STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION
AUGUSTA, ME 04333

BOARD ORDER

IN THE MATTER OF

PASSADUMKEAG WINDPARK, LLC	) SITE LOCATION OF DEVELOPMENT ACT
Greenbush, Grand Falls Township,	) NATURAL RESOURCES PROTECTION ACT
Summit Mountain Township, Greenfield	) WATER QUALITY CERTIFICATION
Township	)
Penobscot County	)
PASSADUMKEAG WINDPARK	) FINDINGS OF FACT AND ORDER
L-25597-24-C-N	) ON APPEAL
L-25597-TH-D-N (Grant of appeal/	)
Approval of permit)	)
(Corrected Order)	

Pursuant to the provisions of 38 M.R.S. Sections 341-D(4), 480-A et seq., and 481 et seq., 35-A M.R.S. Sections 3401-3457, and Section 401 of the Federal Water Pollution Control Act, the Board of Environmental Protection (Board) considered the appeals of Passadumkeag Windpark, LLC (Passadumkeag Wind or the applicant) and Penobscot Forest, LLC (Penobscot Forest) with their supportive data, the response filed by Alexander and Rhonda Cuprak (the Cupraks), and other related materials on file and FINDS THE FOLLOWING FACTS:

1. PROCEDURAL HISTORY:

On February 3, 2012, Passadumkeag Windpark filed a Site Location of Development Act (Site Law) permit application and a Natural Resources Protection Act (NRPA) permit application with the Department of Environmental Protection (Department) for the construction of a 42-megawatt (MW), fourteen turbine wind energy development known as the Passadumkeag Windpark. On April 25, 2012, the Department held the first of two public meetings in Greenbush to receive comments on the proposed project. A second public meeting, chaired by the Department's Commissioner, was held on July 12, 2012. Department staff conducted site visits to Saponac Pond on July 12, 2012 and September 6, 2012. A draft Department order was issued on November 1, 2012 for public comment. The Department denied the Site Law and NRPA applications in Order #L-25597-24-A-N/L-25597-TH-B-N, dated November 8, 2012 based on a finding that the proposed project would have an unreasonable adverse impact on the scenic character of Saponac Pond. The Department found that all other criteria for approval were met. Timely appeals to the Board were filed on December

10, 2012 by Passadumkeag Wind and Penobscot Forest. On January 7, 2013 the Cupraks filed a timely response to the appeals.

The only matters before the Board in the appeals were the Department's findings on the scenic impacts of the proposed project on Saponac Pond and the appellants' due process concerns. At its March 21, 2013 meeting the Board heard oral arguments from the appellants and the Cupraks, and a presentation by the Department staff. The Department staff recommended upholding the underlying denial of the permit and presented a proposed Board order to that effect for the Board's consideration. After consideration of the arguments and the evidence in the record, and because the Board must have a written order with findings to make a final decision, the Board voted to direct the Department staff to draft a proposed order granting the appeals and approving the proposed project on the basis that the evidence demonstrates that the project will not have an unreasonable adverse effect on scenic character and the existing uses related to scenic character of Saponac Pond.

A draft Board order granting the appeals was issued for public comment on June 20, 2013, with a comment deadline of July 12, 2013. The Board received 45 written comments, including a statement signed by 53 individuals. Some of the comments included additional evidence, including materials such as photographs and an information sheet on the economic impact of wind energy, which were not admitted because the evidentiary record was closed; the record before the Board in an appeal is the administrative record before the Department when it made its licensing decision unless supplemented under specific conditions set forth in statute and rule.

By this order the Board grants the appeals, reverses the Department's November 8, 2012 denial, and grants the application for permits and a Water Quality Certification for the proposed project on the terms set forth below and subject to the attached conditions. The Board's findings with regard to the appeal are discussed in detail below.

2. STANDING:

In the applicant's appeal, Passadumkeag Wind states that it qualifies as an aggrieved person, as defined in Chapter 2, § 1(B) of the Department's Rules, because its Site Law and NRPA applications to develop the wind energy project were denied.

In its appeal, Penobscot Forest states that it is an aggrieved person, contending that the denial of the Passadumkeag Wind application will result in a loss of revenue that it would have gained from an easement with the applicant; a loss of its property rights; and it will impede development of other anticipated wind energy projects on Penobscot Forest lands.

The Board finds that both appellants, Passadumkeag Wind and Penobscot Forest, are aggrieved persons as defined in Chapter 2, § 1(B) and may bring these appeals before the Board.

3. PROJECT DESCRIPTION:

The applicant proposes to construct a wind energy project consisting of 14 turbines. This project qualifies as an expedited wind energy development as defined in the Wind Energy Act (WEA) (38 M.R.S. § 3451(4)). The site contains logging roads that will be upgraded and used for project access to minimize clearing and wetlands impacts. In addition to the turbine farm, the project includes an operation and maintenance (O&M) building as well as associated facilities. The O&M building will be located in the town of Greenbush, an organized town. The proposed project overall includes 21.47 acres of impervious area and 97.38 acres of developed area. The development of the O&M building will result in approximately 3.54 acres of impervious area.

A. Wind Turbines. The applicant proposes to construct 14 Vestas V112, 3.0 megawatt (MW) turbines for a total of 42 MW of generation capacity. Each turbine will be 84 meters (approximately 276 feet tall) to the center of the hub and a total of 140 meters (approximately 459 feet) to the tip of a fully extended blade. The turbines will be located on top of Passadumkeag Mountain in Grand Falls Township.

B. Turbine Pads. The turbines will be constructed on 14 pads, each approximately 1.3 acres in size, for a total impervious area associated with the turbine pads of 17.93 acres.

C. Access Roads and Crane Path. The applicant proposes to upgrade existing logging roads for access and the crane path.

D. Electrical Collector Substation and O&M Building. The applicant proposes to construct an electrical substation and an O&M building in the town of Greenbush. The total new impervious area from these two structures will be 3.54 acres and the total new developed area will be 3.69 acres. The proposed substation and O&M building will be adjacent to Bangor Hydro Electric Company's (BHE) transmission line, Line 64.

E. Meteorological Towers. The applicant is proposing to construct one meteorological tower on the site to monitor turbine performance.

F. Generator Lead Line. The applicant is proposing to collect power from the turbines in a 34.5 kilovolt (kV) generator lead line. The generator lead line will run approximately 17 miles from the ridge along the Greenfield Road through Summit Township, Greenfield Township and Greenbush. Nearly all of this line will be adjacent to an existing distribution line right-of-way (ROW) and an existing road. The existing distribution line ROW runs from the existing communications tower on Passadumkeag Mountain to Greenbush along the Greenfield Road. The distribution line ROW will be widened and the existing poles replaced.

The applicant's proposal includes the conversion of 1.22 acres of forested wetland to scrub-shrub wetland associated with the widening of the collector line ROW, and the alteration of 9,800 square feet of moderate value inland waterfowl and wading bird habitat (IWWH) in two locations adjacent to the Greenfield Road.

The project is shown on a series of plans included with the application, the first of which is entitled "Predevelopment Drainage Plan," prepared by the James W. Sewall Company, and dated January 30, 2012.

On October 30, 2012, the applicant submitted a proposal to remove one turbine from the project. In order to allow the Department to meet its statutory time frame for processing the application, this information was not considered.

4. PUBLIC INTEREST:

The Department received multiple requests for the Board to assume jurisdiction over these applications and hold a public hearing. However, the Board's authorizing statute, 38 M.R.S. § 341-D(2), does not allow the Board to assume jurisdiction over applications for approval of expedited wind energy developments as defined in the WEA (38 M.R.S. § 3451(4)). As set forth in the Department's Rules, Chapter 2(7)(B), the holding of a public hearing on applications is discretionary. In this case the Commissioner determined that there was not sufficient credible conflicting technical information submitted and a public hearing was not warranted in order to assist her in understanding the evidence. Therefore, a public hearing was not held. The Department held two public meetings in Greenbush, the first on April 25, 2012 and the second on July 12, 2012. The Department sent letters to all abutters of the project notifying them of the meetings, notified the respective town offices, and published notices in a local newspaper. The Department received many emails and letters from interested persons expressing concerns about the proposed project. Those letters and emails describing issues related to standards that are reviewed under the Site Law or under the NRPA were considered in the review of the proposal.

Several interested persons contended that the 20,000 acres included in a conservation easement between Robbins Lumber, Inc. and the State of Maine should be considered a Scenic Resource of State or National Significance (SRSNS) pursuant to the WEA. As discussed below in Finding 11, the Department ultimately determined that the conservation easement was not an SRSNS.

Interested persons contended that a series of statements by Passadumkeag Wind concerning greenhouse gas emissions and global warming in Section 28 of the Site Law application (Tangible Benefits) were not supported by scientific facts. The application includes a statement that renewable energy demands are increasing and that this project will address concerns about reducing greenhouse gases and particulates from combustion. The Legislature made findings in its adoption of the WEA, in 35-A M.R.S. § 3402, that it is in the public interest to encourage the construction and operation of community wind power generation facilities because wind energy "is an

economically feasible, large-scale energy resource that does not rely on fossil fuel combustion or nuclear fission, thereby displacing electrical energy provided by these other sources and avoiding air pollution, waste disposal problems and hazards to human health from emissions, waste and by-products." Further, 35-A M.R.S. § 3454 directs the Department to presume that an expedited wind energy development provides energy and emissions-related benefits. The Department defers to the Legislature's findings and also utilizes its knowledge and expertise in this area to evaluate the statements. The policy considerations of the Legislature in enacting the WEA are relevant in the Department's interpretation of its statutes, but the Department is required to focus on the statutory licensing criteria set forth by the Legislature. The amount of potential climate benefit from the proposed project is not a factor under the licensing criteria.

While the application was being reviewed, the Department received comments from some interested persons in the surrounding towns expressing concerns that the proposed project will negatively impact tourism. Other interested persons commented that the threat of a forest fire was extreme and the cost of fire suppression should be borne by the applicant. The Department also received some comments about the shortcomings of the WEA. These concerns were noted by the Department but were only considered to the extent they addressed permitting criteria and were thus within the scope of the Department's review of the proposed project.

5. CURRENT USE OF SITE:

The site of the proposed project is woodlands and is currently used extensively for commercial forestry operations. Development on the property consists of one communications tower, a second communications tower which is under construction, and two leased camps.

6. TITLE RIGHT OR INTEREST:

To demonstrate title, right or interest in the property proposed for development, as required in Chapter 2(11)(D) and Chapter 372(9) of the Department's rules, the applicant submitted copies of deeds, leases and lease options between the applicant and the property owners for the proposed project site. The submissions include deeds which show that the property owners who are leasing to the applicants have ownership over the parcels which are the subject of the leases. The duration and the terms of the leases for the proposed project area are sufficient for the duration of the proposed project. The applicant also submitted easements for certain adjacent parcels of land pertaining to noise, shadow flicker effects and safety setbacks.

The Board adopts the Department's finding that the applicant has demonstrated sufficient title, right or interest for the area which will be occupied by the project.

7. BASIS FOR APPEAL:

The appellants objected to the Department's findings and conclusions as follows:

A. Department Applied Incorrect Standard: The appellants contended that the Department did not apply the correct scenic impact standard from the WEA, but rather applied a standard that merged the WEA scenic impact standard with the Site Law scenic standard applicable to non-wind projects.

B. Scenic Character Finding: The appellants contended that the Department erred in its findings and conclusion that the proposed project would have an unreasonable adverse effect on the scenic character of Scenic Resources of State or National Significance (SRSNS) or related existing uses.

The Board finds that the two appellants' appeals make similar arguments; therefore the Board has reviewed the two appeals concurrently.

8. REMEDY REQUESTED:

Both appellants requested that the Board reverse the November 8, 2012 Department decision denying the application filed by Passadumkeag Wind, and approve the license for the proposed Passadumkeag Windpark in the Town of Greenbush and the Townships of Grand Falls, Summit Mountain, and Greenfield.

9. THE CUPRAKS' RESPONSE TO THE APPEALS :

In a letter dated January 7, 2013, the Cupraks argue that the Department order should be upheld because the applicant did not meet its burden of proof with respect to 35-A M.R.S. § 3452(3)(D) of the WEA, which is the subsection of the scenic character section that requires the Department to consider the expedited wind energy development's purpose and the context of the proposed activity. The Cupraks assert that, because the power to be generated by the proposed development will be sold to an out-of-state utility, the development is inconsistent with the purpose of the WEA. The Cupraks incorporate a portion of their previously filed July 26, 2012 comments, asserting that the WEA's references to, for example, "the citizens of the State," make it clear the Legislature intended for projects permitted as expedited wind energy developments to provide power for in-state consumption only.

The record shows that, in a letter dated September 24, 2012, the applicant responded to these arguments by the Cupraks. The applicant explained that the power to be generated by the proposed development will be sold into the ISO-New England grid in Greenbush, Maine, and at that point it becomes a commodity over which the applicant no longer has control. Thus, the power generated by the proposed development may or may not be consumed within the State of Maine. Further, the applicant questions whether a statutory restriction on out-of-state consumption would withstand constitutional scrutiny. Finally, the applicant argues the WEA does not state or imply

that power generated by expedited wind energy development must be consumed within the State of Maine.

While the Board agrees that the legislative findings contained in the WEA contain references to, for example, the people and citizens of Maine, the findings also include broader references. For example, the findings incorporate references to the environmental and human health benefits of reducing reliance on fossil fuels and air pollution. The WEA's more specific provisions, defining expedited wind energy development and providing the applicable review criteria, better indicate the Legislature's intent as to whether the WEA requires expedited wind energy development power to be sold in state. The Board finds nothing in either of these more specific provisions, nor the WEA as a whole, requiring power be sold in state. *See* 35-A M.R.S. sections 3451(3), (4), (10), (11); 3452. *See also* P.L. 2007, ch. 661, "An Act to Implement Recommendations of the Governor's Task Force on Wind Power Development," Emergency Preamble (referring to regional strategies and climate change).

In their comments on the draft Board order of June 20, 2013, the Cupraks also raised procedural issues including failure to provide timely notice to interested persons of the filing of the appeals and assertions regarding *ex parte* communications.

With respect to notice of the appeals, the Cupraks are correct in their assertion that timely notice was not provided of the filing of the appeals to all interested persons. However, the Cupraks acknowledge that they had actual notice of the filing of the appeals on December 20, 2012, twenty days in advance of the deadline for filing a response to the appeals. The Cupraks did not request additional time for the filing of a response and, in fact, filed a response to the appeals on January 7, 2013, before the deadline of January 9, 2013. The Board notes that the 15 working day comment period on the draft of this order provided an additional opportunity for the Cupraks and other interested persons to comment on the issues raised in the appeals, including the potential impact of the proposed project on the scenic character and existing uses related to scenic character of Saponac Pond. The Cupraks and others availed themselves of that opportunity.

With respect to the assertions regarding *ex parte* communications, the appeal proceeding before the Board is not an adjudicatory proceeding; therefore, the *ex parte* rule in the Maine Administrative Procedure Act (MAPA) does not apply. The Board finds that there is not a restriction on communication between an applicant, appellant, respondent, or any interested person and Department or Board staff or Board counsel without notice to other parties or interested persons. While the Cupraks were not included in some of the communications regarding the appellants' proposed supplemental evidence or the appellants' objections to the Cupraks' filing, there were also communications from the Cupraks to Board staff and counsel in which the appellants were not included. Such communications are not prohibited under the Board's rules or the MAPA. The record shows that the appellants were not permitted

to augment the record or their initial filing and the Board denied the appellants' request to exclude the Cupraks' response to the appeals.

10. DISCUSSION AND FINDINGS ON APPEALS:

A. Interpretation of Scenic Impact Criteria:

The appellants argued that the Department applied incorrect legal standards when evaluating the visual impacts of the proposed project on Saponac Pond. The appellants contended that the Department failed to apply the scenic impact standards from the WEA and instead applied the Site Law and the NRPA standards or an incorrect combination thereof. They argued that the Site Law and NRPA require the WEA standards to be applied to evaluate scenic impact instead of the Site Law and NRPA scenic impact standards for non-wind development; that the Department's conclusion that the proposed project would cause an unreasonable adverse effect on the scenic character of a SRSNS was the result of a misapplication of the legal standard; and that under an application of solely the WEA standards to evaluate scenic impact, the application should have been approved.

To obtain a Site Law and an NRPA permit for the proposed development, Passadumkeag Wind must meet the criteria set forth in the Site Law and the NRPA. The scenic and aesthetic impacts criteria of both statutes are further specified, and narrowed, for applications meeting the definition of an expedited wind energy development. The WEA directs that:

> In making findings regarding the effect of an expedited wind energy development on scenic character and existing uses related to scenic character pursuant to [the Site Law or the NRPA] the [Department] shall determine, in the manner provided in subsection 3, whether the development significantly compromises views from a scenic resource of state or national significance such that the development has an unreasonable adverse effect on the scenic character or existing uses related to scenic character of the scenic resource of state or national significance. (M.R.S. 35-A § 3452(1)).

With this language the Department is directed to use the more specific analysis of the WEA in cases of an expedited wind energy project in order to determine whether the underlying general standards of the Site Law and the NRPA are met and a permit under those laws may be issued.

For Site Law projects that are not expedited wind energy developments, the Site Law's basic scenic impact criterion requires a showing that a developer of a proposed project has made adequate provision for fitting the development harmoniously into the natural environment and that the development will not adversely affect existing uses and scenic character. The Board finds that the appellants are correct in their argument that generating facilities of an expedited wind energy development (which includes the turbines), and in this instance also

the associated facilities, are not required to meet the first part of the Site Law's general criterion, a determination that the project would fit harmoniously into the existing natural environment, with regard to scenic impacts. The WEA states that a "determination that a wind energy development fits harmoniously into the natural environment in terms of potential effects on scenic character and existing uses related to scenic character is not required for approval" under the Site Law (M.R.S. 35-A § 3452(1)). Thus this first aspect of the Site Law criterion pertaining to harmonious fit does not apply in the analysis of scenic impacts for expedited wind energy projects. However, the general Site Law requirement that the development not adversely affect existing uses or scenic character is not set aside by the WEA, nor is the scenic and aesthetic uses criterion under the NRPA; rather, they are modified.

The Board concludes that the Department erred with respect to its scenic impact assessment, in requiring the applicant to make adequate provision for fitting the development harmoniously into the existing natural environment.[1]

Passadumkeag Wind contended in its appeal that the Department should not have required the turbine portion of the proposed project to meet the NRPA scenic and aesthetic uses criterion. Its argument was that only the transmission line portion of the project affected wetlands and that portion of the project would not be visible from Saponac Pond. The Board finds that when a project is subject to the NRPA by virtue of its impacts to, or being adjacent to, a protected natural resource such as a freshwater wetland, the project as a whole must meet the licensing criteria. To apply the NRPA otherwise would lead to a result inconsistent with the intent of the statute, such as the assessment of the impacts of only one half of a proposed project. The Board concludes that the Department was correct in applying the NRPA to the proposed development as one complete project.

B. Saponac Pond:

The appellants objected to the Department's findings and conclusions that the proposed project would have an unreasonable adverse effect on the scenic character of Saponac Pond, an SRSNS, and the existing uses of Saponac Pond related to its scenic character.

[1] The Department's error in applying this provision of the Site Law appears both in its negative conclusion with regard to the generating facilities and its positive conclusion with regard to the associated facilities. The Board adopts the Department's finding that the associated facilities of the proposed project would not adversely affect existing uses or scenic character in the municipality, neighboring municipalities or townships.

The Department's scenic impact findings focused on the resource's significance to its users, the predominant role of Passadumkeag Mountain in the value of the scenic resource, the expectations of the viewers, and the nature of the affected uses.

The WEA directs the Department to consider the following evaluation criteria:

(A) The significance of the potentially affected scenic resource of state or national significance [here, Saponac Pond];

(B) The existing character of the surrounding area;

(C) The expectations of the typical viewer;

(D) The expedited wind energy development's purpose and the context of the proposed activity;

(E) The extent, nature and duration of potentially affected public uses of the scenic resource of state or national significance and the potential effect of the generating facilities' presence on the public's continued use and enjoyment of the scenic resource of state or national significance; and

(F) The scope and scale of the potential effect of views of the generating facilities on the scenic resource of state or national significance, including but not limited to issues related to the number and extent of turbines visible from the scenic resource of state or national significance, the distance from the scenic resource of state or national significance and the effect of prominent features of the development on the landscape.

A finding by the [Department] that the development's generating facilities are a highly visible feature of the landscape is not a solely sufficient basis for determination that an expedited wind energy project has an unreasonable adverse effect on the scenic character and existing uses related to scenic character of a scenic resource of state or national significance (M.R.S. § 3452(3)).

The record shows that Saponac Pond is a large (922 acre) shallow (maximum depth of 14 feet) flowage in the path of the Passadumkeag River. The shoreline of the pond is partially developed with approximately 50 camps and homes, primarily along the northeastern and northwestern shores. Route 188 borders the pond to the north for a distance of approximately 850 feet and there is a parking area and small boat put-in at the eastern end of a sand and cobble beach at that location. A large amount of sawdust is piled along and near the shoreline at the western end of the sand and cobble beach. Department records reflect that on August 17, 2012, the Department accepted a permit-by-rule notification from the Town of Burlington for removal of sawdust from the shore of the lake in an effort to restore the area as a recreational asset for the community. As of the date of this order, Department staff indicates that the some of the sawdust has been removed, however a large pile

remains. The most distinctive landform in the area is Passadumkeag Mountain, which rises 1250 feet above the elevation of the pond to the south. The proposed turbines will be located on the ridgeline, running roughly east to west. The project will be located in a working forest landscape, and a logging road is visible on Passadumkeag Mountain. There is also a 574 foot telecommunication tower on Passadumkeag Mountain lit with four beacons, with a second under construction. From Route 188, the closest turbines will be at a distance of between 4 and 4.8 miles; from the south shore of Saponac Pond, the closest turbines will be at a distance of 2.3 miles.

Saponac Pond is an SRSNS by virtue of being one of the 280 great ponds in the Maine Wildlands Lake Assessment (Assessment) designated as either "significant" or "outstanding" from a scenic perspective. Of the two possible ratings, Saponac Pond is rated "significant" for scenic character. Both Saponac Pond and Passadumkeag Mountain are located in the expedited permitting area.

To address the scenic impact criteria, the record shows that the applicant submitted a Visual Impact Assessment (VIA) entitled "Visual Impacts of a Generation Facility," prepared by Terrence J. DeWan and Associates (DeWan Associates). The VIA examined the potential scenic impact of the generating facility and associated facilities on SRSNS within eight miles of the proposed project, including Saponac Pond, using the evaluation criteria contained in the WEA. The applicant also submitted a user intercept survey authored by Market Decisions and dated October 2011.

The applicant's VIA indicated that there will be 10 to 14 turbines visible from Saponac Pond. The VIA assessed user intercept survey results, photo-simulations, and viewshed maps. Based on this evidence, the applicant concluded that while the turbines will have an adverse effect on the scenic value of Saponac Pond, there are relatively few recreational users of the pond, the primary recreational uses being fishing and boating. Of the surveyed users, 70% - 74% would continue to return to the pond to enjoy boating, fishing, and similar recreational pursuits even with the turbines in view. DeWan Associates concluded that the project will have a medium to high scenic impact, but that the impact will not be unreasonable pursuant to consideration under all of the WEA standards. With respect to the Rollins wind energy project and concerns about cumulative impact, the applicant's VIA (September 26, 2012) states that the nearest Rollins turbines are located six to seven miles north of Saponac Pond, but are most visible from the center of Saponac Pond where the viewing distance is at the edge of the 8 mile study area.[2] The VIA concludes that the cumulative visual impact to users of the pond will be relatively minor due to the Rollins turbines distance from the pond, the small viewing arc they would impact (5 to 6 degrees), and intervening topography and vegetation.

[2] Under provisions of the WEA (35-A M.R.S. § 3452(1), "the primary siting authority shall consider insignificant the effects of portions of the development's generating facilities located more than 8 miles, measured horizontally, from a scenic resource of state or national significance."

The Department, in its draft staff analysis of the project issued on July 5, 2012, similarly applied the WEA standards as a whole when it stated, at that point in its analysis, that although there will be some adverse effects on SRSNS, it appeared that the proposed project would not have an unreasonable adverse impact on any SRSNS or the continued use of any SRSNS by a typical user.

Following the Department's second public meeting and at the request of the Department, the applicant submitted additional information concerning the impacts to the scenic character of Saponac Pond, as well as on the public use of the pond. One of the submissions was a QuickTime "movie" prepared by DeWan Associates, created from near the middle of Saponac Pond where the viewer could see a panoramic, 360 degree view of the pond. The movie included simulations of the proposed turbines. The applicant conducted an additional use survey on theextent, nature and duration of the use of Saponac Pond by the public. The additional use survey was conducted by Stantec Consulting on thirteen days between August 8, 2012 and September 3, 2012. During the 86.25 hours of surveying, 24 boats, 42 boaters, and 9 incidental on-shore users were documented. The average time spent on the pond by boaters was 1.8 hours. The applicant concluded that the movie and the additional use survey further demonstrated that the pond is developed; the pond is lightly used; the extent of the use is limited; and that the 14 wind turbines visible will not have an unreasonable adverse impact on the scenic character of Saponac Pond or the existing uses related to scenic character.

The record shows that the Department hired David Raphael of LandWorks, an independent scenic expert, to assist in its review of the evidence pertaining to scenic character and potential impacts. In Mr. Raphael's initial analysis dated June 19, 2012 he factored in distance from the project, duration and extent of the views, and visual absorption and used his own numerical system for comparing extent of impact. Mr. Raphael rated each factor in an evaluation matrix, with a maximum point value of three, representing high potential impact on the resource, down to zero, representing no potential impact on the resource. Mr. Raphael's evaluation yielded a rating of 2.1 for Saponac Pond, indicating a medium impact to scenic quality. Mr. Raphael provided a further assessment in a memorandum dated September 7, 2012. In this analysis Mr. Raphael reframed the matrix to follow the six evaluation criteria exactly and utilized a low, medium and high rating system, rather than his numerical system. Mr. Raphael stated that the reformatting did not change any of the conclusions; he again concluded that the overall scenic impact of the project on Saponac Pond will be medium. Mr. Raphael also reviewed the additional information requested by the Department and submitted by the applicant and provided comments to the Department in a memorandum dated October 3, 2012.

Mr. Raphael concluded that the project will result in an adverse impact to the scenic quality of Saponac Pond, but that the impact will not be unreasonable. While the project will be prominent and alter the visual quality and sense of place

for the users and camp owners at Saponac Pond, Mr. Raphael balanced that with the other factors the WEA directs should be considered, including the character of the surrounding area and the effect on the public's continued use and enjoyment of the scenic resource. He commented that the area has been developed and is not pristine, and noted the relatively high percentage of respondents in the applicant's survey who indicated the project will not have a substantial impact on their enjoyment and willingness to return. Mr. Raphael noted that Passadumkeag Mountain itself is not an SRSNS and that Saponac Pond is lightly used. Mr. Raphael recommended that to mitigate the annoyance factor associated with nighttime warning lights the applicant should address the feasibility of installing a radar detection system, which turns on night lighting only when aircraft are in the vicinity of the project, to decrease the visual impact of the project.

The Department received numerous comments from the public concerning the scenic impacts of the project. The Natural Resources Council of Maine (NRCM) did not take a position on whether the application should be approved or denied; however, it commented that, "Passadumkeag Mountain is a stunning visual feature that dominates and greatly accentuates the scenic quality of the resource." NRCM noted the existing radio tower on the mountain and the visible evidence of working forest use in the project area. NRCM stated that working forests are common within the unorganized territories and it was NRCM's opinion that evidence of a working forest does not detract from the scenic quality of Passadumkeag Mountain or any other feature in the area. NRCM also commented that, "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."

Several interested persons raised concern over the adverse visual impacts from the warning lights required by the Federal Aviation Administration (FAA) that will be placed on some turbines. One interested person submitted a photograph of another wind power project in the state which showed the reflection of such lights on a lake. Another interested person submitted written comments stating, "the pulsating, flashing, incessant night lighting required for safety by FAA is a very large part of the unacceptable, intrusive visual scenic impact." The interested person went on to request that the Department require the applicant to install a radar-activated lighting system. These systems are designed to turn on the warning lights as a plane approaches the turbines. At other times, the warning lights are not lit. Radar-activated lighting systems are not yet approved for use on wind turbines by the FAA. To address these concerns, the applicant modified its application to propose, "If the FAA finalizes the standards for these systems prior to the construction of the Passadumkeag project, the Applicant will evaluate the use of such a system for the project. If it is both technically and economically feasible and approved by the FAA, the Applicant will install a radar controlled system for this project." In response to the interested persons' comments and to reduce nighttime scenic impacts, the Board finds that if at any time prior to or during the operation of this project the FAA approves radar-activated lighting system technology the Applicant must apply for FAA approval for its installation at this

site and, if the FAA approval is granted, install such a system in accordance with Condition 9 below.

One interested person submitted a petition with over 300 signatures urging the Department to deny the project based on, among other things, the negative visual impacts on the surrounding area. Others commented that the research exists which suggests that the reliability of professional assessments of scenic impact is comparable to, but not higher than, public assessments of scenic quality. They also argue that the applicant's user survey is flawed and cannot be used to draw valid conclusions. The Board acknowledges that the user surveys did not reflect large numbers of interviewees; however, the user surveys were considered in conjunction with the evidence from two scenic experts.

The Board finds that an assessment of the significance of Saponac Pond shows that while it is valued by adjacent property owners and users, in relation to other lakes in the Assessment it is not designated as outstanding from a scenic perspective. The Department's visual impact expert, David Raphael of LandWorks, rated Saponac Pond as low in significance as a scenic resource due, in part, to the existing character of the surrounding area. In his October 3, 2012 memorandum, Mr. Raphael stated that Saponac Pond's achievement of a "scenic quality rating of "significant" [in the Assessment] is due to, in part, its topographic relief and shoreline. Beyond those considerations, the pond is not a unique or highly sensitive resource." While impacts to all lakes or ponds qualifying as a SRSNS are considered, the relative qualities of the SRSNS at issue are a factor in the Board's analysis of whether the proposed project's impacts are unreasonable. Impacts to a pond which is rated as "outstanding" in terms of scenic character would be more heavily weighted than impacts to a pond rated as "significant" that has the amount of existing development found on Saponac Pond.

The expectations of a typical viewer are reflected in the user surveys conducted by the applicant. The applicant conducted a survey over portions of eight days in 2011 (Market Decisions), which was augmented by additional user observations over portions of 13 days in 2012 (Stantec Consulting). While most users surveyed stated that they expect a relatively low level of development, the existing development on this pond is currently visible to users of the pond. Even with their expectations, the majority (59%) of the users surveyed said that if the project were built it would not change their sense of enjoyment of the pond. Most users surveyed (71% to 74%) also indicated that they would be likely to return to use the pond for activities such as swimming, canoeing, kayaking and ice fishing if the project was built. Thus, while there will be some effect on the public's continued use and enjoyment of Saponac Pond, the Board finds that most users will return and continue to enjoy their activities on the pond.

Moreover, the impacts that will occur must be considered in conjunction with the extent, nature and duration of those uses. The user survey indicates that Saponac Pond is lightly used in spite of easy access from Route 188. During the

approximately 145 hours of observation, the applicant's consultant documented average length of visits of 1.8 hours, never more than two boats on the pond at any one time, and an average of between 0.2 and 0.3 boats on the water per hour.

The WEA directs consideration of the scope and scale of potential views of the project from a SRSNS. The majority of the project's 14 turbines will be visible from 97 percent of Saponac Pond and a view of turbines will comprise up to 62 degrees of the panorama. However, the Board notes that the applicant reduced the project's size from 27 proposed turbines to 14 turbines and that the project involves fewer turbines than most grid scale wind energy developments proposed for Maine. The appellants argued that the Department's conclusion regarding scenic impact stemmed almost exclusively from the criterion directing consideration of the scope and scale of the potential effect of views of the project on the SRSNS, and that the other scenic criteria discussed above including level of use and effect on public use must be factored into the overall analysis.

Both the applicant's and the Department's scenic consultants have considerable experience in evaluating the scenic impacts of wind energy developments under the standard of the WEA, and the Board finds their assessments in this case credible and gives them considerable weight. In this instance, both the applicant's and the Department's scenic consultants agree that the project will not have an unreasonable adverse impact on the scenic character of Saponac Pond or existing uses of the pond related to scenic character, and there is no comparable assessment to the contrary. Concerns about the view of the proposed project from locations other than a SRSNS (here Saponac Pond) while understandably of concern to the public are not within the purview of the Board to consider under the WEA.

The Board finds that, in accordance with 35-A MRS section 3452(1), for this proposed project all of the criteria listed in the WEA must be considered when determining whether the impacts of a proposed project are unreasonable. In particular, while the arc of the view of this proposed project is wide from some portions of Saponac Pond, the existing character of the area, the relative significance from a scenic perspective, the extent and nature of the uses, and the likely continued use by most users, all support a finding that the proposed project will not result in an unreasonable adverse effect on the scenic character and the existing uses of Saponac Pond that are related to its scenic character.

The Board finds that the proposed project will not significantly compromise views from an SRSNS such that the development will have an unreasonable adverse effect on the scenic character or existing uses related to scenic character of Saponac Pond. While the Board finds that the project as proposed will not have an unreasonable adverse effect on the scenic character or existing uses related to scenic character, the Board is sensitive to the large number of interested persons concerned with impacts to the night sky from lighting of the turbines. To potentially reduce these impacts, the Board is requiring as a condition to this permit that, within six months of FAA's final approval of the specifications for radar

activated lighting, the applicant submit an application to the FAA to install such a system. Within one year of FAA's approval of a radar activated lighting system at the Passadumkeag site, the applicant must install and operate the warning lights in accordance with that approval.

11. SCENIC CHARACTER IMPACTS RELATED TO OTHER SCENIC RESOURCES OF STATE OR NATIONAL SIGNIFICANCE:

As discussed above, the Site Law and the NRPA standards pertaining to scenic impacts must be satisfied in order to obtain a permit. The WEA further specifies those standards and declares that when expedited wind energy developments are being evaluated:

> [T]he [Department] shall determine, in the manner provided in subsection 3, whether the development significantly compromises views from a scenic resource of state or national significance such that the development has an unreasonable adverse effect on the scenic character or existing uses related to scenic character . . . Except as otherwise provided in subsection 2, determination that a wind energy development fits harmoniously into the existing natural environment in terms of potential effects on scenic character and existing uses related to scenic character is not required for approval under…Title 38, section 484, subsection 3. 35-A M.R.S. § 3452(1).

With regard to the facilities associated with an expedited wind energy development, such as substations, buildings, access roads and generator lead lines, the WEA 35-A M.R.S. § 3452(2), provides in pertinent part that:

> The [Department] shall evaluate the effect of associated facilities of a wind energy development in terms of potential effects on scenic character and existing uses related to scenic character in accordance with …Title 38, section 484, subsection 3, in the manner provided for development other than wind energy development if the [Department] determines that application of the standard in subsection 1 to the development may result in unreasonable adverse effects due to the scope, scale, location or other characteristics of the associated facilities. An interested party may submit information regarding this determination to the [Department] for its consideration. The [Department] shall make a determination pursuant to this subsection within 30 days of its acceptance of the application as complete for processing.

The proposed wind project contains "generating facilities" including wind turbines and towers as defined by 35-A M.R.S. § 3451(5) and "associated facilities" such as buildings, access roads, generator lead lines and substations, as defined by 35-A M.R.S. § 3451(1). The proposed project is subject to the expedited wind energy development standards outlined above and, to the extent applicable, 38 M.R.S. § 484(3). The project also contains a generator lead line which will replace an existing line almost in its entirety.

As provided in the WEA, 35-A M.R.S. § 3452(2), the Department made a determination within 30 days of the receipt of the application that the potential effects of the generator lead line on the scenic character and existing uses would be reviewed under the standards set forth in the WEA.

A. Scenic Resources of State or National Significance Other Than Saponac Pond.

Scenic Resources of State or National Significance (SRSNS) are defined in 35-A M.R.S. § 3451(9). The following is a description of what constitutes each type of SRSNS and the applicant's summary, as provided in its VIA, of potential impacts to each SRSNS, other than Saponac Pond, within eight miles of the proposed generating facilities:

1) National Natural Landmarks. National natural landmarks (NNL) are federally designated wilderness areas or other comparable outstanding natural and cultural features, such as the Orono Bog or Meddybemps Heath.

According to the National Park Service, there is one NNL within eight miles of the Passadumkeag Wind Project: the 6,100-acre Passadumkeag Marsh and Boglands. The southeast tip of the area designated as a NNL touches the line that circumscribes area within eight miles of the generating facilities. The National Park Service's website describes the Passadumkeag Marsh and Boglands NNL as:

> One of the largest, unspoiled wetlands in the state of Maine, Passadumkeag Marsh and Boglands contains a unique blend of bog and marsh communities. The marsh is partially bounded by eskers, including the classic Passadumkeag Esker, or Enfield Horseback, known world-wide as an example of glacial geology.

According to the Maine Department of Conservation's publication, *Conservation Lands in Maine*, the Passadumkeag Marsh and Boglands are part of the Cold Stream/Ayers Brook Preserve, which is a series of interconnected tracts of land held by The Nature Conservancy in fee. The area is open for public use, although access is limited due to the nature of the landscape. There are no developed trails and access by road is limited to small areas of frontage on Gould's Ridge Road and Enfield Road. Public use of the area is primarily in the form of canoeing and hunting waterfowl. The applicant states that, at most, the top of one turbine may be visible from the preserve and it will appear as a very small object on a relatively flat horizon. The applicant concluded that the presence of the turbines should not have any visual impact on the Passadumkeag Marsh and Boglands.

The applicant did not identify any other NNL, federally designated wilderness areas, or other comparable outstanding natural and cultural features.

In response to questions raised by an interested person, the Department considered whether potential scenic impacts involving the portion of the Robbins Lumber Easement that is located within eight miles of the generating facilities should be evaluated as an SRSNS. The Department concluded that the features within the Robbins Lumber Easement are not comparable to NNL or federally designated wilderness areas, and the Department did not require the applicant to submit information on potential impacts there.

2) Historic Resources. Historic Resources are properties listed on the National Register of Historic Places pursuant to the National Historic Preservation Act of 1966, as amended, including, but not limited to, the Rockland Breakwater Light and Fort Knox.

   The Old Tavern in Burlington, built in 1844, is listed on the National Register of Historic Places, and is within eight miles of the proposed project. The Old Tavern is a 2.5 story wooden frame structure with a gable roof, clapboard siding, and a covered porch that wraps around the front façade. The National Register nomination form, submitted in 1986, describes the tavern as a popular headquarters for hunters and fishermen in the area in its later years. It was first built to serve as a hotel for lumber crews and others who were working in the area. The building sits on a corner lot in a small town setting. In the nomination for its inclusion on the National Register, the building's relationship to the surrounding landscape is not mentioned as a significant factor; however, the integrity of the immediate setting is important to the Old Tavern. The setting around the Old Tavern is a classic cross-road village, with a church with a white steeple across the street, and private residences, open fields/greens, and additional (formerly) commercial buildings nearby. The building is 5.9 to 7.2 miles northwest of the project and separated by a dense stand of second growth vegetation. The applicant states that the turbines will not be visible presently from this site due to the intervening vegetation and that even if the turbines were to be visible, their relatively small appearance will not detract from the historic context. The primary function of the Old Tavern occurs inside the structure, and while the immediate setting is important, the building's significance is not related to the scenic quality of the surrounding landscape. Based on its field investigation, the applicant states that the presence of the turbines should not have any visual impact on the Old Tavern.

3) National or state parks. There are no national or state parks within eight miles of the project.

4) Great ponds. A great pond is a SRSNS if it is:

   a. One of the 66 great ponds located in the State's organized area identified as having outstanding or significant scenic quality in the "Maine's Finest

Lakes" study published by the Executive Department, State Planning Office in October 1989; or

b. One of the 280 great ponds in the State's unorganized or de-organized areas designated as outstanding or significant from a scenic perspective in the "Maine Wildlands Lakes Assessment" published by the Maine Land Use Regulation Commission (now the Land Use Planning Commission) in June, 1987.

There are no great ponds within eight miles of the generating facilities listed in the Maine's Finest Lakes study. The scenic resources of three great ponds within eight miles of the project have been designated as significant in the Assessment: Saponac Pond, Spring Lake, and Lower Pistol Lake. One great pond within eight miles of the generating facilities, Nicatous Lake, is designated as outstanding from a scenic perspective in the Assessment.

NICATOUS LAKE

Nicatous Lake (5,165 acres, elevation 347 feet above sea level) is the largest waterbody within eight miles of the project, although most of the lake is located further than eight miles from the project. The lake is located southeast of Passadumkeag Mountain in T3 ND, T40 MD, and T41 MD. Most of the shoreline is privately owned and, with the exception of several sporting camps and private homes, is encumbered by conservation easements held by the Maine Bureau of Parks and Lands (BPL). Most of the islands in the lake are owned in fee by BPL. Nicatous Lake is a narrow waterbody approximately nine miles in length with a highly configured shoreline surrounded by low rolling hills. The northern third of the lake, which falls within eight miles of the project, is between 0.2 and 0.9 miles in width, significantly narrower than the southern portion. The closest proposed turbine to the lake will be located 5.6 miles west of this portion of the lake. The landforms surrounding the northern end of the lake rise up to 150 to 225 feet above the surface of the lake. One of the most noteworthy features of Nicatous Lake is the number of wooded islands found throughout its length. The applicant states that although the axis of the northern portion of Nicatous Lake generally runs northwest/southeast, the combination of the surrounding hilly terrain and the presence of several wooded islands in this part of the lake will make it difficult to achieve a long view of the proposed project, except along the western shore. There are no named mountains or other distinctive focal points within the foreground or midground in the viewshed from this portion of the lake.

The applicant's VIA states that between one and nine turbines will be within eight miles, and approximately eight turbines will be visible from portions of Nicatous Lake. The applicant states that based on the user intercept survey results, the photo-simulations, and the viewshed maps, the project will have an adverse effect on the scenic value of the northern third of Nicatous Lake, which

is recognized in the Assessment for its outstanding scenic resources. However, the applicant contends there are moderating factors that will affect the overall scenic impact. The applicant states that the distance of the project (five to eight miles) from the lake will make the turbines appear as relatively small to medium-sized objects on the horizon, and the low hills and wooded islands between the project and the viewer will provide intermittent screening so the entire project will never be visible from any one point on the lake. The applicant concludes from its user intercept survey that most people will continue to return to the lake for boating, fishing, and similar recreational pursuits even with the turbines in view.

LOWER PISTOL LAKE

Lower Pistol Lake (979 acres, elevation 323 feet above sea level) is in T3 ND, ten miles east of Burlington and is between 4.9 and 6.2 miles from the project. Most of the land surrounding the lake is within the Passamaquoddy Indian Territory. Lower Pistol Lake is the westernmost waterbody in a chain of lakes that includes Upper Pistol Lake, Middle Pistol Lake, Side Pistol Lake, and Spring Lake. The landscape surrounding the lake consists of gently rolling wooded hills that are drained by boggy meandering streams. An unnamed hill to the southwest rises 300 feet above the lake. Logging operations have created a network of woods roads that approach the lake from Pistol Green, a break in a distinct esker two miles west of the lake. Access to the lake is over woods roads. An informal boat put-in and campsite are located in an opening at the northwestern end of the lake. The lake is undeveloped, with no camps evident from field evaluation or aerial photographs. The Maine Atlas and Gazetteer indicates the presence of a campsite on one of the islands in the middle of the lake.

The applicant states that all 14 turbines will be visible from Lower Pistol Lake at a distance of five to eight miles. The applicant's VIA states that based on the user intercept survey results, photo-simulations, and viewshed maps, the turbines, seen in profile on the ridgeline of Passadumkeag Mountain, will have an adverse effect on the scenic value of Lower Pistol Lake, however moderating factors will affect the overall scenic impact. The applicant states that the project will be visible in the background, which will make the turbines appear as relatively small to medium-sized objects on the horizon. The applicant concludes from its user intercept survey that the majority of the small number of users of the lake will continue to return to the lake to enjoy boating, fishing, and similar recreational pursuits even with turbines in view.

SPRING LAKE

Spring Lake (435 acres, elevation 336 feet above sea level) is in T3 ND, ten miles east of Burlington and is between 4.9 and 6.2 miles from the project. Spring Lake is a waterbody in a series of lakes that includes Lower Pistol Lake,

Upper Pistol Lake, Middle Pistol Lake, and Side Pistol Lake. The landscape surrounding the lake consists of gently rolling wooded hills rising about 200 feet above the lake, which are drained by boggy meandering streams. A small island is located at the southern end near the boat launch. Logging operations have created a discontinuous network of woods roads that approach the lake from Pistol Green on the west. Access is over a woods road on the south side of the lake, where there is a hand-carry boat launch site. The lake appears to be largely undeveloped, with only one camp evident from field evaluation or aerial photographs.

The applicant's VIA states that based on the photo-simulations, viewshed maps, and field investigation, the blades of up to four turbines will be scarcely visible from Spring Lake, and therefore will have a very slight adverse effect on the scenic value of the lake.

WEST LAKE

A comprehensive visual analysis was not conducted by the applicant for West Lake, as it is not a SRSNS. The applicant states that there will be visual impacts to West Lake, which has a large number of camps. Camp orientation on the extensive southwest and northeast facing shorelines is not, for the most part, in the direction of the project. The applicant states that intervening vegetation and topography, coupled with the distance from project (five miles to the nearest turbine at the closest point of visibility from the lake), will limit overall visual impact. The applicant concludes that owners on the north shore will not be able to see the project.

5) Scenic Rivers. A segment of a scenic river or stream is a SRSNS if it is identified as having unique or outstanding scenic attributes in Appendix G of the "Maine Rivers Study" published by the Department of Conservation in 1982. There are no rivers or streams within eight miles of the proposed project that are identified in the Maine Rivers Study as having unique or outstanding scenic attributes.

6) Scenic viewpoints on public land or trails. A scenic viewpoint is a SRSNS if it is located on state public reserved land or on a trail that is used exclusively for pedestrian use, such as the Appalachian Trail, that the Department of Agriculture, Conservation and Forestry designates by rule. There are no scenic viewpoints located on state public reserved land within eight miles of the proposed project, and there are no trails used exclusively for pedestrian use within eight miles of the proposed project.

7) Scenic turnouts. A scenic turnout is a SRSNS if it has been constructed by the Department of Transportation pursuant to Title 23, section 954 on a public road that has been designated by the Commissioner of Transportation pursuant to Title 23, section 4206, subsection 1, paragraph G as a scenic highway. There

are no scenic turnouts on any designated scenic highways constructed by the Department of Transportation within eight miles of the proposed project.

8) Scenic viewpoints located in the coastal area. To qualify as a SRSNS, a scenic viewpoint located in the coastal area, as defined by Title 38, section 1802, subsection 1, must be ranked as having state or national significance in terms of scenic quality in:

   a. One of the scenic inventories prepared for and published by the Executive Department, State Planning Office: "Method for Coastal Scenic Landscape Assessment with Field Results for Kittery to Scarborough and Cape Elizabeth to South Thomaston," Dominie, et al., October 1987; "Scenic Inventory Mainland Sites of Penobscot Bay," DeWan and Associates, et al., August 1990; or "Scenic Inventory: Islesboro, Vinalhaven, North Haven and Associated Offshore Islands," DeWan and Associates, June 1992; or

   b. A scenic inventory developed by or prepared for the Executive Department, State Planning Office in accordance with section 3457.

   There are no scenic viewpoints located in coastal areas within eight miles of the proposed project.

B. Peer Review.

As discussed above, David Raphael of LandWorks, an independent scenic expert, assisted the Department in its review of the evidence pertaining to potential impacts to scenic character and uses. Mr. Raphael provided the Department with comments dated June 19, 2012 and September 7, 2012 on the applicant's VIA. Mr. Raphael ranked six SRSNS in his review document entitled "Review of the Passadumkeag Wind Project Visual Impact Assessment" dated June 19, 2012 and again on September 7, 2012. The six SRSNS were evaluated based on the statutory requirements of context/ character, significance, level of use, viewer expectations, visual impact, and effect on public use. Mr. Raphael's analysis factored in distance from the project, duration and extent of the views, and visual absorption. Mr. Raphael rated each factor in an evaluation matrix, with a maximum point value of three, representing high potential impact on the resource, down to zero, representing no potential impact on the resource.

In addition to the matrix evaluation, Mr. Raphael provided the following comments to the Department on the other five SRSNS, in addition to Saponac Pond, which are within eight miles of the proposed project:

1) Passadumkeag Marsh and Boglands:

   Only a very small portion of this area, 0.6 acres (the most southeasterly section of the bog land parcel), is within eight miles of the project. Based on the

viewshed analysis of both the applicant's VIA and the LandWorks analysis of aerial photography for land cover, Mr. Raphael agrees with the applicant that it is expected that there will be no visibility of the project from this resource.

2) Old Tavern:

The Old Tavern faces Route 188 (Main Road) and is oriented in a manner that the view of its external architectural qualities as well as access to the building's interior is from the west. From this direction the proposed project will not be visible. Mr. Raphael concludes that any potential views of the project will be in the southerly to south easterly direction; however it is unlikely that these views are possible due to the intervening vegetation and structures.

3) Nicatous Lake:

Approximately one half of this nine mile long lake is within eight miles of the proposed project. The applicant's VIA indicates that the visibility of the project will be limited on the lake. Any visibility will be of only a few turbines in a narrow angle of view of approximately 10 degrees. The distance to the turbines ranges from 6.9 miles for the closest visible turbine to 9.5 miles for the most distant visible turbines from the applicant's photo-simulation location. Mr. Raphael concludes that the developed areas at the northern end of the lake and at Porter Cove are unlikely to have any visibility of the turbines due to the intervening vegetation and topography. Mr. Raphael states that while there will be some visibility of the project from other points on the lake within the eight-mile project radius, the distance to the nearest visible turbine is such that these turbines will be neither dominant nor serve as a focal point to draw the eye.

Passadumkeag Mountain can be discerned from viewing points within the eight-mile project radius. Mr. Raphael comments that while atmospheric conditions and landscape qualities associated with the lake and shoreline will diminish the presence of the project, the project will have the potential to result in adverse impact of the scenic qualities and values of the lake. He comments that the proposed project will add an unnatural element to the view and horizon line when seen from the shoreline or on the lake vantage points however the visibility of the project is limited by distance. After consideration of the applicant's user survey, in which 68% of the respondents indicated that the project will not change, or will have a positive impact on, their level of enjoyment, Mr. Raphael stated that the scale of the project's potential visual presence on this lake will not be so large as to be disconcerting and unsettling. The evaluation matrix developed by Mr. Raphael indicates that the project's impact on scenic qualities and values for this lake will be a composite rating of 1.9, or a moderate impact.

4) Lower Pistol Lake:

Mr. Raphael observes that the general context for this particular lake is one of an undeveloped, remote pond; however, there is evidence of surrounding timber harvesting and forest resource management. With the surrounding low relief of this pond and the wooded nature of the shoreline, this area is not particularly unique nor does it rise to the level of being distinctive with regard to other similar lakes in the region. The lake is considered generally remote as it is only reachable by four-wheel drive or by snowmobile in the winter. The distance to the nearest turbine from this lake is over five miles at the northern end of the lake. Mr. Raphael concludes that on those portions of the lake where the turbines are visible, the range of view is approximately eight degrees.

Mr. Raphael considered the applicant's user survey, which stated that 62% of respondents indicated that their enjoyment of the lake will not be affected by the turbines.

Based on the limited extent of potential project visibility on this lake; the fact that a small percentage of the panorama will be occupied by the project; and consideration of a lack of impact on the quiet and solitude that the lake provides, Mr. Raphael's matrix result was a 1.4 and he concludes that there will be a low to moderate impact on scenic quality.

5) Spring Lake:

Mr. Raphael comments that Spring Lake is another seemingly remote, undeveloped pond, surrounded by both wetland systems and timber harvest operations. The shoreline is wooded with spruce, pine and northern hardwoods, and much like Lower Pistol Lake the topography around the lakes is comprised of low lands and low ridges with elevation differences of about 200 to 250 feet above the lake surface. The lake is primarily accessible with four-wheel drive or by snowmobile in the winter. When topography and vegetation are taken into account, Mr. Raphael's viewshed analysis yields the conclusion that only a small portion of the lake, approximately 15% of the surface and shoreline area, will have visibility of the proposed project turbines, and that will be from hub height and above. He concludes that visual impacts to Spring Lake resulting from this project will be minimal, if the turbines were discerned at all. He commented that users of this lake will need to be, for the most part, looking in the right direction and will need to know what they were looking for in order to see the project.

Mr. Raphael's evaluation matrix yielded a score of 1.1, and given the distance to the project, the minimal visibility, the lack of users and difficult access, as well as the fact that the lake is not an outstanding scenic landscape, he concludes that it appears that the project's impacts will barely be adverse and the overall impact to scenic quality will be low.

The applicant's VIA determined that the access roads, crane paths, turbine pads and O&M building have a minimal possibility of being seen from any SRSNS or other public area. The applicant's study concluded that these associated facilities will not have an unreasonable adverse effect on scenic character and existing uses. Mr. Raphael reviewed this portion of the VIA and concurred with the applicant's analysis.

Based on the applicant's VIA for the generating facilities and associated facilities, the applicant's user surveys, public comments, the analysis and review comments from the Department's scenic expert, other information in the record, and in consideration of 35-A M.R.S. § 3425 (2) and (3), the Board adopts the Department's findings that the generating facilities and associated facilities will not have an unreasonable adverse effect on the scenic character and the existing uses related to the scenic character of Passadumkeag Marsh and Boglands, Old Tavern, Nicatous Lake, Lower Pistol Lake, and Spring Lake. While the Board finds that the project as proposed will not have an unreasonable adverse effect on the scenic character or existing uses related to scenic character, the Board is sensitive to the large number of interested persons concerned with impacts to the night sky from lighting of the turbines. To potentially reduce these impacts, the Board is requiring as a condition to this permit that, within six months of the FAA's final approval of the specifications for radar activated lighting, the applicant submit an application to the FAA to install such a system. Within one year of the FAA's approval of a radar activated lighting system at the Passadumkeag site, the applicant must install and operate the warning lights in accordance with that approval.

12. FINANCIAL CAPACITY:

The applicant estimates the total cost of the project to be $79 million.

Passadumkeag Wind is a legal entity authorized to do business in the State of Maine and is a wholly owned subsidiary of Quantum Utility Generation, LLC (Quantum). Passadumkeag Wind was established to develop and own the Passadumkeag wind project. The application states that Quantum intends to provide all of the funding for the project. The application also states that Quantum may elect to find third party financing.

The applicant submitted a letter dated February 1, 2012 from Quantum indicating that it intends to finance the project. In addition the applicant submitted a letter from Price Waterhouse Coopers LLP, dated April 27, 2011, which contains a report of independent auditors indicating total assets of more than $355 million.

The Board adopts the Department's finding that the applicant has adequate capacity to fund the project, provided that prior to construction the applicant submits evidence that it has been granted a line of credit or a loan by a financial institution authorized to do business in this State, or evidence of any other form of financial assurance determined

by Department Rules, Chapter 373(1), to be adequate to the Department's Bureau of Land and Water Quality for review and approval.

13. TECHNICAL ABILITY:

Passadumkeag Wind operates several other energy projects with a total generation capacity of 866 MW in Virginia and Mississippi and is in the process of developing solar and wind projects across the country. In addition the applicant retained the services of the following companies to prepare the application:

- Stantec Consulting – natural resource assessment, permitting
- James W. Sewall Company– engineering and stormwater
- Albert Frick Associates, Inc. – soil assessment
- Terrence DeWan Associates – visual impact analysis
- Public Archeology Lab – historic archaeological resources
- TRC/Northeast Cultural Resources – prehistoric archaeological resources
- Independent Archaeological Consulting – historic archaeological resources

Based on the experience and expertise of the applicant and their retained consultants, the Board adopts the Department's finding that the applicant has demonstrated adequate technical ability to comply with Department standards.

14. NOISE:

To address the Site Law standard pertaining to the control of noise, 38 M.R.S. § 484(3), and the applicable rules, Chapter 375(10), the applicant submitted a Noise Impact Study entitled "Sound Level Assessment for the Passadumkeag Wind Park Project," completed by Stantec Consulting, Ltd and dated January 2012 and April 2012. The sound level study was conducted to model expected sound levels from the proposed project, and to compare the model results to the applicable requirements of Chapter 375(10).

The Passadumkeag Windpark project was reviewed for compliance with the Department noise regulations that were in effect at the time the application was filed, regarding sound levels from construction activities, routine operation and routine maintenance. Chapter 375(10) applies hourly sound level limits (L_{eqA}-Hr) at facility property boundaries and at nearby protected locations. Chapter 375(10)(G)(16) defines a protected location as "[a]ny location accessible by foot, on a parcel of land containing a residence or planned residence or approved subdivision near the development site at the time a Site Location of Development application is submitted…". In addition to residential parcels, protected locations include, but are not limited to, schools, state parks, and designated wilderness areas.

The hourly sound level resulting from routine operation of a development is limited to 75 decibels (dBA) at any development property boundary as outlined in Chapter 375(10)(C)(1)(a)(i). The applicable hourly equivalent sound level limits at any

protected location vary depending on local zoning or surrounding land uses and existing (pre-development) ambient sound levels. Where the daytime pre-development ambient hourly sound level is equal to or less than 45 dBA and/or nighttime ambient hourly sound level is equal to or less than 35 dBA, the applicable rules impose the Department's strictest "Quiet Location" limits of 55 dBA daytime and 45 dBA nighttime. [3]

Due to the rural nature of the area for which the project is proposed, Department required the applicant to meet the applicable "Quiet Location" limits. The applicant proposes to operate the project in compliance with those limits as set forth in Chapter 375(10)(H)(3)(1). In Quiet Locations, the nighttime limit of 45 dBA will apply at the property line of the protected location, or up to 500 feet from sleeping quarters when the property line is greater than 500 feet from a dwelling. For this project there are two protected locations. At Receptor R1, the applicant's predicted sound levels are 48 dBA and at Receptor R2, the applicant's predicted sound levels are 36 dBA. Pursuant to Chapter 375(10)(5)(s) sounds from a regulated development received at a protected location are exempt from the regulations when the owner of the property conveys a noise easement for that location to the generator of the sound. The owner of protected location Receptor R1 has a license agreement with the underlying landowner making the sound emissions from the wind project at that location exempt from the rule. While the Department applied the regulation that existed at the time of the filing of the application, the Board finds that the project will also comply with the night-time sound level limit currently in effect, 42 dBA, at Receptor R2, the only protected location at which the limit applies. The predicted night-time sound level at Receptor R2 is 36 dBA. The applicant in its comments of July 12, 2013 stated that it does not object to the Board imposing the more protective nighttime sound level limit which is currently in effect, 42 dBA, for this project. Therefore, the Board is requiring that the current night-time sound level limit be met.

To assist with the review of the application, the Department retained an independent noise expert, Peter Guldberg of Tech Environmental, Inc., to review the applicant's prediction model and associated data as well as other evidence received on the issue of noise.

A. Sound Level Modeling. The applicant's noise consultant, Stantec Consulting, Ltd., developed a sound level prediction model to estimate sound levels from the operation of the proposed project. The sound model for the project was created using Cadna/A software developed by DataKustik of Germany. Cadna/A allows the consultant to construct topographic surface models of area terrain for calculating sound attenuation from multiple sound sources such as wind turbines.

[3] Because this project was reviewed for compliance with the sound level regulations that were in effect on February 3, 2012, the date the application was accepted for processing by the Department, citations herein are to those regulations. Amendments to those regulations became effective on June 10, 2012. The sound level limits applied in the permitting process were not appealed.

The locations of the proposed turbines, roads, parcels, land uses and waterbodies were entered into Cadna/A in order to calculate sound levels at various points within the proposed project area. Sound level predictions were calculated in accordance with ISO 9613-2, which is an international standard for calculating outdoor sound propagation.

This computerized model is capable of predicting sound levels at specific receiver positions originating from a variety of sound sources. Applicable national or international standards can also be included in the analysis as described above. Cadna/A accounts for such factors as:

- Distance attenuation;
- Geometrical characteristics of sources and receivers;
- Atmospheric attenuation (i.e. the rate of sound absorption by atmospheric gases in the air between sound sources and receptors);
- Ground attenuation (effect of sound absorption by the ground as sound passes over various terrain and vegetation types between source and receptor);
- Screening effects of surrounding terrain; and
- Meteorological conditions and effects.

The applicant states that conservative modeling assumptions were applied when analyzing the sound impacts of the project to allow for uncertainties in the sound power output from the turbines and inherent uncertainties in mathematical modeling of the sound propagation. To be conservative, a factor of three dBA was added by the applicant's consultant to the manufacturer's sound power level of the turbines, and a factor of two dBA was added to account for uncertainty in the mathematical modeling, resulting in a total adjustment factor of five dBA. The mathematical modeling uncertainty factors are in compliance with the Noise Rules currently in place.

Sound associated with the operational phase of the project was modeled excluding other existing sound sources. Modeling the sound generated from the operation of the 14 turbines was conducted by first obtaining the manufacturer's sound power level specifications (106.5 dBA), and then applying the uncertainty factors described above to account for the manufacturer's uncertainty and the modeling uncertainty, for a total sound power level of 111.5 dBA from each turbine. The model was run with all 14 turbines operating at full sound power output. No noise reduction operations are proposed for this project.

Although substation transformers emit sound, they were not considered significant sound sources by the applicant's consultant due to the low sound output and relatively large distance from protected locations, and were therefore not included in the model. The Department and Peter Guldberg found this appropriate and acceptable.

B. Short Duration Repetitive Sound. At the time the application was filed, Chapter 375(10)(G)(19) defined short duration repetitive sound (SDRS) for all projects as "a sequence of repetitive sounds which occur more than once within an hour, each clearly discernible as an event and causing an increase in the sound level of at least 6 dBA on the fast meter response above the sound level observed immediately before and after the event, each typically less than ten seconds in duration, and which are inherent to the process or operation of the development and are foreseeable." Under the current rules, SDRS is defined for wind energy projects as "a sequence of repetitive sounds that occur within a 10-mintues measurement interval, each clearly discernible as an event resulting from the development and causing an increase in the sound level of 5 dBA or greater on the fast meter response above the sound level observed immediately before and after the event, each typically ± 1 second in duration, and which are inherent to the process or operation of the development." Chapter 375 requires that if any defined SDRS results from routine operation of a development, 5 dBA must added to the observed level of sound.

The January 2012 sound level study submitted by the applicant summarized measurements of operating wind turbines in Maine and data from published literature that indicate that sound level fluctuations during the blade passage of wind turbines typically range from 2 to 5 dBA, with an occasional event reaching 6 dBA or more. However, the applicant's report concludes that the occurrence of these higher fluctuations will be so infrequent that they are not expected to meet the Department's earlier definition of SDRS or affect the predicted sound levels. The Department's expert, Tech Environmental reviewed this study pursuant to the earlier rule and stated, "Since the 5-dBA penalty for SDRS is applied only to the SDR sounds and not the entire measurement interval, the infrequent occurrence of SDR sound events are not expected to significantly affect the project's sound levels and no adjustment to the acoustic model predictions for 1-hour L_{eqA} levels is necessary." Based on the applicant's January 2012 sound level study and the assessment of the Department's noise expert, it appears the proposed project would be unlikely to generate short duration repetitive sounds under the rules in effect at the time the application was filed. Compliance testing for SDRS is incorporated into the post-construction noise monitoring program (discussed in Finding 14.F. below) after project completion. If the results of the compliance testing demonstrate that SDRS as currently defined for wind energy developments is occurring and the project does not comply with the rules currently in effect, the applicant shall submit a plan to bring the project into compliance with the current rule as set forth in Condition 6 below.

C. Tonal Sound. As defined in Chapter 375(10)(G)(24), a regulated tonal sound occurs when the sound level in a one-third octave band exceeds the arithmetic average of the sound levels in the two adjacent one-third octave bands by a specified dBA amount based on octave center frequencies. Chapter 375 requires that 5 dBA be added to the observed level of any defined tonal sound that results from routine operation of a development.

The applicant's January 2012 sound level study states that the Vestas V112 turbines proposed for use carry Sound Level Performance Standard warranties certifying that they will not produce a tonal sound as it is defined by the Department's Noise Regulations. In his review of the applicant's sound level study on behalf of the Department, Mr. Guldberg confirmed that an analysis of the sound power octave band spectrum for the Vestas V112 turbine reveals that it has no potential for creating a tonal sound as defined in the Department's Regulations.

D. Generator Lead Line. The proposed generator lead line is anticipated to produce a minor noise impact during operation.

E. Analysis. Mr. Guldberg reviewed all of the materials submitted by the applicant and by members of the public. He reviewed the applicant's January 2012 and April 2012 Sound Level Assessments and submitted a report entitled "Peer Review of the Sound Level Assessment for the Passadumkeag Wind Project", dated April 13, 2012 and May 1, 2012. Mr. Guldberg concluded that the turbine maximum sound power level used in the analysis was conservative and tended to overestimate the actual turbine sound levels; the acoustic model and its assumptions are appropriate; the sound receiver locations are appropriate; the decibel contour maps adequately cover the potential impact area; and the Department's Noise Regulations were properly interpreted and applied by the applicant.

F. Post-construction Monitoring Program. The applicant did not propose to conduct post-construction noise monitoring due to the lack of receptors in the area, unless there was a complaint. However, Mr. Guldberg recommended the Department require limited post-construction monitoring at Receptor R2 (the only protected location within one mile of any turbine) following the test methodology approved by the Department for the Saddleback Ridge Wind project. The Saddleback Ridge Wind compliance monitoring program was adapted and used for this project as follows:

1) Post-construction operation compliance testing around the project completed within the first year of operation. For the Passadumkeag Wind project, this can be limited to the area around Receptor R2.

2) Compliance must be demonstrated based on the following outlined conditions for twelve 10-minute measurement intervals at Receptor R2, as set forth in Chapter 375(10) requirements. All data submittals must be accompanied by concurrent time stamped audio recordings.

   a. Compliance will be demonstrated when the required operating/test conditions have been met for twelve 10-minute measurement intervals at Receptor R2.

b. Measurements must be obtained during weather conditions when wind turbine sound is most clearly noticeable, when the measurement location is downwind of the development and maximum surface wind speeds ≤6 mph (wind speeds for this project must be ≤ 12 mph) with concurrent turbine hub-elevation wind speeds sufficient to generate the maximum continuous rated sound power from the five nearest wind turbines to the measurement location. Measurement intervals affected by increased biological activities, leaf rustling, traffic, high water flow or other extraneous ambient noise sources that affect the ability to demonstrate compliance may be excluded from reported data. A downwind location exists when the wind direction is within 45° of the direction at Receptor R2 and the acoustic center of the five nearest wind turbines.

c. Sensitive receiver sound monitoring locations must be positioned to most closely reflect representative protected location Receptor R2 for purposes of demonstrating compliance with applicable sound level limits, subject to permission from the respective property owner(s). Selection of the monitoring location will require concurrence from the Department.

d. Meteorological measurements of wind speed and direction should be collected using anemometers at a 10-meter height above ground at the center of large unobstructed areas and generally correlated with sound level measurement locations. Results should be reported based on one-second integration intervals, and be reported synchronously with hub level and sound level measurements at 10 minute intervals. The wind speed average and maximum should be reported from surface stations. Department concurrence on meteorological site selection is required. One-second data should be available on request, as required.

e. Sound level parameters reported for each 10-minute measurement period should include A-weighted equivalent sound level, 10/90% exceedence levels and ten one-minute 1/3-octave band linear equivalent sound levels (dB). Short duration repetitive events should be characterized by event duration and amplitude. Amplitude is defined as the peak event amplitude minus the average minimum sound levels immediately before and after the event, as measured at an interval of 50 millisecond (ms) or less, A-weighted and fast time response, i.e. 125 ms. For each 10-minute measurement period short duration repetitive sound events should be reported by the percentage of 50 ms or less intervals for each observed amplitude integer above 4 dBA. Reported measurement results should be confirmed to be free of extraneous noise in the respective measurement intervals to the extent possible and in accordance with section (b) above.

f. Compliance data collected in accordance with the assessment methods outlined above for representative location selected in accordance with this protocol must be gathered and submitted to the Department at the earliest

possible opportunity after the commencement of project operation, with consideration for the required weather, operations, and seasonal constraints, but no later than twelve months after commencement of project operation. Subsequently, compliance data for the location must be submitted to the Department for review and approval once every successive fifth year until the project is fully decommissioned.

g. All operational, sound and meteorological data shall be retained by the applicant for a period of one year from the date of collection. All audio data collected shall be retained by the applicant for a period of four weeks from the date of collection unless subject to a complaint filed in accordance with the sound complaint protocol outlined below, in which case the audio data shall be retained for a period of one year from the date of collection. All operational, sound, audio and meteorological data is subject to inspection by the Department and submission to the Department upon request.

G. Sound Complaint Response and Resolution Protocol. The applicant did not propose a formal complaint response protocol due to the lack of receptors in the area. The application states that if a complaint is received, the applicant will investigate it and if it is determined that the project may have been the cause, an ambient monitoring program will be proposed. The applicant must notify the Department of any complaints within three business days of receiving them, and the applicant must notify the Department of the outcome of its investigation within three business days of completion.

Based on the applicant's submissions and the review of those submissions by the Department's expert, the Board adopts the Department's finding that the proposed project will meet all applicable standards of Chapter 375(10), including tonal sound and SDRS, and that the applicant has made adequate provisions for the control of excessive environmental noise from the proposed project. The Board further finds that the proposed project will meet the current nighttime sound level limit of 42 dBA at the one protected location (Receptor R2) at which that limit must be met. To ensure that the project operates in compliance with the permit and the Department's regulations, the Board finds that the applicant must implement the post-construction monitoring program described above, including the sound complaint protocol. The applicant must investigate all complaints and must notify the Department of any complaints within three business days of receiving them, and must notify the Department of the outcome of its investigation within three business days of completion; and the applicant must submit sound level monitoring reports in accordance with the post-construction monitoring program described above. Upon any finding of non-compliance by the Department, the applicant must take short-term action immediately to adjust operations to reduce sound output to the current limits under Chapter 375(10). Within 60 days of a determination of non-compliance by the Department, the applicant must submit, for review and approval, a mitigation plan that proposes actions to bring the project into compliance. The Department will review any such mitigation plan and may require

additional mitigation or alternative measures. If immediate actions to bring the project into compliance with the noise standards are not taken or not successful while the process of generating and obtaining approval of a longer term plan is taking place, the Department may take such enforcement action as it finds appropriate to ensure compliance with the Site Law, provisions of Chapter 375(10), and this Order.

15. WILDLIFE AND FISHERIES:

Applicants for Site Law and NRPA permits are required to demonstrate that the proposed project will not unreasonably harm wildlife and fisheries; any significant wildlife habitat; freshwater plant habitat; threatened or endangered plant habitat; aquatic or adjacent upland habitat; travel corridor; freshwater, estuarine or marine fisheries; or other aquatic life. In support of its application, the applicant submitted the results of a series of ecological field surveys conducted by Stantec Consulting (Stantec), including wildlife surveys; wetland delineations; rare, threatened, and endangered plant and animal species surveys; and vernal pool surveys within the project area, including the area affected by the 17-mile generator lead line. During the preparation of the surveys and other material in support of the application, Stantec consulted with the Department and other natural resource review agencies.

A. Significant Vernal Pools. Stantec conducted vernal pool surveys within the project area in the spring of 2011. Stantec identified one vernal pool that qualifies as significant within the transmission line portion of the project area which will be impacted by clearing. The clearing will impact less than 25% of the critical terrestrial habitat of the vernal pool and the applicant obtained approval for those proposed impacts with a Permit-By-Rule (PBR) #53622.

B. Inland Waterfowl and Wading Bird Habitat. The turbine portion of the project will not impact any Inland Waterfowl and Wading Bird Habitat (IWWH).

The proposed transmission line will cross three areas of IWWH. The impacts to one area of IWWH, will result in an increase of less than 10% of an existing developed area within the IWWH. Therefore, the applicant applied for, and received approval for, those impacts pursuant to a PBR (PBR #53671) under Chapter 305, Section 20.

The remaining two transmission line crossings will result in an increase of more than 10% of the developed area of the respective IWWH. These two crossings will result in a total impact of 9,800 square feet adjacent to existing cleared area and adjacent to a road.

The applicant proposes to construct the transmission line to be in compliance with the U.S. Fish and Wildlife Department's Avian Protection Plan (APP) Guidelines. This will include cutting only vegetation that could grow to within 15 feet of a conductor in the next three to four years. If possible the applicant will leave two to

three snags within the collection line corridor to provide nesting habitat. The applicant will also locate poles in upland areas whenever possible in order to minimize impacts to the IWWHs.

The Board adopts the Department's finding that the impacts to IWWHs have been minimized by the proposed vegetation management plan and the proposal to locate poles in upland areas.

C. Deer Wintering Area. Neither the generating facilities nor the transmission line portions of the project will impact any Deer Wintering Areas as defined under the NRPA.

D. Rare, Threatened, and Endangered Species. Stantec conducted a survey of the area within two miles of the proposed project for plant and animal species that are state or federally listed as Rare, Threatened, or Endangered. No Rare, Threatened or Endangered plant or animal species were found.

E. Salmon Habitat Streams. The proposed transmission line will cross 13 streams that contain, or may contain, habitat for Atlantic Salmon. As described in Finding 17 below, the applicant has proposed buffers adjacent to those streams to minimize any impacts to the habitat.

F. Birds and Bats. The applicant retained Stantec to conduct bird and bat surveys to identify which species occurred in the area of the proposed project; the extent of the use of the site by such species; and potential impacts of the proposed project. Stantec conducted specific avian surveys, including raptor migration surveys and eagle use surveys. It also compiled a list of bird species observed on the site. In the spring of 2011, Stantec conducted 20 nights of nocturnal radar studies, acoustic bat surveys, and raptor migration surveys. In the summer of 2011, breeding bird surveys were conducted. In the fall of 2011, 12 days of raptor surveys were conducted. In addition to the fall 2011 surveys, 12 survey days were conducted in late August/early September and mid-October/early November to document eagle activity and migration.

The majority of the bat calls identified were of the *Hoary* bat family (957 out of 1133 calls), followed by unknown calls (76 out of 1133), and *Myotis* species (48 out of 1133). A total of 171 observations of raptors were documented. Three bald eagles were observed.

MDIFW recommended that, to minimize potential impacts to bat species found at the project site, operational control measures be established for the proposed project. MDIFW recommended that the applicant be required to curtail the cut-in speed for all turbines to 5.0 meters per second (m/s) between April 20 and October 15 from one half-hour before sunset to one half-hour after sunrise. Under this recommendation, during times when the winds are less than the 5.0 m/s threshold, turbine blades will not rotate, thus reducing the risk of fatality for bats. If at any

point during this time period the wind speed increases to greater than 5.0 m/s, the turbine blades will be free to rotate. MDIFW recommended that these curtailment measures be in place from day one of operation for the life of the project.

After consultation with MDIFW regarding curtailment and the potential for bat mortality, the applicant agreed to seasonal curtailment of the turbine cut-in speed to 5.0 m/s on all turbines from one half-hour before sunset to one half-hour after sunrise for the life of the project. The applicant proposes that this curtailment be required from May 1 to September 30, and only when the ambient temperature is above 50 degrees F from June 1 to August 31, and when above 32 degrees F in May and September. If at any point during this time period the wind speed increases to greater than 5.0 m/s the turbine blades will be free to rotate. MDIFW commented that this level of curtailment will be adequate.

Regarding post-construction monitoring of bird and bat mortality, MDIFW further stated that assuming an April 20 to October 15 window for searches for evidence of bird and bat mortality, MDIFW will consider it adequate for searches to take place weekly between April 20 and May 31 and daily between June 1 and September 30, with a return to a weekly schedule from October 1 through October 15. The applicant responded that because post-construction monitoring at wind power projects is an evolving science, they will work with MDIFW to finalize a monitoring methodology prior to the start of operation. MDIFW agreed to work with the applicant to develop a final monitoring methodology.

The Board adopts the Department's finding that impacts to birds and bats have been minimized provided the applicant complies with the curtailment requirements above and submits a final mortality monitoring methodology to the Department for review and approval prior to the commencement of operation.

G. Fisheries. No fisheries impacts are anticipated from the proposed project.

The Board adopts the Department's finding the project will not result in an unreasonable impact on fisheries and wildlife or habitat protected by the NRPA provided turbine operation is curtailed as outlined above. If post-construction monitoring indicates an unreasonable impact on birds, bats and/or raptors, the Department, in conjunction with MDIFW, may require modified operation of the wind project, including the curtailment of the operation of turbines, as necessary.

16. HISTORIC SITES AND UNUSUAL NATURAL AREAS:

The Maine Historic Preservation Commission reviewed the proposed project and stated that it will have no effect upon any structure or site of historic, architectural, or archaeological significance as defined by the National Historic Preservation Act of 1966.

The Maine Natural Areas Program database does not contain any records documenting the existence of rare or unique botanical features on the project site and, as discussed in Finding 15, MDIFW did not identify any unusual wildlife habitats located on the project site.

Based on information in the application, the Maine Historic Preservation Commission's review, and the Maine Natural Areas Program's review, the Board adopts the Department's finding that the proposed project will not have an unreasonably adverse effect on the preservation of any historic sites or unusual natural areas either on or near the project site.

17. BUFFER STRIPS:

The applicant proposes six basic buffer strip types around access roads, turbine pads and the generator lead line for storm water management, habitat protection, phosphorus control and waterbody protection. Buffers for the proposed development will include no disturbance buffers around roads and turbines, stream buffers, Atlantic Salmon stream buffers, Significant Vernal Pool buffers, and Inland Waterfowl and Wading Bird Habitat buffers. The generator lead line ROW will be continuously vegetated with grass and shrubs, and several methods will be used to maintain buffers along the corridor. The applicant will maintain these buffers according to the proposed Vegetation Management Plan. All buffer strips will be clearly marked prior to construction.

A. Access Road, Crane Path and Turbine Buffers. The applicant proposes to maintain forested buffers along the access road and around the turbines. Forested buffers provide both a visual screen and stormwater and phosphorus treatment. The stormwater and phosphorus treatment measures are more fully described in Finding 19. Most of the area around the turbine pads will be revegetated after construction is completed, providing additional buffering.

B. Stream Buffers. There are 18 streams along the generator lead line, five of which have standard stream buffers proposed. These buffers are 25 feet wide, measured from the top of the bank of the stream. No poles are proposed to be located in the stream buffer areas. During initial construction, any vegetation that must be removed will be removed by hand-cutting or by traveling or reaching into the buffer using low-ground-pressure mechanized harvesting equipment. Following construction, any disturbed areas within the stream buffers will be graded to the original contour and stabilized with permanent seeding.

C. Salmon Stream Buffers. There are 13 streams in the project area which contain, or may contain, habitat for Atlantic Salmon. Buffers around these streams are 100 feet wide and only trees that are capable of growing within 15 feet of the conductor within the next 3 years will be removed. The applicant has attempted to locate the proposed placement of poles as close to the edge of these buffers as is practical, thereby elevating the line above the stream to the greatest extent and reducing the

number of trees that must be removed. Topping of trees is the preferred method of vegetation maintenance and will be utilized unless the tree is dead or dying. No other vegetation will be removed. Removal of capable species will be by hand-cutting or with low-ground-pressure tree harvesting equipment. No refueling, including refueling of chain saws, is allowed in the Salmon Stream Buffers.

D. Significant Vernal Pool Buffers. One Significant Vernal Pool (SVP) will be impacted by the generator lead line. The applicant has proposed to maintain a minimum 100-foot vegetated buffer around this pool. Due to the limited reach of harvesting equipment, access ways may be needed to remove capable vegetation within this buffer. Low-ground-pressure harvesting equipment may enter the buffer but must be operated in a manner intended to minimize disturbance. Mats must be utilized if necessary to prevent excessive rutting or other soil disturbance. No equipment may travel within the SVP depression. Only capable species greater than eight to 10 feet tall will be removed. Clearing may not take place between April 1 and June 30 of any calendar year within 25 feet of the vernal pool depression or with any wheeled or tracked equipment.

E. Inland Waterfowl and Wading Bird Habitat. The generator lead line crosses three Inland Waterfowl and Wading Bird Habitats (IWWH) along its proposed route. During initial construction, the applicant proposes to only remove capable species. Topping of trees is the preferred method of vegetation maintenance and will be utilized unless the tree is dead or dying. No other vegetation will be removed. Removal of capable species will be by hand-cutting or with low-ground-pressure tree harvesting equipment. Where possible, the applicant will leave two to three snags per 500 linear feet of corridor to provide nesting habitat for waterfowl. Initial ROW clearing will be done during frozen conditions whenever practical. No clearing will take place between April 15 and July 15 in any calendar year, unless approved by the Department and MDIFW.

F. Vegetation Management Plan. The applicant submitted a Post-Construction Vegetation Management Plan (VMP) for the Passadumkeag Wind project, prepared by Stantec Consulting, dated October 2011, which includes routine maintenance along the ROW to prevent vegetation from getting too close to the conductor. The plan summarizes vegetation management methods and procedures that will be utilized by the applicant for the transmission line corridor and collector lines. The plan describes restrictive maintenance requirements for natural resources and significant wildlife habitats. The plan also includes procedures for managing or removing osprey nests built on power line structures, describes a system for identifying restricted areas, and summarizes training requirements for construction personnel.

The Board adopts the Department's finding that the applicant has made adequate provision for buffer strips based on the post-construction VMP and the proposal to clearly mark on the ground, prior to construction, all visual screening buffers, stream buffers and other resource buffers, and the stormwater buffers. Additionally, prior to

operation, the applicant must record all deed restrictions for stormwater buffers and submit the recorded deeds along with plot plans to the Department within 60 days of recording.

18. SOILS:

The applicant submitted a soil survey map and report and a geotechnical report based on the soils found at the project site. The report was prepared by a certified soil scientist and reviewed by staff from the Department's Division of Environmental Assessment (DEA) of the Bureau of Land and Water Quality. DEA also reviewed the applicant's Blasting Plan (dated February 2012), which outlines the proposed procedures for removing rock and ledge, and submitted the following comments:

> The copy of the blasting plan received for review does not include a standard for ground vibration, although the proposed standards for air overpressure, flyrock control, and record keeping are generally consistent with those required by the Department. Prior to construction, the applicant must prepare and submit for review and approval a revised blasting plan including the Department blasting standards in 38 M.R.S. § 490-Z(14), and specifically stating that ground vibration at offsite structures may not exceed the limits shown in Figure B-1 of Appendix B, U.S. Bureau of Mines Report of Investigations 8507.

DEA also stated that the application does not contain a procedure to deal with any potentially reactive rock that may be encountered during construction, but based on a site visit, DEA does not expect large volumes of this material to be encountered. Small amounts of reactive rock may be managed successfully by segregating the potentially reactive rock types from other rock types that are acceptable for use in well-drained fill slopes or road beds, and burying the reactive rock in other areas of the site that do not discharge to nearby surface waters.

Based on the applicant's soils reports and blasting plan, and DEA's review comments, the Board adopts the Department's finding that the soils on the project site present no limitations to the proposed project that cannot be overcome through standard engineering practices provided that prior to construction, the applicant must submit a revised blasting plan to the Department's Bureau of Land and Water Quality for review and approval.

19. STORMWATER MANAGEMENT:

The proposed project includes approximately 21.47 acres of impervious area and 97.38 acres of developed area. It lies within the watersheds of the Passadumkeag River, Saponac Pond and Great Pond. The applicant submitted a stormwater management plan based on the Basic, General, Phosphorus, and Flooding standards contained in Chapter 500 of the Department Rules. The proposed stormwater management system consists of vegetated buffers for the turbine sites and underdrained soil filters at the O&M building.

A. Basic Standards:

1) Erosion and Sedimentation Control: The applicant submitted an Erosion and Sedimentation Control Plan (Section 14 of the application) that is based on the performance standards contained in Appendix A of Chapter 500, and the Best Management Practices outlined in the Maine Erosion and Sediment Control BMPs, which were developed by the Department. This plan and plan sheets containing erosion control details were reviewed by, and revised in response to the comments of, the Department's Division of Watershed Management (DWM). DWM commented that:

> Erosion control details will be included on the final construction plans and the erosion control narrative will be included in the project specifications to be provided to the construction contractor. Prior the start of construction, the applicant must conduct a pre-construction meeting to discuss the construction schedule and the erosion and sediment control plan with the appropriate parties. This meeting must be attended by the applicant's representative, Department staff, the design engineer, the contractor, and the third-party inspector. Given the size and nature of the project site, the applicant must retain the services of a third party inspector in accordance with the Special Condition for Third Party Inspection Program, which is attached to this Order.

2) Inspection and Maintenance: The applicant submitted a maintenance plan that addresses both short- and long-term maintenance requirements. This plan was reviewed by, and revised in response to the comments of, DWM. The maintenance plan is based on the standards contained in Appendix B of Chapter 500. The applicant will be responsible for the maintenance of all common facilities including the stormwater management system.

3) Housekeeping: The applicant states that the proposed project will comply with the performance standards outlined in Appendix C of Chapter 500.

Based on DWM's review of the applicant's erosion and sedimentation control plan and maintenance plan, the Board adopts the Department's finding that the proposed project will meet the Basic Standards contained in Chapter 500(4)(A), provided the applicant conducts a pre-construction meeting and retains a third-party inspector to oversee project construction.

B. General and Phosphorus Standards:

The General Standards must be met for the portion of the project which drains to the Passadumkeag River.

The applicant's stormwater management plan includes general treatment measures to mitigate for the increased frequency and duration of channel erosive flows due to runoff from smaller storms, provide for effective treatment of pollutants in stormwater, and mitigate potential temperature impacts. The portion of the proposed project which drains to the Passadumkeag River is a road that meets the definition of "a linear portion of a project" in Chapter 500. For that area, the applicant is proposing to control runoff volume from no less than 75% of the impervious area and no less than 50% of the developed area.

The forested, no-disturbance stormwater buffers are proposed to be protected from alteration through the execution of a deed restriction. The applicant proposes to use the deed restriction language contained in Appendix G of Chapter 500 and submitted a draft deed restriction that meets Department standards. The Declaration of Restrictions must be recorded prior to the start of operation, and the applicant must submit a copy of the recorded deed restriction including the plot plan to the Department within 60 days of its recording. Prior to beginning construction in an area, the location of forested buffers must be permanently marked on the ground. Methods of marking on the ground must include, but are not limited to, a combination of field flagging and clearly marked permanent signage.

The following minor adjustments may be made during construction without advance notice to the Department provided they do not impact protected resources and are reflected in the final as-built drawings: changes that result in a reduction in impact and/or footprint (such as a reduction in clearing or impervious area, and elimination of structures or a reduction in structure size); location of a structure within the identified clearing limits; the type of foundations used; additional drainage culverts, level spreaders or rock sandwiches; changes to culvert size or type provided that the culvert does not convey a regulated stream and that the hydraulic capacity of the substitute culvert is greater than or equal to that of the original; and changes of up to 10 feet in the base elevation of a turbine vertically as long as the change in elevation does not result in increased visual impacts or changes to the stormwater management plan.

Additionally, the following minor adjustments may be made upon prior approval by the third-party inspector or Department staff, and do not require a revision or modification of the permit but must be reflected in the final as-built drawings: minor changes that do not increase overall project impacts or project footprint and which do not impact any protected resources as long as any new areas of impact have been surveyed for environmental resources and do not affect other landowners. These changes include adjustments to horizontal or vertical road geometry that do not result in changes to the stormwater management plan; a shift of up to 100 feet in a turbine clearing area; and adjustments to culvert locations based on field topography.

The portions of the project which drain to Saponac Pond and Great Pond are required to meet the Phosphorus Standards.

Because of the proposed project's location in the watersheds of Saponac Pond and Great Pond, the applicant proposes to treat stormwater runoff from the project site to meet the phosphorus standard outlined in Chapter 500(4)(C). The applicant's phosphorus control plan was developed using methodology developed by the Department and outlined in "Phosphorus Control in Lake Watersheds: A Technical Guide for Evaluating New Development". For this project, the Permitted Phosphorus Export is 18.0123 pounds of phosphorus per year for Saponac Pond and 7.0650 pounds of phosphorus per year for Great Pond. The applicant proposes to remove phosphorus from the project's stormwater runoff by utilizing buffers, as shown on the set of plans referenced in Finding 3. The predicted phosphorus export for the project site based on the applicant's model is 17.8462 pounds per year of phosphorus for Saponac Pond and 7.0626 pounds per year of phosphorus for Great Pond. The Board adopts the Department's finding that the proposed stormwater treatment will be able to reduce the export of phosphorus in the stormwater runoff below the maximum permitted phosphorus export for the site.

The stormwater management system proposed by the applicant was reviewed by, and revised in response to comments from, DWM. After a final review, DWM commented that the proposed stormwater management system is designed in accordance with the Chapter 500 General and Phosphorus Standards provided that prior to beginning construction in an area, the location of forested buffers must be permanently marked on the ground and the deeds for the forested, no disturbance buffers are recorded in the registry of deeds prior to the start of operation and submitted to the Department within 60 days of recording.

Based on the stormwater system's design the Board adopts the Department's finding that the applicant has made adequate provision to ensure that the proposed project will meet the Chapter 500 General and Phosphorus Standards.

C. Flooding Standard:

The applicant is proposing to utilize a stormwater management system based on estimates of pre- and post-development stormwater runoff flows obtained by using Hydrocad, a stormwater modeling software program that utilizes the methodologies outlined in Technical Releases #55 and #20, U.S.D.A., Soil Conservation Service, and retains stormwater from 24-hour storms of 2-, 10-, and 25-year frequency. The post-development peak flow from the site will not exceed the pre-development peak flow from the site and the peak flow of the receiving waters will not be increased as a result of stormwater runoff from the development site.

DWM commented that the proposed system is designed in accordance with the Flooding Standard contained in Chapter 500(4)(E) .

Based on the system's design and DWM's review, the Board adopts the Department's finding that the applicant has made adequate provision to ensure that the proposed project will meet the Chapter 500, Flooding Standard for peak flow from the project site, and channel limits and runoff areas.

The Board also adopts the Department's finding that the proposed project will meet the Chapter 500 standards for: (1) easements and covenants; (2) management of stormwater discharges; (3) discharge to freshwater or coastal wetlands; and (4) threatened or endangered species.

20. GROUNDWATER:

The project site is not located over a mapped sand and gravel aquifer. The proposed project does not propose any withdrawal from, or discharge to, the groundwater except for a single septic system described in Finding 22.

The applicant submitted a Spill Prevention, Control and Countermeasures plan (SPCC) detailing steps to be taken to prevent groundwater contamination during construction, however the applicants did not submit an SPCC plan for on-going operation of the project. The applicant stated that potential contamination during construction will be fuel and hydraulic and lubricating oils used in operation vehicles and construction equipment. The SPCC plan includes general operational requirements, storage and handling requirements, and training requirements to prevent spilling of oil, hazardous materials or waste during construction. The plan also sets out spill reporting and cleanup requirements should such an event occur. No herbicides will be used, stored, mixed or transferred between containers within designated buffers or within 25 feet of streams or wetlands with standing water. Designated buffers and areas within 25 feet of streams and wetlands with standing water must be flagged prior to construction.

Prior to operation of the development, the applicant must submit an operational SPCC Plan for the on-going operation of the project to the Department for review and approval.

The Board adopts the Department's finding that the proposed project will not have an unreasonable adverse effect on groundwater quality provided the applicant flags designated buffers and areas within 25 feet of streams and wetlands with standing water and submits, prior to operation, the operational SPCC Plan to the Department for review and approval.

21. WATER SUPPLY:

Water for the development will be supplied by an individual well at the O&M building. The applicant submitted an assessment of groundwater supplies that are available on the project site. This assessment was prepared by a certified geologist and was reviewed by, and revised in response to comments from, the DEA.

The applicants also propose to use up to 20,000 gallons of water per day for dust control. DEA reviewed this portion of the application and stated that this water could be drawn from one or more of the lakes in the project vicinity without affecting the water level of the lake, but the applicant should identify, prior to construction, the access points for trucks to obtain water from the lake(s), in order to ensure that all points are stable locations suitable for repeated access by large vehicles without creating excessive erosion or issues with bank stability, such as boat ramps or bridges.

The Board adopts the Department's finding that the applicant has made adequate provision for securing and maintaining a sufficient and healthful water supply, provided the applicant identifies locations for water withdrawal for dust control prior to construction.

22. WASTEWATER DISPOSAL:

Wastewater will be disposed of by an individual subsurface wastewater disposal system located at the O&M building. The applicant submitted the soil survey map and report discussed in Finding 18. The individual system will be designed to meet the requirements of the Maine State Plumbing Code. Based on a review of the information submitted by DEA, a subsurface wastewater disposal system capable of handling septic waste from the O&M building could be constructed on this site.

The Board adopts the Department's finding that the applicant has made adequate provisions for wastewater disposal.

23. SOLID WASTE:

When completed, the proposed project is anticipated to generate minor amounts of general solid waste each year. All general solid wastes from the proposed project will be disposed of at Penobscot Energy Recovery Company, which is currently in substantial compliance with the Maine Solid Waste Management Rules.

All marketable timber will be removed from the project site. A single one-acre stump dump may be located on the project site. All stumps and grubbings generated will be disposed of on site, either chipped or burned, with the remainder to be worked into the soil, in compliance with the Maine Solid Waste Management Rules.

The proposed project will generate approximately 465 cubic yards of construction debris and demolition debris. All construction and demolition debris generated will be disposed of at Juniper Ridge, which is currently in substantial compliance with the Maine Solid Waste Management Rules.

The Board adopts the Department's finding that the applicant has made adequate provisions for solid waste disposal.

24. FLOODING:

The applicants do not propose constructing any structure other than three poles within a flood zone. As discussed in Finding 19 the Department has reviewed the applicant's plans for stormwater management and found that the project is unlikely to have an adverse impact on downstream flooding. Based on the nature of the project and the minimal number of structures in the flood zone, the Board adopts the Department's finding that the proposed project is unlikely to cause or increase flooding or cause an unreasonable flood hazard to any structure.

25. WETLAND IMPACTS:

The applicant retained Stantec to locate wetlands and waterbody resources on the proposed project site. The results of the applicant's surveys for wetlands and waterbodies which were present in the vicinity of the turbine sites, access roads and collector lines are summarized as follows:

- 173 wetlands were identified along the proposed access roads and the electrical collector line.
- 35 jurisdictional streams were identified, including 23 perennial streams. No streams are proposed to be crossed.
- 67 vernal pools were identified, including 3 significant vernal pools, and 4 potentially significant vernal pools, only one of which will be impacted, as discussed in Finding 15.
- 34 wetlands were identified that meet the definition of wetlands of special significance.

A. Freshwater Wetland Impacts.

The applicant is proposing 1.2 acres of vegetation conversion in wetland areas for the turbine sites, access roads and collector lines. No permanent loss of freshwater wetland through filling is proposed.

The Department's Wetlands and Waterbodies Protection Rules, Chapter 310, provide the framework for the analysis of whether a proposed project's impacts to protected resources will be unreasonable, as that term is used in the NRPA, and whether the project meets the NRPA licensing criteria. A proposed project's impacts may be found to be unreasonable if the project will cause a loss in wetland area, functions and values and for which there is a practicable alternative that will be less damaging to the environment. For this aspect of the Department's review an applicant must provide an analysis of alternatives to the project.

1) Avoidance. The applicant submitted an alternatives analysis for the wetland and stream impacts of the proposed project, completed by Stantec Consulting, and dated February, 2012. The applicant states that the proposed project was designed to avoid wetlands to the greatest extent possible and the applicant proposes to site

the proposed turbines and associated access roads in predominantly upland areas. The applicant states that it used existing roads when possible to avoid any new impacts to natural resources, and that any new roads that were necessary were designed to avoid wetlands if practical. The construction and maintenance of the electrical transmission line will primarily result in a permanent change in vegetation cover type in wetland areas.

2) Minimal Alteration. In the determination of whether any adverse impacts from a project are unreasonable, the Department looks at whether the amount of wetland and waterbodies to be altered have been kept to the minimum amount necessary for meeting the overall purpose of the project. The applicant is proposing construction practices to reduce erosion, maintain stream and vernal pool buffers, and to reduce habitat fragmentation by the proposed co-locating of the majority of the generator lead transmission line. Prior to the start of construction, the location of stream buffers, wetlands, IWWH, and vernal pool buffers must be marked on the ground.

3) Compensation. Compensation may be required to achieve the goal of no net loss of wetland functions and values. The applicant submitted an assessment of the functions and values of wetlands impacted by the proposed project, prepared by Stantec. The assessment determined that the primary functions and values of the potentially impacted wetlands were wildlife habitat, with some levels of floodwater alteration, sediment/toxicant retention, and production export. In this case, it appears that the conversion of the vegetative cover type in wetlands potentially affected by the project will not result in a loss of functions and values so compensation will not be required.

The Board adopts the Department's finding that the applicant has avoided and minimized wetland and water body impacts to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project, provided that prior to the start of construction, the location of stream buffers, wetlands, IWWH, and vernal pool buffers are marked on the ground.

26. SHADOW FLICKER:

In accordance with 38 M.R.S. § 484(10), an applicant must demonstrate that the proposed wind energy development has been designed to avoid unreasonable adverse shadow flicker effects. Shadow flicker caused by wind turbines is defined as alternating changes in light intensity caused by the moving blade casting shadows on the ground and stationary objects. Shadow flicker is the sun seen through a rotating wind turbine rotor. Shadow flicker does not occur when the sun is obscured by clouds or fog or when the turbine is not rotating. The spatial relationships between a wind turbine and receptor, as well as wind direction which cause the turbines to rotate, are key factors relating to shadow flicker occurrence and duration. At distances of greater than 1,000 feet between wind turbines and receptors, shadow flicker usually occurs when the rotor plane is in-line with the sun and receptor (as seen from the receptor).

The cast shadows will be very narrow (blade thickness) and of low intensity, and the shadows will move quickly past the stationary receptor. When the rotor plane is perpendicular to the sun-receptor "view line," the cast shadow of the blades will move within a circle equal to the turbine rotor diameter.

The applicant submitted a shadow flicker analysis with its application. The applicant used WindPRO, a wind modeling software program, to model expected shadow flicker effects on adjacent properties from the 14 proposed turbine locations. The applicant's analysis assumed a worst case scenario, that all receptors have a direct in-line view of the incoming shadow flicker sunlight, and did not take into account any existing vegetative buffers.

The Department generally recommends that an applicant conduct a shadow flicker model out to a distance of 1,000 feet or greater from a residential structure, and the applicant's model did so. The applicant modeled two receptors, A and B, which are located within 1 mile of the project and which will potentially receive shadow flicker. Maine currently has no numerical regulatory limits on exposure to shadow flicker; however, the industry commonly uses 30 hours per year as a limit to reduce nuisance complaints. Receptor A will have approximately 46.54 hours of flicker per year and Receptor B will have approximately 4.37 hours per year. The applicant has a lease agreement with Receptor A allowing shadow flicker greater than 30 hours per year. Based on the WindPRO analysis, no other property is calculated to receive flicker in excess of 30 hours per year.

The Department found the shadow flicker modeling conducted by the applicant is credible. Based upon the proposed project's location and design, the distance to the nearest shadow flicker receptor, and results of the shadow flicker analysis, the Board adopts the Department's finding that the proposed project will not unreasonably cause shadow flicker to occur over adjacent properties which are not subject to an easement allowing for shadow flicker.

27. PUBLIC SAFETY:

The proposed project will use Vestas V112 3.0-megawatt (MW) wind turbine generators. The turbines' conformity with International Electrotechnical Commission standards has been certified by Det Norske Veritas and included in the applications in Appendix 27-2 dated March 19, 2010.

The Board and the Department recognize that locating wind turbines a safe distance away from any occupied structures, public roads or other public use areas is extremely important. In establishing a recommended safety setback, the Department considered industry standards for wind energy production in climates similar to Maine, as well as the guidelines recommended by certifying agencies such as Det Norske Veritas. Based on these sources, the Department requires that all wind turbines be set back from the property line, occupied structures, or public areas, a minimum of 1.5 times the maximum blade height for the wind turbine. Based on the Department setback

specifications, the minimum setback distance to the nearest property line for this project should be 688.5 feet for the Vestas turbines. A review of the application indicates that all turbines are set back at least 688.5 from property lines, occupied structures and public areas.

The Department found that the applicant provided documentation of industry standard compliance by the manufacturer that the wind generation equipment has been designed to conform to applicable industry safety standards, and has demonstrated that the proposed project has been sited such that it will not present an unreasonable safety hazard to adjacent properties or adjacent property uses. The Board adopts the Department's findings and finds that the applicant has submitted sufficient evidence which demonstrates that the proposed project will be sited with appropriate safety setbacks from adjacent properties and existing uses.

28. DECOMMISSIONING PLAN:

In order to facilitate and ensure appropriate removal of the wind generation equipment when it reaches the end of its useful life or if the applicant ceases operation of the turbines, the Department requires an applicant to demonstrate, in the form of a decommissioning plan, the means by which decommissioning will be accomplished. The applicant submitted a decommissioning plan which includes a description of the trigger for implementing the decommissioning, a description of the work required, an estimate of decommissioning costs, a schedule for contributions to its decommissioning fund, and a demonstration of financial assurance.

A. Trigger for Implementation of Decommissioning. The proposed wind turbine generators are designed and certified by independent agencies for a minimum expected operational life of 20 years, however other factors may trigger the requirement for decommissioning before 20 years have passed. The applicant's proposal is that the wind generation facility will be decommissioned when it ceases to generate electricity for a continuous period of twelve months. In the case of a force majeure event which causes the project to fail to generate electricity for 12 months, the applicant proposes that it be allowed to submit to the Department for review and approval reasonable evidence in support of a request that they not be required to decommission the project at that time.

An exception to the requirement that decommissioning begin if twelve months of no generation occurs will be allowed for a force majeure event, however the Department found that the applicant's proposed definition of "force majeure" is exceedingly broad, and instead provides the following definition: The Department considers a force majeure to mean fire, earthquake, flood, tornado, or other acts of God and natural disasters; strikes or labor disputes; and war, civil strife or other similar violence. In the event of a force majeure event which results in the absence of electrical generation for twelve months, by the end of the twelfth month of non-operation the applicant shall demonstrate to the Department that the project will be substantially operational and producing electricity within twenty-four months of the

force majeure event. If such a demonstration is not made to the Department's satisfaction, the decommissioning must be initiated eighteen months after the force majeure event.

B. Description of Work. The description of work contained in the application outlines the applicant's proposal for the manner in which the turbines and other components of the proposed project will be dismantled and removed from the site. Subsurface components will be removed to a minimum of 24 inches below grade, generating facilities will be removed and salvaged and disturbed areas will be re-seeded. At the time of decommissioning, the applicant must submit a plan for continued beneficial use of any wind energy development components proposed to be left on-site to the Department for review and approval.

C. Financial Assurance. The applicant estimates that the current cost for decommissioning the project will be $504,600. The applicant proposes that financial assurance for the decommissioning costs will be in the form of (i) cash, (ii) a letter of credit, or (iii) a combination of cash and a letter of credit for the total cost of decommissioning. The applicant proposes to have the financial assurance mechanism in place prior to construction and to re-evaluate the decommissioning cost at the end of years eight and 15.

Based on the applicants' proposal outlined above, with the exception as noted for what constitutes a "force majeure," and after consideration of the public comments, the Board adopts the Department's finding that the applicant's proposal will adequately provide for decommissioning, provided the applicant implemented the decommissioning plan as proposed.

29. TANGIBLE BENEFITS:

In its application the applicant described tangible benefits that the project will provide to the State of Maine and to the host communities, including economic benefits and environmental benefits.

The applicant states that its proposal will benefit the host communities and surrounding areas through construction-related employment opportunities. These will include tree clearing and excavation jobs, and jobs in businesses that support construction such as lodging, restaurant, fuel and concrete supply. In addition, the applicant has signed an agreement with the Forest Society of Maine (Forest Society), in which the applicant has agreed to provide $4,000.00 per turbine per year for 20 years. The agreement requires the Forest Society to utilize these funds for land and natural resource conservation. Pursuant to the agreement, the Forest Society will give preference to projects in the vicinity of Passadumkeag Mountain when utilizing the funds. Staff from the Governor's Office of Policy and Management reviewed the Tangible Benefit agreement between Passadumkeag Windpark, LLC and the Forest Society and commented that the agreement met the tangible benefits criteria of the WEA.

Based on the employment opportunities, the tax revenue and the Community Benefits Agreement proposed by the applicant, the Board adopts the Department's finding that the applicant has demonstrated that the proposed project will provide significant tangible benefits to the host communities and surrounding area pursuant to 35-A M.R.S. § 3454, provided that annual payments were made to the Forest Society as described above.

BASED on the above findings of fact, the Board makes the following conclusions pursuant to 38 M.R.S. Sections 480-A et seq. and Section 401 of the Federal Water Pollution Control Act:

A. The proposed activity will not interfere with existing recreational or navigational uses. The proposed activity will not significantly compromise views from a SRSNS and will not have an unreasonable adverse effect on the scenic character and existing uses related to scenic character of the resource. The proposed activity will not unreasonably interfere with existing scenic and aesthetic uses.

B. The proposed activity will not cause unreasonable erosion of soil or sediment.

C. The proposed activity will not unreasonably inhibit the natural transfer of soil from the terrestrial to the marine or freshwater environment.

D. The proposed activity will not unreasonably harm any significant wildlife habitat, freshwater wetland plant habitat, threatened or endangered plant habitat, aquatic habitat, travel corridor, freshwater, estuarine, or marine fisheries or other aquatic life provided the applicant implements turbine curtailment and provides a final mortality monitoring methodology to the Department as described in Finding 15, and all buffers are marked prior to construction as described in Finding 17.

E. The proposed activity will not unreasonably interfere with the natural flow of any surface or subsurface waters.

F. The proposed activity will not violate any state water quality law including those governing the classifications of the State's waters.

G. The proposed activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties.

H. The proposed activity will not be on or adjacent to a sand dune.

I. The proposed activity will not be on an outstanding river segment as noted in 38 M.R.S. Section 480-P.

BASED on the above findings of fact, and subject to the conditions listed below, the Board makes the following conclusions pursuant to 38 M.R.S. Sections 481 et seq.:

A. The applicant has provided adequate evidence of financial capacity and technical ability to develop the project in a manner consistent with state environmental standards provided that, prior to construction, the applicant submits evidence that financing has been secured as outlined in Finding 12.

B. The proposed activity will not significantly compromise views from an SRSNS and will not have an unreasonable adverse effect on the scenic character and existing uses related to scenic character of the resource. The applicant has made adequate provisions for air quality, water quality and other natural resources in the municipality or in neighboring municipalities provided that the applicant implements the post-construction noise monitoring program, and investigates all noise complaints as described in Finding 14; the applicant implements turbine curtailment and provide a final mortality monitoring methodology to the Department as described in Finding 15; and all buffers are marked prior to construction as described in Finding 17.

C. The proposed development will be built on soil types which are suitable to the nature of the undertaking and will not cause unreasonable erosion of soil or sediment nor inhibit the natural transfer of soil provided that the applicant submits a revised blasting plan as described in Finding 18, and provided that the SPCC Plan is submitted as described in Finding 20.

D. The proposed development meets the standards for stormwater management in Section 420-D and the standard for erosion and sedimentation control in Section 420-C provided the applicant records the Declaration of Restrictions, submits the recorded deed restrictions, and permanently marks the locations of protected buffers prior to construction, conduct a pre-construction meeting and hire a third-party inspector, as described in Finding 19.

E. The proposed development will not pose an unreasonable risk that a discharge to a significant groundwater aquifer will occur provided that the applicant submits the SPCC Plan as described in Finding 20.

F. The applicant has made adequate provision of utilities, including water supplies, sewerage facilities and solid waste disposal required for the development, and the development will not have an unreasonable adverse effect on the existing or proposed utilities in the municipality or area served by those services, provided sites used to obtain water used for dust control are as described in Finding 21.

G. The activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties nor create an unreasonable flood hazard to any structure.

H. The proposed development will not unreasonably cause shadow flicker effects to occur over adjacent properties.

I. The activity will not present an unreasonable safety hazard to adjacent properties or adjacent property uses.

J. The applicant has made adequate provisions to achieve decommissioning of the wind power facility provided the decommissioning plan is implemented as described in Finding 28.

K. The activity will provide significant tangible benefits to the host community and surrounding area, provided that the applicant implements the Community Benefits Agreement as discussed in Finding 29.

THEREFORE, the Board GRANTS the appeals of Passadumkeag Windpark and Penobscot Forest solely on the issue of whether the proposed project would have an unreasonable adverse effect on Saponac Pond, a Scenic Resource of State or National Significance, and APPROVES the application of PASSADUMKEAG WINDPARK, LLC to develop a 14 turbine wind energy development project known as the Passadumkeag Wind Park, SUBJECT TO THE FOLLOWING CONDITIONS and all applicable standards and regulations:

1. The Standard Conditions of Approval, copies attached.

2. In addition to any specific erosion control measures described in this or previous orders, the applicant shall take all necessary actions to ensure that their activities or those of their agents do not result in noticeable erosion of soils or fugitive dust emissions on the site during the construction and operation of the project covered by this approval.

3. Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

4. The applicant or other responsible party shall, within three months of the expiration of each five-year interval from the date of this Order, submit a report certifying that the items listed in Department Rules, Chapter 500, Appendix B(4) have been completed in accordance with the approved plans.

5. Prior to the start of construction, the applicant must submit evidence that it has been granted a line of credit or a loan by financial institution authorized to do business in this State, or evidence of any other form of financial assurance determined by Department Rules, Chapter 373(1), to be adequate to the Department for review and approval.

6. The applicant must comply with the nighttime sound level limit of 42 dBA at the protected location (Receptor R2) and the limitations on SDRS set forth in Chapter

375(10), effective June 10, 2012. Within one year of the start of operation, the applicant shall implement the post-construction noise monitoring program, which shall include an assessment of SDRS as defined under the current Chapter 375(10)(I)(4) and the complaint response protocol, as described in Finding 14. The applicant shall investigate all complaints and must notify the Department of any complaints within 3 business days of receiving them and shall notify the Department of the outcome of its investigation within 3 business days of completion; and the applicant shall submit sound level monitoring reports in accordance with the post-construction noise monitoring program. If the noise monitoring results demonstrate that SDRS as currently defined for wind energy developments is occurring and the project is not in compliance with the current rules, the applicant shall submit, within 60 days, to the Department for review and approval a plan and schedule to bring the project into compliance with the current rules for sound levels from wind energy developments.

7. The applicant shall comply with the curtailment requirements described in Finding 15 and shall submit a final mortality monitoring methodology to the Department for review and approval prior to the commencement of operation.

8. Prior to the start of construction, the location of all buffers (including natural resource buffers and stormwater buffers) shall be clearly marked in the field using durable signs and/or flagging that is visible to construction personnel. The location of protective buffers shall be marked on construction drawings and restrictions within these buffers shall be explained during the pre-construction meeting with the contractor. The applicant's environmental inspector will be responsible for ensuring signs are maintained and visible to construction personnel during the construction phase of the project. Location of protective buffers will be permanently marked on the ground following the construction phase of the project.

9. Within six months of FAA's final approval of the specifications for radar activated lighting, the applicant shall submit an application to the FAA to install such a system. Within one year of FAA's approval of a radar activated lighting system at the Passadumkeag site, the applicant shall install and operate the warning lights in accordance with that approval.

10. Prior to the commencement of operation the applicant shall record all deed restrictions for stormwater buffers and submit the deed recordings along with plot plans to the Department within 60 days of the recordings.

11. Prior to construction, the applicant shall submit a revised blasting plan to the Department for review and approval.

12. The applicants shall retain the services of a third-party inspector in accordance with the Special Condition for Third-Party Inspector Program, attached to this Order.

13. Prior to beginning construction in an area, the location of forested buffers shall be permanently marked on the ground. Methods of marking on the ground must include, but are not limited to, a combination of field flagging and clearly marked permanent signage.

14. Prior to operation of the development, the applicant shall submit an operational SPCC Plan for the on-going operation of the project to the Department for review and approval.

15. The applicant shall identify and receive approval from the Third-Party Inspector, for the locations for water withdrawal for dust control prior to use.

16. The applicant shall implement the decommissioning plan as proposed.

17. The applicant shall make the annual tangible benefits payments to the Forest Society as proposed.

18. Prior the start of construction, the applicant shall conduct a pre-construction meeting. This meeting shall be attended by the applicant's representative, Department staff, the design engineer, the contractor, and the third-party inspector.

DONE AND DATED IN AUGUSTA, MAINE, THIS 20th DAY OF August, 2013.

BOARD OF ENVIRONMENTAL PROTECTION

BY: /s/ Robert Foley
Robert Foley, Chairman

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

JB/L25597CNDN/ATS76234/76235

This order corrects the Board Order dated August 1, 2013 by replacing the outdated Site Location of Development Standard Conditions (dated November 1979) with the current Site Location of Development Standard Conditions (dated December 2011). This corrected order does not stay the deadline for appeal of the Board's decision.

Department of Environmental Protection
SITE LOCATION OF DEVELOPMENT (SITE)
STANDARD CONDITIONS **

A. Approval of Variations from Plans. The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation. Further subdivision of proposed lots by the applicant or future owners is specifically prohibited without prior approval of the Board, and the applicant shall include deed restrictions to that effect.

B. Compliance with All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. Compliance with All Terms and Conditions of Approval. The applicant shall submit all reports and information requested by the Board or the Department demonstrating that the applicant has complied or will comply with all preconstruction terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.

D. Advertising. Advertising relating to matters included in this application shall refer to this approval only if it notes that the approval has been granted WITH CONDITIONS, and indicates where copies of those conditions may be obtained.

E. Transfer of Development. Unless otherwise provided in this approval, the applicant shall not sell, lease, assign or otherwise transfer the development or any portion thereof without prior written approval of the Board where the purpose or consequence of the transfer is to transfer any of the obligations of the developer as incorporated in this approval. Such approval shall be granted only if the applicant or transferee demonstrates to the Board that the transferee has the technical capacity and financial ability to comply with conditions of this approval and the proposals and plans contained in the application and supporting documents submitted by the applicant.

F. Time frame for approvals. If the construction or operation of the activity is not begun within four years, this approval shall lapse and the applicant shall reapply to the Board for a new approval. The applicant may not begin construction or operation of the development until a new approval is granted. A reapplication for approval may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

G. Approval Included in Contract Bids. A copy of this approval must be included in or attached to all contract bid specifications for the development.

H. Approval Shown to Contractors. Work done by a contractor pursuant to this approval shall not begin before the contractor has been shown by the developer a copy of this approval.

Natural Resource Protection Act (NRPA)
Standard Conditions

THE FOLLOWING STANDARD CONDITIONS SHALL APPLY TO ALL PERMITS GRANTED UNDER THE NATURAL RESOURCE PROTECTION ACT, TITLE 38, M.R.S.A. SECTION 480-A ET.SEQ. UNLESS OTHERWISE SPECIFICALLY STATED IN THE PERMIT.

A. Approval of Variations From Plans. The granting of this permit is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation.

B. Compliance With All Applicable Laws. The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.

C. Erosion Control. The applicant shall take all necessary measures to ensure that his activities or those of his agents do not result in measurable erosion of soils on the site during the construction and operation of the project covered by this Approval.

D. Compliance With Conditions. Should the project be found, at any time, not to be in compliance with any of the Conditions of this Approval, or should the applicant construct or operate this development in any way other the specified in the Application or Supporting Documents, as modified by the Conditions of this Approval, then the terms of this Approval shall be considered to have been violated.

E. Time frame for approvals. If construction or operation of the activity is not begun within four years, this permit shall lapse and the applicant shall reapply to the Board for a new permit. The applicant may not begin construction or operation of the activity until a new permit is granted. Reapplications for permits may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

F. No Construction Equipment Below High Water. No construction equipment used in the undertaking of an approved activity is allowed below the mean high water line unless otherwise specified by this permit.

G. Permit Included In Contract Bids. A copy of this permit must be included in or attached to all contract bid specifications for the approved activity.

H. Permit Shown To Contractor. Work done by a contractor pursuant to this permit shall not begin before the contractor has been shown by the applicant a copy of this permit.

Revised (4/92) DEP LW0428

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION, AUGUSTA, MAINE 04333

Erosion Control for Homeowners

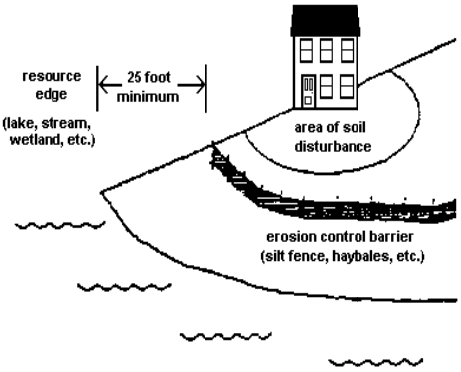
Before Construction

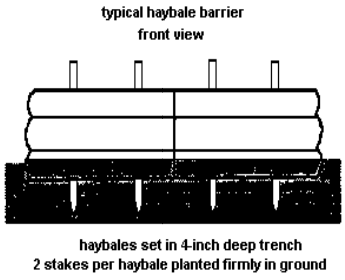
1. If you have hired a contractor, make sure you discuss your permit with them. Talk about what measures they plan to take to control erosion. Everybody involved should understand what the resource is, and where it is located. Most people can identify the edge of a lake or river. However, the edges of wetlands are often not so obvious. Your contractor may be the person actually pushing dirt around, but you are both responsible for complying with the permit.

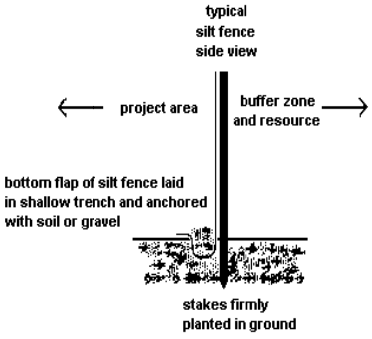
2. Call around to find where erosion control materials are available. Chances are your contractor has these materials already on hand. You probably will need silt fence, hay bales, wooden stakes, grass seed (or conservation mix), and perhaps filter fabric. Places to check for these items include farm & feed supply stores, garden & lawn suppliers, and landscaping companies. It is not always easy to find hay or straw during late winter and early spring. It also may be more expensive during those times of year. Plan ahead -- buy a supply early and keep it under a tarp.

3. Before any soil is disturbed, make sure an erosion control barrier has been installed. The barrier can be either a silt fence, a row of staked hay bales, or both. Use the drawings below as a guide for correct installation and placement. The barrier should be placed as close as possible to the soil-disturbance activity.

4. If a contractor is installing the erosion control barrier, double check it as a precaution. Erosion control barriers should be installed "on the contour", meaning at the same level or elevation across the land slope, whenever possible. This keeps stormwater from flowing to the lowest point along the barrier where it can build up and overflow or destroy the barrier.







During Construction

1. Use lots of hay or straw mulch on disturbed soil. The idea behind mulch is to prevent rain from striking the soil directly. It is the force of raindrops hitting the bare ground that makes the soil begin to move downslope with the runoff water, and cause erosion. More than 90% of erosion is prevented by keeping the soil covered.

2. Inspect your erosion control barriers frequently. This is especially important after a rainfall. If there is muddy water leaving the project site, then your erosion controls are not working as intended. You or your contractor then need to figure out what can be done to prevent more soil from getting past the barrier.

3. Keep your erosion control barrier up and maintained until you get a good and healthy growth of grass and the area is permanently stabilized.

After Construction

1. After your project is finished, seed the area. Note that all ground covers are not equal. For example, a mix of creeping red fescue and Kentucky bluegrass is a good choice for lawns and other high-maintenance areas. But this same seed mix is a poor selection for stabilizing a road shoulder or a cut bank that you don't intend to mow. Your contractor may have experience with different seed mixes, or you might contact a seed supplier for advice.

2. Do not spread grass seed after September 15. There is the likelihood that germinating seedlings could be killed by a frost before they have a chance to become established. Instead, mulch the area with a thick layer of hay or straw. In the spring, rake off the mulch and then seed the area. Don't forget to mulch again to hold in moisture and prevent the seed from washing away or being eaten by birds or other animals.

3. Keep your erosion control barrier up and maintained until you get a good and healthy growth of grass and the area is permanently stabilized.

Why Control Erosion?

To Protect Water Quality

When soil erodes into protected resources such as streams, rivers, wetlands, and lakes, it has many bad effects. Eroding soil particles carry phosphorus to the water. An excess of phosphorus can lead to explosions of algae growth in lakes and ponds called blooms. The water will look green and can have green slime in it. If you are near a lake or pond, this is not pleasant for swimming, and when the soil settles out on the bottom, it smothers fish eggs and small animals eaten by fish. There many other effects as well, which are all bad.

To Protect the Soil

It has taken thousands of years for our soil to develop. It usefulness is evident all around us, from sustaining forests and growing our garden vegetables, to even treating our septic wastewater! We cannot afford to waste this valuable resource.

To Save Money ($$)

Replacing topsoil or gravel washed off your property can be expensive. You end up paying twice because State and local governments wind up spending your tax dollars to dig out ditches and storm drains that have become choked with sediment from soil erosion.

STORMWATER STANDARD CONDITIONS

STRICT CONFORMANCE WITH THE STANDARD AND SPECIAL CONDITIONS OF THIS APPROVAL IS NECESSARY FOR THE PROJECT TO MEET THE STATUTORY CRITERIA FOR APPROVAL

Standard conditions of approval. Unless otherwise specifically stated in the approval, a department approval is subject to the following standard conditions pursuant to Chapter 500 Stormwater Management Law.

(1) Approval of variations from plans. The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents must be reviewed and approved by the department prior to implementation. Any variation undertaken without approval of the department is in violation of 38 M.R.S.A. §420-D(8) and is subject to penalties under 38 M.R.S.A. §349.

(2) Compliance with all terms and conditions of approval. The applicant shall submit all reports and information requested by the department demonstrating that the applicant has complied or will comply with all terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.

(3) Advertising. Advertising relating to matters included in this application may not refer to this approval unless it notes that the approval has been granted WITH CONDITIONS, and indicates where copies of those conditions may be obtained.

(4) Transfer of project. Unless otherwise provided in this approval, the applicant may not sell, lease, assign, or otherwise transfer the project or any portion thereof without written approval by the department where the purpose or consequence of the transfer is to transfer any of the obligations of the developer as incorporated in this approval. Such approval may only be granted if the applicant or transferee demonstrates to the department that the transferee agrees to comply with conditions of this approval and the proposals and plans contained in the application and supporting documents submitted by the applicant. Approval of a transfer of the permit must be applied for no later than two weeks after any transfer of property subject to the license.

(5) Time frame for approvals. If the construction or operation of the activity is not begun within four years, this approval shall lapse and the applicant shall reapply to the department for a new approval. The applicant may not begin construction or operation of the project until a new approval is granted. A reapplication for approval may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.

(6) Certification. Contracts must specify that "all work is to comply with the conditions of the Stormwater Permit." Work done by a contractor or subcontractor pursuant to this approval may not begin before the contractor and any subcontractors have been shown a copy of this approval with the conditions by the developer, and the owner and each

contractor and subcontractor has certified, on a form provided by the department, that the approval and conditions have been received and read, and that the work will be carried out in accordance with the approval and conditions. Completed certification forms must be forwarded to the department.

(7) Maintenance. The components of the stormwater management system must be adequately maintained to ensure that the system operates as designed, and as approved by the department.

(8) Recertification requirement. Within three months of the expiration of each five-year interval from the date of issuance of the permit, the permittee shall certify the following to the department.

(a) All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.

(b) All aspects of the stormwater control system have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the facilities.

(c) The erosion and stormwater maintenance plan for the site is being implemented as written, or modifications to the plan have been submitted to and approved by the department, and the maintenance log is being maintained.

(9) Severability. The invalidity or unenforceability of any provision, or part thereof, of this permit shall not affect the remainder of the provision or any other provisions. This permit shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

November 16, 2005 (revised December 27, 2011)

Special Condition
for
Third Party Inspection Program

DEPLW078-B2001 November 2008

THIRD-PARTY INSPECTION PROGRAM

1.0 THE PURPOSE OF THE THIRD-PARTY INSPECTION

As a condition of this permit, the Maine Department of Environmental Protection (MDEP) requires the permit applicant to retain the services of a third-party inspector to monitor compliance with MDEP permit conditions during construction. The objectives of this condition are as follows:

1) to ensure that all construction and stabilization activities comply with the permit conditions and the MDEP-approved drawings and specifications,

2) to ensure that field decisions regarding erosion control implementation, stormwater system installation, and natural resource protection are based on sound engineering and environmental considerations, and

3) to ensure communication between the contractor and MDEP regarding any changes to the development's erosion control plan, stormwater management plan, or final stabilization plan.

This document establishes the inspection program and outlines the responsibilities of the permit applicant, the MDEP, and the inspector.

2.0 SELECTING THE INSPECTOR

At least 30 days prior to starting any construction activity on the site, the applicant will submit the names of at least two inspector candidates to the MDEP. Each candidate must meet the minimum qualifications listed under section 3.0. The candidates may not be employees, partners, or contracted consultants involved with the permitting of the project or otherwise employed by the same company or agency except that the MDEP may accept subcontractors who worked for the project's primary consultant on some aspect of the project such as, but not limited to, completing wetland delineations, identifying significant wildlife habitats, or conducting geotechnical investigations, but who were not directly employed by the applicant, as Third Party inspectors on a case by case basis. The MDEP will have 15 days from receiving the names to select one of the candidates as the inspector or to reject both candidates. If the MDEP rejects both candidates, then the MDEP shall state the particular reasons for the rejections. In this case, the applicant may either dispute the rejection to the Director of the Bureau of Land and Water Quality or start the selection process over by nominating two, new candidates.

3.0 THE INSPECTOR'S QUALIFICATIONS

Each inspector candidate nominated by the applicant shall have the following minimum qualifications:

1) a degree in an environmental science or civil engineering, or other demonstrated expertise,
2) a practical knowledge of erosion control practices and stormwater hydrology,

3) experience in management or supervision on large construction projects,

4) the ability to understand and articulate permit conditions to contractors concerning erosion control or stormwater management,

5) the ability to clearly document activities being inspected,

6) appropriate facilities and, if necessary, support staff to carry out the duties and responsibilities set forth in section 6.0 in a timely manner, and

7) no ownership or financial interest in the development other than that created by being retained as the third-party inspector.

4.0 INITIATING THE INSPECTOR'S SERVICES

The applicant will not formally and finally engage for service any inspector under this permit condition prior to MDEP approval or waiver by omission under section 2.0. No clearing, grubbing, grading, filling, stockpiling, or other construction activity will take place on the development site until the applicant retains the MDEP-approved inspector for service.

5.0 TERMINATING THE INSPECTOR'S SERVICES

The applicant will not terminate the services of the MDEP-approved inspector at any time between commencing construction and completing final site stabilization without first getting written approval to do so from the MDEP.

6.0 THE INSPECTOR'S DUTIES AND RESPONSIBILITIES

The inspector's work shall consist of the duties and responsibilities outlined below.

1) Prior to construction, the inspector will become thoroughly familiar with the terms and conditions of the state-issued site permit, natural resources protection permit, or both.

2) Prior to construction, the inspector will become thoroughly familiar with the proposed construction schedule, including the timing for installing and removing erosion controls, the timing for constructing and stabilizing any basins or ponds, and the deadlines for completing stabilization of disturbed soils.

3) Prior to construction, the inspector will become thoroughly familiar with the project

plans and specifications, including those for building detention basins, those for installing the erosion control measures to be used on the site, and those for temporarily or permanently stabilizing disturbed soils in a timely manner.

4) During construction, the inspector will monitor the contractor's installation and maintenance of the erosion control measures called for in the state permit(s) and any additional measures the inspector believes are necessary to prevent sediment discharge to off-site properties or natural resources. This direction will be based on the approved erosion control plan, field conditions at the time of construction, and the natural resources potentially impacted by construction activities.

5) During construction, the inspector will monitor the contractor's construction of the stormwater system, including the construction and stabilization of ditches, culverts, detention basins, water quality treatment measures, and storm sewers.

6) During construction, the inspector will monitor the contractor's installation of any stream or wetland crossings.

7) During construction, the inspector will monitor the contractor's final stabilization of the project site.

8) During construction, the inspector will keep logs recording any rain storms at the site, the contractor's activities on the site, discussions with the contractor(s), and possible violations of the permit conditions.

9) During construction, the inspector will inspect the project site at least once a week and before and after any significant rain event. The inspector will photograph all protected natural resources both before and after construction and will photograph all areas under construction. All photographs will be identified with, at a minimum the date the photo was taken, the location and the name of the individual taking the photograph. *Note: the frequency of these inspections as contained in this condition may be varied to best address particular project needs.*

10) During construction, the inspector will prepare and submit weekly *(or other frequency)* inspection reports to the MDEP.

11) During construction, the inspector will notify the designated person at the MDEP immediately of any sediment-laden discharges to a protected natural resource or other significant issues such as the improper construction of a stormwater control structure or the use of construction plans not approved by the MDEP.

7.0 INSPECTION REPORTS

The inspector will submit weekly written reports *(or at another designated frequency)*, including photographs of areas that are under construction, on a form provided by the Department to the designated person at the MDEP. Each report will be due at the

MDEP by the Friday *(or other designated day)* following the inspection week (Monday through Sunday).

The weekly report will summarize construction activities and events on the site for the previous week as outlined below.

1) The report will state the name of the development, its permit number(s), and the start and end dates for the inspection week (Monday through Sunday).

2) The report will state the date(s) and time(s) when the inspector was on the site making inspections.

3) The report will state the date(s) and approximate duration(s) of any rainfall events on the site for the week.

4) The report will identify and describe any erosion problems that resulted in sediment leaving the property or sediment being discharged into a wetland, brook, stream, river, lake, or public storm sewer system. The report will describe the contractor's actions to repair any damage to other properties or natural resources, actions to eliminate the erosion source, and actions to prevent future sediment discharges from the area.

5) The report will list the buildings, roads, parking lots, detention basins, stream crossings or other features open to construction for the week, including those features or areas actively worked and those left unworked (dormant).

6) For each area open to construction, the report will list the date of initial soil disturbance for the area.

7) For each area open to construction, the report will note which areas were actively worked that week and which were left dormant for the week. For those areas actively worked, the report will briefly state the work performed in the area that week and the progress toward final stabilization of the area -- e.g. "grubbing in progress", " grubbing complete", "rough grading in progress", "rough grading complete", "finish grading in progress", "finish grading complete", "permanent seeding completed", "area fully stable and temporary erosion controls removed", etc.

8) For each area open to construction, the report will list the erosion and sedimentation control measures installed, maintained, or removed during the week.

9) For each erosion control measure in-place, the report will note the condition of the measure and any maintenance performed to bring it to standard.

Third Party Inspection Form

This report is prepared by a Third Party Inspector to meet the requirements of the Third Party Inspector Condition attached as a Special Condition to the Department Order that was issued for the project identified below. The information in this report/form is not intended to serve as a determination of whether the project is in compliance with the Department permit or other applicable Department laws and rules. Only Department staff may make that determination.

TO: *PM, Maine DEP (@maine.gov)*	FROM:
PROJECT NAME/ LOCATION:	DEP #:
DATE OF INSPECTION:	DATE OF REPORT:
WEATHER:	CONDITIONS:

SITE CHARACTERISTICS:

# ACRES OPEN:	# ACRES ACTIVE:	# ACRES INACTIVE:
LOCATION OF OPEN LAND:	LOCATION OF ACTIVE LAND:	LOCATION OF INACTIVE LAND:
OPEN SINCE:	OPEN SINCE:	OPEN SINCE:

PROGRESS OF WORK:

INSPECTION OF:	**Satisfactory**	**Minor Deviation** (corrective action required)	**Unsatisfactory** (include photos)
STORMWATER CONTROL (VEGETATIVE & STRUCTURAL BMP'S)			
EROSION & SEDIMENTATION CONTROL (TEMPORARY & PERMANENT BMP'S)			
OTHER: (PERMIT CONDITIONS, ENGINEERING DESIGN, ETC.)			

COMMENTS/CORRECTIVE ACTIONS TAKEN (attach additional sheets as necessary):

Photos (must be labeled with date, photographer and location):

Cc:		
Original and all copies were sent by email only.		