

STATE OF NEW YORK  
SUPREME COURT                      COUNTY OF ALBANY

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In the Matter of the Application of

PROTECT THE ADIRONDACKS! INC.,

Plaintiff-Petitioner,

for a Judgment Pursuant to  
Section 5 of Article 14 of the  
New York State Constitution  
and CPLR Article 78,

-against-

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

Defendants-Respondents.

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**ANSWERING  
AFFIDAVIT OF  
STEVE SIGNELL**

**INDEX NO. 2137-13**

**RJI NO. 01-13-ST-4541**

STATE OF NEW YORK        )  
  ) SS.:  
COUNTY OF SCHENECTADY)

Steve Signell, being duly sworn, does hereby depose and say that:

1. I make this affidavit in opposition to the Defendants' motion for summary judgment. I have previously submitted an affidavit in support of Plaintiff's motion for summary judgment, sworn to on August 25, 2016 ("Signell Aff.").

2. I have read the memorandum of law and affidavits supporting the State's motion for summary judgment submitted by Loretta Simon of the NYS Office of the Attorney General and Department of Environmental Conservation ("DEC") staff, including Tate

Connor and Peter Frank, and Kathy Regan from the NYS Adirondack Park Agency (“APA”). These affidavits claim that newly constructed Class II Community Connector snowmobile trails are built in the “character of a foot trail.” I have also read the affidavit by Timothy G. Howard in which he claims that the Class II Community Connector snowmobile trails being built by DEC are “mostly improving the fragmentation state of these forests” (Howard Affidavit, page 8).

3. I personally assessed the major Class II Community Connector snowmobile trails (hereafter referred to as “connector trails”) in question, including the 11.9-mile Seventh Lake Mountain Trail in the Moose River Plains Wild Forest; the 3.8-mile Cooper Kill Trail in the Wilmington Wild Forest; the 12-mile Newcomb-Minerva-North Hudson Trail in the Vanderwhacker Wild Forest Area, Santanoni Historic Area, and Harris Lake Intensive Use Area; and the 6-mile Polaris Bridge Trail that has been approved in the Essex Chain Lakes Complex Unit Management Plan.

4. My visits to these trails and planned trails have allowed me to assess these trails in various stages of completion, from trails marked with GPS points, trails painted in the forest, trails freshly cut out, to those newly graded, to those that were completed in 2012 and 2013 and have had several years to recover.

5. I am familiar with Article 14, Section 1 of the NYS Constitution. I do not believe that these connector trails meet the requirement that the Forest Preserve “be forever kept as wild forest lands.” The changes to the Forest Preserve from the construction of these connector trails, due to their alterations of the terrain and the forest, are substantial and will be long-lasting. I am also familiar with the 2009 Management Guidance on “Snowmobile Trail Siting, Construction and Maintenance on Forest Preserve Lands in the

Adirondack Park” issued by the APA and DEC for policy governing construction of connector trails (Record Exhibit 8) (hereafter referred to as “Snowmobile Management Guidance”). For the following reasons, it is my scientific judgment that the construction of these connector trails in the Adirondack Forest Preserve is not consistent with the wild forest nature of the Forest Preserve.

The Community Connector Trails do not Have the Character of Foot Trails

6. One major argument made by DEC and APA concerns whether or not Class II Community Connector Snowmobile Trails will have “the character of a foot trail” once they have been constructed. I understand that the Plaintiff does not agree with DEC and APA that just because a snowmobile trail has the character of a foot trail, that it is automatically allowable under Article 14. It is my professional opinion that, even if this is a standard that applies to Article 14, the trails that I have observed consistently violate that standard.

7. The Snowmobile Management Guidance states (pages 8 & 9) “For new snowmobile trails of both classes (I & II) to retain essential characteristics of foot trails, management practices must integrate thorough knowledge of the standards and guidance below, with efforts to appropriately balance them and the underlying concerns as the trails are sited, constructed and maintained thereafter.” Furthermore, the Guidance states (page 2) “All snowmobile trails, regardless of class, will be carefully sited, constructed and maintained to preserve the most essential characteristics of foot trails and to serve, where appropriate, hiking, mountain biking and other non-motorized recreational pursuits in spring, summer and fall.” However, I could not find a definition of “foot trail” anywhere in the Snowmobile Management Guidance.

8. The Peter Frank Affidavit, page 16, paragraph 33, footnote 7, states “as a result of public comments, DEC and State Parks determined to reduce the proposed twelve-foot width to nine feet in the final plan [for connector trails] because DEC believed that nine-foot wide trails would have ‘essentially the same character’ as a foot trail.” This statement is not consistent with DEC’s own Policy on Foot Trails. A copy of that Policy is attached hereto as Exhibit A. The Policy on Foot Trails (page 7) quotes another DEC policy, which states that the widest category of trails, known as “trunk trails”, should be “within a foot of the finger tips when standing in the center of the tread with arms outstretched.” For a typical human being, the arm span is about the same as their height. For a person of average height, this would be between 7 and 8 feet, not 9 to 12 feet, as the snowmobile connector trails are. The Narrower Class II foot trails vary from about 2 feet wide to 4 feet wide. DEC Policy on Foot Trails, page 7.

9. The DEC Policy on Foot Trails (page 6) also says, quoting the other DEC policy, that “the overhead clearing should be as high as a man can reach with his axe.” Assuming a person of average height, and a typical 2 foot long axe handle, this would be about 9 feet. The Snowmobile Management Guidance (at page 10) allows the connector snowmobile trails to be 12 feet high, which is greatly in excess of 9 feet.

10. This belief of DEC that 9-foot wide trails have the “character of a foot trail” is not supported by any other definition of foot trail or footpath that I have encountered, either through research, or in my life experience. Here are some common definitions from online dictionaries of the term “footpath” (“foot trail” not being available):

- a. Merriam-Webster Dictionary: “a narrow path for pedestrians.”
- b. Dictionary.com: “a path for people going on foot.”

- c. Free Dictionary: “a narrow path for persons on foot.”
- d. MacMillan Dictionary: “a path used only for walking, usually in the countryside.”

11. In contrast to the DEC, the U.S. Forest Service (“USFS”) has very clear, well documented definitions for all kinds of trails, including hiker-pedestrian trails and snowmobile trails in its training publication “Trail Fundamentals and Management Objectives: Training Reference Package, 2011.” A copy of this publication is attached hereto as Exhibit B. According to the USFS, in wilderness settings such as the Adirondacks, the largest class of foot trail (class 4) has a maximum 24” tread +12” to 18” on either side, for a total width of no more than 5 feet. (Note that “wilderness” in this instance is meant as a contrast to “urban” settings, and includes virtually all public land classification types found in the Adirondacks, including Wild Forest, Primitive and Wilderness Areas.)

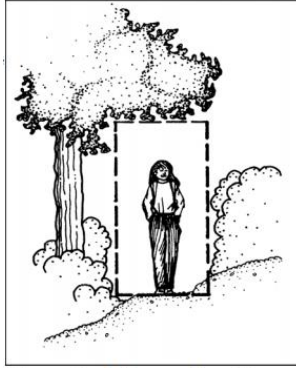
13. According to the USFS, the only type of snowmobile trail that has any overlap with the character of a wilderness hiking trail is Class 2 snowmobile trails with a width of 4-6 feet. Several of the trails that were reported closed in the Moose River Plains (e.g. Bear Lake trail) meet the USFS definition of a Class 2 snowmobile trail, and thus could reasonably be considered to have a character consistent with a Class 4 foot trail in a wilderness setting.

14. The newly constructed Class II Community Connector Snowmobile Trails would be considered Class 4 snowmobile trails under the USFS classification and could only be considered as having the character of a Class 5 foot wide trail in a non-wilderness setting. This is the width of a foot trail you might expect in a city park or in a rails-to-trails situation, not in the middle of the Adirondack forest. Based on the need to provide a wide

and flat riding surface the USFS does not detail any way that a Class II Community Connector Snowmobile Trails has the character of a foot trail.

15. The National Park Service, through its National Trails System (“NTS”), administers several flagship hiking trails in the U.S., including the Appalachian Trail, the Pacific Crest Trail and The Lewis and Clark Historic Trail. One of the NTS trails is the North Country Scenic Trail (“NCST”), which will run through the Adirondack Park when completed. DEC is already planning the route for this trail. The NCST’s **‘Handbook for Trail Design, Construction, and Maintenance’** (p. 30) provides more guidance on the nature of foot trails and their construction (copies of the pertinent pages of this handbook are attached hereto as Exhibit C):

- e. **In heavily wooded areas, the clearing width is normally maintained simply by pruning limbs.** Here, the area between the edge of the tread and the edge of the clearing is normally leaf litter or short herbaceous plants. While four feet is the average standard width, some variation is allowed and encouraged—it is visually appealing and often more sensitive to adjoining natural resources. In wooded areas there are occasions when it is desirable to narrow the clearing width in order to route the trail between two large, visually interesting trees. **Generally, the trail winds between existing medium to large size trees, and is created by cutting only smaller trees and saplings.**
- f. The trail should be cleared to a height of 8 feet (10 feet within Wisconsin DNR properties). At this height, branches that could snag on a tall hiker’s extended pack or attachments, such as a fishing rod, are removed. Branches that could restrict the trail when weighted with rain or snow are also removed. If the trail is in an area of deep snow and it receives winter use, clearing may have to be higher. Whatever the reason for a higher clearing height, **an overhead canopy of branches should remain to slow the growth of grasses and shrubs that thrive in sunlight.**



16. My assessments of the major new Class II Community Connector Snowmobile Trails found that they do not have the character of a foot trail when measured by using the rational standards of the U.S. Forest Service or the North Country Scenic Trail, or even DEC's own Policy on Foot Trails (Exhibit A). These routes are far more road-like than foot trail-like.

#### The Nature of These Trails Contrasts with the Wild

#### Forest Nature of the Surrounding Forest Preserve Lands

17. None of the practices described above were followed during construction of the Class II Community Connector Snowmobile Trails in question. The effects of these trails on the wild forest nature of the Forest Preserve are clearly visible on these trails. Tate Connor's Affidavit in paragraph 16 states "trail construction features are consistent with the wild forest character of the adjoining lands and areas where the vegetation is growing are blended in with the forested area." On the Seventh Lake Mountain Trail ("SLMT"), where the trail has had several years to recover, this blending has not in fact occurred, and the community of plants within the trail corridor often contrasts strongly with that of the

surrounding forest. Many large sections of trail have become overrun by grasses, which do not thrive in shade and are virtually absent in the surrounding forest understory. In one location along the west side of Seventh Mountain, this grassy strip of non-forest plant community extends uninterrupted for over a quarter mile. Pictures of long stretches of grassy trails that I observed on the SLMT are attached hereto as Exhibit D.

18. Grasses and sun-loving shrubs are not desirable on a foot trail for both aesthetic and ecological reasons. Aesthetically, these plants contrast with the surrounding forest understory of shade-tolerant herbs and shrubs, giving the impression of walking along a road rather than through a forest. Ecologically, the presence of grasses is an indicator that the canopy has in fact been disturbed and opened up significantly. If grasses can thrive, then other invasive, non-native and non-forest species of plant will be able to thrive there as well. Once established, grasses and invasive plants can persist for decades, even on abandoned roads and trails, serving as a reminder of past human activity in the area.

19. In order to quantify the extent to which grass has invaded and colonized the SLMT corridor, I analyzed the photographs I took during my 0.10-mile survey points along the along the SLMT. See Signell Aff. pages 13-14. At each point I took 4 photographs, one northward along the trail, one westward off the trail, one southward along the trail and one eastward off the trail. Each photograph was viewed and examined for presence/absence of grass. Samples of these photographs are attached hereto as Exhibit E. Then I summarized these into a single 'on-trail' and 'off-trail' observation for each survey point. If either the north photo or south photo at a given point had grass, then the 'on-trail' variable was assigned a value of '1'; if neither had grass, then the 'on-trail' variable was assigned a value of '0'. The same was done for the east/west photos to create a binary 'off-trail' variable.



These were then summarized and subjected to statistical analysis to determine the significance of any differences between the two.

20. The results of this analysis showed large and statistically significant differences in the grass populations on the trail and off the trail.

- 10 points had grass both on and off the trail. Most of these were in areas adjacent to wetlands where grass occurs naturally, or in the 'maple hilltops' mentioned in my previous affidavit. Signell Aff. page 34.
- 1 point had grass off the trail, but not along the trail itself. This is where a grassy wetland was visible through the woods to the east of the trail.
- 40 points had no grass on the trail or in the woods. Trail construction at these locations has not resulted in successful colonization by grasses.
- 66 points had grass along the trail, but not in the woods. These are the areas where grass does not normally occur in the forest but where trail construction has modified the light conditions to the point where grass can thrive within the trail corridor.

21. Altogether, fully 56% of the survey points (66 out of 117) exhibited the unwanted pattern of grasses thriving along a trail in sharp contrast to the surrounding forest where grasses are absent. Statistical analysis showed this contrast to be highly significant; both the paired T-test and the Wilcoxon Signed-Rank test produced p values <0.0001, indicating that we can be more than 99.99% certain that there are real, measurable differences between the plant community on the trail vs. off the trail.

22. The construction of the SLMT has significantly altered the larger forest ecosystem by creating a long, narrow ecosystem dominated by sun-loving, non-forest species that winds through the native forests, many of which are pre-settlement-era old growth forests.

23. While such changes in plant community due to trail construction will be evident for decades or a few centuries, changes in the actual shape of the land due to grading and subsequent erosion can last for millennia. There are several areas on the SLMT where grading and erosion have already permanently altered the landscape, and in some places erosion has worn the soil away to exposed bedrock and is beginning to form gullies that can expand greatly over time and create blowouts such as the 100' section of eroded trail referenced by Tate Connor in the work plan for this segment. Photographs of such areas that I observed are attached hereto as Exhibit F.

#### The New Trails Will Not Reduce Fragmentation of the Forest Preserve

24. The state argues in its memorandum of law and the Timothy Howard affidavit that the excesses in construction and the impacts of Class II Community Connector Snowmobile Trails are somehow offset by reductions in the mileage of smaller snowmobile trails in interior Forest Preserve areas and by routing the new bigger connector snowmobile trails on the periphery of Forest Preserve units. Howard states on page 3, paragraph 6, that "...roads and other features that divide a forest have detrimental impacts on the plants and animals making up the forest ecosystem..." I concur on this point; the evidence in the ecological literature strongly supports this assertion.

25. Unfortunately, I do not agree that the state has mitigated the negative fragmentation impacts to the forest preserve from construction of large connector snowmobile trails. Howard identified several “roadless” areas and ran statistics showing some evidence of reduction in fragmentation as a result of DEC’s closure of some older trails, and construction of the new connector snowmobile trails. However, ground-truthing revealed that this analysis was based on flawed and incomplete data, and any benefits to the Forest Preserve exist solely on paper and in computer models, not in reality.

26. Focus Area 2 shown in Howard Exhibit B, Figure 2 is bounded on the North by State Highway 28, and on the south by the Cedar River Road, a DEC-maintained gravel road, which is approximately 14 feet wide, through the Moose River Plains Wild Forest Area. However, this delineated “roadless” area is not in fact roadless at all, but rather crisscrossed by transportation corridors of all sizes and character, many wider and more improved than the Cedar River Road itself.

27. On September 21, 2016, I personally visited many of the following sites and verified their existence and character (attached hereto as Exhibit G is a map that details all of the roads, trails, and routes identified):

- a. Roads as large as or larger than Cedar River Road: Paved roads and driveways extending inward from Route 28; Sagamore Road, Mohegan Lake Road, Killkare Way; gravel access roads to campsites north of the Cedar River Road. 20.2 miles. These were not shown on the maps included as part of Howard’s analysis.
- b. 4WD Roads: Road to inholdings south of Mohegan Lake (drivable even without 4WD) and 4WD access roads to campsites north of the Cedar River

Road. 6.1 miles. These were not shown on the maps included as part of Howard's analysis.

- c. Two Track Trails: trails > 6' wide but impassable by automobile: 41.8 miles. These were not shown on the maps included as part of Howard's analysis.
- d. Single Track Trails: trails <6' wide. 26.5 miles. These were not shown on the maps included as part of Howard's analysis.
- e. Powerline: 1.4 miles. This was not shown on the maps included as part of Howard's analysis.

28. Most of the trails designated as closed trails either did not exist, or have not actually been closed but continue to be maintained and will persist into the future.

- a. The closure of the Bear Pond and Lost Ponds Trails to snowmobiles will have no appreciable effect on fragmentation, as they remain intact and are being actively maintained as two track trails to accommodate hikers and bicycles. I observed many places along these trails where windfalls across the trail had been recently trimmed to widths of 4-8 feet.
- b. The Benedict Creek trail is completely overgrown with brush, berry bushes, grasses and small to medium sized trees. Bridges in advanced stages of decay and countless blowdowns provide further evidence that this trail has not been maintained in decades, for snowmobiling or any other use, and had been closed for years due to neglect. This trail closure occurred solely on paper, and has had no practical effect on forest fragmentation. Recent photographs of this trail are attached hereto as Exhibit H.

- c. The only closure that may actually act to reduce forest fragmentation over time is that of the 2.6-mile long section of the Mohegan Lake trail that was closed. This section of trail does appear to have been abandoned-- there is some evidence of trail clearing, but it looks to be several years old; blowdowns are beginning to accumulate across the trail and small trees are starting to populate the trail corridor. However, this trail was most likely abandoned many years before its paper closure in 2011; the DEC cut over 400 trees on the shared 1-mile long section of the Mohegan Lake Trail during construction of the Seventh Lake Mountain Trail. This level of cutting would not have been necessary had the trail been actively maintained prior to construction.

29. Howard's assertion that the trail closures in this area have reduced forest fragmentation are not correct. Rather, forest fragmentation has increased as a result of constructing over 10 miles of new snowmobile trail where none existed before, while allowing, at most, 2.6 miles of trail to revert to its natural state.

30. One of the state's core assertions about its program to build many miles of new wide Class II Community Connector snowmobile trails is that by supposedly routing these trails on the periphery of the Forest Preserve and closing interior trails there is an ecological benefit to the Forest Preserve. My analysis challenges this assertion and found that, at best, there is only a paper benefit from officially closing trails that have not been used or maintained in decades and, at worst, the new trails have further fragmented the Forest Preserve, with all of the resulting negative long-term impacts.

31. Furthermore, Howard's analysis does not take into account the ecological characteristics of the forest itself. For example, old growth forests like those along the new SLMT are not only rare, but also are among the most intact terrestrial ecosystems in the Adirondacks. Largely untouched by human disturbance since time immemorial, these patches of old growth have now been bisected by road-like trails, often overrun by grasses and other plant species not normally seen in Adirondack forests. Some of these grasses were actually intentionally planted by the DEC to stabilize the disturbed soil after grading. These highly disturbed areas are susceptible to further colonization by other non-forest, non-native and invasive plants brought in by wind or motor vehicle. A map of the old growth forests in the Moose River Plains where the Seventh Lake Mountain Trail was constructed is attached hereto as Exhibit I. I Note that the affidavit of Ron Sutherland also concurs with my identification of this area of the forest as old growth.

#### Post-Construction Erosion of the Connector Trails

32. Although the Tate Connor Affidavit says that no erosion has occurred on the SLMT, I saw erosion at several points on it. Pictures of such eroded areas are at Exhibit F.

#### Conclusion

33. In conclusion, it is my professional opinion that the connector snowmobile trails do not have the essential characteristics of a foot trail, have significantly opened the forest canopy and allowed non-forest vegetation to thrive, have increased the fragmentation of the forest, and contributed to erosion and the spread of invasive species.

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Steve Signell

Sworn to before me this \_\_\_\_\_  
day of September, 2016.

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NOTARY PUBLIC