

1 STATE OF NEW YORK  
2 SUPREME COURT

COUNTY OF ALBANY

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3 In the Matter of the Application of  
4 PROTECT THE ADIRONDACKS!, INC.,

Plaintiff-Petitioner,

5 -against-

Index No. 2137-13

6 NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL  
7 CONSERVATION and ADIRONDACK PARK AGENCY,

Defendants-Respondents.  
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8  
9 Volume IV

10 - N O N - J U R Y T R I A L -

11 BEFORE: HON. GERALD W. CONNOLLY  
12 Acting Justice of the Supreme Court

13  
14 Transcript of the Proceedings held on the record  
15 on March 16, 2017, at the Albany County Courthouse, Albany,  
16 New York.

17 APPEARANCES:

18 For the Plaintiff:

19 JOHN W. CAFFRY, ESQUIRE  
20 CLAUDIA K. BRAYMER, ESQUIRE  
21 WILLIAM F. DEMAREST, III, ESQUIRE

22 For the Defendants:

23 LORETTA SIMON, ESQUIRE  
24 MEREDITH G. LEE-CLARK, ESQUIRE  
Assistant Attorneys General

Protect the Adirondacks! v. NYS DEC & APA

1 THE COURT: This is the continuation of the  
2 non-jury trial in the matter of Protect the Adirondacks!  
3 against the New York State DEC and Adirondack Park  
4 Agency.

5 Counsel, all set to proceed?

6 MR. CAFFRY: Yes, your Honor.

7 MS. SIMON: Yes, your Honor.

8 THE COURT: All right.

9 All set, Mr. Caffry?

10 MR. CAFFRY: Yes. We would like to recall Dr.  
11 Ronald Sutherland.

12 THE COURT: Dr. Sutherland, you can come right up  
13 here.

14 You are still under oath, sir.

15 MR. CAFFRY: Your Honor, before I start questioning  
16 the witness, can we just confirm the status of Exhibit  
17 104, which I think was admitted yesterday? I just want  
18 to confirm that that is correct.

19 THE COURT: That has been admitted.

20 MR. CAFFRY: Thank you.

21 **THEREUPON,**

22 **RONALD W. SUTHERLAND,**

23 **called as a witness, having been previously duly sworn, was examined**  
24 **and testified as follows:**

(Ronald Sutherland - Direct by Mr. Caffry)

DIRECT EXAMINATION continued

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BY MR. CAFFRY:

Q Dr. Sutherland, as you may recall yesterday, I had begun asking you questions about Exhibit 102 and you were attempting to refresh your recollection from your file and at that point the judge adjourned court for the day. So I'm going to go back now to Exhibit 102 and I think I will start over for clarity of the record.

Can you identify Exhibit 102?

A Yes. It's a photo I took on the Seventh Lake Mountain Trail.

Q Do you know where on the Seventh Lake Mountain Trail you took that photo?

A I do not recall, but could refresh my recollection.

Q Do you have something with you that would allow you to refresh your recollection?

A Yes.

Q Would you like to consult that now, please?

A Yes.

Q And briefly, tell the Court what it is you are looking at when you do so.

A So I'm looking at basically a contact sheet showing thumbnails of the photos, along with miscellaneous information for each photo that I have written down myself.



(Ronald Sutherland - Direct by Mr. Caffry)

1           A     Do I need to say that I took these photos and that  
2 kind of thing?

3           Q     No. You have already been through that and they  
4 have been admitted into evidence.

5           A     Okay.

6           Q     What do they actually show?

7           A     What do they actually show. Got you.

8                     So, photos 102 and 104 show an area of sky  
9 surrounded by trees in both photos. The sky area and what  
10 that represents is an area of open canopy that was directly  
11 over the respective trails in each case. Exhibit 104 being  
12 on the Newcomb to Minerva Trail and 102 being on the Seventh  
13 Lake Mountain Trail.

14          Q     Is that the type of open canopy situation that you  
15 have previously described in your testimony?

16          A     It is.

17          Q     And could you look at Exhibit 103, which has been  
18 marked for identification?

19          A     Yes.

20          Q     Can you identify that document?

21          A     Yes. This is a photo that I took on the Seventh  
22 Lake Mountain Trail.

23          Q     Do you know where you took it on the trail?

24          A     Not exactly.

(Ronald Sutherland - Direct by Mr. Caffry)

1 Q Do you have something available that would allow  
2 you to refresh your recollection?

3 A I do.

4 Q Would you like to consult that?

5 A Yes.

6 Q Please do. And tell us what it is you are looking  
7 at.

8 A Sure. Okay. I'm looking again at the same contact  
9 sheet with the photos.

10 Okay. So this photo was taken essentially  
11 eight minutes of hiking from the start of the first section  
12 of the Seventh Lake Mountain Trail from the Moose River Road.

13 Q When did you take that photo?

14 A August 18<sup>th</sup>.

15 Q Does it fairly and accurately represent the scene  
16 depicted at the time that you took it?

17 A It does.

18 MR. CAFFRY: Your Honor, I would move that Exhibit  
19 103 be admitted into evidence.

20 MS. SIMON: No objection.

21 THE COURT: 103 is received into evidence.

22 (Plaintiff's Exhibit 103 received in  
23 evidence.)

24

(Ronald Sutherland - Direct by Mr. Caffry)

1 BY MR. CAFFRY:

2 Q Dr. Sutherland, can you tell the Court what Exhibit  
3 103 shows?

4 A Exhibit 103 shows a dead tree on the side of the  
5 Seventh Lake Mountain Trail. And as you can tell in the  
6 photo, the area that was formerly occupied by the leaves and  
7 branches of the tree is now quite permeable to sunlight. So  
8 it allows sunlight to come down through there providing an  
9 opening in the canopy. It'll, you know, become more like the  
10 other two photos when that tree eventually falls down.

11 Q Although the tree appears to be dead, you testified  
12 it's dead, it still appears to have a trunk and branches.  
13 Won't that help block the sunlight and contribute to the  
14 closing of the canopy?

15 MS. SIMON: Objection. Counsel is testifying.

16 THE COURT: Overruled.

17 You may answer.

18 A Not to a significant degree. As you can tell in  
19 the photo, there is abundant opportunities for sunlight to  
20 pass between the bare branches of that tree.

21 Q And if you were to look at an aerial photograph of  
22 that trail that included the area where that tree is, would  
23 you be able to tell that there is an opening in the canopy  
24 there?

(Ronald Sutherland - Direct by Mr. Caffry)

1 MS. SIMON: Objection.

2 THE COURT: Sustained.

3 BY MR. CAFFRY:

4 Q Are the canopy openings that you have just  
5 described that are depicted in Exhibits 102, 103 and 104,  
6 large enough to adversely affect the ecology of the forest  
7 floor, the wildlife, and the understory vegetation in the  
8 ways that you have previously testified about?

9 A Yes. They are sufficient to cause the edge effects  
10 and the associated ecological impacts that I talked about  
11 yesterday.

12 Q And do Exhibits 102, 103 and 104 typify the type of  
13 canopy openings that you observed on the two Class II  
14 community connector trails that you inspected?

15 A They do.

16 Q Do those photos necessarily capture the entire  
17 opening in the area where you took it?

18 A No, they do not. It was difficult to take a  
19 picture of a hundred foot long canopy opening for example.

20 Q Dr. Sutherland, I have handed you what's been  
21 marked as Plaintiff's Exhibits 105 to 107 for identification.  
22 Can you please look at number 105 and tell us if you can  
23 identify that?

24 A Yes. This is a photo that I took on August 18<sup>th</sup>

(Ronald Sutherland - Direct by Mr. Caffry)

1 of Seventh Lake Mountain Trail.

2 Q Can you tell us approximately where in the trail  
3 you took it?

4 A I would need to refresh my recollection.

5 Q Please do. And are you going to look at the same  
6 document you previously looked at to refresh?

7 A Yes.

8 Q Please go ahead.

9 A This photo was taken roughly a quarter of a mile  
10 before the first bridge on the Seventh Lake Mountain Trail.

11 Q When you say first bridge, coming from where?

12 A Coming from the Moose River Road and also I believe  
13 those bridges are numbered sequentially in that direction.

14 Q And does the photograph fairly and accurately  
15 represent the scene depicted at the time that you took it?

16 A It does.

17 MR. CAFFRY: Your Honor, I would move that Exhibit  
18 105 be admitted into evidence.

19 MS. SIMON: No objection.

20 THE COURT: 105 is received in evidence.

21 BY MR. CAFFRY:

22 Q And would you please look at Exhibit 106 for  
23 identification. Tell us if you can identify that.

24 A Yes. This is a photo I took on the Seventh Lake

(Ronald Sutherland - Direct by Mr. Caffry)

1 Mountain Trail on August 18<sup>th</sup> of 2016.

2 Q Can you tell us where on the trail you took it?

3 A I would have to refresh my recollection.

4 Q Please do. Have you refreshed your recollection  
5 using that same document?

6 A Yes.

7 Q Where on the trail did you take the photo?

8 A This photo was taken roughly a quarter of a mile  
9 before the second bridge on the first section of the Seventh  
10 Lake Mountain Trail.

11 Q Does it fairly and accurately represent the scene  
12 depicted at the time that you took it?

13 A It does.

14 MR. CAFFRY: Your Honor, I would move that Exhibit  
15 106 be admitted into evidence.

16 MS. SIMON: No objection.

17 THE COURT: 106 is received into evidence.

18 Go ahead. If you are going to do 107 now, go ahead  
19 and do that, and then we will mark all three.

20 MR. CAFFRY: Thank you.

21 BY MR. CAFFRY:

22 Q Would you please look at Exhibit 107 for  
23 identification?

24 A Yes. This is a photo I took of the Seventh Lake

(Ronald Sutherland - Direct by Mr. Caffry)

1 Mountain Trail on August 18<sup>th</sup>.

2 Q Of 2016?

3 A 2016.

4 Q Where on the trail did you take it?

5 A I would have to refresh my recollection.

6 Q Please do so. I assume using the same document?

7 A Yes, the same document.

8 Q Have you been able to refresh your recollection?

9 A I have.

10 Q Where on the trail did you take that picture?

11 A It was approximately a tenth of a mile past bridge  
12 seven, Seventh Lake Mountain Trail, the first section.

13 Q Does it fairly and accurately represent the scene  
14 depicted at the time that you took it?

15 A It does.

16 MR. CAFFRY: Your Honor, I would move that Exhibit  
17 107 be received into evidence.

18 MS. SIMON: No objection.

19 THE COURT: 107 is received into evidence.

20 You can mark all three, please.

21 (Plaintiff's Exhibits 105, 106 and 107  
22 received in evidence.)

23 BY MR. CAFFRY:

24 Q Dr. Sutherland, could you tell the Court, starting

(Ronald Sutherland - Direct by Mr. Caffry)

1 with number 105, what each one of these exhibits shows about  
2 the vegetation on the Seventh Lake Mountain Trail?

3 A Yes, I can. So, Exhibit 105 shows the Seventh Lake  
4 Mountain Trail road running up a hill. There is trees on  
5 both sides on the upper part of the photo. And as you can  
6 see, the surface of the trail is covered in primarily thick  
7 grass and ferns, a little bit of leaf cover, and some other  
8 types of plants mixed in, but primarily grass and ferns. And  
9 this is indicative of an open canopy, high sunlight  
10 environment.

11 Q And could you now look at Exhibit 106 and tell us  
12 what it depicts about the vegetation conditions on the  
13 Seventh Lake Mountain Trail?

14 A Yes. Exhibit 106 essentially shows the same  
15 features. Again, you have the surface of the trail or road  
16 covered in more ferns in this picture, but still some grass  
17 in the foreground there. And, again, that's indicative in  
18 this case of high sunlight conditions.

19 Q And finally looking at 107, what does that show  
20 about the vegetation on the trail?

21 A So, photo 107 on the left side of the photo you can  
22 see an area where the surface of the trail or road is covered  
23 in grass with a few ferns sticking out in the upper left  
24 corner. And then in the foreground there is a large tree

(Ronald Sutherland - Direct by Mr. Caffry)

1 whose roots have been severed in many locations.

2 Q And now with regard to all three photographs, 105  
3 to 107, are the conditions shown in those photographs  
4 typically found on the forest floor in an undisturbed forest  
5 of the type of which the Seventh Lake Mountain Trail is  
6 located?

7 A No, they are not.

8 Q And in your professional opinion, is that condition  
9 of that, of the grass and ferns on the trail there, related  
10 to the existence of the openings in the forest canopy that  
11 were created by the construction of the trail?

12 A Yes, sir. I think these conditions are caused by  
13 the open canopy.

14 Q And can the presence of grass and ferns to this  
15 extent also be an indicator of the existence of open canopy  
16 conditions?

17 A Yes, it can.

18 Q Based upon your observations and your professional  
19 experience, did you develop an opinion as to the causes of  
20 the open canopy conditions that you observed on both trails?  
21 In other words, what about construction of the trail causes  
22 this to occur?

23 A I think it's fairly obvious that the open canopy  
24 conditions are caused by the combination of trees being cut

(Ronald Sutherland - Direct by Mr. Caffry)

1 us for creation of the trail and trees dying on the side of  
2 the trail as we saw in previous exhibits, and then possibly  
3 even later falling down, since this particular trail is four  
4 years old.

5 Q When you say referring to a previous exhibit, can  
6 you tell us which number or at least which one, what's  
7 depicted in that exhibit you were referring to?

8 A May I look at? I believe Exhibit 103 shows a dead  
9 tree on the side of the trail.

10 Q How, in your experience, in your professional  
11 opinion, how might trees that are along newly built forest  
12 roads or a Class II community connector trail, die post  
13 construction? What's the factors that would cause that to  
14 happen?

15 A Several things, really, could cause trees to die in  
16 that situation. The first, as I think is exemplified in  
17 Exhibit 107, is that the tree's roots could be cut to a  
18 substantial degree. And trees turn out to need their roots.  
19 And so that can often lead to tree death.

20 The second thing is that if trees are  
21 substantially run into with any kind of machinery or  
22 equipment and the bark is substantially damaged, that can  
23 also lead to trees getting fungal infections and dying  
24 subsequently.

(Ronald Sutherland - Direct by Mr. Caffry)

1           And then the third reason is if the canopy is  
2 otherwise opened up because of other trees being cut down,  
3 then that leads to greater wind penetration into open canopy  
4 situations and that can lead to trees falling over directly  
5 or being tipped up and then falling over.

6           And then the fourth thing is alterations in  
7 the microclimate around the tree. You know, as we talked  
8 about yesterday, the increased amount of sunshine can lead to  
9 lower water availability and that could lead to stressing a  
10 tree enough to cause it to die.

11          Q     And would these conditions that could cause the  
12 tree, the trail side trees to die post construction, cause  
13 that to happen immediately, or could that continue for a  
14 number of years?

15          A     I think it could keep happening for a number of  
16 years, yes.

17          Q     Dr. Sutherland, I have handed you what's been  
18 marked as Exhibit 108 for identification. Can you identify  
19 that?

20          A     Yes. This is a photo I took on the Seventh Lake  
21 Mountain Trail on August 18<sup>th</sup>, 2016.

22          Q     Can you tell us where on the trail it was taken?

23          A     I would need to refresh my recollection.

24          Q     Using the same document as before?

(Ronald Sutherland - Direct by Mr. Caffry)

1 A Yes.

2 Q Please do.

3 A This photo was taken just past bridge 15 on the  
4 second section of the Seventh Lake Mountain Trail.

5 Q And does it fairly and accurately represent the  
6 scene depicted at the time that you took it?

7 A Yes, it does.

8 MR. CAFFRY: Your Honor, I would move that Exhibit  
9 108 be admitted.

10 MS. SIMON: No objection.

11 THE COURT: 108 is received into evidence.

12 (Plaintiff's Exhibit 108 received in  
13 evidence.)

14 BY MR. CAFFRY:

15 Q Can you tell the Court what that picture shows?

16 A Yes. This picture shows the base of the large  
17 tree. I believe it's a sugar maple and it's on the edge,  
18 directly on the edge of the Seventh Lake Mountain community  
19 connector trail, and it's roots on the right side, lower  
20 right side of the photo, appear to have been severed to a  
21 significant degree.

22 Q Is there a feature in the terrain immediately to  
23 the right of those roots?

24 A Yes, there is. You can tell in the photo there is

(Ronald Sutherland - Direct by Mr. Caffry)

1 a small bench cut approximately about, I would say 12 inches  
2 in height from the surface of the snowmobile trail road. And  
3 so that's a perpendicular cut into what was formerly a slight  
4 slope. And there is soil erosion from the edge of that cut.

5 Q Do you have an opinion as to whether or not the  
6 damage to the roots of the trees related to the creation of  
7 that bench cut?

8 MS. SIMON: Objection.

9 THE COURT: Sustained.

10 MR. CAFFRY: Can I ask the reason for it being  
11 sustained, your Honor?

12 THE COURT: You are asking for a conclusion, which  
13 is not based upon anything other than speculation.

14 The photo does speak for itself. And the existence  
15 of the bench cut and the cut roots do speak, in what  
16 appear to be a bench cut, do speak for themselves. But  
17 it calls for speculative evidence, which is, again,  
18 speculative and also outside the field of expertise as  
19 stated.

20 If you would like to set some further foundation to  
21 ask the question, you may attempt to do so.

22 MR. CAFFRY: We will let the photo speak for  
23 itself.

24 THE COURT: Okay.

(Ronald Sutherland - Direct by Mr. Caffry)

1 BY MR. CAFFRY:

2 Q Are trailside or roadside trees with the type of  
3 damage that you have described with regard to the trees in  
4 Exhibits 107 and 108, are they susceptible to dying an  
5 untimely death in your professional opinion?

6 A Yes. There is higher likelihood that a tree in  
7 this situation would die as a result of the injuries to its  
8 roots.

9 Q If that were to occur, would that affect the forest  
10 canopy?

11 A Yes, it would. A large, mature hardwood tree like  
12 the one shown in the photo would occupy a large amount of the  
13 forest canopy. If it dies, that's going to be a rather large  
14 opening.

15 Q In your professional opinion, could the linear  
16 canopy openings that you have testified about having observed  
17 on the Class II community connector trails, have been caused  
18 by natural events?

19 MS. SIMON: Objection.

20 THE COURT: What's the objection?

21 MS. SIMON: He's asking him -- let's ask for it to  
22 be read back.

23 THE COURT: That's fine.

24 (Whereupon the Reporter read back the

(Ronald Sutherland - Direct by Mr. Caffry)

1 question.)

2 MS. SIMON: I withdraw my objection.

3 A No, not per se, because in the sense that the  
4 linear openings on the road or trail canopies follow the road  
5 surface and curved as roads and trails do, the natural  
6 occurrences that could lead to linear openings in the canopy  
7 would, to my knowledge, include only tornadoes and small  
8 gusts, you know, targeted gusts of wind that would knock down  
9 several trees in a row. And those are similar, but though  
10 slightly different conditions.

11 Q Would a tornado or a strong wind gust follow the  
12 path of the trail or road?

13 A No.

14 Q Dr. Sutherland, in comparing the areas where you  
15 observed open canopy conditions on the Class II trails and  
16 the areas where you had observed that the canopy had remained  
17 closed, was there a difference in the vegetation on the  
18 ground?

19 A Can you repeat that question one more time? I'm  
20 sorry.

21 Q In comparing the areas where you observed open  
22 canopy conditions on the Class II trails and the areas where  
23 you had observed that the canopy had remain closed, was there  
24 a difference in the types of vegetation on the ground along

(Ronald Sutherland - Direct by Mr. Caffry)

1 the trail?

2 A Yes. There was a fairly obvious difference on the  
3 areas. Where the community connector trails or roads  
4 retained closed canopy there was not very much vegetation at  
5 all on the surface of the trail or road.

6 Q Now, I have handed you what's been marked as  
7 Plaintiff's Exhibit 109 for identification. Can you identify  
8 that?

9 A I can. This is a photo I took and I believe it was  
10 on the Seventh Lake Mountain Trail on August 18<sup>th</sup>, but I  
11 would probably want to refresh my recollection.

12 Q Could you please do that? And again, I assume you  
13 would use the same document to do so?

14 A Um-hum. Yes. I'm looking at the same document.

15 So, indeed this is a photo I took about a  
16 tenth of a mile before bridge eight of the first section on  
17 the Seventh Lake Mountain Trail.

18 Q Does it fairly and accurately represent the scene  
19 depicted at the time that you took it?

20 A It does.

21 MR. CAFFRY: Your Honor, I would move that Exhibit  
22 109 be admitted into evidence.

23 MS. SIMON: Can I voir dire?

24 THE COURT: Yes.

(Ronald Sutherland - Direct by Mr. Caffry)

1 VOIR DIRE EXAMINATION

2 BY MS. SIMON:

3 Q Is this picture depicting the trail or the forest  
4 alongside the trail?

5 A It's taken from the trail. It depicts the forest  
6 immediately adjacent to the trail.

7 MS. SIMON: Thank you. No objections.

8 THE COURT: 109 is received into evidence.

9 (Plaintiff's Exhibit 109 received in  
10 evidence.)

11 BY MR. CAFFRY:

12 Q Dr. Sutherland, in response to defense counsel's  
13 question, you already said what view it depicted, but what  
14 can you tell us about the vegetation in that picture?

15 A What the picture shows is a dense accumulation of  
16 shade tolerant plants, which is dog hobble, and other similar  
17 understory vegetation, various species of wildflowers were in  
18 the same community type, and then the surrounding trees in  
19 the forest.

20 And, yeah, this photo was typical of  
21 vegetation that I observed while hiking on the community  
22 connector trails that was off the trails, roads.

23 Q Now, Dr. Sutherland, I have just handed you what  
24 has been previously admitted as Exhibit 94, which I believe

(Ronald Sutherland - Direct by Mr. Caffry)

1 you testified you took on the Rock Lake Trail; is that  
2 correct?

3 A Yes, it is.

4 Q Does that also show typical trailside vegetation?

5 A It does.

6 Q And on the hiking trail, is that vegetation present  
7 in the trail corridor itself, as well as in the woods?

8 A Not directly on the, you know, roughly two-foot  
9 wide footpath or the footbed of the trail where people walk  
10 there is mostly exposed soil, but there were some examples of  
11 similar plants trying to grow up in places where they were  
12 protected from being trampled, like between rocks and that  
13 sort of thing.

14 Q What about within, say, approximately three feet on  
15 either side of the foot trail?

16 A Yes. Yeah. You can tell in the photo that the  
17 natural vegetation runs right up to the edge of the narrow  
18 footpath.

19 Q And is the vegetation on the outside of the foot  
20 tread similar in that exhibit to the vegetation shown on  
21 Exhibit 109 on the trailside of the Seventh Lake Mountain  
22 Trail?

23 A It's substantially similar. It's not as dominated  
24 by the dog hobble as the other photo 109 is, but yes, it's

(Ronald Sutherland - Direct by Mr. Caffry)

1 the same sort of understory vegetation that you would expect  
2 in a forest interior environment.

3 Q Is that type of vegetation present within the width  
4 of the Seventh Lake Mountain Trail itself?

5 A Only in an isolated sense. There were the  
6 occasional pockets, particularly in places that looked like  
7 they had not been graded as substantially as other places by  
8 any kind of machinery. There were some isolated pockets of  
9 native understory plants here and there, but to a large  
10 extent the understory vegetation was not present on the  
11 surface of those trails.

12 Q In your opinion, are those differences in  
13 vegetation the result of the construction of the community  
14 connector trail?

15 A Yes.

16 MS. SIMON: Objection. He did not witness the  
17 construction of the trail as far as I can tell in the  
18 testimony.

19 THE COURT: Overruled.

20 BY MR. CAFFRY:

21 Q Would it be fair to say then that off of the Class  
22 II community connector trail there is a variety of native  
23 understory vegetation, but on the trail there is little to no  
24 vegetation of that type, and perhaps only non-native grass in

(Ronald Sutherland - Direct by Mr. Caffry)

1 your professional opinion?

2 MS. SIMON: Objection.

3 THE COURT: Sustained. Let's let him do the  
4 testifying.

5 Q In your opinion, is there a variety of vegetation  
6 on the trailside of the Seventh Lake Mountain Trail?

7 A Yes.

8 Q Is that native understory vegetation or something  
9 else?

10 A It appears to be native.

11 Q And is it also your opinion there is very little of  
12 that on the Seventh Lake Mountain Trail itself?

13 A Yes.

14 Q Do canopy openings in the forest create  
15 opportunities for invasive plant species to colonize --  
16 withdrawn.

17 Do canopy openings along community connector  
18 trails in a forest create opportunities for invasive plant  
19 species to colonize those trails and the areas around them?

20 A They do through two causes of action. To the  
21 extent the canopy is open, that provides the sunshine that  
22 many invasive types of plants utilize. And then they also --  
23 the process of trail construction inevitably leads to soil  
24 disturbance and soil disturbance promotes the germination of

(Ronald Sutherland - Direct by Mr. Caffry)

1 many kinds of seeds, especially including disturbance loving  
2 plants, such as many invasive plant species. Oh, and if I  
3 can continue.

4 Q Please do.

5 A The other -- the third tendency for exotic and  
6 invasive plants to colonize a trail or community connector  
7 trail or small road such as this, would be the actual  
8 intrusion of humans and human equipment on the trail during  
9 the construction process.

10 Seeds have a way of attaching themselves to  
11 those types of things and then making their way down the  
12 trail.

13 Then the fourth is that if any seed mixes are  
14 used to try to prevent erosion on the surface of the trail,  
15 it's not unusual for such seed mixes to be contaminated. You  
16 know, if you look on a bag -- I'm not saying they used grass  
17 seed from a hardware store, but if you look at a bag of grass  
18 seed from a hardware store, it always lists the percentage of  
19 weeds that are contained, the maximum percentage of weeds  
20 contained in the bag. And that's just indicative of how hard  
21 it is to prevent the contamination of non-native and exotic  
22 weed species in any kind of mix that you would use to  
23 revegetate.

24 Q Could invasive plant species such as that, spread

(Ronald Sutherland - Direct by Mr. Caffry)

1 from a trail into the forest near the trail?

2 A Yes, it can. I believe that the published evidence  
3 that I'm aware of suggests invasive plant penetration of up  
4 to about 15 meters on either side of a forest road. It  
5 depends on the extent to which the exotic plant is able to  
6 tolerate the conditions that are in the understory of the  
7 undisturbed forest. There are some invasive plants that can  
8 actually outcompete native plants in the understory.

9 Q And during your inspections of the Class II  
10 community connector trails last August, did you observe any  
11 invasive or non-native plant species?

12 A I did. Principally on the Newcomb to Minerva  
13 Trail, particularly at the start of the trail there was a  
14 fair number of examples of common ragweed, which is, I  
15 believe, to be a native species to North America, but it's  
16 expanding its range due to human disturbance.

17 Q Dr. Sutherland, I've handed you what's been marked  
18 as Plaintiff's 122 for identification. Can you identify  
19 that?

20 A Yes, I can. This is a photo I took on  
21 August 16<sup>th</sup>, 2016, right at the start of the Newcomb to  
22 Minerva community connector trail there, not far from the  
23 Santanoni historic area.

24 Q And does it fairly and accurately represent the

(Ronald Sutherland - Direct by Mr. Caffry)

1 scene depicted at the time that you took it?

2 A It does.

3 MR. CAFFRY: Your Honor, I would move that Exhibit  
4 122 be admitted into evidence.

5 MS. SIMON: Can I ask voir dire?

6 THE COURT: Yes.

7 VOIR DIRE EXAMINATION

8 BY MS. SIMON:

9 Q Could you be more precise where you saw it? Was it  
10 on the Santanoni historic area or is it on the trail?

11 MR. CAFFRY: Objection, your Honor. I objected  
12 before when Miss Simon attempted to ask the witness  
13 which bureaucratic boundary of the State Land Master  
14 Plan it was located in. She asked about the Santanoni  
15 historic area. That's another administrative unit and I  
16 don't think that the name of the administrative unit is  
17 relevant.

18 THE COURT: Did you understand the question?

19 THE WITNESS: I did.

20 THE COURT: All right. Can you differentiate  
21 between the two areas that Miss Simon just described in  
22 her question?

23 THE WITNESS: In this case I can.

24 THE COURT: All right. The objection is overruled.

(Ronald Sutherland - Direct by Mr. Caffry)

1           You may answer the question.

2           A     This was literally right at the start of the trail.  
3     It was on the trail itself.

4           MS. SIMON:   Okay.   Thank you.

5           THE COURT:   Any objection?

6           MS. SIMON:   No.

7           THE COURT:   All right, 122 is received into  
8     evidence.

9                                 (Plaintiff's Exhibit 122 received in  
10                                evidence.)

11   BY MR. CAFFRY:

12           Q     Dr. Sutherland, is ragweed such as is depicted in  
13     Exhibit 122 --

14           MS. SIMON:   Objection.   It hasn't been identified  
15     yet, I don't believe.

16           MR. CAFFRY:   I'm sorry.

17           Q     Could you tell us what Exhibit 122 shows?

18           A     Yes.   This is a photo I took of a large specimen of  
19     common ragweed.

20           Q     Is that species found in a forest interior?

21           A     Not commonly.

22           Q     Why is that?

23           A     This particular species is a classic invasive plant  
24     that is sun loving and grows on the forest edges and

(Ronald Sutherland - Direct by Mr. Caffry)

1     disturbed areas and also agricultural fields.

2           Q     But if it does become established on a location in  
3     a forest, such as on a community connector trail, could it  
4     persist as long as there is still an opening in the canopy?

5           A     Yes, as long as the canopy opening is maintained.

6           Q     To your knowledge, is this the type of invasive  
7     plant that you said could be found as an impurity in a seed  
8     mix in the manner you previously described?

9           A     I think it's an example, yes, of that kind of  
10    plant.

11          Q     If ragweed is native to the State of New York, in  
12    your professional opinion, would it still be considered to be  
13    an invasive species in the forest interior settings where the  
14    Class II community connector trails are located in which you  
15    observed?

16          A     Yes, I would agree. The rather extensive forest  
17    environment of the Adirondacks would have prevented the  
18    colonization of the species like this.

19          Q     Did any of the effects of canopy openings on the  
20    vegetation types on the two trails that you observed, extend  
21    off the trail into the woods?

22          A     That I witnessed personally?

23          Q     Yes.

24          A     I did not attempt to census the vegetation

(Ronald Sutherland - Direct by Mr. Caffry)

1 immediately off the trail to try to discern any changes  
2 between the vegetation immediately along the trail and the  
3 vegetation that was further away from the trails or roads.

4           So, apart from the, you know, the damage to  
5 the immediate environment off the trail that was caused by,  
6 for example, the bench cuts, that was the main difference  
7 that I can attest to.

8           Q     Do the effects of manmade canopy openings in a  
9 forest tend to persist or do they go away with time?

10          A     That's an excellent question. The answer is  
11 complicated. You know, whether or not a canopy opening  
12 persists is a function of whether the causes that caused the  
13 canopy to open in the first place persist.

14           So, for example, are the trees continuing to  
15 be cut down obviously would be one obvious solution.

16           If the canopy opening is narrow enough, then  
17 trees have a tendency to close that gap as they search for  
18 more sunlight and that's a natural process, but that process  
19 can be stymied if, for example, there is continued damage to  
20 the trees that would otherwise be closing that gap. If there  
21 is high mortality of those trees over an ongoing basis, that  
22 could be a factor that would lead to the canopy openings  
23 persisting.

24          Q     And what might cause such mortality?

(Ronald Sutherland - Direct by Mr. Caffry)

1           A     Continued injuries to the trees, for example, and  
2 also my understanding is that, you know, we have talked about  
3 this already, that some of the elements that cause edge  
4 effects like wind, increased wind and increased sunlight in  
5 canopy openings, they do have a tendency to cause ongoing  
6 tree mortality. That tendency is counteracted by the natural  
7 tendency of vegetation to regrow. And so which side wins is  
8 really a function of if the relative degree of impact  
9 continues.

10           Q     And would continued human use of a trail beneath  
11 such a canopy opening have an effect on whether or not the  
12 opening persists?

13           A     Yes, it would.

14           Q     And how would that work?

15           A     Well, for example, a continued mechanized use of  
16 the trail, number one, would, and maintenance of the trail  
17 itself to allow the mechanized use of the trail, would  
18 prevent trees from growing directly on the road surface, the  
19 trail surface itself, which would be the most direct action  
20 of the canopy closure. But then those same processes could  
21 lead to ongoing damage to the trees immediately adjacent to  
22 the trail.

23           Q     And what would cause such ongoing damage during  
24 maintenance?

(Ronald Sutherland - Direct by Mr. Caffry)

1           A     The obvious things, such as maintenance equipment  
2 hitting the trees and either on accident or some attempt to  
3 widen the trail. Or in the case of use of the trail, if  
4 users of the trail happen to hit the trees themselves on a  
5 regular basis or any amount sufficient to injure a tree.

6           Q     And in your professional opinion, how long can  
7 canopy openings such as those you observed on the Class II  
8 trails persist?

9           A     In the right circumstances and with the impacts  
10 that I have just discussed, if they are sufficient, the  
11 canopy openings could persist indefinitely. If impacts are  
12 not sufficient to control the vegetation, then they would  
13 close over a period of years or decades.

14          Q     And can impacts to the ecology of the forest, such  
15 as you have previously described on native vegetation, animal  
16 populations and such, can they persist after the canopy  
17 begins to close or even completely closes?

18          A     Yes, they can. Yeah. A recent review of the  
19 ecological impacts of the forest roads concludes that such  
20 impacts persist long after the use of the roads even stops.  
21 And a lot of the ecological impacts of roads stem from, for  
22 example, the opening in the canopy. So one could infer that  
23 the active canopy closure over a road is not sufficient to  
24 immediately mitigate those effects.

(Ronald Sutherland - Direct by Mr. Caffry)

1                   I think I mentioned yesterday that there are  
2 studies of salamander populations in the Appalachians, which  
3 have broadly similar vegetation to what you see up here.  
4 That salamander populations on old forest roads that were  
5 manmade years ago have yet to recover due to differences in  
6 the microclimate and the available habitat caused by the road  
7 in this case. Those forests presumably had closed canopy at  
8 that point, because the road itself had been abandoned for 80  
9 years.

10           Q       Were the open canopy conditions with grass growing  
11 on the trail of the type that you have just testified about  
12 this morning really common on the Seventh Lake Mountain  
13 Trail?

14                   MS. SIMON: Objection. Asked and answered.

15                   THE COURT: Sustained.

16 BY MR. CAFFRY:

17           Q       If you were to assume hypothetically speaking that  
18 grass like that was found to be growing at over half of all  
19 of a set of randomly selected points spread over the entire  
20 length of the Seventh Lake Mountain Trail, in your  
21 professional opinion, would that create a significant impact  
22 on the ecology of the forest?

23           A       Yes, I think it would.

24           Q       And can you explain why?

(Ronald Sutherland - Direct by Mr. Caffry)

1           A     Well, once you have an extensive feature like an  
2 eight-mile road, for example, like the one that I hiked at  
3 Seventh Lake Mountain Trail, and that feature was covered,  
4 you know, half or more of it was open canopy conditions, such  
5 with grass and other types of open canopy vegetation I should  
6 say, then that would imply a certain degree of connectivity  
7 in the open canopy edge environment, and that would allow,  
8 you know, not only does that represent a fairly substantial  
9 amount of open canopy just in terms of geography alone, but  
10 it also would allow what I mean by connectivity is the flow  
11 of plants and animals that are adapted to that kind of  
12 environment. Once you hit above 50 percent that you have  
13 enough of that kind of habitat that different species are  
14 able to basically flow up and down that trail and colonize  
15 more of the forest interior environment that they would  
16 otherwise not have access to.

17           Q     In your professional opinion, do the adverse  
18 effects of the canopy openings that you have described on the  
19 Class II community connector trails, impair the normal  
20 functioning of the forest ecosystem along those trails?

21           A     Yes, I think they do.

22           Q     And did you observe this happening on both of those  
23 trails?

24           MS. SIMON: Objection. Asked and answered.

(Ronald Sutherland - Direct by Mr. Caffry)

1 THE COURT: Sustained.

2 Q Was the level of impairment on those trails  
3 significant?

4 MS. SIMON: Objection. Asked and answered.

5 THE COURT: I will sustain that as both asked and  
6 answered and leading and, frankly, calling for a  
7 conclusory response.

8 MR. CAFFRY: I will move on.

9 BY MR. CAFFRY:

10 Q Dr. Sutherland, is wildlife part of a forest  
11 ecosystem?

12 A Yes.

13 Q What roles does it play in the forest ecosystem?

14 A Well, the animals in the forest ecosystem are  
15 generally considered to be one of several major components of  
16 the ecosystem. You know, the other ones being the plants and  
17 the decomposers primarily speaking. And so animals do things  
18 like influence the vegetation. They influence nutrient  
19 cycling. They spread seeds. They pollinate flowers. They  
20 control each other's relative population levels, things like  
21 that.

22 Q Would this be true in the Adirondacks?

23 A Yes.

24 Q Can locating new snowmobile trails in an area where

(Ronald Sutherland - Direct by Mr. Caffry)

1 there was not previously a trail create adverse impacts to  
2 wildlife?

3 A I would think so, yes.

4 Q Is there published research on these types of  
5 impacts?

6 A Yes, there is literature about the impacts of  
7 snowmobile trails themselves and also forest roads that  
8 approximate the same conditions.

9 Q Have you reviewed some of this research?

10 A I have.

11 Q And through this research, what kinds of impacts on  
12 wildlife have been found?

13 A So, beginning with the general fact of forest roads  
14 penetrating the forest environment, I think, you know, we  
15 have already covered some of the basics, like impacts on  
16 terrestrial salamanders, where you have reduced salamander  
17 abundance within up to 80 meters of forest roads. Forest  
18 interior birds, where you have reduced abundance of those  
19 species up to 150 meters away from the edge of the road.

20 Some species like moose, which I believe are  
21 trying to make a comeback in New York, the moose have been  
22 found to be sensitive to forest roads and snowmobile trails  
23 up to distances -- I think one study was up to 250 meters.  
24 Another study found moose avoid forest roads specifically out

(Ronald Sutherland - Direct by Mr. Caffry)

1 to a distance of one or more kilometers.

2 Q Does the construction of such roads or equivalent  
3 sized trails allow for increased levels of human access to an  
4 interior forest?

5 A Yes, it does. That is the construction of roads is  
6 recognized globally as one of the leading causes of wildlife  
7 depletion around the world. You know, it's particularly true  
8 in places where hunting is unregulated, but, you know, even  
9 in an environment like the Adirondacks, if you provide  
10 greater access through roads, then that's going to increase,  
11 inevitably increase the local hunting and trapping pressure  
12 along those roads.

13 Q And can these impacts continue after a road or  
14 similar size snowmobile trail has been abandoned?

15 A They can as long as the abandoned road or trail is  
16 still relatively convenient for human access.

17 MR. CAFFRY: Your Honor, I had intended to elicit  
18 some additional testimony from the witness regarding the  
19 impacts of noise from snowmobiles on the wildlife.

20 Yesterday you sustained an objection to a similar  
21 question and so I'm not going to elicit that or attempt  
22 to elicit that from the witness at this point.

23 What we would like to do, your Honor, is offer a  
24 proffer of evidence at some point, perhaps directly to

(Ronald Sutherland - Direct by Mr. Caffry)

1 the stenographer just to preserve the issue for any  
2 potential appeal and so that we can preserve for appeal.

3 THE COURT: Well, your statement is noted. I think  
4 it adequately preserves it for appeal. Is there  
5 something further that you need?

6 You are not going to put all of your evidence on  
7 the record in a non-jury trial to show what you would  
8 have put on the record. But your statement of my ruling  
9 and of what my ruling would be on an attempt to now  
10 proffer evidence with regard to noise and its effect on  
11 wildlife is correct and I stand by it. And you continue  
12 to have your exception, but if there is something more  
13 that you need on the record, you are more than welcome  
14 to do it.

15 MR. CAFFRY: No, I understand. And I think the  
16 fact that you recognize that, it takes care of that  
17 question.

18 THE COURT: Good enough.

19 MR. CAFFRY: Thank you.

20 BY MR. CAFFRY:

21 Q Dr. Sutherland, if a snowmobile trail or forest  
22 road was designated as a multiple use trail that would be  
23 open to other uses in the seasons when there is not snow on  
24 the ground, such as mountain biking or hiking, would that

(Ronald Sutherland - Direct by Mr. Caffry)

1 also potentially impact the wildlife in the manner you have  
2 described?

3 A Yes, I believe so. The continued access during the  
4 summer and spring and fall would lead to ongoing disturbance  
5 of many species of animals that are sensitive to any kind of  
6 human intrusion.

7 Q Is that based upon -- is that opinion based upon  
8 your review of the literature and perhaps your own work and  
9 research?

10 A Yes. It's consistent with my review of the  
11 literature, I think, and there is also the issue that  
12 continued access during the summer can also lead to illegal  
13 activities during the off season months. So even in  
14 well-regulated environments, such as New York, you still have  
15 illegal activities, such as poaching.

16 MS. SIMON: Objection, your Honor. It's  
17 speculative and not in evidence illegal activity.

18 THE COURT: Sustained.

19 BY MR. CAFFRY:

20 Q Will the impacts on wildlife that you have just  
21 described, impair the natural condition of the forest around  
22 the Class II community connector trails?

23 A Yes. I think it's generally accepted that forest  
24 roads impair the natural environment around them.



(Ronald Sutherland - Direct by Mr. Caffry)

1 Q Does such erosion and sedimentation create adverse  
2 impacts to the forests and the streams within them?

3 A Yes, principally the aquatic environment.

4 Q Could you explain that in some more detail?

5 THE COURT: We did go through this already once.

6 MR. CAFFRY: Okay. Yesterday.

7 THE COURT: Yes. Is there something new? I'm  
8 looking back at my notes from yesterday.

9 MR. CAFFRY: All right. Fine.

10 THE COURT: Sensitive to sediment, going down the  
11 hill, getting into the stream. Yes?

12 MR. CAFFRY: Withdrawn. Moving on.

13 THE COURT: Okay.

14 BY MR. CAFFRY:

15 Q I have handed you what has been marked as Exhibits  
16 110 to 112 for identification. Do you have them?

17 A Yes.

18 Q Would you look at Exhibit 110?

19 A Yes.

20 Q Can you identify that?

21 A Yes. This is a photo that I took on August 16<sup>th</sup>  
22 of the Newcomb to Minerva Class II community connector trail  
23 and it's from the section of the trail from Santanoni to  
24 Harris Lake.

(Ronald Sutherland - Direct by Mr. Caffry)

1 Q Does it fairly and accurately represent the scene  
2 depicted at the time that you took it?

3 A It does.

4 MR. CAFFRY: Your Honor, I would move that Exhibit  
5 110 be admitted into evidence.

6 MS. SIMON: May I voir dire?

7 THE COURT: Yes.

8 VOIR DIRE EXAMINATION

9 BY MS. SIMON:

10 Q Could you give a more exact location of where on  
11 that trail that is located?

12 A Yes, if I may refresh my recollection.

13 THE COURT: You may refresh.

14 A Okay. This picture was taken just past the third  
15 bridge that is on that snowmobile trail on your way from  
16 Santanoni to Harris Lake.

17 MS. SIMON: Thank you. No objections.

18 THE COURT: 110 is received into evidence.

19 MR. CAFFRY: Your Honor, would it be best to wait  
20 for -- to go through all three before the stenographer  
21 marks them?

22 THE COURT: That would be fine.

23 BY MR. CAFFRY:

24 Q Can you tell the Court what number 110 shows?

(Ronald Sutherland - Direct by Mr. Caffry)

1           A     Yes.  So we have at the top of the photo there is  
2 Mr. Davis and Miss Greene walking on the trail or road and in  
3 the foreground there is two large ruts that parallel each  
4 other going through on the road surface or trail surface.  
5 And near where Mr. Davis and Miss Greene are blocking, there  
6 is an extensive area of grass that's growing surrounded by  
7 straw.  And the two ruts in the foreground have standing  
8 water in them, as you can see.  And there also appears to be  
9 soil erosion happening on the lower right corner of the photo  
10 where the influence of the ruts appears to be leading to the  
11 soil moving downslope from those ruts.

12           Q     Could you please look at Exhibit 111 for  
13 identification?

14           A     Yes.  This is a photo that I took of the Newcomb to  
15 Minerva Trail on August 16<sup>th</sup>, 2016.

16           Q     What part of the trail was it taken on?

17           A     I would have to refresh my recollection with the  
18 same.

19           Q     Please do.

20           A     With the same material here.

21                         This picture was taken just past the fifth  
22 bridge on your way from Santanoni to Lake Harris.

23           Q     Does it fairly and accurately represent the scene  
24 depicted at the time that you took it?

(Ronald Sutherland - Direct by Mr. Caffry)

1 A It does.

2 MR. CAFFRY: Your Honor, I would move that Exhibit  
3 111 be admitted into evidence.

4 MS. SIMON: No objection.

5 THE COURT: Exhibit 111 is received into evidence.

6 BY MR. CAFFRY:

7 Q Would you look at Exhibit 112 for identification?

8 A Yes. This is a photo that I took on August 18<sup>th</sup>  
9 on the Seventh Lake Mountain Trail.

10 Q Do you know where on the Seventh Lake Mountain  
11 Trail?

12 A It would be better if I refreshed my recollection.

13 Q Please do.

14 A This photo was taken on the Seventh Lake Mountain  
15 Trail roughly half a mile from the start of the trail from  
16 Moose River Road.

17 Q Does it fairly and accurately represent the scene  
18 depicted at the time that you took it?

19 A It does.

20 MR. CAFFRY: Your Honor, I would move that Exhibit  
21 112 be admitted into evidence.

22 MS. SIMON: No objection.

23 THE COURT: Exhibit 112 is received into evidence.

24 You can mark them all now.

(Ronald Sutherland - Direct by Mr. Caffry)

1 (Plaintiff's Exhibits 110, 111 and 112  
2 received in evidence.)

3 BY MR. CAFFRY:

4 Q Dr. Sutherland, can you tell the Court what Exhibit  
5 111 shows?

6 A Yes, I can. It shows the Newcomb to Minerva Trail  
7 as it goes through a forest and crosses over the large dark  
8 area in the center of the photograph. It is a large, roughly  
9 20 foot by 20 foot area of exposed and rather wet organic  
10 soil.

11 THE COURT: 111 is Newcomb to Minerva?

12 THE WITNESS: It is.

13 THE COURT: Thank you.

14 Q And what else is in that picture?

15 A So, Miss Greene is standing there on the left side  
16 of the photo for scale and there is a large board that  
17 somebody has placed to allow for human traffic around this.

18 MS. SIMON: Objection.

19 THE COURT: Sustained.

20 A There is large board. And there also -- well, you  
21 can see in the center on the lower right corner of the  
22 exposed dirt area in the middle of the photograph there is an  
23 exposed piece of thick black plastic.

24 Q And --

(Ronald Sutherland - Direct by Mr. Caffry)

1           A       There is also some evidence on the downstream side,  
2 which in this photo is the right side of the black swampy  
3 area in the middle of the photograph; there is some evidence  
4 of black organic soil draining off of that exposed mud.

5           Q       Where does it appear to be draining to?

6           A       Down the hill and there is no obvious stream in  
7 this picture, but one can infer from the topography that as  
8 you would proceed downhill, eventually there will be a  
9 stream.

10           MS. SIMON: Objection. Speculation.

11           THE COURT: Overruled.

12           Q       It's going off of the trail?

13           A       Yes.

14           Q       Would you look at Exhibit 112 and tell the Court  
15 what that shows?

16           A       Yes. Here you have a photo from the Seventh Lake  
17 Mountain Trail that shows Mr. Davis, Mr. Amadon, and Mr.  
18 Bauer hiking along. And the most prominent feature in the  
19 photograph is the large body of water, roughly eight feet by  
20 six feet, that's in the lower right corner of the photograph  
21 and it's surrounded by exposed organic soil. And there is  
22 another slightly smaller area of standing water on the same  
23 road or trail that Mr. Amadon is taking a photograph of.

24           Q       Where is that located in relation to the first one?

(Ronald Sutherland - Direct by Mr. Caffry)

1           A     It's roughly 10 or 15 feet down the trail and  
2 directly above it in the photograph.

3           Q     And were this type of muddy conditions like those  
4 you have just described in those three exhibits common on the  
5 two Class II trails that you observed?

6           A     Relatively common, yes.

7           Q     Based on your experience and training, what can  
8 cause conditions like that in a road or trail?

9           A     Two things I would say would cause it. One would  
10 be when the trail road was constructed, if there was natural  
11 variation in the topography and the construction of the trail  
12 led to essentially the damming of areas that would otherwise  
13 have drained due to altering the fine scale topography of the  
14 environment along the roadbed. If that is sufficient to  
15 create areas to collect water, that can lead to large puddles  
16 that you see here.

17                     And then the other source of creation of this  
18 type of feature that I have observed around the southeast  
19 where I spend most of time, is human use, particularly motor  
20 vehicle use. If you have an area of wet soil that is  
21 traversed by vehicles, then that often leads to the  
22 displacement of that soil as the vehicle travels often times  
23 gets stuck.

24                     And then those problems tend to get worse over

(Ronald Sutherland - Direct by Mr. Caffry)

1 time. So it starts as a small hole. It becomes a big hole  
2 because people try to drive around it and people spin their  
3 tires, for example, when they get stuck.

4 MS. SIMON: Objection, your Honor, to this line of  
5 answer. I'm going to renew my objection from yesterday  
6 that this witness is not certified, nor does he have any  
7 training and experience in road or trail construction to  
8 opine on causes of what he has seen on these trails and  
9 they are conclusory in nature.

10 THE COURT: The objection is overruled. I will  
11 take the evidence for what it is worth.

12 Go ahead.

13 BY MR. CAFFRY:

14 Q Based upon your experience and training, could  
15 summer use of a multi-use snowmobile trail by hikers and  
16 mountain bikers contribute to this condition on a trail?

17 A Yes, it could. As you can see in Exhibit 112, we  
18 were forced to walk around the outside of the muddy, swampy  
19 areas, and that has a tendency under wetter conditions than  
20 what we observed in this photo, but as I have seen in various  
21 other trails and road environments, when people are forced to  
22 go around features like this, that has a natural tendency to  
23 enlarge them and maintain them.

24 Q And does that then contribute to the erosion and

(Ronald Sutherland - Direct by Mr. Caffry)

1 sedimentation of such areas?

2 A It does.

3 Q Dr. Sutherland, I have handed you what's been  
4 marked as Plaintiff's Exhibits 113 and 114 for  
5 identification. Can you look at number 113?

6 A Yes.

7 Q Can you identify that?

8 A This is a photo I took of the portion of the  
9 Newcomb to Minerva Class II community connector snowmobile  
10 trail at the end of the Santanoni to Lake Harris segment of  
11 that trail as, literally as the community connector trail  
12 comes down the hill and joins the road that goes around Lake  
13 Harris.

14 Q What date did you take that on?

15 A August 16<sup>th</sup>, 2016.

16 Q Does it fairly and accurately represent the scene  
17 depicted at the time that you took it?

18 A It does.

19 MR. CAFFRY: Your Honor, I move that Exhibit 113 be  
20 admitted into evidence.

21 MS. SIMON: No objection.

22 THE COURT: 113 is received into evidence.

23 BY MR. CAFFRY:

24 Q Could you look at number 114?

(Ronald Sutherland - Direct by Mr. Caffry)

1 A Yes.

2 Q Can you identify that?

3 A This is a photo I took on a portion of the Newcomb  
4 to Minerva Trail between Santanoni and Lake Harris.

5 Q And on what date?

6 A August 16<sup>th</sup>.

7 Q Can you be more specific as to where on that trail  
8 this photograph was taken?

9 A Yes, but I would want to refresh my recollection.

10 Q Please do.

11 A So this photo was taken at the second bridge from  
12 Santanoni heading to Harris Lake.

13 Q And does it fairly and accurately represent the  
14 scene depicted at the time that you took it?

15 A It does.

16 MR. CAFFRY: Your Honor, I would move that Exhibit  
17 114 be admitted.

18 MS. SIMON: No objection.

19 THE COURT: Exhibit 114 is received into evidence.

20 (Plaintiff's Exhibits 113 and 114  
21 received in evidence.)

22 BY MR. CAFFRY:

23 Q Going back to number 113, can you tell the Court  
24 what that shows?

(Ronald Sutherland - Direct by Mr. Caffry)

1           A       Yes. This is given the end of the Class II  
2 community connector trail as it comes down a steep hill and  
3 adjoins the gravel road that you can see in the immediate  
4 foreground that proceeds to the Harris Lake Campground. And  
5 the snowmobile trail or the road appears to expand in width  
6 as it proceeds down the hill, from sort of the normal width  
7 of those trails, which was in between eight and ten feet in  
8 the center of the photo, to roughly twice that width where it  
9 joins the road.

10                       And there is one track from a mountain bike  
11 that we identified going down the left side of the snowmobile  
12 trail that you can see, that thin dark line in the photo.

13                       And then on the -- well, the trail surface  
14 itself is covered with straw primarily, a few pockets of  
15 grass, and on the center right of the photo there is a bench  
16 cut, one to two feet in height, where you can see exposed  
17 black soil.

18                       MS. SIMON: Objection, your Honor, as to  
19 identifying the rut, referred to as a mountain bike rut.  
20 It's not in evidence.

21                       THE COURT: The objection is sustained absent  
22 further evidence from Dr. Sutherland with regard to his  
23 identification of the mountain bike.

24

(Ronald Sutherland - Direct by Mr. Caffry)

1 BY MR. CAFFRY:

2 Q Dr. Sutherland, when you were at this location  
3 yourself at approximately the time you took the photograph,  
4 that is Exhibit 113, did you personally observe any mountain  
5 bike tracks?

6 A I did.

7 Q And is that a mountain bike track that you  
8 testified appears in the picture?

9 A It is.

10 Q And is this location near any water bodies?

11 THE COURT: Any what?

12 MR. CAFFRY: Water bodies.

13 THE COURT: Thank you.

14 A Yes, it is. As I said, the gravel road in the  
15 foreground of the picture is one that immediately proceeds to  
16 Harris Lake or Lake Harris.

17 Q And did you observe the topography between this  
18 trail and the lake?

19 A I did, but at this point I probably cannot describe  
20 it in great detail.

21 Q Is it generally downhill, uphill? Do you remember  
22 that?

23 MS. SIMON: Objection. Asked and answered.

24 THE COURT: Overruled. You may answer if you can,

(Ronald Sutherland - Direct by Mr. Caffry)

1 Doctor.

2 A It's downhill.

3 Q So, would it appear that water and sediment running  
4 off from the location depicted in the picture will drain into  
5 Lake Harris?

6 A Yes, eventually.

7 Q Did you observe this or does the picture, Exhibit  
8 113, show any evidence of erosion occurring in that location?

9 A It does, particularly on the left and right sides  
10 of the trail or road. Again, we already talked about the  
11 exposed soil on the center right of the photograph. And  
12 there is also an area of exposed soil on the bottom left of  
13 the photograph where the road, where the snowmobile trail  
14 hits the road. And as a matter of principle, when you have a  
15 hillside that's this steep and you have a trail or road  
16 surface that is made of dirt, then erosion is inevitable.

17 THE COURT: The question, Doctor, was whether there  
18 was evidence of erosion.

19 THE WITNESS: Right.

20 THE COURT: Which I take to mean active occurring  
21 erosion in the picture.

22 THE WITNESS: Um-hum.

23 THE COURT: Is there some that you identified?

24 THE WITNESS: Yes. The two things I mentioned

(Ronald Sutherland - Direct by Mr. Caffry)

1 first.

2 THE COURT: The one on the right, is that what you  
3 identified as the bench cut already?

4 THE WITNESS: Yes.

5 THE COURT: So there is evidence of erosion in  
6 addition to the bench cut?

7 THE WITNESS: Yes.

8 THE COURT: What's that?

9 THE WITNESS: The exposed soil. And with exposed  
10 soil is actually coming down from the bench cut into  
11 the, mixing in with the straw.

12 THE COURT: Okay.

13 Go ahead.

14 BY MR. CAFFRY:

15 Q That's on the right side of the photograph?

16 A Yes.

17 Q Did you observe any active erosion on the other  
18 side of the trail depicted in the photograph?

19 A Yes, I did. The area of exposed soil on that lower  
20 left side of the photograph appeared to me at the time to be  
21 an area of active erosion.

22 Q Given the steepness of the snowmobile trail or road  
23 in this location that you have testified to, do you have an  
24 opinion as to whether or not there will be further erosion at

(Ronald Sutherland - Direct by Mr. Caffry)

1 this location?

2 A Yes, I do. I think based on my experience with  
3 other forest roads in hilly or mountainous terrain, that this  
4 particular segment of the trail will continue to experience  
5 loss of soil fairly quickly.

6 Q Turning now to Exhibit 114, can you describe what  
7 that photograph shows?

8 A Yeah. This is a closer picture I took showing one  
9 of the bridges over the Newcomb to Minerva Trail between  
10 Santanoni and Harris Lake. The bridge itself is on the left  
11 side of the photograph and there is a creek that the bridge  
12 goes over. That's on the bottom portion of the photograph.  
13 There is a series of rocks leading from the top end of the  
14 bridge that's shown in the photograph, down into the creek.  
15 And then there is rocks in the creek and there is a large  
16 amount of straw applied on the road itself, on the trail  
17 itself, which extends through the top left of the photograph.  
18 And then there is an area of exposed black soil directly  
19 above the top end of the bridge on the upper left of the  
20 photograph. And there is also evidence of soil eroding  
21 around the rocks on the, above the creek. And then also  
22 there is an area of exposed sediment directly adjacent to the  
23 edge of the creek between the rocks and the lower middle  
24 section of the photograph that I infer as being the result of

(Ronald Sutherland - Direct by Mr. Caffry)

1 erosion of the same soil between those rocks.

2 Q And did you observe that sediment in the creek  
3 itself?

4 A No, I did not.

5 Q Is it reasonable to assume given the laws of  
6 gravity, that some of it might wind up there?

7 MS. SIMON: Objection.

8 THE COURT: Sustained.

9 BY MR. CAFFRY:

10 Q I would like to ask you to look at Exhibit 101,  
11 which was previously admitted into evidence. Do you recall  
12 that photograph?

13 A Yes, I do.

14 Q Do you recall testifying about that depicting a  
15 bench cut and showing how erosion was occurring in that  
16 location?

17 A Yes.

18 Q Are the erosion conditions that you just testified  
19 about as shown in Exhibits 101, 113, and 114, common on the  
20 Newcomb to Minerva Trail at the time that you observed it?

21 THE COURT: What were those numbers again, 101,  
22 113, and 114?

23 MR. CAFFRY: Correct, your Honor.

24 THE COURT: Did I miss one or that is it?

(Ronald Sutherland - Direct by Mr. Caffry)

1 MR. CAFFRY: That's it.

2 THE COURT: Okay. Thanks.

3 A Yes, they were.

4 BY MR. CAFFRY:

5 Q Dr. Sutherland, I have handed you what's been  
6 marked as Plaintiff's Exhibits 115 to 119 for identification.  
7 Could you please look at number 115 and tell us if you can  
8 identify it?

9 A Yes. Exhibit 115 is a photograph I took on the  
10 Seventh Lake Mountain Trail on August 18<sup>th</sup>.

11 Q Can you tell us where on the Seventh Lake Mountain  
12 Trail?

13 A If I refresh my recollection.

14 Q Please do so.

15 A This photograph was taken a tenth of a mile past  
16 the first bridge in the first section of that trail on the  
17 way from Moose River Road.

18 Q Does it fairly and accurately represent the scene  
19 depicted at the time when you took it?

20 A It does.

21 MR. CAFFRY: Your Honor, I move that number 115 be  
22 admitted.

23 MS. SIMON: No objection.

24 THE COURT: 115 is received into evidence.

(Ronald Sutherland - Direct by Mr. Caffry)

1 BY MR. CAFFRY:

2 Q Could you please look at Exhibit 116?

3 A Yes.

4 Q And identify it, please?

5 A Sure. This is a photograph that I took on  
6 August 18<sup>th</sup>, 2016, of the Seventh Lake Mountain community  
7 connector trail, and it is at the junction of said community  
8 connector trail with a different snowmobile trail that heads  
9 directly into Seventh Lake. So it's between the first and  
10 second sections of the Seventh Lake Mountain Trail.

11 MS. SIMON: Excuse me. Could I have that read  
12 back?

13 THE COURT: Sure.

14 (Whereupon the Reporter read back the  
15 answer.)

16 MS. SIMON: May I voir dire?

17 THE COURT: Yes.

18 Did you proffer 116?

19 MR. CAFFRY: I have not.

20 THE COURT: Go ahead, Mr. Caffry.

21 BY MR. CAFFRY:

22 Q Dr. Sutherland, does Exhibit 116 fairly and  
23 accurately represent the scene depicted at the time that you  
24 took it?

(Ronald Sutherland - Direct by Mr. Caffry)

1 A It does.

2 MR. CAFFRY: Your Honor, I would move number 116 be  
3 admitted into evidence.

4 THE COURT: Do you want to voir dire?

5 MS. SIMON: Yes, please.

6 THE COURT: Go ahead.

7 VOIR DIRE EXAMINATION

8 BY MS. SIMON:

9 Q What is the -- could you please identify what other  
10 snowmobile trail you testified this joins?

11 A My understanding is it's called the Seventh Lake  
12 Trail and that is as much as I know. It's marked, I believe,  
13 on maps of the Seventh Lake Mountain Trail as the smallest  
14 spur trail that heads immediately to the adjacent road.

15 Q A spur trail that runs from the Seventh Lake boat  
16 launch to the trail?

17 A I did not hike that other portion of the road so I  
18 do not know.

19 Q Is this on segment one or segment two?

20 A As I said, it's right where segment one joins  
21 segment two.

22 MS. SIMON: Thank you. No objection.

23 THE COURT: Exhibit 116 is received into evidence.

24

(Ronald Sutherland - Direct by Mr. Caffry)

1 BY MR. CAFFRY:

2 Q Could you please look at Exhibit 117 and identify  
3 it?

4 A Yes. This is a photograph I took on the Seventh  
5 Lake Mountain Trail on August 18<sup>th</sup> of 2016.

6 Q Where on the trail?

7 A I would have to refresh my recollection.

8 Q Please do so.

9 A Okay. This photograph was taken approximately  
10 one-sixth of a mile or about ten minutes at a slow hiking  
11 pace from the first bridge on the Seventh Lake Mountain  
12 Trail.

13 Q Does it fairly and accurately represent the scene  
14 depicted at the time that you took it?

15 A It does.

16 MR. CAFFRY: Your Honor, I would move that Exhibit  
17 117 be admitted into evidence.

18 MS. SIMON: May I voir dire?

19 THE COURT: You may.

20 VOIR DIRE EXAMINATION

21 BY MS. SIMON:

22 Q Dr. Sutherland, is this the first bridge coming  
23 from Moose River Road, which you had testified to before?

24 A Yes.

(Ronald Sutherland - Direct by Mr. Caffry)

1 MS. SIMON: Okay. Thank you. No objection.

2 THE COURT: Exhibit 117 is received into evidence.

3 BY MR. CAFFRY:

4 Q Please look at Exhibit 118 and identify it.

5 A This is another photograph of a portion of the  
6 Seventh Lake Mountain Trail that I took on August 18<sup>th</sup>,  
7 2016.

8 Q Can you tell us where on the trail it was taken?

9 A If I could refresh my recollection.

10 Q Please do.

11 A This photograph was taken roughly a tenth of a mile  
12 past bridge number ten on the first section of the Seventh  
13 Lake Mountain Trail.

14 Q Does it fairly and accurately represent the scene  
15 depicted at the time that you took it?

16 A It does.

17 MR. CAFFRY: Your Honor, I would move that Exhibit  
18 118 be admitted into evidence.

19 MS. SIMON: May I voir dire, please?

20 THE COURT: Yes.

21 VOIR DIRE EXAMINATION

22 BY MS. SIMON:

23 Q Can you identify the segment, segment one or  
24 segment two, where bridge number ten is?

(Ronald Sutherland - Direct by Mr. Caffry)

1 A Segment one.

2 Q It's segment one. Okay. Thank you.

3 THE COURT: No objection?

4 MS. SIMON: Sorry. No objection.

5 THE COURT: All right. Exhibit 118 is received  
6 into evidence.

7 BY MR. CAFFRY:

8 Q Could you please look at Exhibit 119 and identify  
9 it?

10 A Yes. This is a photograph I took on the Seventh  
11 Lake Mountain Trail on August 18<sup>th</sup>, 2016.

12 Q Where on the trail was it taken?

13 A I would prefer to refresh my recollection.

14 Q Please do.

15 A So this photograph shows bridge four on the first  
16 section of the Seventh Lake Mountain Trail.

17 Q Does it fairly and accurately represent the scene  
18 depicted at the time that you took it?

19 A It does.

20 MR. CAFFRY: Your Honor, I would move that Exhibit  
21 119 be admitted into evidence.

22 MS. SIMON: One more voir dire, please?

23 THE COURT: Yes. Go ahead.

24 VOIR DIRE EXAMINATION

(Ronald Sutherland - Direct by Mr. Caffry)

1 BY MS. SIMON:

2 Q Could you please identify the segment of the trail?

3 A Yes. That would be the first segment as well.

4 MS. SIMON: Thank you.

5 THE COURT: No objection?

6 MS. SIMON: No objection.

7 THE COURT: Exhibit 119 is received into evidence.

8 Is that it for the series?

9 MR. CAFFRY: Yes.

10 THE COURT: Let's get the photos marked. So 115  
11 through 119.

12 (Plaintiff's Exhibits 115 through 119  
13 received in evidence.)

14 BY MR. CAFFRY:

15 Q Dr. Sutherland, could you look back at Exhibit 115?

16 A Yes.

17 Q Can you tell the Court what it shows?

18 A Well, in the top of the photograph you have Mr.  
19 Amadon and Mr. Bauer. And in the lower right corner of the  
20 photograph there is an area of moving standing water. There  
21 is ripples on the surface of the water. And underneath that  
22 water and adjacent to that water is a fairly substantial  
23 chunk of exposed rock, brownish rock.

24 And then moving up the trail this actually

(Ronald Sutherland - Direct by Mr. Caffry)

1 shows -- it's difficult to show the steep terrain in a static  
2 photograph, but this was a very steep portion of the trail  
3 and there is a piece of grass in the center of the trail or  
4 road and what appeared to be two furrows or ruts on either  
5 side of that piece of grass.

6           And on the right side, the right version of,  
7 or, yeah, the right hand furrow or rut in this photograph,  
8 there is a substantial area of exposed rocks heading down  
9 towards the pool of water in the bottom right of the  
10 photograph.

11           And between those small rocks you can also see  
12 more standing water and some evidence of water flowing down  
13 along those rocks into the standing pool.

14           Q     And do you see any evidence of erosion and  
15 sedimentation in this picture?

16           A     I do. There is a substantial amount of exposed  
17 soil on both of the ruts heading down through this photograph  
18 and then there is also some areas of sediment in, scattered  
19 in the pool itself in the bottom of the photograph.

20           Q     Can you tell from the photograph or from having  
21 been there yourself, where there is exposed rock, what the  
22 cause of those rocks being exposed was?

23           MS. SIMON: Objection, speculation. Calls for  
24 speculation.

(Ronald Sutherland - Direct by Mr. Caffry)

1 THE COURT: The objection is sustained absent the  
2 demonstration of some further basis for the opinion  
3 prior to asking that final question, Mr. Caffry.

4 BY MR. CAFFRY:

5 Q Did you observe at that location any evidence that  
6 erosion was actively occurring?

7 MS. SIMON: Objection. Asked and answered.

8 THE COURT: Overruled.

9 Go ahead.

10 A Yes. I think it's safe to conclude that the fact  
11 that there is water flowing down in the rocky areas along the  
12 right hand rut in this photograph and the fact that there is  
13 exposed soil on both portions of those or both of those ruts  
14 heading through the photograph, there was clearly erosion  
15 happening, the loss of soil heading down the hill.

16 Q And that would be as a result of the flowing water?

17 A The flowing water flowing over exposed soil.

18 Q Approximately how long in a linear sense is the  
19 area of exposed soil in the ruts that you described?

20 A It appears to be at least 20 feet in length.

21 Q What are you basing that opinion on?

22 A Visual inspection of the size of the rocks and the  
23 plants and also the height of Mr. Bauer.

24 Q And he's one of the individuals in the picture?

(Ronald Sutherland - Direct by Mr. Caffry)

1 A Yes.

2 Q Do you know approximately how tall Mr. Bauer is?

3 A He's at least six feet.

4 Q Have you spent some time with Mr. Bauer in the last  
5 few days?

6 A Yes.

7 MS. SIMON: Objection.

8 THE COURT: Overruled.

9 Q How tall are you, yourself?

10 A Six-foot three.

11 Q And is Mr. Bauer approximately the same height as  
12 you?

13 A Yes.

14 Q Would you please look at Exhibit 116?

15 A Yup.

16 Q Can you tell the Court what it shows?

17 A This picture shows the Seventh Lake Mountain  
18 community trail heading up directly through the center of the  
19 photograph. And in the exact center of the photograph there  
20 is a fairly steep hill that the trail progresses up as it  
21 gets further away from the camera. And there is a large --  
22 well, there is a sign on the tree in the left center of the  
23 photograph that says snowmobile trail and it points in the  
24 direction that the trail proceeds up the hill. And then

(Ronald Sutherland - Direct by Mr. Caffry)

1 there is forest surrounding that trail. And then on the  
2 trail itself as it proceeds up the hill there are, again, two  
3 parallel ruts in the surface of the trail that are exposed  
4 dirt and there is one area of grass in the center of that  
5 portion of the trail.

6 Q And when you were there and/or as depicted in the  
7 photograph, is there any evidence of erosion occurring on the  
8 hill that you have just described where the trail goes up the  
9 hill?

10 A Yes. There was some evidence of continued loss of  
11 soil down those two ruts down the surface of that steep hill.

12 Q Looking at Exhibit 117, please.

13 A Um-hum. Yes.

14 Q Can you tell the Court what that shows?

15 A This photograph shows Mr. Bauer standing above --  
16 setting on the Seventh Lake community connector trail and  
17 he's standing above a rather impressively steep section of  
18 the trail that is marked by a large planer surface of exposed  
19 rock that I think is bedrock in this setting. And then there  
20 is heavy concentrations of grass and ferns on both sides, all  
21 three, the left, right, and in the foreground of the  
22 photograph. And there is also a recently fallen tree on the  
23 upper left of the photograph where the root bed of that tree  
24 is exposed.

(Ronald Sutherland - Direct by Mr. Caffry)

1 Q Could you tell, when you refer to the root bed,  
2 which feature in the photograph is the root bed of the tree?

3 A It's the large dark area in the upper left of the  
4 photograph where you can see the trunk of the tree that hits  
5 the edge, upper left edge of the tree, or the photograph.  
6 And then the roots are visible along this mound of material  
7 that appears in the upper left of the photograph and that is  
8 the root mound.

9 Q What's located immediately below and to the right  
10 of that root mound?

11 A There is a series of rocks and an extension of the  
12 same bedrock feature that you see in the middle of the  
13 photograph.

14 Q And you referred to exposed bedrock in this  
15 picture. Do you know approximately how high that area of  
16 bedrock is?

17 A My recollection was that it was approximately  
18 six feet tall, possibly a little more.

19 Q Does Mr. Bauer's presence in the photo tell you  
20 anything about the height of the bedrock?

21 A It does. He's a little further back behind the  
22 bedrock in the front of the photograph, which is why it's not  
23 quite as tall as it might appear, but I think it was at least  
24 as tall as Mr. Bauer.

(Ronald Sutherland - Direct by Mr. Caffry)

1 Q And based upon your observation of this scene and  
2 your professional training and experience, is the presence of  
3 exposed bedrock like this in the middle of the trail a  
4 natural condition or is it somehow related to the trail?

5 A Clearly the rock would have been there regardless  
6 of the presence of the trail, but the rock would have been  
7 covered. Under most normal conditions the rock would have  
8 been covered with soil and vegetation, though not this  
9 vegetation, the grass, heavy grass and ferns, indicating an  
10 open canopy situation.

11 Typically you would only see exposed bedrock  
12 with this kind of slope in a situation where you would have  
13 running water, like a waterfall, for example. And I think  
14 there is -- so my professional opinion is that there was a  
15 good chance that the rock was covered by just a thin layer of  
16 soil.

17 You can infer a thin layer of soil by the root  
18 mound that has been peeled off of the upper left side of the  
19 photograph. There was rock underneath, directly underneath  
20 that tree. And the root mound in this case was a foot or  
21 less in depth in its original condition rising up from the  
22 bedrock. So it wouldn't have been very thick, but I think  
23 it's safe to infer that there would have been some covering  
24 of soil and vegetation, natural vegetation over this surface.

(Ronald Sutherland - Direct by Mr. Caffry)

1 Q You say there would have been. Do you have an  
2 opinion as to what would have caused the change?

3 MS. SIMON: Objection, your Honor. This all calls  
4 for speculation.

5 THE COURT: The objection is sustained.

6 Dr. Sutherland testified to there being a good  
7 chance, in his opinion, that there was a degree of soil,  
8 open bedrock that's depicted in 117.

9 If he can't testify to a reasonable degree of  
10 scientific certainty in his opinion based on his  
11 experience and the evidence that there was a layer of  
12 soil over the bedrock as he's described, then I'm going  
13 to strike the testimony.

14 BY MR. CAFFRY:

15 Q Dr. Sutherland, do you have an opinion to a  
16 reasonable degree of scientific certainty as to whether it is  
17 likely that this bedrock was previously covered with soil?

18 A One can say with certainty that the upper left  
19 portion of the bedrock was covered in a thin layer of soil.  
20 As you can tell, that's what's been peeled back from when the  
21 tree fell over.

22 As to the rest of the bedrock, again, I think  
23 I can only express in terms of probability, not with  
24 certainty, whether it was covered in soil.

(Ronald Sutherland - Direct by Mr. Caffry)

1 Q And moving on to Exhibit 118, can you tell the  
2 Court what that shows?

3 A So this is the portion of the Seventh Lake Mountain  
4 connector trail as it proceeds downhill. In this case you  
5 are looking down the hill as you look down the trail or road  
6 and it's surrounded on both sides by fairly dense forest.

7 There is standing water, as far as you can  
8 see, down this particular road or trail, and it's marked  
9 by -- the roadbed itself is marked by numerous rocks and not  
10 much vegetation and some amounts of exposed soil.

11 Q Do you observe any erosion occurring in that  
12 location?

13 A Yes, and, you know, when we were there looking at  
14 this, it was obvious to me at the time that this was an  
15 example of the adjacent stream. The picture doesn't show  
16 this, but there is a stream adjacent to the photograph on the  
17 left. And a small portion of that stream had begun to flow  
18 down this road instead of flowing the stream itself. And in  
19 the literature that's called stream piracy when it captures  
20 something else, like an erodable feature like the exposed  
21 surface of a road.

22 Q It's your opinion that that's what's occurring as  
23 shown in this photograph?

24 A Yes.

(Ronald Sutherland - Direct by Mr. Caffry)

1 Q And what is the longer term effect of stream piracy  
2 on an exposed surface such as that depicted in Exhibit 118?

3 A Based on my experience and absent a substantial  
4 amount of bedrock, which is not evident in this particular  
5 photograph, the inevitable result of stream piracy flowing  
6 down a road that's primarily composed of dirt, will be  
7 significant erosion along that road leading to an actual  
8 gully, fairly deep gully down the center of the road, unless  
9 it's eventually corrected.

10 Q Does the picture show or do you recall the distance  
11 over which this stream piracy was occurring in this location?

12 A It was at least one hundred feet in my recollection  
13 and as you can tell in the photograph.

14 Q Do you recall where the -- was there a point at  
15 which the stream departed the road or trail surface?

16 A I think there was, yes.

17 Q Do you recall where it went from there?

18 A Downhill.

19 Q Off the trail surface. You don't know more than  
20 that?

21 A I don't recall more than that at this time, but  
22 streams do go down, always go down.

23 Q Would you please look at Exhibit 119?

24 A Uh-huh.

(Ronald Sutherland - Direct by Mr. Caffry)

1 Q Can you please tell the Court what this photograph  
2 shows?

3 A This photograph shows Mr. Amadon on the left, Mr.  
4 Bauer on the right standing on one of the bridges on the  
5 Seventh Lake Mountain Trail that we already described. And  
6 it's a relatively short bridge compared to some of the other  
7 ones we saw in terms of its length down in the direction of  
8 the road traveling, but it's the same width. It's about  
9 12 feet wide. And the most apparent feature in the center of  
10 the photograph is a ramp of soil that's been placed leading  
11 up to the edge of the bridge and that soil is mostly exposed,  
12 a few small rocks.

13 Q When you were there or in the photograph, did you  
14 observe any signs of erosion occurring at that location?

15 A Yes. In this photograph it's particularly obvious.  
16 You can see pot marks of places where there was soil in the  
17 past and that soil has been lost as water has flowed down  
18 that ramp of soil.

19 Q And how far away is that from the stream that the  
20 bridge crosses?

21 A Less than ten feet.

22 Q Given the conditions depicted in the picture, is  
23 that process likely to continue to occur?

24 A Yes, it is. Absent trees being allowed to grow in

(Ronald Sutherland - Direct by Mr. Caffry)

1 that ramp of soil, essentially the entire mound of soil  
2 that's been pushed up there will eventually erode into the  
3 creek.

4 Q How many bridges, approximately, did you observe on  
5 the -- withdrawn.

6 How many bridges of similar construction did  
7 you observe on the Seventh Lake Mountain Trail and the  
8 Newcomb to Minerva Trail?

9 A My recollection is at least 20.

10 Q Was this type of construction with soil ramped up  
11 to the edge of -- withdrawn.

12 You testified that the soil was ramped up.  
13 Could you tell why that was done?

14 MS. SIMON: Objection. Calls for speculation.

15 THE COURT: Sustained.

16 Q Is the surface of the bridge at the same level as  
17 the surface of the trail approaching it or leaving it?

18 A No. As general matter the bridges were about  
19 roughly a foot or a little bit more over the surface of the  
20 road.

21 Q Was there soil ramped up such that it brought the  
22 surface of the road up to the level of the bridge?

23 A Yes.

24 Q Was this type of bridge construction with the soil

(Ronald Sutherland - Direct by Mr. Caffry)

1 ramps typical of the 20 or so bridges that you observed?

2 A It was common, yes. There was some other bridges  
3 that had wooden ramps, but this was also a common feature.

4 Q And were the erosion and sedimentation conditions  
5 that you just testified about in the last, I believe, five  
6 exhibits, 115 through 119, were they common on the Seventh  
7 Lake Mountain Trail?

8 A They were.

9 Q On wood roads and trails do erosions and  
10 sedimentation conditions like those that you have now  
11 testified about on the Seventh Lake Mountain Trail, do they  
12 tend to get better over time or do they get worse?

13 MS. SIMON: Objection. Calls for speculation.

14 THE COURT: Sustained.

15 Q In your professional opinion, do you have a  
16 professional opinion as to a reasonable degree of scientific  
17 certainty, whether over time on wood roads and trails,  
18 erosion and sedimentation conditions, such as you have just  
19 testified about on the Seventh Lake Mountain Trail, do they  
20 improve over time or do they get worse?

21 A My professional opinion, based on my years of  
22 experience, is that such conditions continue to get worse  
23 unless some action is taken to ameliorate them or unless  
24 vegetation is allowed to regrow immediately on the exposed

(Ronald Sutherland - Direct by Mr. Caffry)

1 soil.

2 Q Dr. Sutherland --

3 MR. CAFFRY: Your Honor, these two exhibits which I  
4 have handed the witness and he's about to testify are  
5 the last exhibits we are going to have him testify  
6 about.

7 We will have a few more questions after that on a  
8 different topic, but there won't be more exhibits.

9 THE COURT: Thank you for the update.

10 BY MR. CAFFRY:

11 Q Dr. Sutherland, as part of your research and  
12 professional work, have you studied old growth forests?

13 A I have.

14 Q In your professional opinion, what is an old growth  
15 forest?

16 A When it comes to definitions I have a preference,  
17 personal preference for simple and pragmatic definitions. So  
18 my personal definition of old growth forest is indeed a  
19 forest that has not been subject to stand replacement  
20 disturbance for a relatively long period of time. So the  
21 trees are relatively old compared to conditions that are  
22 present elsewhere.

23 THE COURT: That has not been subject to what for a  
24 relatively long period of time?

(Ronald Sutherland - Direct by Mr. Caffry)

1 THE WITNESS: Disturbance. Stand replacing  
2 disturbance where the trees have all been replaced by  
3 some other disaster.

4 MS. SIMON: Could I just have that read back again?  
5 I missed a word or something there.

6 THE COURT: Sure.

7 (Whereupon the Reporter read back the  
8 answer.)

9 BY MR. CAFFRY:

10 Q Dr. Sutherland, could you clarify what you mean by  
11 stand replacement disturbance?

12 A Yes. Stand replacement disturbance is disturbance  
13 that affects the -- that removes in some way or kills in some  
14 way the majority of the trees in the stand all at once.

15 Q What is a stand of trees?

16 A Just a collection of trees on the site. So the  
17 forest.

18 Q And is your personal definition as you have  
19 described it of an old growth forest, is that consistent with  
20 scientific literature that you have reviewed and studied?

21 A It is. And often times there is attempts made to  
22 add age classifications to -- sort of minimum age for what  
23 constitutes an old growth forest. Estimates I have read for  
24 that range from, you know, 120 years and up or 150 years and

(Ronald Sutherland - Direct by Mr. Caffry)

1 up and so on, but there is also the admission that it depends  
2 on the type of forest as to what qualifies that.

3 Q And does your definition of old growth forest  
4 differ from what's sometimes, at least in the -- by lay  
5 people referred to as virgin forest?

6 A It does. You know, the virgin forest implies,  
7 especially in this country, virgin forest implies forest that  
8 has never been cut down by humans, especially European,  
9 humans of European descent. And while such, you know, that  
10 type of forest certainly does qualify for the old growth  
11 forest definition, humans of European descent have been on  
12 this particular continent for long enough now that we  
13 actually have stands of old growth forest that have grown  
14 back over a period of hundreds of years that have attained  
15 the unique characteristics of old growth forest, even if some  
16 of the trees may have been cut down many hundreds of years  
17 ago.

18 Q Are old growth forests ecologically important?

19 A Yes, they are. They are believed to be very  
20 important and at the same time believed to be very rare  
21 around the world, but a recent review of old growth forests  
22 and large old trees in particular concluded that such stands  
23 of large old trees and old growth forests play a remarkable  
24 number of important roles in the ecosystem.

(Ronald Sutherland - Direct by Mr. Caffry)

1 Q Could you tell us what some of them are? In  
2 particular, some of those roles that they may play in a  
3 location like the Adirondacks.

4 A Sure. I guess the place to start would be that old  
5 growth forests provide unique habitats for a number of  
6 species that are specialized to live in old growth habitats  
7 and this is because of the size of the trees and the density  
8 of the canopy. The trees themselves provide unique habitats  
9 when they reach a certain size. They start to provide  
10 more -- at a certain age they provide more holes and cavities  
11 in the trees. For example, that's a feature of old growth  
12 forests and there are species that are adapted to living in  
13 those holes and cavities.

14 The bark on old growth trees becomes  
15 substantially different than younger growth trees and that  
16 provides habitat for numerous species. And that's just the  
17 trees themselves.

18 Another unique feature of old growth forests,  
19 due to their lack of significant disturbance over a period of  
20 hundreds of years, another feature is that they have built up  
21 substantial amounts of organic material on the surface of the  
22 forest floor. And not only does that provide its own unique  
23 habitats for numerous species, but it also serves as a very  
24 important filtration system for preventing nutrients from

(Ronald Sutherland - Direct by Mr. Caffry)

1 being lost from the ecosystem.

2 Q Are old growth forests common in the eastern United  
3 States?

4 A They are not.

5 Q Are they rare in the eastern United States?

6 A Yes. Looking at the entire United States as a  
7 whole, old growth forests are rare.

8 Q Are they common in the Adirondacks?

9 A My understanding is that the Adirondacks has one of  
10 the largest concentrations of old growth forests in the  
11 eastern United States.

12 Q And does that give it any significance outside the  
13 immediate locale of the Adirondacks?

14 A Yes. It's recognized. Well, among the  
15 conservation biologists it's generally recognized that the  
16 world remaining old growth forests are highly valuable from a  
17 conservation biodiversity standpoint. And so any large  
18 concentrations of old growth forests that are left are even  
19 more valuable because they are so rare.

20 Q And did you observe any old growth forest during  
21 your site visit to the Newcomb to Minerva Trail?

22 A Yes, there was one section.

23 Q Where was that?

24 A It was along that segment of the trail from

(Ronald Sutherland - Direct by Mr. Caffry)

1 Santanoni to Lake Harris.

2 Q And can you describe what you observed?

3 A Yes, I can. In that section of trail there was  
4 numerous large old trees that were wider than the trees we  
5 observed in other portions of the forest, much greater  
6 diameters, and the understory vegetation in those portions of  
7 the forest was lush and filled with a very well developed  
8 ground cover, which also implies a significant amount of time  
9 since disturbance.

10 Q I have just handed you what's previously been  
11 admitted into evidence as Exhibit 79. You have seen this  
12 map. Can you describe for the Court where on the map you  
13 were -- excuse me.

14 Did you observe any old growth forest during  
15 your site visit to the Seventh Lake Mountain Trail?

16 A Yes, I did.

17 Q And using Exhibit 79, can you describe for the  
18 Court where on that map you were when you observed old growth  
19 forest on the Seventh Lake Mountain Trail?

20 A Yes, I can. It was the second segment of the trail  
21 that's marked in blue on this map.

22 Q Within that segment where was the old growth forest  
23 located?

24 A My recollection is it was fairly extensive. We saw

(Ronald Sutherland - Direct by Mr. Caffry)

1 the photo of the hill. I can't remember the exhibit now, but  
2 the exhibit that had the snowmobile trail sign on it. After  
3 that hill, once the Seventh Lake Mountain Trail headed up the  
4 hill, and was on the side of the hill slope, the old growth  
5 continued until the trail began to descend again down to what  
6 I believe is called the Old Uncas Road.

7 Q What was the approximate length of this stand of  
8 old growth forest that you walked through on the Seventh Lake  
9 Mountain Trail?

10 A Approximately two miles.

11 Q I have handed you a moment ago Exhibit 120 for  
12 identification. Can you look at that?

13 A Yes.

14 Q Can you identify that document?

15 A Yes. This is a photo I took of a tree on the  
16 Seventh Lake Mountain Trail.

17 Q Was that within the section of the Seventh Lake  
18 Mountain Trail you just described?

19 A Yes, it was.

20 Q What date did you take that on?

21 A August 18<sup>th</sup>, 2016.

22 Q Does it fairly and accurately represent the scene  
23 depicted at the time that you took it?

24 A Yes, it does.

(Ronald Sutherland - Direct by Mr. Caffry)

1 MR. CAFFRY: Your Honor, I would move that Exhibit  
2 120 be admitted into evidence.

3 MS. SIMON: May I voir dire?

4 THE COURT: Yes.

5 VOIR DIRE EXAMINATION

6 BY MS. SIMON:

7 Q Looking at the map, Plaintiff's 79, could you give  
8 us an approximation of the location of this tree in the  
9 photograph on 120?

10 A Yes. May I refresh my recollection?

11 THE COURT: Go ahead.

12 A Yes. This photograph was taken -- it was taken  
13 close to bridge 13 on that second segment of the Seventh Lake  
14 Mountain Trail, which looking at the map would have been  
15 roughly two-thirds of the way from the orange first segment  
16 going towards the purple segment.

17 MS. SIMON: Okay. Thank you.

18 No objection.

19 THE COURT: You proffered 120?

20 MR. CAFFRY: Yes, your Honor.

21 THE COURT: Exhibit 120 is received into evidence.

22 Do you want to do 120? Is there a second one as  
23 well?

24 MR. CAFFRY: There is, but I would like to proceed

(Ronald Sutherland - Direct by Mr. Caffry)

1 with 120 at this time after the stenographer marks it.

2 THE COURT: No problem.

3 (Plaintiff's Exhibit 120 received in  
4 evidence.)

5 THE COURT: Go ahead.

6 BY MR. CAFFRY:

7 Q Can you tell the Court what Exhibit 120 shows?

8 A Yes, I can. It is a very large specimen of a tree  
9 and with a very impressive spreading canopy above it. And,  
10 yes, I believe the tree is a sugar maple.

11 Q And in your opinion, is that an old growth tree?

12 A Yes. It's my recollection upon looking at this  
13 tree in person is that it represented a very old tree.

14 Q And was this in the old growth stand of trees that  
15 you previously testified about?

16 A Yes, it was. There were numerous other trees that  
17 approximated the size. This was a particularly impressive  
18 specimen.

19 Q Can you or did you estimate its diameter?

20 A My recollection was that it was between two and  
21 three feet.

22 Q And at what height did you estimate that diameter?

23 A The typical breast height that is used by  
24 foresters.

(Ronald Sutherland - Direct by Mr. Caffry)

1 Q Could you please look at Exhibit 121 and tell us if  
2 you could identify that?

3 A Yes. This is a photograph I took on the Seventh  
4 Lake Mountain Trail.

5 Q On what date?

6 A August 18<sup>th</sup>.

7 Q Where on the Seventh Lake Mountain Trail was it  
8 taken?

9 A It was within that second section of the trail. To  
10 be more precise I would have to refresh my recollection.

11 MS. SIMON: I'm sorry. Excuse me. I didn't hear  
12 that answer.

13 A It was within the second segment of the trail and  
14 to be more precise than that I would have to refresh my  
15 recollection.

16 BY MR. CAFFRY:

17 Q Could you do so, please?

18 A Sure. It was immediately adjacent to bridge 17.

19 Q Does it fairly and accurately represent the scene  
20 depicted at the time that you took the photograph?

21 A It does.

22 MR. CAFFRY: Your Honor, I would move Exhibit 121  
23 into evidence.

24 MS. SIMON: No objection.

(Ronald Sutherland - Direct by Mr. Caffry)

1 THE COURT: Exhibit 121 is received. Hang on one  
2 second, Mr. Caffry, unless you have another one.

3 MR. CAFFRY: No. That's it.

4 (Plaintiff's Exhibit 121 received in  
5 evidence.)

6 BY MR. CAFFRY:

7 Q Can you tell the Court what Exhibit 121 depicts?

8 A Yes, I can. This was the end of a tree that had  
9 been cut by some human action. You can tell that because of  
10 the straightness of the cut. And it was a large tree that  
11 appeared to be an old growth tree in that section of the  
12 forest and it shows remarkably tight growth rings that I, in  
13 my notes, estimated as being approximated one thirty-second  
14 of an inch in width, the growth rings, between each growth  
15 ring. And that type of feature is indicative of a tree that  
16 has grown for many years in closed canopy or competitive  
17 environment. So it's growing slowly and not -- the annual  
18 increment in growth has been relatively short and, you know,  
19 that kind of -- the tight growth rings that are indicative of  
20 old growth forest also happen to make old growth lumber  
21 particularly valuable. So that's just one aside.

22 Q And how close was this to the tree that you  
23 photographed that is shown in Exhibit 120? Was it nearby or  
24 was it a ways away?

(Ronald Sutherland - Direct by Mr. Caffry)

1           A     It was within two miles and I can try to refresh my  
2 recollection a little bit if that would help.

3           Q     Sure.

4           A     Yeah. I would estimate that it was within about  
5 half a mile.

6           Q     In its vicinity did you see other such trees of  
7 similar size?

8           A     Yes, both living and dead.

9           Q     Were you able to estimate the age of this tree  
10 that's depicted in the photograph, and if so how?

11           MS. SIMON: Point of information, which photograph  
12 are we talking about?

13           MR. CAFFRY: I'm sorry, 121.

14           A     To be honest, I don't know if it was this  
15 particular tree or not, but we counted the rings on one of  
16 the stumps we saw and we hit 200 and stopped at that point.

17           Q     Was that consistent with your professional opinion  
18 about the age of the old growth stand that you walked through  
19 on the Seventh Lake Mountain Trail?

20           A     Yes, it was. It certainly appeared to me to be at  
21 least a 200 year-old forest.

22           Q     In your professional opinion, is this a significant  
23 stand of old growth forest?

24           A     I think it is.

(Ronald Sutherland - Direct by Mr. Caffry)

1 Q Could you explain why?

2 A As we talked about earlier, old growth forest is  
3 globally endangered as a type of ecosystem around the entire  
4 world. And a stand of old growth forest that is  
5 approximately two miles in length is significant from a  
6 conservation standpoint. I think, you know, the scale of --  
7 and when you consider the rarity of such 200 year-old forests  
8 or even older possibly, its scale over the entire eastern  
9 United States, this track, of course, would be significant.

10 Q And in your professional opinion, or do you have a  
11 professional opinion to a reasonable degree of scientific  
12 certainty, as to whether or not it was detrimental to this  
13 old growth forest to build a Class II community connector  
14 snowmobile trail through it? And if so, why?

15 A I do have an opinion. My professional opinion is  
16 that it was detrimental to build a small road through an old  
17 growth forest essentially for all the reasons that we have  
18 covered already that detail the ecological impacts of similar  
19 forest roads. It provides the intrusion of early  
20 successional habitat, which is habitat that's of a young age  
21 into an older ecosystem type. It provides edge effects and  
22 leads directly to the death of numerous old trees that have  
23 been living in that place for hundreds of years.

24 MR. CAFFRY: Your Honor.

(Ronald Sutherland - Direct by Mr. Caffry)

1 THE COURT: Yes.

2 MR. CAFFRY: I have another line of questioning for  
3 this witness that might go ten minutes or so. Given the  
4 time, I would just point that out to you and whether you  
5 want to break for lunch and have me finish after lunch  
6 or have him finish before lunch.

7 THE COURT: We can break for lunch now.

8 MR. CAFFRY: Okay.

9 THE COURT: Thank you for telling me about the  
10 break. We will take the break now and we will return  
11 and recommence at 1:30.

12 MR. CAFFRY: Thank you.

13 (Whereupon a lunch recess was taken.)

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## Protect the Adirondacks! v. NYS DEC &amp; APA

I N D E X

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PLAINTIFF'S WITNESSES

<u>NAME</u>	<u>DIRECT</u>	<u>CROSS</u>	<u>REDIRECT</u>	<u>RECROSS</u>
Ronald W. Sutherland	416	---	---	---

PLAINTIFF'S EXHIBITS

<u>NO.</u>	<u>DESCRIPTION</u>	<u>IDENT.</u>	<u>EVID.</u>
102	Photograph	---	417
103	Photograph	---	419
105	Photograph	---	424
106	Photograph	---	424
107	Photograph	---	424
108	Photograph	---	429
109	Photograph	---	434
110	Photograph	---	458
111	Photograph	---	458
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113	Photograph	---	463
114	Photograph	---	463
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117	Photograph	---	476
118	Photograph	---	476
119	Photograph	---	476
120	Photograph	---	497
121	Photograph	---	499
122	Photograph	---	441

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C E R T I F I C A T I O N

I, Tracie Pamela Hilton, C.S.R, R.P.R., a Senior Court Reporter for the Unified Court System, Third Judicial District of the State of New York, do hereby certify that I attended and reported the foregoing proceedings; that it is a true and accurate transcript of the proceedings had therein to the best of my knowledge and ability.

*Tracie Pamela Hilton*

Tracie Pamela Hilton  
Certified Shorthand Reporter  
Registered Professional Reporter

Dated: March 31, 2017

Tracie Pamela Hilton, CSR, RPR  
Senior Court Reporter