



TERESA L. DAVIS

LICENSED SITE EVALUATOR #203

REGISTERED FORESTER #1094

72 FLOODS POND ROAD

OTIS, ME 04605

207-537-3432

March 25, 2020

Jessica Damon, Project Manager
Department of Environmental Protection
106 Hogan Road
Bangor, Maine 04401

Re: Silver Maple Wind Project, Clifton, Maine.

Dear Jessica,

I've numbered my following comments for ease of future discussion, should there be any, and have included an appendix of items pertinent to some of my numbered comments, with the comment number in the upper right hand corner of the appropriate appendix item.

1. Unreasonable adverse effect. In Chapter 382: Wind Energy Act Standards, Section 3, it states that wind energy development must not significantly compromise views from a Scenic Resource of State or National Significance (SRSNS) such that it has an "unreasonable" adverse effect on the scenic character or existing uses related to scenic character of the SRSNS. There are 10 SRSNS within an eight mile radius of this project and 4 historical buildings. It is not rational to claim that wind turbines will not cause an unreasonable adverse effect on the scenic character of Bald Mountain Bluff, Chemo Pond, Hatcase Pond, Halfmile Pond, Hopkins Pond, Jellison Hill Pond, Mountainy Pond, Parks Pond, Second Pond, and the West Branch of Union River. Floods Pond would be another SRSNS under consideration within the radius of this project if the Bangor Water District allowed public access, which it no longer does.

The height of structures is carefully limited in every town ordinance and in LUPC rules for every unorganized township. The height of a structure is widely accepted as a measure of compatibility with scenic vistas. A very common height limit on structures in the shoreland zone of hundreds of lakes and ponds in Maine is 35 feet. To allow wind turbines with heights of 400 to 600 feet, and even taller, is not compatible with current height restrictions for structures and will cause unreasonable adverse effects on all ten of the SRSNS.

Chapter 382.3.I.(7) states "A Department finding that a proposed wind energy development would cause an unreasonable adverse effect on the scenic character or existing uses related to scenic character on a *single* SRSNS is sufficient grounds for denial of the proposed wind energy project.

If wind turbines are not considered to have an unreasonable adverse effect on the scenic character or existing uses related to scenic character of this beautiful and unspoiled area and all ten of

the SRSNS within it, then what would? Nothing I can imagine. So why take DEP's time to even include such a standard in the Wind Energy Act Standards if nothing is going to be found to cause unreasonable adverse effect? That key word, "unreasonable" in the Wind Energy Act Standards gives DEP a lot of flexibility in its permitting procedure. Please use that flexibility to deny this project.

2. Maine's Finest Lakes Study of 1989 rated all the lakes and ponds in the organized portions of the state. This list is one source of SRSNS, including lakes rated as finest for their scenic characteristics. In this study, on page 23, the authors noted three areas in all the vast organized acreage of this state as having especially scenic lakes. The three areas they noted are the area around Moosehead Lake, the lakes and ponds of Mount Desert Island, and an area "approximately 10 miles east of Bangor", which is the very area surrounding Pisgah Mountain and the Silver Maple Wind Project. This very area, listed first of the three exemplary areas in Maine's Finest Lakes Study is described as follows:

"Approximately 10 miles east of Bangor, 11 lakes are clustered around a small series of mountains and large hills. The surrounding terrain is relatively flat, making the mountains appear even larger. In additions, these lakes contain irregular shorelines, islands, rockslides and beaches. All of these features create a visually pleasing setting."

The many people who have homes, camps, or recreate in this beautiful area want to maintain the gorgeous unspoiled scenic values. Part of the joy in driving to and from their homes or camps or recreational areas is the view coming and going, not just the view from their own windows or tents.

If wind turbines are allowed within this area noted as one of three with exemplary scenic lakes and ponds in the entire organized acreage of this state then where in Maine would they ever be excluded? Please deny this project and exclude wind towers from this notably scenic area.

3. Landscape context. Chapter 382: Wind Energy Act Standards, Section 3.B.3., says that the "character, landscape context, unique features, usage patterns, and other relevant characteristics of the SRSNS" shall be taken into consideration by DEP in their review of wind projects. These items, especially "landscape context" for all ten SRSNS within the project area that must be addressed in the Visual Impact Assessment (VIA) in this wind project application currently enjoy an unspoiled landscape - all ten of them. There are very few towers or tall structures of any kind marring the ridgetops and scenic views across this large area. Wind turbines do not fit within the landscape context around any of the ten SRSSN. The ridgetops within the landscape around each of these SRSNS have remained relatively unchanged and unspoiled by human structures for the past 10,000 years or so.

4. Character of surrounding area. Chapter 382.C.(1) and (2). This portion of the Wind Energy Act Standards states that DEP will take into consideration the existing character of the surrounding area in determining whether the proposed wind project will have an unreasonable adverse effect on SRSNS or existing uses related to scenic character of the SRSNS. Some items they must take into consideration include landscape scale, vegetation and forest cover types, variations in topography and geology, prominent natural features, and waterbodies. Also, the type and amount of development in the viewshed of the SRSNS including roads, buildings and other structures, utility lines, communication towers, and nighttime lighting.

Nighttime lighting is thankfully nearly non-existent within this broad region, including around all ten SRSNS. All ten SRSNS have beautiful geological features of some type, such as ledgy outcrops, talus slopes, hills, and valleys, forested landscapes, etc., in their viewshed. All ten have very few roads, structures, utility lines, communication towers, also. Please recognize the exemplary existing character of the large area surrounding this wind project and deny the Silver Maple Wind Project. Photos provided by the applicant in their VIA show the large unspoiled tracts of land surrounding this project quite clearly.

5. Cumulative scenic impact. Chapter 382.3.H.(1). There are 33 existing wind turbines and 22 more currently being built (Weaver Wind) in a north/south strip on ridges located on the east side of the Union River Valley. The citizens of Otis and Mariaville, whose towns occupy the ridges located on the west side of the Union River Valley, have already had their entire eastern viewshed - from their homes and camps and drives to work - dominated by wind turbines. The huge turbines are the backdrop of every single sunrise and every blessed sunset, and blink away during the night every four seconds, mingling with the stars that are still visible in this region at night. Must we have our northern view so dominated too? The only defense I can find to discourage this clustering of wind towers is in the Wind Energy Act Standards Section 3, Subsection H. It says that the cumulative scenic impact in conjunction with scenic impacts from other wind energy developments located within eight miles of each SRSNS addressed by the applicant's VIA will be considered.

The West Branch of the Union River is a Focus River Segment and SRSNS and is within the eight mile radius of Weaver Wind and of the Silver Maple Wind Project. The West Branch of the Union River is spectacular and the eastern viewshed is already dominated by 33, soon to be 55, wind towers. Please protect the western viewshed of this outstanding river segment by denying the Silver Maple Wind Project.

6. Comment Period. Extension requested. The public comment period for this project has been open since DEP deemed the application complete for review on November 13, 2019. We members of the public want our comments to be pertinent to the application in DEP's view. The list of SRSNS that need to be considered in the applicant's VIA was a moving target due to the very poor quality of the applicant's VIA until these features were correctly assessed by James Palmer in his peer review of the VIA for DEP. His review is dated 1/21/2020 and appeared on the DEP web site for this project on 1/22/2020. From November 13, 2019 through January 22, 2020 we opposed to this project were very busy trying to get people to comment to DEP...on the wrong lakes and ponds. I request that the comment period for this project be extended so people have adequate time to comment on the officially accepted SRSNS.

7. Application corrections and the watershed divide. Could the applicant please correct the north arrow on Section 12, Maps C701 and C702, the pre- and post- development Storm Water Management maps? Their arrows point east and it does a disservice to people who are interested in the very close proximity of Towers 4 and 5 to the Floods Pond watershed divide to the west and south. Could they also please correct their watershed boundary line on these two maps? The present watershed boundary line

shown on those two maps is not even close to being correct and it is a disservice and misleading to anyone looking at the impact of this project on the surrounding water quality.

The watershed boundary of Springy Pond, which this project is clearly within, includes a huge aquifer, Maine Geological Survey Aquifer ID #5678, between the project and Springy Pond. This aquifer extends to Graham Lake through the towns of Clifton, Otis, and Mariaville and is a water supply for many individual homeowners in those municipalities.

There are ledge outcrops mapped within the project area and the applicant notes that blasting will need to take place at Towers #1 and #5. Tower #5 is very close to the watershed of Floods Pond, which is most clearly visible on Maps C701 and C702. Is there sufficient evidence that the blasting at Tower #5 will not change the water flow surrounding that tower from the watershed of Springy Pond to the watershed of Floods Pond? I can't find any evidence which supports that the flow will remain in the watershed of Springy Pond.

Could the applicant also please correct the Viewshed Maps dated on the DEP web site as 1/22/2020? They have Second Pond listed twice and the larger waterbody is actually Mountainy Pond.

8. Floods Pond, Hatcase Pond, and review by the Maine Drinking Water Program. Floods Pond is rated as a SRSNS because of its scenic beauty but does not have to be considered in the Visual Impact Assessment of this project because it is no longer allowed public access by the Bangor Water District. Floods Pond is the municipal water supply for Bangor and Hampden, parts of Hermon, Eddington, Orrington, and at least one home in Veazie. The Bangor Water District draws over 4.4 million gallons of water every day from Floods Pond in Otis, Maine. Floods Pond has been rated as some of the purest, cleanest water in the world. A project of this type does not belong so close to the watershed of such a valuable natural resource and municipal water supply.

Peasley Airstrip is located east of Floods Pond on the Springy Pond Road in Otis, Maine. The Airstrip is approximately 2 miles from the south end of Pisgah Mountain and the Silver Maple Wind Project. This area is also on the route for Maine's Life Flight helicopters and small planes; in their effort to save lives they don't need to be dodging 600 foot tall structures. There are many, many pilots – experienced and inexperienced - that fly in this area, not only via Peasley Airstrip but also to land by floats on all of the surrounding ponds, especially Beech Hill Pond. It isn't too much of a stretch to think that there could be a terrible accident where a small plane runs into a wind turbine. It could easily tip a turbine to the west, down the steep sideslope of Pisgah Mountain and pollute the large brook at the base of the western slope with many different substances, including the 300 or so gallons of hydraulic/transmission fluid in each turbine. This nearby tributary brook flows into Floods Pond just west of the pumping station. Placing a wind project in this area is too great a risk for the water supply for so many homes and businesses, including Northern Light Eastern Maine Medical Center, St. Joseph's Hospital, etc.

Floods Pond is also home to a rare species of native Arctic charr. These rare fish are found in only a handful of lakes and ponds worldwide. Charr from Floods Pond are used to stock other waterbodies. Please deny the Silver Maple Wind Project and protect this rare fish in Floods Pond. Infrasound waves are known to behave differently than other sound waves, especially around water. The 2018 Report from the Maine Wind Energy Advisory Commission recognizes the potential health risk to people and animals of infrasound from wind turbines. They recommend that more studies be done on the effects of infrasound before more turbines are constructed. The effect on people is bad enough but negative affects might even be magnified for fish like the Arctic charr by the short waves

movement through water. Let's find out more before we add any more turbines in the proximity of Floods Pond.

Hatcase Pond is a SRSNS that does need to be considered in the Visual Impact Assessment of this project. Not only is Hatcase Pond a beautiful little gem, it is the municipal water supply for Brewer, Maine. When I called the Director of the Maine Drinking Water Program, Michael Abbott, he thanked me for notifying the program and said that Susan Breau may have been aware of the project but that he had not been. He said he would ask Susan Breau to work with DEP to make sure this project was a safe as it could be. Given that there are two municipal water supplies within 8 miles of this project - Hatcase Pond and Floods Pond - could DEP please have Susan Breau, hydrogeologist for the Maine Drinking Water Program, review the project?

9. Review by State Soil Scientist. I understand that the lack of soils information in the application has been identified and is being corrected but in addition to this work I would like to ask that the State Soil Scientist, David Roque, be asked to review this project, too. When I called him he said he used to review all projects like this being reviewed by DEP as a matter of course and that he felt it was important. He is perfectly willing to review the projects and was prevented from doing so in the past by a former DEP Board Member who did not want David Roque involved. That former Board Member was not allowed to stay on the Board of Environmental Protection because it was deemed a conflict of interest with his business. Please reinstate having our State Soil Scientist review all such projects, most particularly this one so close to the watershed of Floods Pond.

10. Public safety. Chapter 382. 5. This section of the Wind Energy Act Standards states that an applicant "must demonstrate that a proposed wind energy development will be constructed with setbacks and other considerations that are adequate to protect public safety."

The report issued on January 2, 2018 by the Maine Wind Energy Advisory Commission listed thirteen major recommendations that all make very good sense to me. Have any of these recommendations been followed up on? Recommendation #12 states "Maine should consider creating an expert scientific and medical panel to review the extensive literature on wind farm noise and health issues and issue a finding for publication."

The literature on this subject is extensive and a bit scary. Infrasound is referred to as a low-frequency sound and a common misconception is that infrasound occurs at levels below the lower limit of audibility (generally 20 Hz) when actual hearing thresholds have been measured down to 1.5 Hz (cycles per second). Infrasound is often described as sound you feel but can't hear. Infrasound in nature comes from avalanches, volcanoes, earthquakes, meteorites, whales, elephants, rhinoceroses, and more. Wind turbines emit infrasound on a more continuous basis than naturally occurring events and animals do.

People vary in their sensitivity to noise and infrasound. Many studies have found that exposure to low-frequency sound may alter the inner ear. This inner ear alteration results in an increase of sensitivity to low-frequency sounds so previously imperceptible sounds become audible to the exposed person. Low-frequency noise may have serious health effects like vertigo, disturbed sleep, stress, hypertension, and heart rhythm disorders. Nobody knows how serious this threat is to people or animals or fish like the Arctic charr found in Floods Pond. The Report recommends a panel to sift through the

literature and issue a finding. How can DEP know that this wind project has setbacks that are protecting the public safety when so little is known about the long term effects of the noise – all frequencies of the noise – they create? Please deny this project until more is known about the health risks and proper setbacks required to adequately protect public safety.

11. Tangible benefits, Chapter 382, Section 6. This section of the Wind Energy Act Standards states that “An applicant must demonstrate that a proposed wind energy development will establish environmental and economic improvements or benefits to the citizens of Maine attributable to the construction, operation, and maintenance of the proposed development.” Note this is not written as environmental *or* economic improvements, but is environmental *and* economic improvements.

Economic benefits. According to the applicant the project is not expected to impact property tax rates in Clifton. The project is not expected to have any material impacts on the electricity rates throughout Maine or New England.

The applicant claims the project will create 15 to 20 short term (2-3 months) jobs, 15 to 20 longer term (12 – 18 months) jobs, and post-construction 3 fulltime jobs and 2 part time jobs for guarding the site and snow removal. Those are pretty low tangible benefits for so large a project and cost to the environment.

In addition the project will pay \$40,000.00 a year to the town of Clifton for 20 years. That is basically peanuts to the town of Clifton and would be acceptable to surrounding communities, if the project was constrained within that town’s boundaries. These projects affect the surrounding countryside for miles, independent of town boundaries. The economic benefits offered are not enough to justify the project. Also, many residents of Clifton feel differently about wind turbines now that they have five in their town and the original promises from the developer never materialized. There are residents working on a petition to put a vote before the citizens to adopt an anti-industrial wind turbine ordinance. This has been done in other areas already, including the western town of Woodstock.

Tourism in Maine is a 6 billion dollar business annually, according to a research study commissioned by the Maine Office of Tourism, and accounts for one of every six jobs in this state. That is huge. The effects of wind projects on tourism haven’t been studied adequately yet as the industry is still relatively new here. Many of my out-of-state clients are not aware yet that we have turbines in Maine and I believe they and their acquaintances are fair representatives of tourists who come to this state. As turbines become taller and more widespread everyone will soon realize they are amongst us. As more and more seasonal home owners or annual visitors arrive in Maine to find their own beloved stretches of this beautiful state adorned with industrial wind turbines that are loud, produce infrasound that hasn’t been adequately studied as to health risks, blink red lights at night every four seconds, chop up bats and birds, and destroy the scenic view they are accustomed to...they are not going to be happy. \$40,000.00 paid to the town of Clifton annually will not make up for the loss of tourism in this area. To pretend that wind projects won’t affect tourism is ludicrous.

The Silver Maple Wind Project does not provide enough tangible benefits to the citizens of Maine to make the project worthwhile and their permit should be denied.

Environmental benefits. Please. The leveling of ridgetops, acres of concrete poured, miles of new roads and utility lines installed in the construction of wind energy projects is appalling to say the least. The loss of trees and the carbon sequestering they do is not an environmental benefit and is not included in the studies of the carbon footprint of these projects.

Jessica Damon, Project Manager
Silver Maple Wind Project
March 25, 2020
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Applicants should need to share how many gallons of hydraulic fluid/transmission fluid - whatever the substance is within these turbines to the tune of upwards of 300 gallons per turbine that keeps them spinning coolly and freely - is lost over a month's time. Where does it go? Off into the wild blue yonder?? They should have to divulge what the towers and blades are coated with - lead based paint or worse? Those coatings off gas with condensation from changes in temperature, rain, snow, etc.

The fact that wind energy project developers can sell Renewable Energy Credits based on wind projects in Maine to other states so they can continue to burn coal and oil in their own power plants is of no environmental benefit to Maine or any of its citizens, or to people anywhere. Maine is upwind of many of these sources of pollution and we are being forced to accept polluted air from them based in part on giving up our scenic beauty, hurting our tourism industry, etc. It is not right and it should be stopped. I understand it is not within DEP's capacity to stop the selling of Renewable Energy Credits from Maine, but please acknowledge that there are absolutely no environmental benefits to Maine or her people from the Silver Maple Wind Project. In fact, the environmental cost is far too high a price to pay. Please deny the Silver Maple Wind Project.

In conclusion I would like to reiterate that the Silver Maple Wind Project does not belong on Pisgah Mountain in an area noted as having exemplary scenic lakes and ponds, it does not belong so close to the watershed of a major municipal water supply, it does not offer any environmental benefits to the citizens of Maine and, in fact, is detrimental to our environment, offers very few economic benefits, will have an unreasonable adverse effect on the scenic character or existing uses related to scenic character of each and every one of the ten SRSNS that need to be addressed by the applicant, and it will negatively affect tourism - an important industry in Maine. I urge DEP officials to have the courage and integrity to stand up to the wind industry and deny this Silver Maple Wind Project.

Thank you for this opportunity to comment to you about this project. The people of Maine are counting on you to help us protect our environment.

Sincerely,



Teresa Davis