another seventy-five percent of the stand to be harvested that is fully stocked. The basal area was very low of acceptable growing stock in this area, and that it needs to be measured across the stand to consider it in context.
Q. Mr. Langlais -- Mr. Holleran, I'm about to show you what's been marked Exhibit 102. Did you prepare this?
A. Yes, I did.
Q. When did you prepare it?
A. Last week.
Q. What's it a summary of?
A. This is --
Q. Briefly, what's it a summary of?
A. A revised table 1 from my September 15 th report that just uses Mr. Langlais' numbers for the areas he cruised, and the areas that I cruised we used my numbers, and came up with a weighted average for across the stand averages.

MR. GRAYCK: Plum Creek moves the introduction of Exhibit 101 (sic).
(Revised table 1 from Mr. Holleran's September 15th report was hereby marked for identification as Plaintiff's Exhibit 102, as of this date.)

MR. DUANE: May I inquire, Your Honor?
THE COURT: Yes.
VOIR DIRE EXAMINATION
BY MR. DUANE:
Q. When last week -- I'm sorry, good morning Mr. Holleran.
A. Hi.
Q. Hi. When last week did you prepare this?
A. I think I did it Friday night. I'm not sure. I think I did it over the weekend maybe on Saturday.

MR. DUANE: Your Honor, we object. There's been an ongoing duty to supplement discovery, and this differs from

Mr. Holleran's report, and it would have been nice if we had received this before this minute. And we object to its admission as a document.

MR. GRAYCK: Your Honor, it's simply taking the data that's in evidence and presenting it in a different manner. It doesn't -- it doesn't contain any evidence that hasn't already been introduced to the Court.

THE COURT: Well, two things. One is it hasn't been sufficiently identified yet. I don't understand exactly what it is.

MR. GRAYCK: Okay.
THE COURT: Maybe it was said, but not enough for me to take it in. So it may not be clear to the State either. And -- and it -- but then secondly -- so you need to establish a firmer foundation first. Then I'll defer ruling, give the State an opportunity to review it during the break.

MR. DUANE: Okay.
THE CLERK: Judge, I see that it should be 102.
MR. GRAYCK: Did I -- what -- what did we label it as?

THE WITNESS: 102.
MR. GRAYCK: I apologize; 102. Is that how it's labeled Rob?

THE WITNESS: Yes.
MR. GRAYCK: Mr. Holleran?

THE COURT: That's correct. 101 was an e-mail. It's already been admitted.

MR. GRAYCK: I apologize, 102. 102.
THE COURT: Okay, thank you.
BY MR. GRAYCK:
Q. Did you hear what the Court said?
A. Yes.
Q. Okay. Can you please address what the Court said?
A. Since there's discrepancy over Mr. Langlais and I numbers for certain areas, I deferred to Mr. Langlais to use his numbers for the portions he cruised, and I used my numbers for the remainders of the stand to come up with a total across the stand basal area.
Q. And how does this respond to Mr. Langlais' testimony; specifically, to his contention that improper residual basal areas have been achieved through the harvesting that's been conducted today?
A. It clearly shows sufficient basal area across the stand to meet compliance.

MR. GRAYCK: Your Honor, we would move the introduction of the exhibit.

MR. DUANE: Objection, Your Honor, this is a document prepared by their expert. There's been an ongoing -- ongoing duty to supplement discovery. We received it three minutes ago, and without an opportunity to look at it, and digest it,
and review it, we would object to its admission.
THE COURT: Well, I'm going to defer ruling to give you an opportunity to look at it further during the break.

MR. DUANE: Thank you, Your Honor.
BY MR. GRAYCK:
Q. Mr. Holleran, could you please respond to Mr. Langlais' testimony that the appropriate residual basis areas were not achieved by the harvesting to date, and respond to it by explaining how this table shows the use of Mr. Langlais' numbers, whether or not it still results in compliance?

MR. DUANE: Objection, Your Honor. He is asking the witness to refer to and read from a document that hasn't been admitted into evidence.

THE COURT: You can't use it. You can't read from it. You can't demonstrate it, but you can describe what you did in evaluating the testimony.
A. There's ongoing debate about whether the prescription has been complied with. There are a number of different ways to consider the question. I think it's important to consider the specific sivicultural treatments in each area within the context of compliance across the stand, and one measure of that is the basal area. And so by using Mr. Langlais' -- by conceding Mr. Langlais' number for the portions that he provided the detailed survey of, using my numbers for the remainder of the stand which was not in contention as being
cut contrary, that I think that that's a fair way to consider both of our testimonies and look at the total basal area for the stands and compare that to the requirements in the prescription language.
Q. Okay. Now, you've heard Mr. Langlais' testimony that Plum Creek didn't comply with the prescription, yes?
A. Yes.
Q. Okay. If Plum Creek was allowed to resume the harvest at Clough Brook North, could it successfully complete the prescriptions?
A. Easily. And in my opinion, they should have kept going.

MR. GRAYCK: A moment, Your Honor?
THE COURT: All right.
(Pause)
Q. Mr. Holleran, if you used County Forester Langlais' numbers for the alleged cut contrary, and you used your numbers, does it comply with the prescription?
A. Easily, yes.
Q. Okay.

MR. GRAYCK: Your Honor, I would still move the admission of Exhibit 102.

THE COURT: Again, I'm not going to rule until the State has had an opportunity to spend the right time with it, so if -- do you have other questions or are you --

MR. GRAYCK: I was going to -- I'm prepared to conclude, Your Honor.

THE COURT: Okay. In that case, we could take -- why don't we take a break early, give the State an opportunity. So we'll continue at 10:30.

THE CLERK: All rise.
THE COURT: Oh, and while we're talking about
admissibility of evidence, $I$ don't know if the State had
intended to introduce 99 and D that are on the -- the wall or not, but it's just a -- it's something to think about.

MR. DUANE: Well, I was wondering myself, Your Honor,
how I would convert my blackboard into an exhibit that would fit in the Court's file, so --

THE COURT: Okay. Well, the blackboard itself is not an exhibit.

MR. DUANE: I know.
THE COURT: But the others are.
MR. DUANE: Right. So we'll address that when we come back.

THE COURT: Okay.
(Recess beginning at 10:12 AM until 10:32 AM)
THE COURT: Please be seated. And Mr. Duane, your response to the offer of 102?

MR. DUANE: Thank you, Your Honor. We were also handed another document, when the Court recessed, that appears
to be a map that was, according to the box, created on June 2nd. We just received it a couple of minutes ago, but we're not going to object to that. It appears to be plots as to the site visit. But we are objecting, Your Honor, to the admission of the document with regard to Mr. Holleran's analysis. Again, it's last-minute. It wasn't part of any supplementation. We've stood outside trying to figure it out with our expert, Mr. Langlais, and the director of forestry, and I think his testimony is sufficient for what it's worth, but we're objecting to the admission of the document itself.

THE COURT: Your objection is that you don't understand it?

MR. DUANE: Not without further analysis, Your Honor. I think we have a sense of what it might be, but we didn't have our -- it would take us time to -- more time than was allowable to check it, understand it, think about it, analyze it to be able to perhaps cross-examine on it. So we are -we're objecting to it -- to its admission.

THE COURT: Mr. Grayck?
MR. GRAYCK: Your Honor, I -- I think it's a relatively simple exhibit, as we explained. He's simply taking the numbers which have -- which are in evidence and combining them to express a result. And I think it's actually, you know, the key issue before the Court which we've been talking about. Do you take numbers from just the cut
contrary portion, or do you take numbers from both cut, uncut, cut contrary, not cut contrary, and add them up, and -- and measure it across the stand, and there's nothing new about those numbers.

THE COURT: Well, the Exhibit 102 is admitted. It has been an issue from the start, continuously, what the residual basal area measurements were as made by both foresters, what lands they applied to, whether the proper measurement was across the stand or overall in the stand, or whether it was as to the cut contrary area. So the issue is not new. The information is not new.

We'll permit the State, though, to call Mr. Holleran back after the lunch hour to cross-examine further on that, if you feel that you haven't had sufficient preparation time in the fifteen minutes of the morning break, and also to call Mr. Langlais.
(Revised Table from Mr. Holleran's September 15th Report was hereby received into evidence as Plaintiff's Exhibit 102, as of this date.)

MR. DUANE: Thank you, Your Honor.
THE COURT: So 102 is admitted, and where is it?
(Pause)
THE COURT: So that completes your --
MR. GRAYCK: Yes, yes, Your Honor.
THE COURT: -- examination.

Mr. Duane?
MR. DUANE: Thank you, Your Honor.
CROSS-EXAMINATION
BY MR. DUANE:
Q. Mr. Holleran, in your testimony this morning,
you -- you mentioned the Dirigo information; correct?
A. Yes.
Q. But you never included any information regarding

Dirigo in your 2012 report; is that correct?
A. I'm going to look in my regeneration report. No, I don't believe it's mentioned in the report.
Q. And your regeneration report is dated October 16th, 2012; correct?
A. Correct.
Q. And the Dirigo information was produced in late 2011; correct?
A. I-- I'm not familiar.
Q. And you also did another report on May 9th, 2013; correct?
A. Correct.
Q. And there's nothing in that report dated May 9th, 2013, that references the 2011 Dirigo information that Plum Creek conducted at the request Vermont Land Trust; correct?
A. Can you rephrase the question, please?
Q. I'm sorry. There's nothing in your May 9th, 2013,
report that makes a reference to the Dirigo cruise that the Vermont Land Trust required Plumb Creek to conduct; correct?
A. Correct.
Q. And there was nothing in your testimony last week on direct examination regarding the Dirigo cruise; correct?
A. Correct.
Q. So Mr. Holleran, it's your opinion, isn't it, that with regard to the residual basal area, that County Forester Matt Langlais is wrong, that Dirigo-Vermont Land Trust is wrong, that Landvest-Plum Creek is wrong, but that you're correct; isn't that right?
A. No.
Q. Thank you.

MR. DUANE: Your Honor, I have nothing further for Mr. Holleran.

THE COURT: All right. Mr. Grayck?
REDIRECT EXAMINATION
BY MR. GRAYCK:
Q. Mr. Holleran, can you please explain why you answered no to Mr. Duane's last question?
A. Well, it's a complex question, and it has to do with what forest sampling is. And as I explained, it's an estimate. I'm confident that my numbers are well constructed, that the cruise was well done. I'm reasonably confident that everybody else's numbers are well constructed. And -- and
that's why I offered that final table which gives the benefit of the doubt to Mr. Langlais for the numbers that he provided, and uses my numbers for the portions that there are no other numbers for, to take a broader look at the big picture.

MR. GRAYCK: Nothing further, Your Honor.
THE COURT: Anything else?
MR. DUANE: Nothing further, Your Honor, thank you. THE COURT: Okay. That concludes your testimony. You may step down. Thank you. THE WITNESS: Thank you.
(Pause)
MR. GRAYCK: Mr. Fife -- I would call Mr. Fife to the stand, please. COURT OFFICER: Please raise your right hand. CHRISTOPHER FIFE
having been duly sworn, testified as follows: DIRECT EXAMINATION

BY MR. GRAYCK:
Q. Good morning, Mr. Fife.
A. Good morning.
Q. Do you recall Mr. Langlais' testimony regarding the adoption of the land -- large landowner alternative and its use of stratified data?
A. Yes, I do.
Q. And do you recall his explanation of -- of why he put
the large landowner alternative together?
A. Yes.
Q. Okay. Has any other Forest, Parks and Recreation personnel expressed an opinion to you as to whether large landowners should be in the program based upon the use of stratified data?
A. When I first met Mr. Sinclair in April of 2009, it was at a Vermont Woodlands Association meeting, and his first comment to me was that it was a mistake for Forest, Parks and Recreation to have allowed large landowners to be in UVA using stratified data.
Q. Now, turning to Mr. Langlais' testimony regarding changes that were made to the prescription for Clough Brook North, do you recall Mr. Langlais' testimony that he says that Mr. Horton agreed to changes?
A. Yes.
Q. Okay. What was your role with respect to the changes?
A. Well, Mr. Horton, working for Landvest, was making those changes on behalf of Plum Creek, so I was intricately involved with the discussions on the site visit, as well as approving the final changes before they were sent to Forest, Parks and Recreation.
Q. Okay. Mr. Langlais refers to stand 43 so that Plum Creek complied -- those changes were made that could comply.

Do you recall how Mr. Langlais used the word "add" in his testimony?
A. Yes, I do.
Q. Can you explain, or can you testify as to what you heard with his -- with his use of the word "add"?
A. Yes. Mr. Langlais said that the -- he requested that

Plum Creek add the two-stage shelterwood because in order to -- that they -- we could meet the prescription for the stand -- comply with the prescription for the stand.
Q. Okay. And what is your response to his testimony that you added the stand 43 prescription?
A. Well, if I could, looking at the -- comparing the Exhibit 20 which was the prescription that we took to the field and used for a basis for our discussions on that field visit in October before the final submission, or before the changes were submitted and approved for the prescriptions, and comparing that to Exhibit 22 which is the actual proved final version of the prescription.
Q. Go ahead.
A. So on -- on the October version that was taken to the field, stand 43 was prescribed to have an improvement thinning and an overstory removal. And if that is -- and it was twenty-five to thirty percent of the stand receiving and overstory removal. That's compared to the approved prescription.

THE COURT: Would you point out where you are? THE WITNESS: Yes, Your Honor. Exhibit 20 has a -on Page 2 it lists the prescriptions for each stand, and I'm looking at stand 43 which is down in the last quarter of the page. And I'm comparing that to Exhibit 22, also the second page, which looks very similar.

THE COURT: Okay. Go ahead.
A. And on Exhibit 20, the original prescription that was put on the stand which we discussed in the field, was for an improvement thinning and an overstory removal with the overstory removal covering twenty-five to thirty percent of the stand. The final approved prescription, after our discussion in the field, was for a two-stage shelterwood and an overstory removal with the overstory removal treating thirty to forty percent of the stand. So it was not in addition to the prescription so much as a change in the prescription from a thinning, an improvement thinning, to a two-stage shelterwood, and an increase in the percentage of overstory removal on that stand.

And the importance of that $I$ think is that we recognized that the focus on this stand, on stand 43, was regeneration; either establishing it through a shelterwood type of harvest and releasing it through overstory removal. And that there was more established regeneration -- pockets of established regeneration throughout this stand than would have
been represented if -- twenty-five to thirty percent of the stand would not have given enough latitude to treat enough of the stand with overstory removal, so that number was increased to thirty to forty percent of the total stand acres.

And that also relates to the testimony we've heard about the overstory removal box, which was just over -represented just over twenty percent of the stand but also included areas that would not be authorized for harvesting the riparian areas. So twenty percent of the stand approximately was represented by that overstory removal box. Clearly, there was another ten to twenty percent of the stand outside of that box that we had agreed to that would receive overstory removal. And that was the areas that were more patchy in distribution as far as the regeneration.
Q. Now, with respect to stand 34, I believe Mr. Langlais testified that stand 34 called for an irregular shelterwood; do you recall?
A. Yes, he did.
Q. Okay. Could you please respond to his statement with respect to an irregular shelterwood by turning to the authorized treatment for stand 34?
A. Again, the approved prescription for stand 34 is in Exhibit 22.
Q. And we'll just give the Court a moment to get there.
A. The form 2, page 2.

MR. DUANE: Page what?
A. It's the Form 2, Page 2 that looks like this. It's the first one after the description pages. Stand 34 is the second block of data down.

And in the prescription for this stand, it says it will receive a two-stage shelterwood even age, UVA code 3. The stand lacks an acceptable amount of regeneration, and the majority of the overstory is unacceptable growing stock. A low-density shelterwood with a residual basal area of thirty to forty square feet will be utilized to discourage the establishment of beech in the understory. The shelterwood will be irregular in distribution and will target sugar maple and yellow birch with large crowns to provide shade and seed distribution.

If you will recall the line of questioning around patchy -- of Mr. Langlais' -- around patchy versus patch, this is a similar situation here. An irregular shelterwood is a term of silviculture; it's an actual treatment just as a twostage shelterwood is a treatment, just as a clear cut is a treatment. So if we had meant an irregular shelterwood, that's what would have been written here, "irregular shelterwood." A shelter -- a low-density shelterwood that is irregular in distribution is describing how that shelterwood will be applied across the stand. So it won't be a regular distribution across the stand. There will be places that are
open. There will be places that have higher density, places that have lower density. There will be places that potentially are patches where there was already-established regeneration. And this is a -- this type of distribution of shelterwood, a traditional shelterwood, is clearly described in forestry texts, so it's not a new concept. It's very similar, as I said, to the difference between patchy, which describes how things are laid out on the forest, versus a patch. Which, when we say patch, we mean a silvicultural treatment. It's a clear cut. It has a defined size and you remove all the trees. So an irregular shelter, as Mr. Langlais described correctly, is a shelterwood where you -you do your establishment, got your shelterwood cut, and then you allow the understory to grow for twenty or more years. It's a very extended type of shelterwood harvest.
Q. And so just to put what you said in context, how does what you just explained in response to Mr. Langlais' testimony identify or -- or evidence the major misunderstanding over stand $34 ?$
A. Well, if -- after stand -- the portion of stand 34 that was harvested, in looking at that, if that was reviewed with the idea of an irregular shelterwood in mind, you would be looking for a different result than if you were looking for a shelterwood that was irregular in distribution along with the patches that were called for in that stand.

THE COURT: I'm afraid that it will all have to be repeated or said differently. I thought I was following but didn't.

THE WITNESS: The irregular shelterwood is -- was not the treatment that was called for in this stand. The treatment called for was a shelterwood that was irregularly applied; irregular in distribution. So it's a non-uniform application of the shelterwood treatment. And as it's been --

THE COURT: Would you explain the difference between an irregular shelterwood treatment and a shelterwood that is irregularly --

THE WITNESS: An irregular shelterwood treatment is a treatment where you allow the stand -- after the initial harvest to establish regeneration, you allow the stand to continue much longer than you normally would before removing those trees in what's called the overstory removal. That's a specific treatment. In the -- in the shelterwood treatment that was prescribed here, it was a traditional shelterwood treatment with the low density -- it calls for a thirty to forty square feet of basal area -- but that that would be irregular across the stand. So the basal areas would not all be low; there would be some high, some low. And across the stand it would average to the target of thirty to forty square feet which is what the prescription says.

THE COURT: So then what are you saying that Mr.

Langlais said, and how do you differ from what he said?
THE WITNESS: Mr. Langlais read this prescription and
said that this was an irregular shelterwood; a type of silviculture that is different from a traditional two-stage shelterwood. But what is called for here is not an irregular shelterwood. What's called for here is a traditional shelterwood, but the application of it will be irregular in distribution, so it will be -- it won't be a uniform distribution in the way that it's applied. And those are two different things; one is a term of silviculture, and one is describing the spatial implementation of the harvest.

THE COURT: All right.
BY MR. GRAYCK:
Q. Mr. Fife, I'm going to ask you to hold up Exhibit 103 -- Exhibit 103. Who created that?
(Map was hereby marked for identification as Plaintiff's Exhibit 103, as of this date.)
A. I did.
Q. When did you create it?
A. I created this on Saturday.
Q. And why did you create it?
A. I created this to illustrate the -- the interrelation of the -- the conformance map that the State created, along with the AMP violation sites that were provided to Plum Creek in relation to the Court site visit that we took and the route
which is identified by the yellow dotted line on here.
MR. GRAYCK: Plum Creek moves the admission --
introduction of the exhibit.
MR. DUANE: No objection, Your Honor.
THE COURT: Plum Creek 103 is admitted.
(Map was hereby received into evidence as Plaintiff's Exhibit 103, as of this date.)

MR. GRAYCK: May the witness hold on to it during the course of his testimony?

THE COURT: Yes.
BY MR. GRAYCK:
Q. So Mr. Fife, do you recall Mr. Langlais' testimony regarding location of the alleged AMP violations?
A. Yes, I do.
Q. Okay. Can you please respond to this testimony as to your disagreement with it relative to the exhibit you're holding?
A. Mr. Langlais testified that the green triangles, which are the same here as on the State's map, represented the locations of the AMP violations. And that -- that map is the map that was provided with the initial investigation report that Plum Creek received. So these green triangles are the alleged AMP violation locations from the original report we received from the State. However, the -- the photography underneath this is a different photography. This is post-
harvest. This photography was taken after the harvest reached the state it is in now, and things like stream crossings are quite evident on this. And our root from the other day was GPSd. There's a portion --

THE COURT: Before you go on --
THE WITNESS: Yes.
THE COURT: -- are you saying that the underlying depiction of the land and the trees on 102 is not the same as it is in State's B?

THE WITNESS: I am. It's different photography. THE COURT: So --

THE WITNESS: The scale is the same, and the area is the same. They're both aerial photographs of the same area. This one is color infrared photography taken after the harvesting that we saw on the site visit. I believe the State's exhibit was pre-harvest. No -- so pre this current harvest.

THE COURT: Okay.
A. There -- there's a portion of our site visit which was not captured on the GPS that we weren't tracking the route at that point. So from -- we parked at this landing here and walked down the road. We did take points at the site we stopped at in the woods. We walked back up the road, and Out. And then we started up through the woods, and we took a couple of more points here. These are points where we stopped
and talked. Turned the track on here on the GPS. So after that, we were also tracking where we were walking, and so you can see our route up into the cut contrary area. This is the area we referred to as the overstory removal box. We came down, we crossed through the riparian area which was right along the edge of the boundary of the alleged cut contrary. The black is the edge of the stand lines. The red is the edge of the alleged cut contrary. We went up the hill. We crossed the stream crossing. We went down to the area, we had lunch. Tracked back up the hill and across this stream crossing we had to cross going down. We actually changed our route slightly; went off of our path that we had taken going down the hill and came back over beside the riparian area. This is -- we looked a tree that was marked with a blue $S B$, and an old stump. And then this green triangle -- this orange triangle -- I'm sorry -- is the area where we stopped first, as we were following the State, and Mr. Langlais stated this was the location of an -- of an AMP violation. And as you can see, the green triangle from the report is downhill below the area we even crossed. I -- I assume, in my interpretation of the report, that that triangle actually represents the crossing that we crossed, because there's nothing below that that would have been anything that could have possibly been an AMP violation. There was -- there was nothing there, so I assume it related to the crossing, but we were clearly quite
far away from that. We followed along the hill and, similarly, stopped over here at a location that Mr. Langlais again represented as the location of an alleged AMP violation. And the green triangle from the report is not in the same location as the track and the point where we were. And then our track from the day continues around, and across the site, and back to where we came back to the vehicles.

I used the green triangles in my initial response, after receiving the report, to go out to the field and attempt to locate the locations the State had identified as AMP violations to make sure that nothing had been missed out there. We had already -- I had already had a thorough review of the site done both by myself and others; walking it over, making sure -- trying to make sure we didn't miss anything. But again, we went back and, in that review, discovered that some of these green triangles did not represent places where there were AMP violations. This one, in particular, is one that I recall. This is just a ski trail. It's way up beyond the head of a stream. I believe with the snow on the ground at the time, there was probably concern that that was actually or potentially could be a stream, but in returning during bare ground, there's no water there. There were no water quality issues there.

BY MR. GRAYCK:
Q. Okay.
A. Thanks.
Q. Now, turning to Mr. Langlais' testimony regarding stand 43 and the approved silviculture for stand 43, do you recall what his testimony was with -- with respect to the location of the OSR treatment?
A. I believe I do.
Q. Okay. And do you recall his testimony regarding red spruce seedlings in OSR areas?
A. Yes, I do.
Q. Could you just tell us -- tell us what your understanding of his testimony was?
A. Yes. Again, if you take Exhibit 22, and starting at the beginning of that exhibit is the harvest prescription fact sheet. Page 2 of that has a table at the top. And the third item down on the table, the third line down on this table is for stand 43, and it lists the seedlings per acre and the one to three inch stems per acre of what we would consider regeneration for a total of -- there's a total of 410 stems per acre. And then it also lists at the end the dominant acceptable species, and it mentions red spruce.

I believe that in interpreting the description of stand 43, as well as the table, it was interpreted that we were attempting to manage for red spruce. Red spruce being listed as a dominant acceptable species in the regeneration does not mean it's exclusive by any means. Dominant -- if
there was twenty percent red spruce, depending on the other species that were there -- the yellow birch, the sugar maple, the red maple, the fir -- could make it a dominant. It could be dominant with only twenty percent of the total. I'm not sure what the total numbers were here, so I -- I cannot -- I can't guess at that. But this is certainly saying that it was the -- the most prevalent species but it doesn't tell -- tell us how prevalent.

We know from the original walk through that there were many other species in the regeneration. There are areas of stand 43 that clearly were very dominant to red spruce, where red spruce would have been more than fifty percent of the regeneration. But fir was certainly a high component, as were birches. And I believe that the interpretation that we were managing for softwood on stand 43 made by Mr. Langlais is an incorrect interpretation; something that was never stated for an objective across stand 43. Stand 43 was
a -- described as a hardwood-dominated mixed wood stand. And
a hardwood-dominated mixed wood stand would not be a stand that you would necessarily manage for softwood.
Q. So with respect to stand 44 and Mr. Langlais'
testimony about gaps and low level of acceptable growing stock -- do you recall that?
A. Yes, I do.
Q. Okay. Can you just tell us what your understanding
of Mr. Langlais' testimony is?
A. Well, Mr. Langlais actually did not focus on the low levels of acceptable growing stock. In his testimony, he did a good job of explaining what this intermediate thinning prescription would generally look like in a stand with high stocking, but he did not describe the fact that this stand has a low level of acceptable growing stock. And these gaps for regeneration, which can be up to quarter-acre gaps as described by the UVA manual, would be an important part of a treatment like this where you have beech in the stand, you have lower quality trees in the overstory, you have groups of trees that are not healthy trees. So it would be -- you can't -- you would want to make sure that you considered that, even though you have a higher level of stocking, you also have a high level of unacceptable growing stock here. The -the -- the description of this stand, of stand 44, has ninetyseven square feet of basal area initially, and, of that, only forty-two square feet is acceptable growing stock, which in many cases, as we looked at the guides, would actually bring you to -- that's not enough acceptable growing stock to carry that stand by itself. I think I mentioned early on that in order to do an intermediate thinning on this stand and have the proper residual basal area of sixty square feet, you would need to carry some unacceptable growing stock in portions of the stand. So this isn't a high-quality stand, but it's a
stand that does have potential and -- and we felt enough potential to carry forward.
Q. And when you say -- when you say carry forward, what are you -- what are you saying?
A. That --

THE COURT: I -- I'm confused about what stand you're talking about.

THE WITNESS: I'm talking about --
THE COURT: The question had to do with 34 , and it seems like you've migrated to 43.

THE WITNESS: I -- I believe you asked me about 44?
MR. GRAYCK: Yes. I thought I said 44, Your Honor.
THE COURT: Oh, okay. Well, no wonder I'm confused. Okay. Go ahead.
A. Yes. Stand 44, the testimony did not focus at all -by Mr. Langlais -- did not focus on the portion of acceptable versus unacceptable growing stock. And this had a high level of unacceptable growing stock.

THE COURT: Okay.
BY MR. GRAYCK:
Q. So I just want to make sure there's no confusion that I might have caused by what I said. So just -- when you say carry it forward -- right? -- when you said -- when you just used that phrase, what does that mean? What are -- what are you telling us? As a forester, what are you saying? So what
are you telling us?
A. We've talked about regeneration harvest where our focus is the next stand. In this case, we're focused on the trees that are there and growing a portion of those trees for quality. Releasing trees that are already in the overstory and growing those longer to add value, to add size, and then coming back in and thinking about regeneration as the primary objective probably the next time we harvest on that site.
Q. And about how many years in the future might that be?
A. Fifteen -- fifteen to twenty years.
Q. There was testimony by Mr. Langlais regarding an inventory done by Dirigo; do you recall that?
A. Yes, I do.
Q. Okay. And could you summarize what you understand Mr. Langlais to have testified with respect to the Dirigo cruise?
A. I believe that Mr. Langlais testified that he received those cruise results, and he took the plot data from the maps, and tried to extrapolate that to the different stands and portions of stands that matched the areas of cut contrary, and used those to come to some kind of conclusion about the way -- the -- the basal areas and the support, or lack thereof, of his cruise information.
Q. Okay. Why was the Dirigo cruise done?
A. The Dirigo cruise was done as a collaborative effort
between the Vermont Land Trust and Plum Creek. We wanted to do what we termed a resource assessment primarily looking at regeneration, but also the interaction with the overstory on the Clough Brook site. Dan Kilborn, the stewardship forester for the -- for the Land Trust, and I looked at the postharvest photography, the same photography that was the base for the math I showed you just a few minutes ago. We identified together areas that we wanted assessed, and then gave that to Dirigo and asked them to provide us -- to -- to do an inventory and provide the data back to us on regeneration as well as overstory.

The area that we selected did not consider the stand boundaries and did not consider the alleged cut contrary boundaries. We weren't looking at that. We were looking at an area that Plum Creek and Vermont Land Trust had agreed upon.
Q. And -- and the Dirigo cruise, it would have been prepared in connection with the conservation easement; is that correct?
A. Yes, that's correct.
Q. As part of the ongoing relationship between Vermont Land Trust and Plum Creek in the administration of the conservation easement?
A. Yes, that's correct.
Q. Mr. Langlais testified regarding the amount of time
and taxpayer dollars the agency has spent working with Plum Creek; do you recall that testimony?
A. Yes, I do.
Q. Could you tell us what you recall of his testimony?
A. He stated that the department has spent a great deal of time and taxpayer money on working with Plum Creek, on meeting with Plum Creek. He testified about the number of days he, as well as the Department staff, in general, had put into working with Plum Creek.
Q. And what's your response to that specific testimony?
A. I -- well, I appreciate the time that the department has spent with us. I think that, from my perspective, a lot of that time has been discussing silviculture and the implementation of silviculture, the correct silviculture in different sites. The department has felt the need to go and review every one of our harvest prescription amendments in the field ahead of the approval for those, which takes a great deal of time.

I think on a ratio, if you looked at the 110-acre average size of the parcels in UVA, that it's probably a good deal. I think that the -- the amount of time spent is in no way excessive compared to the time that would be spent with a smaller landowner. And I -- I feel that, you know, we as Plum Creek, obviously, coming into Vermont, never having owned land in Vermont before, we did have a great deal to learn about the
rules and laws, the just in making connections and building relationships with both regulators and the Land Trust, and the other people that we cooperate with in managing this property.

I also think, you know, with all due respect, that the Forest and Parks and County Forester Matt Langlais had a learning curve as well. That there was a -- a level of trying to learn about a company that owns its own land, employs its own foresters to manage that land, which is not a norm in Vermont. So I think there was probably a great learning curve on both sides, and a great deal of energy expended both by Plum Creek and by the department.

And really, with the contribution that's made to the local economies, Mr. Langlais testified that forty-five percent of the total harvest volume in Essex and Caledonia Counties this year came from the harvest on Plum Creek property. Given the size of the property and the approved ten-year plan that isn't a surprising number, but that number is actually with -- without us actually meeting the goals of the ten-year plan yet; the -- the harvest goals of the fortyfive thousand cords that Mr. Langlais referred to. And I feel that the Department of Forest and Parks should be proud of the time they spent with Plum Creek, and the success in having that level of input into the local economies and into a productive working forest.
Q. Now, with respect to Mr. Langlais' testimony as to
the deleterious effect of the harvesting done at Clough Brook North, do you recall his testimony?
A. Yes, I do.
Q. Okay. Can you just summarize it for us?
A. I believe he was asked whether this -- the -- what he observed on the stands at Clough Brook North contributed to a productive forest, and he replied that it did not.
Q. And could you please respond to that specific testimony with respect to the Clough Brook North?
A. Well, forest productivity is really related to site. The -- the site determines the productivity of the trees growing on it. And then the history of what has happened to those trees is what determines the individual productivity of those trees. So in order to address the productivity of the Clough Brook North site, you have to think about the entire site, and we saw that on our site visit. We saw a lot of regeneration, vigorous young trees coming. We saw soils that are supporting those trees growing. We saw wildlife habitat. We saw birds. We saw signs of moose using that area. We have seen bear tracks in the area, so we know bear are using that area. And the stands that were described were all described as being in fairly poor condition; low levels of acceptable growing stock, damage, ice storm damage, past logging damage, beech bark nectria disease, things that did not describe really healthy vigorous stands. What our silviculture was
aiming for was to regenerate that area so that we could have vigorous young trees, seedlings, saplings coming back. And I feel it's clear from what we saw from the regeneration tallies that have been done that have showed over 10,000 trees to the acre out there, that that's exactly the result we got. And we have a more productive forest coming now exactly as planned on Clough Brook North. And if we had been able to continue the harvest through to completion, I think you would see that, across the stand, there would be compliance with the prescriptions. There would be a vigorous new forest growing that then Plum Creek could track through the future and continue to treat, continue to keep it growing so that we would continue to have a productive forest up there.
Q. Okay.

MR. GRAYCK: Nothing further, Your Honor.
MR. DUANE: Thank you, Your Honor.
THE COURT: Mr. Duane?
MR. DUANE: Can I have just one minute, Your Honor? THE COURT: All right.
(Pause)
CROSS-EXAMINATION

BY MR. DUANE:
Q. Good morning Mr. Fife.
A. Good morning.
Q. It was Plum Creek through you that closed down the
harvest on Clough Brook North; correct?
A. That's correct.
Q. Matt didn't close down -- Matt Langlais did not close down the harvest on Clough Brook North; correct?
A. No, he didn't.
Q. Okay. Now, with regard to the Dirigo cruise by Vermont Land Trust which you described as a collaborative effort, isn't it correct that the Vermont Land Trust had concerns that Plum Creek through its harvesting was violating the terms of the conservation easement?
A. Can I clarify?
Q. Well, I -- I -- perhaps you can clarify when you're redirected, but isn't it true that the Vermont Land Trust had that cruise done because it had concerns regarding Plum Creek being in compliance with the conservation easement?
A. They were concerned about the -- assessing the regeneration.
Q. It was the Land Trust, wasn't it, that initiated the request that $P l u m$ Creek go out and hire a third party to do the inventory; correct?
A. No. It was a collaborative thing. It was brought up a meeting.
Q. And it was brought up because of the concerns that the Land Trust had specifically when it was accompanying you on January 26th, 2010, to the Clough Brook tract; correct?
A. Correct.
Q. And it not only involved the land in Lemington, but Plum -- but the Land Trust wanted lands in Averill and in Brighton also inventoried; correct?
A. Correct.
Q. Because of concerns the Land Trust had with regard to Plum Creek being in compliance with its conservation easement in those two towns as well; correct?

MR. GRAYCK: Objection, Your Honor, it's not relevant to the issues before the Court. Mr. Duane is once again trying to create trials within trials. We don't see the Land Trust here. We don't see any testimony from the Land Trust regarding compliance with easements or not. It's an independent cause of action vested in the Land Trust. If it wants to pursue legal action with respect to enforcing its rights under an easement, it can do so. It's not -- it's not what's -- it's not what's before here. And it's also hearsay, Your Honor.

MR. DUANE: If I may? Mr. Grayck asked Mr. Fife why did the Vermont Land Trust request Dirigo cruise to be conducted.

MR. GRAYCK: And it was specific in response to Mr. Langlais' testimony which was solely limited to the Town of Lemington where the exhibit itself had pages removed so that that would be the case.

THE COURT: The objection is overruled. We've heard testimony about the use of the data from the Dirigo cruise, and also we've heard testimony about how it came about. So it's a fair subject for cross-examination.

MR. DUANE: Thank you.
BY MR. DUANE:
Q. Mr. Fife, just to repeat. The Land Trust also requested Plum Creek to hire a third party to inventory the lands in Brighton and Averill because of concerns regarding compliance with the conservation easement; correct?
A. Correct.
Q. Thank you.

MR. DUANE: That's all I have, Your Honor.
THE COURT: Mr. -- Attorney Grayck?
MR. GRAYCK: Briefly, Your Honor.
REDIRECT EXAMINATION
BY MR. GRAYCK:
Q. Mr. Fife, could you please turn to Exhibit 32 in Volume I.
A. Yeah.
Q. Do you have that?
A. I do.
Q. Who is that a letter from?
A. Steve Sinclair.
Q. Can you read the second paragraph of the letter that
begins "until"?
A. "Until all actions related to the potential UVA violations are completed, FPR will not be in a position to approve any new activities in the area referred to as Clough Brook North. Matt will be working on the plans and requests that have been submitted for any other Plum Creek harvest areas as well."
Q. What's your understanding of this letter's directive to you regarding Clough Brook North?
A. That there would be no more activity -- no new activities on Clough Brook North.
Q. And would that include completing the harvest?
A. Yes, I would say it would.

MR. GRAYCK: Nothing further, Your Honor.
THE COURT: That concludes your testimony. You may step down.

THE WITNESS: Thank you, Your Honor.
MR. GRAYCK: That concludes Plum Creek's case, Your Honor.

THE COURT: Mr. Duane?
MR. DUANE: Thank you, Your Honor. We would intend to call Mr. Langlais on surrebuttal with respect to the testimony that was put forth this morning from the two witnesses and be mindful of limiting it to that extent. THE COURT: All right.

COURT OFFICER: Please raise your right hand. MATT LANGLAIS
having been duly sworn, testified as follows:
COURT OFFICER: Please be seated.
MR. DUANE: Your Honor, if I might have just one moment?

THE COURT: All right.
(Pause)

## SURREBUTTAL DIRECT EXAMINATION

BY MR. DUANE:
Q. Good morning, Mr. Langlais.
A. Good morning.
Q. Were you present in the courtroom this morning when Mr. Holleran was testifying?
A. Yes, I was.
Q. And do you recall his testifying regarding your use of measurement sticks in stand 43?
A. Yes, I do.
Q. Do you recall that he said that you, as the county forester, should have used both sticks when you were in the overstory removal and shelterwood areas at once in that stand?
A. Yes, I do.
Q. And do you agree or disagree with his assessment of your capabilities when you went out there and looked at that part of stand 43?
A. Yes, I do disagree.
Q. And why do you disagree?
A. If we were to -- I use two measuring sticks at every plot that we take, it would not give an accurate representation of either prescriptions. It would create a scenario where at every single point you would have a different prescription, and that in turn could create a different stand at absolutely every different point that you visited. It's a -- it's completely unattainable to utilize that methodology to state that on a point by point basis a prescription is either met or unmet.
Q. Thank you, Mr. Langlais. And were you present when Mr. Holleran testified about a topic involving 350 stems per acre?
A. Yes, I was.
Q. And are you familiar with the concept of 350 stems per acre?
A. Yes.
Q. And -- and what is the concept of 350 stems per acre?
A. Yeah. In the program manual, we have a statement that Mr . Holleran regarding 350 stems. And 350 stems of regeneration is what we use in the department to determine whether or not a forest is a forest or a forest is a field. It tells us whether or not the area for which application -application is being submitted for is a forest or a field, and
the minimum standard is 350 stems. It further states that, for regeneration cutting, 350 stems is needed three years after the harvest. Mr. Holleran was stating that we needed to use that to evaluate the overstory removal harvest. Now, within the program manual on $I$ think it's Form 4, we state that, for overstory removals, that immediately after the harvest, there needs to be either -- either sixty square feet if it's a $2-H$ stand or 350 stems of acceptable regeneration.

So Mr. Holleran was using that portion of the manual out of the context -- out of context and applying it where it should not been applied.
Q. Mr. Langlais, were you present in the courtroom this morning when Mr. Fife talked about there being a major misunderstanding with respect to the interpretation of the prescription for stand 34 ?
A. Yes, I was.
Q. And were you present when he testified about the difference in his opinion between an irregular shelterwood and either the distribution of it or the -- the location of it in the stand?
A. Yes.

MR. DUANE: Your Honor, if I could approach the witness and show him an exhibit?
Q. Mr. Langlais, I'm going to bring to your attention -and for my convenience, it is in Mr. Holleran's Exhibit 36
entered as Plum Creek Exhibit 36, and it's sub-Exhibit 2, and it is the Northern Hardwood Type Forest Guide. You're familiar with that document?
A. Very familiar.
Q. You've testified about it a lot in the course of this proceeding; correct?
A. The last few days, yes.
Q. Let me show you what's been marked -- actually I'm going to let Mr. Grayck see. I'm going to show the witness a highlighted portion of it. So I'm going to show you where it's highlighted on page 15 and 14. So we've highlighted that.

MR. DUANE: Your Honor, I'm showing Mr. Grayck and his expert pages 14 and 15 highlighted in my version of a document. It's not highlighted on the admitted document that the Court has. Thank you.
Q. So with that, Mr. Langlais, let me show you again Exhibit 36 of Plum Creek, sub-Exhibit 2, and I'll direct your attention to page 14 and 15. Do you -- is that a copy of the Leak Guide?
A. Yes, it is. This is NE-603.
Q. And with -- is there a description of the -- the term shelterwood in there?
A. Yes, there is.
Q. And you listened to Mr. Fife's testimony about the
irregularity, or not, of the shelterwood cut; correct?
A. Correct.
Q. And do you agree or disagree with his testimony of this morning regarding that concept?
A. I disagree.
Q. And why do you disagree with his testimony regarding that concept?
A. The shelterwood called for a two-stage shelterwood. He stated that it was going to be a two-stage shelterwood. The successful implementation of a shelterwood is, if you look at this image here, you see a very --
Q. And when -- when you say image here, what are you referring to?
A. The image, figure 5 on page 15.
Q. Continue please.
A. This is the author's description of the successful implementation of a two-stage shelterwood. Further below, it says: "Marking for seed cuts and prep cuts must be from below. Removing the smaller stems as first priority and leaving a uniformly distributed stand." The irregular shelterwood description came in to tell us that when these stands regenerate, that regeneration period is going to extend for so long that the stand will no longer be truly even age but two aged. So it's a further -- it was used to further describe the future of that stand, not how it's to be
interpreted directly after the harvest.
THE COURT: What was used for that? You said "it," what do you mean?

THE WITNESS: Yeah, I'm sorry. Within their prescription for stand 34, they used the term "irregularly distributed."

THE COURT: So what was your point again?
THE WITNESS: My point is that that was a part of the prescription which led to our evaluation of that prescription and subsequent use of it.

THE COURT: But what did you mean when you said describe the future not -- I'm trying to understand your -what your testimony is about the irregular distribution of the shelterwood.

THE WITNESS: Yeah, it -- it refers to the -- to the age class distribution; twenty, thirty, forty years down the line, because that regeneration period is extended so long. So when they included it in their prescription, that told me that they would be carrying that overwood for a long period of time.

THE COURT: Can you -- can you describe more clearly the difference between your interpretation and Mr. Fife's?

THE WITNESS: Mr. Fife believed that the use of the term "irregular" talked about the spatial arrangement of cuttings. When we have discussed shelterwoods in the field
and have referred to them -- I believe it's page 51 of the Plum Creek plan specifically talks about that irregular shelterwoods would be used. That's from where we base our discussions in the field, and it's a very specific type of shelterwood in that it's -- it's about the extended length of the regeneration period not about the spatial arrangement of cuttings.

THE COURT: So you're saying that the word
"irregular" is used to mean that this is lasting a longer period of time than a usual span of time?

THE WITNESS: Yeah, exactly. You've got it.
BY MR. DUANE:
Q. Thank you. Mr. Langlais, you mentioned in your testimony just now Page 51 of the conceptual plan. And were you here when there was testimony regarding some scheme -schematic drawings in that plan regarding residual basal area?
A. Yes, I was.
Q. And were you present this morning when Mr. Holleran was talking about residual basal area?
A. Yes, I was.

MR. DUANE: Let me if I may, Your Honor, if I could approach the witness to show him what's been admitted into evidence as Plum Creek's 13 and refer him to page 53 which was brought up in Plum Creek's case in chief?

MR. GRAYCK: Your Honor --

MR. DUANE: And in their discussions this morning about residual basal areas.

MR. GRAYCK: Your Honor, I object. The portion of this plan was not brought up this morning.

MR. DUANE: But the residual basal discussion was in terms of how one measures it. That was pretty much the heart of what Mr. Holleran was testifying about this morning in his rebuttal testimony.

THE COURT: Well, what is -- what is the subject matter that you're seeking to approach now?

MR. DUANE: Approach about how one determines residual basal area in a harvest.

MR. GRAYCK: Your Honor, the portion of the plan that Mr. Duane would like to use is part of my examination of Mr. Langlais. Mr. Duane had an opportunity to redirect, and he chose not to.

THE COURT: The objection is overruled. How to measure residual basal areas is a constant theme in this case. He's referring to something that's been admitted in evidence. It may be used.

MR. DUANE: Thank you, Your Honor. And if I could again approach the witness? BY MR. DUANE:
Q. Mr. Langlais, let me direct your attention to conceptual plan for Plum Creek's lands. Let me direct you to
page 51 and 53. Do you recall this drawing --
THE COURT: Wait, wait.
MR. DUANE: I'm sorry.
THE COURT: What is you're looking at?
MR. DUANE: I'm looking at Plum Creek 13 which is the -- excuse me, 14.

THE COURT: Okay.
MR. DUANE: My tab is bent -- my tab is bent in on my
binder.
THE COURT: Okay.
MR. DUANE: Exhibit 14 which is the forest management
plan for the Essex Timber Company that Plum Creek has taken.
THE COURT: All right.
MR. DUANE: And I'm directing the witness' attention to page 51, and then to page 53 where there's a -- two little schematic drawings.

BY MR. DUANE:
Q. And with respect -- with respect to residual basal area, Mr. Langlais, to what do the schematic drawings on page 53 refer?
A. These schematics refer specifically to retention which is required in the Vermont Land Trust easement. MR. GRAYCK: Objection.
A. When clear -MR. DUANE: Sorry. Go ahead. What?

MR. GRAYCK: I thought you were finished. Go ahead. A. -- when the landowner employs clear cutting. So this has a very specific application to retain legacy trees when clear cutting.

MR. GRAYCK: And objection, Your Honor, move to strike. This is not about residual basal area. The concept of retention is different.

MR. DUANE: If I may, Your Honor, the document, page 53 talks about fifteen acres 20 (b) (a), which is basal area. And page 51, to which the witness was referring, says the following four figures are illustration of ways to maintain twenty basal area retention in the clear cut, so it has to do with basal area, how one measures basal area, and, in fact, I know we're on rebuttal, but in Plum Creek's case in chief they were attempting to show that this was how one measures residual basal area, and it came up again on rebuttal. I'm doing a simple clarifying question.

THE COURT: Anything further?
MR. GRAYCK: I'll address it on re -- on --

THE COURT: Okay. The objection -- are you still objecting?

MR. GRAYCK: I'll withdraw the objection. We'll address it.

THE COURT: Okay. All right. Okay, go ahead.
MR. DUANE: And with that, Your Honor, I have no
further questions of Mr. Langlais.
THE COURT: Mr. Grayck? CROSS-EXAMINATION

BY MR. GRAYCK:
Q. Good morning Mr. Langlais.
A. Good morning Mr. Grayck.
Q. As I recall, you testified that you had used David Smith's The Practice of Silviculture for stand 34 with respect to shelterwood; is that right?
A. I used it for the definition of an irregular shelterwood.
Q. I'd like to see whether you agree or disagree with the following statement. It is not necessary that the distribution of reserved trees be absolutely uniform?
A. It depends on what -- what portion of that book that that's coming from and for what -- for what it describes.
Q. An uneven distribution may occasionally be favorable, the seedlings in their competition with the older trees for soil moisture?

MR. DUANE: Objection, Your Honor. Is that a question or statement?
Q. Do you agree or disagree with that -- with that sentence?
A. I would have to know that context, and the full paragraph, and the chapter within which it's placed in order
to evaluate that statement. Thank you.
Q. Advantage is taken of all groups of advanced growth that may have started naturally or as an unintentional result of preparatory cuttings or thinnings; do you agree or disagree with that?
A. It depends on what silviculture is being prescribed.
Q. Now, you had just testified --

MR. GRAYCK: Your Honor, may I approach?
THE COURT: Yes.
Q. You had just testified that it depended upon where these statements were located, and in what context; am I right?
A. Correct.
Q. Okay. I'm going to show you Smith book.
A. Thank you.
Q. And what's the heading on page -- on page 406 ?
A. The heading is silviculture systems.
Q. And can you find where your definition of a regular shelterwood is located in that book, in that chapter, in that subsection?
A. Yes. I find it where it's on page 410. It states variations in shelterwood methods.
Q. Can I have the book? Now, that you've seen where the statements I've read are located in the Smith book that you relied upon, do you agree or disagree with the statements I
read from the Smith book?
A. Did you read those from the specific subsections on the irregular shelterwood method?
Q. I'll show you where they originated from. I'm showing you what's been marked as Plum Creek Exhibit 104. And please see if that helps to clarify the location.
(Practice of silviculture was hereby marked for identification as Plaintiff's Exhibit 104, as of this date.)

MR. DUANE: Excuse me, Your Honor, I'm wondering if we could get a copy of that exhibit?

MR. GRAYCK: Certainly. I apologize.
A. Yeah, this location is not where I've taken my definition of the irregular shelterwood.
Q. In fact --

MR. DUANE: Your Honor, I'm sorry, maybe it would be helpful if Mr. Grayck handed the witness the entire book so he could get to the point of the question.

MR. GRAYCK: Well, I think he has the text that's necessary for my question.

MR. DUANE: Oh, I'm sorry.
THE COURT: Okay.
BY MR. GRAYCK:
Q. Isn't the point that what we've been reading and looking at here is regular shelterwood?
A. I'm sorry. Your -- your copy is --
Q. Here --
A. -- has taken off half of the -- half of the words.

My use of the Smith textbook, specific to a regular shelterwoods, comes from page 414 where it states the -- "This differs from other variance in the shelterwood method in that the regeneration period is extended so long that the new stand is not really even aged. This does not mean that it has three or more age classes that denote the uneven age condition. It does, however, mean that the stand will include two age classes for long periods and sometimes even for a whole rotation. The adjective irregular refers mainly to the variations in tree heights within the new stand."
Q. Right. Isn't it also possible that a regular shelterwood can be irregularly distributed across the stand?
A. No.
Q. As a different treatment -- as a different treatment, isn't it possible that the regular shelterwood can be irregularly distributed across a stand?
A. On page 14 -- 416, application of shelterwood -- let me find it here.
Q. I'm asking your personal knowledge, Mr. Langlais, not what it says in the book at this point. Isn't it possible that a regular shelterwood can be irregularly distributed across a stand?
A. No, it cannot. And that's based on the text from
which we described in the field when we talked about irregular shelterwoods. The spatial arrangements of cuttings can either be uniform, so when an irregular shelterwood can be uniformly arrangement in its spatial arrangements of cuttings. It can be in a strip arrangement or in a group arrangement. Plum Creek chose a uniform arrangement as it did not chose to employ a strip irregular shelterwood or a group irregular shelterwood as they have done in other prescriptions where they have called for those other spatial arrangements in employing the irregular shelterwood.
Q. Mr. Langlais, isn't it true that it's not necessary that the distribution of reserved trees be absolutely uniform when a regular shelterwood is irregularly distributed; isn't that true?
A. Could you restate that?
Q. Isn't it true it's not necessary that the distribution of reserved trees be absolutely uniform in a regular shelterwood irregularly distributed?
A. So long as you're able to meet your crown closure requirements. You know, absolutely uniform is -- that would be difficult to attain -- absolutely uniform -- but there's a big difference between absolutely uniform and the great variation that resulted in the cuttings.
Q. Now, you just crown closure; am I correct?
A. I did.
Q. Yes. To ascertain crown closure, does it require a specific piece of equipment?
A. It requires, if you're doing science or need an exact measurement, you can use a densiometer. However, the NE-603 Guide provides a table for foresters to use when they are trying to use basal area as a surrogate for crown closure. It's how we use NE-603 to mark our shelterwoods.
Q. When you were doing your investigations for the adverse inspection report, did you have a densiometer with you?
A. No, I relied on the NE-603 Guide.
Q. Did you take any densiometer measurements?
A. No, I did not.
Q. Did you report any in your adverse inspection report?
A. It was indicative --
Q. Did you report any densiometer readings in your adverse inspection report expressly?
A. Densiometer readings, no.
(Pause)
Q. You just relied on the guide; am I correct?
A. I relied on the chart in the back of the guide; correct.
Q. And you are aware that Mr. Holleran has been selected to assist with the guide, aren't you? He just testified, and you heard him say that?
A. I heard him say that, yes.

MR. GRAYCK: Thank you, Your Honor, nothing further.
MR. DUANE: No further evidence, Your Honor, but just
a point of evidence. Is the document, Practice of
Silviculture, these few pages, been offered into evidence? And the reason $I$ ask is because the witness was reading from a document that hadn't been admitted into evidence and so, therefore, we have no objection to this as long as it's a cleaner copy and we include the back pages of the Smith text that Mr. Langlais was reading from.

MR. GRAYCK: I didn't offer it and, at this point, I'm not. And I didn't hear any objection to what $I$ was doing when I was doing it.

MR. DUANE: Just a point of -- thank you for the clarification, and I just have one follow-up question to Mr. Langlais. Very briefly.

THE COURT: All right.

## REDIRECT EXAMINATION

BY MR. DUANE:
Q. The book in front of you, the David Smith Practice of Silviculture that Mr. Langlais -- excuse me -- that Mr. Grayck presented to you, Mr. Langlais, is that the Smith text that was talked earlier in these proceedings?
A. Yes, it's the same one.
Q. And is that the book I think you described, and
correct me if I'm wrong, that all good foresters, including yourself, have on their bookshelf?
A. Anybody who took silviculture class in forestry school has this.
Q. Okay. Thank you. What you read from today was the same text you testified about the other day?
A. Correct.
Q. Thank you.

MR. DUANE: That's it.
MR. GRAYCK: And one brief follow-up question, Your Honor.

THE COURT: All right.
RECROSS-EXAMINATION
BY MR. GRAYCK:
Q. Is that book in the guide? Is it one of those listed in the appendix?
A. No, it's not.

MR. GRAYCK: Nothing further, Your Honor.
THE COURT: That concludes your testimony. You may step down. Thank you.

THE WITNESS: Thank you.
THE COURT: Does that complete all of the evidence?
MR. DUANE: Yes.
MR. GRAYCK: Yes, Your Honor.
THE COURT: Okay. And what about these exhibits?

You're simply not offering them?
MR. DUANE: Not offering them, Your Honor. I believe
that the larger map -- the larger map marked for
identification purposes, if $I$ may, as $B$, was a copy of a
document that was already into evidence, but this is a blown up version of it. And the State's Exhibit E, which is Mr.

Langlais' drawing of trees, is something we are not offering as -- into evidence as an exhibit.

THE COURT: Okay.
MR. DUANE: Thank you.
THE COURT: So it's now noon. Would you like to make arguments after lunch?

MR. DUANE: Well, Your Honor, if I may, Mr. Grayck and I spoke yesterday about the next step and, at that time, we were going to suggest to the Court that, given the evidence that was submitted and the number of legal arguments involved in this case, that we would ask the Court for permission to file proposed findings of fact and proposed conclusions of law. And we were thinking that, based on everyone's schedules and trying to absorb everything, that if we would have thirty days to do that?

MR. GRAYCK: Yes, Your Honor.
THE COURT: Are you in agreement?
MR. GRAYCK: Yes, Your Honor.
THE COURT: Okay. All right. So that would be July

4 th, so we'll make it the following Monday. I think July 4th is a Thursday, so that would be the 8 th maybe.

MR. GRAYCK: I don't want to take my cell phone,
which is also my calendar, out of my pocket and use the court, Your Honor.

THE COURT: Okay. All right.
MR. DUANE: So that works for us.
MR. GRAYCK: Yes, so the Monday following July 4th.
THE COURT: All right. So and you'll file them simultaneously?

MR. DUANE: That's what I was thinking, Your Honor.
MR. GRAYCK: Yes, Your Honor.
THE COURT: And are you seeking additional time to respond to the other person's?

MR. DUANE: Given the interesting nature of the legal
arguments that have been made throughout this case, I think that might be a good idea.

MR. GRAYCK: Yes, Your Honor.
MR. DUANE: Would you concur, David?
MR. GRAYCK: Yes, I would agree, Your Honor.
THE COURT: Okay. So then -- July 22nd, then, for any responses?

MR. DUANE: That would be fine. Thank you.
MR. GRAYCK: And, yes, Your Honor, I believe the -the first filing date is July 8th?

THE COURT: Yes.
MR. GRAYCK: And can we just clarify, are these mailin dates or arrive-at-the-court dates, please? I just want to know what we're agreeing to. I'm happy for them to be mailed -- postmarked dates.

THE COURT: The -- the civil rules would call for it
just to be mailed on that day.
MR. DUANE: I think mail-in date would be -- work
well for us.
MR. GRAYCK: We'll exchange correspondence.
THE COURT: Okay.
MR. GRAYCK: Thank you, Your Honor, I just wanted to clarify.

THE COURT: All right.
MR. DUANE: And just as a matter of -- of a technical nature, Your Honor, at this point, the State would, under Rule 50, renew its motion for a directed verdict, or judgment as a matter of law, and we can address that in our legal filing.

THE COURT: All right. Okay. I'll look forward to your submissions. Thank you very much.

MR. DUANE: Thank you.
MR. GRAYCK: Thank you, Your Honor.
THE CLERK: All rise.
(Proceedings concluded at 12:02 PM)

| A | $\begin{array}{\|c\|} 71: 4,11 \\ \text { activity (1) } \\ 71: 10 \end{array}$ | $\begin{aligned} & 77: 16 ; 85: 8,8,9 \\ & \text { aged (2) } \\ & 76: 24 ; 85: 7 \end{aligned}$ | $\begin{aligned} & \text { answered (1) } \\ & 44: 19 \\ & \text { apologize (3) } \end{aligned}$ | $\begin{aligned} & \text { 25:7;29:17,17;34:3; } \\ & 35: 6,7 ; 37: 10,16 ; 38: 7 ; \\ & 49: 8,9,13 ; 52: 21 ; 58: 8 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| able (3) | actual (2) | agency (1) | 36:22;37:3;84:11 | $59: 10 ; 62: 20,22 ; 63: 8$ |
| 41:17;67:7;86:19 | $\begin{gathered} \text { 47:17;50:18 } \\ \text { actually }(\mathbf{1 0}) \end{gathered}$ | $\begin{array}{r} 64: 1 \\ \text { ago (3) } \end{array}$ | $\begin{aligned} & \text { appear (3) } \\ & 5: 18,20 ; 18: 18 \end{aligned}$ | $71: 7 ; 72: 21 ; 79: 2,18$ |
| $\begin{gathered} \text { above (1) } \\ 29: 17 \end{gathered}$ | $\begin{array}{\|l\|l} \text { actually }(10) \\ 4: 23 ; 41: 24 ; 56: 11,21 ; \end{array}$ | 37:25;41:2;63:7 | $\begin{aligned} & \text { 5:18,20;18:18 } \\ & \text { appears (4) } \end{aligned}$ | arguments (3) <br> 90:12,16;91:16 |
| absolutely (7) | 57:20;60:2,19;65:18, | agree (8) | 10:9;31:12;40:25; | around (10) |
| $\begin{aligned} & 73: 8 ; 82: 14 ; 86: 12,17, \\ & 20,21,22 \end{aligned}$ | $\begin{aligned} & \text { 18;75:8 } \\ & \text { add (6) } \end{aligned}$ | $\begin{aligned} & 12: 24 ; 72: 23 ; 76: 3 \\ & 82: 12,22 ; 83: 4,25 \end{aligned}$ | $\begin{gathered} 41: 3 \\ \text { appendix (1) } \end{gathered}$ | $\begin{aligned} & 7: 19,20 ; 8: 1,6,10 \\ & 15: 19 ; 24: 15 ; 50: 15,16 \end{aligned}$ |
| absorb (1) | 42:2;47:1,5,7;62:6,6 | 91:20 | 89:16 | 57:6 |
| 90:20 | added (1) | agreed (3) | applicable (2) | arrangement (12) |
| accept (1) | $47: 11$ <br> addition (1) | $46: 15 ; 49: 12 ; 63: 15$ <br> agreeing (1) | $13: 2,4$ | $\begin{aligned} & 23: 15 ; 24: 8,23,25 \\ & 25: 6,15 ; 77: 24 ; 78: 6 \end{aligned}$ |
| 4:13 | $\begin{array}{\|c} \text { addition (1) } \\ 48: 16 \end{array}$ | $\underset{92: 4}{\operatorname{agreeing}(\mathbf{1})}$ | application (6) $52: 8 ; 53: 7 ; 73: 24,25$ | 25:6,15;77:24;78:6; 86:4,5,5,6 |
| $12: 9 ; 14: 3,9 ; 22: 4 ;$ | additional (2) | agreement (4) | 81:3;85:19 | arrangements (4) |
| 23:8;28:15;34:19;50:7; | 30:14;91:13 | 8:25;9:1;34:13 | applied (7) | 26:17;86:2,4,9 |
| 58:20,24;59:22;60:3,7, | address (6) | 0:23 | 20:20;21:10;42:8; | arrive-at-the-court (1) |
| 18,20;61:16;66:22; | 37:8;40:18;66:14; $81: 19,23 \cdot 92 \cdot 18$ | ahead (7) | 50:24;52:7;53:9;74:11 | 92:3 |
| 74:8 | 81:19,23;92:18 | 47:19;48:7;61:14 | apply (1) | art (1) |
| accepted (1) | addressed (1) | 64:17;80:25;81:1,24 | $8: 7$ applying | 13:10 artistic (1) |
| 12:15 | 30:11 | aiming (1) | applying (1) | artistic (1) |
| accepting (1) | addressing (1) | 67: | 74:10 | 14:17 |
| 23:21 | 31:20 | alleged (8) | appreciate (1) | ascertain (1) |
| accompanying (1) | adequate (3) | 26:18;39:17;54:13, | 64:11 | 87:1 |
| 68:24 | 20:4;22:2;26:2 | 23;56:6,8;57:3;63:13 | approach (7) | aside (1) |
| According (3) | $\underset{23: 7}{\operatorname{adjacent}}(\mathbf{1})$ | allegedly (2) | $\begin{aligned} & 11: 15 ; 74: 22 ; 78: 22 ; \\ & 79 \cdot 1011.22 \cdot 83 \cdot 8 \end{aligned}$ | $29: 22$ |
| 17:23;20:11;41:1 | $\begin{gathered} 23: 7 \\ \text { adjective (1) } \end{gathered}$ | $\begin{aligned} & \text { 24:19;26:4 } \\ & \text { allow (3) } \end{aligned}$ | 79:10,11,22;83:8 <br> appropriate (4) | $\begin{aligned} & \text { assessed (1) } \\ & 63: 8 \end{aligned}$ |
| $\begin{gathered} \text { account (1) } \\ 30: 6 \end{gathered}$ | 85:11 | 51:14;52:13,14 | 19:10;29:1,22;38:7 | assessing (1) |
| accounts (1) | administration (1) | allowable (4) | approval (1) | 68:16 |
| 29:25 | 63:22 | 30:2,7;33:1;41:16 | 64:17 | assessment (2) |
| accuracy (1) | admissibility (1) | allowance (1) | approve (1) | 63:2;72:23 |
| 7:9 | 40:8 | 26:19 | 71:4 | assist (1) |
| accurate (2) | admission (7) | allowed (5) | approved (7) | 87:24 |
| 7:18;73:4 | 36:3;38:1;39:22 | 21:18;22:2;30:10 | $9: 17 ; 47: 16,24 ; 48: 1$ | Association (1) |
| achieved (2) $37 \cdot 16 \cdot 38 \cdot 8$ | $\begin{aligned} & \text { 41:5,10,18;54:? } \\ & \text { admitted (9) } \end{aligned}$ | $\begin{aligned} & \text { 39:8;46:10 } \\ & \text { allows (2) } \end{aligned}$ | 49:22;58:3;65: <br> approving (1) | 46:8 <br> assume (2) |
| 37:16;38:8 acknowledged | $37: 2 ; 38: 13 ; 42: 5,21$ | $21: 21 ; 30: 1$ | $46: 22$ | $\begin{array}{r} 56: 20,25 \\ 5 \end{array}$ |
| 26:16 | 54:5;75:15;78:22 | almost (1) | approximately (1) | attain (1) |
| acre (14) | 79:19;88:7 | 15:22 | 49:9 | 86:21 |
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