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**Maine Department of Environmental Protection
Site Law Development Permit
Passadumkeag Wind Power Project**

**Comments of the Natural Resources Council of Maine
July 27, 2012**

The Natural Resources Council of Maine offers these comments on behalf NRCM's 12,000 members and supporters. We do not have a position in support or opposition to the proposed project, but wish to provide information and comments which NRCM hopes the Department of Environmental Protection (Department) will consider as it deliberates on this project.

Summary

NRCM is a strong supporter of both protecting the environmental, scenic and recreational resources of the state and developing renewable energy as one part of a strategy to limit climate change and reduce air pollution. We believe that the combination of the Maine's wind power laws and other applicable statutes and rules for the Department and the Land Use Regulation Commission (LURC) indicate that the State is also committed to both of these goals.

In reviewing the proposed Passadumkeag project we conclude that it will not have unreasonable adverse impacts with regard to scenic and recreational uses for some of the scenic resources within eight miles. However we reached no conclusion about the unreasonableness of the adverse impacts on two of the scenic resources.

In determining whether the adverse impacts are "unreasonable" or "undue," it is important to consider the energy and climate benefits. It is this weighing of the adverse impacts to scenic and recreational resources against the benefits to our energy supply and climate that should lead the Department to the decision whether or not this project meets the criteria for approval. It is also important to make a careful review of the specific circumstances of impacts on any scenic resources, guided directly by the statutory criteria. We are providing information we hope will be useful as you weigh these issues.

Energy and Climate Context

It is important to remember the purpose of wind power and renewable energy generation in Maine. Maine and the region continue to be over-dependent on fossil fuels for power, a situation which is unsustainable both economically as well as environmentally. The impacts of our dependence on gas, coal and oil may be out of sight much of the time, but they are clearly

harmful and unsustainable to all living things and must not be out of mind. Climate change is one of the most dramatic negative effects of continued fossil fuel use, and will cause sweeping harms to Maine's forests, coasts, fisheries, wildlife, public health and physical infrastructure.

Maine is particularly vulnerable to climate change for two reasons. First, our economy and way of life are much more closely tied to the environment than in many other places. Second, Maine's northern location has meant that the state is already experiencing disproportionate amounts of warming. Over the last 100 years, Maine was the fifth fastest warming state.¹ Here are two recent examples of this threat to Maine:

Lyme disease reached a record high in Maine in 2011, according to the Maine Center for Disease Control.² Incidence of the disease had nearly quadrupled since 2005 and is up nearly tenfold since 1990. Traditionally, cold winters have limited populations and range of deer ticks that carry this debilitating disease. Warmer winters over the past several years have corresponded to increases in the disease. Climate and disease-vector models by the University of Maine and Maine Medical Center show that warming over the next several decades will continue and extend this trend, even in northern Maine.

Warming ocean temperatures have been a significant driver behind the widely reported challenges for Maine's lobster industry this summer. Soaring spring ocean temperatures caused a spike in lobster activity and moved their annual molt up by a couple of months. The molted lobsters, called "shedders" Downeast, were easy to catch but not so great to sell. They don't pack well for shipping and since many Maine lobsters are shipped to Canada for processing, the buyers were reluctant to buy them, despite a spike in the catch by July. This contributed to an over-abundance of soft shelled lobsters at the peak of the season, and the corresponding plunge in prices.

These are merely two examples of the many cascading negative impacts of global warming pollution. We must transition to a cleaner, more affordable future through several simultaneous policies, from energy efficiency to additional use of renewable energy available here in Maine. We have examined the impact of wind power in displacing pollution and fossil fuel energy, primarily natural gas, at great length—the simple conclusion is that wind power can play an important role in displacing these fuels and reducing pollution levels. There is no comprehensive assessment of Maine and the region's climate and pollution mitigation strategy that does not include a significant amount of new non-emitting electricity generation. Where will that electricity come from? Nuclear? Solar? Biomass? New ocean renewable sources? Each may be important and each has trade-offs. Solar power remains expensive at grid-scale; tidal power is appealing but limited in scope; biomass generation has both air emission and affordability challenges. Wind power is one of the most cost-effective and abundant renewable energy sources in Maine and the region, although it sometimes must still struggle to compete with traditional sources of energy, such as oil and gas that we have collectively subsidized and invested in for generations. The need to develop clean energy is obviously important but it does not automatically trump other needs—hence the need for balancing with conservation goals.

¹ Climate Central. "The Heat is On: United States Temperature Trends." p. 3.

² Maine Center for Disease Control. "Lyme Disease Surveillance Report of Maine, 2011."

Wind Power Siting in Maine

Maine has taken some important steps to guide the development of appropriate wind power development, including by designating about 1/3 of LURC jurisdiction as “expedited” for wind power. It was clearly not the intention of the Governor’s Task Force on Wind Power nor the legislature for permitting authorities to give a rubber stamp to every wind project simply because it was proposed in the expedited area. In fact, the statutory criteria for receiving a development permit remain relatively similar to other forms of development.

7.2 million acres of LURC, which includes just over half of the identified windy land in the state, is outside of the expedited area. Within the expedited area, wind project locations are not only constrained by wind power generation issues (such as the wind resource and transmission access), but by proximity to homes, impacts to sensitive wildlife and habitat, and impacts to scenic resources of statewide significance. Avoiding all conflicts is impossible, which reflects the fact that there are no easy choices for energy.

Recently the Appalachian Mountain Club published further analysis of wind power sites in Maine in order to identify areas with greater or fewer conflicts.³ They identified 268 windy ridgelines in Maine and ranked roughly 70 of those to be among the *more* suitable sites, given a wide range of environmental constraints. (Passadumkeag was one of them, ranking near the middle.) All 70 had some predicted adverse impacts, and the large majority (52) of them were within three miles of a scenic resource. 30 of these more preferable sites were within three miles of two or more scenic resources of statewide significance. On the other hand, only 10 of these 70 more preferable sites were within three miles of four or more scenic resources. Proximity is not the same as impact, much less undue adverse impacts, for many reasons. However this analysis reminds us that wind power sites must meet multiple criteria for environmental and existing use impacts within a constrained world, and there are few, if any places, where no conflicts occur.

It appears that the Passadumkeag project would not have many of the potential conflicts that other wind sites may have: noise, wildlife habitat, or high elevation. However the impacts on scenic resources and related existing recreational uses are significant. The following sections correspond to the specific statutory criteria the Department must consider for scenic resources of statewide significance.

Significance of the Potentially Affected Scenic Areas, and Existing Character of Surrounding Area

The areas of state or national significance that will be affected by this project include four lakes with scenic resources of statewide significance. One of them, Saponac Pond, is within three miles. The following table includes some specific characteristics of the four lakes from the Lake Assessment referenced in statute.

³ Publicover, David A., Kimball, Kenneth D., Poppenwimer, Catherine J.: Ridgeline Windpower Development in Maine: An Analysis of Potential Resource Conflicts, Appalachian Mountain Club, 2011.

	Scenic Rating	LURC Resource Class	LURC Management Class
Saponac Pond	Significant	1B ó one outstanding resource value ⁴	3 ó potentially suitable for development
Nicatous Lake	Outstanding	1A ó multiple outstanding resource values	4 ó high value, developed lake
Lower Pistol Lake	Significant	1B ó one outstanding resource value	7 ó unclassified (simply ðaccessible, undevelopedð)
Spring Lake	Significant	2 ó at least one significant resource value	7 ó unclassified (simply ðaccessible, undevelopedð)

Saponac Pond has some unusual combinations of characteristics. Although it technically has quite a bit of development ð approximately 40 camps ð most of these are well set back from the shore, leading to a much lower *sense* of development. This is reflected in the user surveys, where people indicated an expectation of very low levels of development. On the other hand, the lake also has a paved highway passing immediately adjacent to it. Passadumkeag Mountain is a stunning visual feature that dominates and greatly accentuates the scenic quality of the resource. On the other there is a single existing radio tower on the mountain. We find visible evidence of working forest use in general, and in this case, to be of much less consequence than the applicant ð this use is nearly ubiquitous within the unorganized territories and can hardly be used in all of those cases to indicate a significant scenic detractor. It is also not a permanent scenic impact.

Nicatous Lake is one of 73 lakes (out of the 2,635 lakes and ponds in LURC jurisdiction) that have been designated as having ðoutstandingð scenic resources. The lake also lies at the center of a comprehensive conservation initiative that is documented in the application. This includes the Bureau of Public Lands Duck Lake Unit and the extensive Robbins easement. These represent many years of concerted efforts and millions in state and federal investment. The lake is a very significant resource because of the extensive protection of the area and shoreline and relatively undeveloped scenic character. There is relatively good access, but it is distant enough from paved public roads to have a greater feeling of remoteness. Relatively little topographic relief is visible, at least from the northern half of the lake, although it has an interesting and varied shoreline.

Lower Pistol Lake is completely undeveloped with rough, limited access and two primitive campsites. It has an appealing and varied shoreline, with rolling hills surrounding it. Spring Lake is similar: almost entirely undeveloped with somewhat rough access, allowing non-motorized use. NRCM did not conduct a site visit to these two lakes.

⁴ As noted in the application, the lake was rated 1B even though it does not have any ðoutstandingð ratings ó perhaps because it has four significant ratings, for fisheries, scenic, shore character, and cultural.

Nature, extent and duration of uses, and Expectations of Typical Viewer

It is important in reviewing the amount of use that a lake receives not to necessarily translate high use into a conclusion that the lake is more important and low use into unimportance. Lakes that are prized for their remote wilderness experience, almost by definition, will have lower use. Low use can be a valued characteristic of a wilderness area, not an indication of lack of importance. And the inverse can be true. For example: while we did not take a position on the project, in our internal review of the Saddleback wind project proposed near Webb Lake in Weld, we noted that the impacted lake is very popular for recreational use and more developed. It is important in its own ways, but not as one of Maine's more remote-feeling lakes.

The user survey provides interesting and important information, given the noted lack of data about usage levels and expectations for most scenic resources. However it was frustrating that data about the attributes of importance for users was combined for those surveyed at Saponac and at Nicatous.

Saponac Pond appears to be used for a variety of purposes. Among those surveyed, the most number of visits were for snowmobiling and staying at a camp. Canoeing/kayaking and viewing the scenery were also prominent. More people reported using the lake for fishing, but those people reported using the lake very infrequently (once a year.) On NRCM's site visit to the Pond on a mid-July weekday, we observed a small number of families enjoying the beach area along Route 188, as well as a kayaker putting in. The put-in along Route 188 (not the same as indicated in the Gazetteer) appeared to be suitable for trailered use, although parking may be limited. As noted above, visitors have expectations of a relatively undeveloped lake with few crowds. The applicant notes in its conclusion about impacts to Saponac that most users are there for fishing and boating, who, it is implied, are less sensitive to scenic impacts. That is not supported by the data, cited above, about the number of visits for different purposes. (Even if one focuses only on the percentage of people using the lake for a specific activity, and equal number of people noted viewing the scenery as boating.)

Nicatous Lake is used for a wide variety of uses. There are at least six designated campsites around the lake, making it unusually well suited for multi-day paddling. According to the user surveys, nearly 2/3 of the visitors to lakes in the area had visited Nicatous. There is extensive use of the beaches and for personal watercraft, but viewing the scenery, snowmobiling, studying nature, hiking, fishing and other uses were also important. We expect, confirmed by the user surveys, that viewers expect a relatively but not completely undeveloped natural setting.

There is less data about Spring and Lower Pistol Lakes. The user survey suggests low numbers of users, but also suggests that those users may make more extensive/repeated use of the lakes. Given the character of the lakes and access, we believe users will have high expectations of a remote feeling.

Scope and Scale of the potential effect of views of the generating facilities

All of the lakes will be adversely impacted by the presence of a wind farm to some degree. Based on the simulations, it appears that the impact of the project on Spring Lake will be quite minor, because it will not be visible from much of the lake, and when it is, the distance to and elevation above the horizon of the project will make it significantly less noticeable.

Because of the information presented above, which echoes observations in the application and Departmental reviews, NRCM was particularly interested in the potential effect of the project on Nicasius Lake. User surveys found that 30% of users concluded the project would have a negative impact. Given the significance and character of the resource, this is not a low number. A much lower number (about 12%) indicated that they were less likely to use the lake overall.

The maps and simulations provided by the applicant in this case were a little less helpful than we would have hoped, in part because (as noted by Landworks) it was difficult to determine from the simulations where the project was or how many turbines were projected to be visible, and to reconcile this with the viewshed maps. However from these simulations and our site visit, we did conclude that the visible scope and scale of the project would be limited. Both the scope and scale of the project appeared to be limited to relatively modest portions of the lake (at least those portions of the lake within 8 miles) and also limited by longer distances (seven or more miles) and the low profile of the project on the horizon. It also appears that the project will not be visible from camping locations along the northern part of the lake (nor from the lodges.) This is important from the perspective of night lighting impacts. For these reasons, NRCM concluded that the project will not have an undue adverse impact on Nicasius.

The situation would be completely different at Saponac Pond. The project will be inescapably dominant from the entire lake, at distances of 2-4 miles. The fact that 40% of users felt the project would have a negative impact and 25-30% of users thought they were less likely to return indicates a substantial impact on usage. This is somewhat mitigated by the presence of some development (the highway, the radio tower and some visible camps), but these cannot by any means be said to reduce the adversity of the impacts substantially.

The scope and scale of the project from Lower Pistol Lake will be somewhere in between these two extremes. Most of the turbines will be visible from much of the lake. They will not occupy a large portion of the horizon, but they will be much more distinctive than from Nicasius because of shorter distances (roughly 4-5 miles) and more elevation prominence and less intervening topography. NRCM did not reach a specific conclusion about the severity of impacts to Lower Pistol Lake.

Cumulative regional impacts on scenic resources and recreational uses

NRCM observes that this is the third wind power project to seek a permit in relatively close proximity to the resources in and adjacent to the unexpedited area around the Downeast lakes, the others being Rollins and Bowers. If all three of these projects were to be permitted

(and of course, one is already built), this could raise significant concerns about cumulative impacts on scenic and recreational resources in the region. (We note that the Bowers project was denied a permit by the Land Use Regulation Commission but is likely to be resubmitted in amended form.)

Evaluation of impacts on scenic and recreational uses under the wind power act presumes that it is necessary to protect *some* scenic resources from the impact of wind power development. We believe it is directly implied by this, and certainly directly supported by LURC statutes and policies such as the Comprehensive Land Use Plan, that users need access to *some* undeveloped areas for uses that depend on natural settings. Permitting of a wind power project that changes the character of scenic resources away from a relatively undeveloped natural setting may be acceptable in part because users still have access in a region to unimpacted resources. (All those surveyed users who said they are less likely to return to an impacted resource are presumed to go somewhere else in the area.) The presence of three projects with 10-15 miles of each other could easily change this situation. Put in the most simplistic terms, what if wind power projects have a visual impact on nearly all of the scenic resources in the northern/eastern part of the Downeast lakes? We are encouraged that both LURC and the Department have been engaging in discussions about such cumulative impacts with regard to wind power, and believe this project is a case in which cumulative impact considerations should be part of the record.

Conclusion

Maine continues to need additional clean, renewable generation such as wind power in order to reduce pollution and address climate change. Wind power is one of the most cost-effective forms of new renewable generation, with a large capacity to displace generation from fossil fuel power plants. It remains important that we develop additional wind power projects in a deliberative fashion to ensure that projects are sited by weighing benefits and impacts, and approved only when they do not have undue impacts to important natural resources of statewide significance. Our comments regarding scenic and recreational impacts are intended to provide additional information and perspectives about the considerations we believe the Department should give to scenic resources impacted by wind power projects, and Passadumkeag in particular. We concluded that the project would not have unreasonable adverse impacts on two of the scenic resources in the project area, Niatous Lake and Spring Lake. We did not reach a conclusion about the adversity of impacts on Saponac Pond or Lower Pistol. We encourage the Department to make specific findings about the cumulative impact on scenic and recreational resources in this region.

Thank you for your attention.