STATE OF MAINE

Department of Environmental Protection

PAUL R. LEPAGE
GOVERNOR

PATRICIA W. AHO
COMMISSIONER

June, 2014

Canton Mountain Wind LLC
549 South Street
Quincy, MA 02169
ATTN: Andy Novey

RE: Site Location of Development Act and Natural Resources Protection Act Applications, Canton and Dixfield, DEP #L-25558-24-A-N/L-25558-TB-B-N

Dear Mr. Novey:

Please find enclosed a signed copy of your Department of Environmental Protection land use permit. You will note that the permit includes a description of your project, findings of fact that relate to the approval criteria the Department used in evaluating your project, and conditions that are based on those findings and the particulars of your project. Please take several moments to read your permit carefully, paying particular attention to the conditions of the approval. The Department reviews every application thoroughly and strives to formulate reasonable conditions of approval within the context of the Department's environmental laws. You will also find attached some materials that describe the Department's appeal procedures for your information.

If you have any questions about the permit or thoughts on how the Department processed this application please get in touch with me directly. I can be reached at (207) 991-8078 or at erle.townsend@maine.gov.

Sincerely,

Erle Townsend, Project Manager
Division of Land Resource Regulation
Bureau of Land & Water Quality

pc: File

AUGUSTA
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RAY BLDG., HOSPITAL ST

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PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
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STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

IN THE MATTER OF

CANTON MOUNTAIN WIND, LLC	) SITE LOCATION OF DEVELOPMENT ACT
Canton and Dixfield, Oxford County	) NATURAL RESOURCES PROTECTION ACT
CANTON MOUNTAIN WIND PROJECT	) FRESHWATER WETLAND ALTERATION
L-25558-24-A-N (approval)	) WATER QUALITY CERTIFICATION
L-25558-TB-B-N (approval)	) FINDINGS OF FACT AND ORDER

Pursuant to the provisions of 35-A M.R.S. §§ 3401-3457, 38 M.R.S. §§ 480-A et seq. and 481 et seq., and Section 401 of the Federal Water Pollution Control Act, the Department of Environmental Protection has considered the application of CANTON MOUNTAIN WIND LLC with the supportive data, agency review comments, public comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. PROJECT DESCRIPTION:

A. Summary: Canton Mountain Wind, LLC submitted applications for permits under the Site Location of Development Act (Site Law) and the Natural Resources Protection Act (NRPA) on December 30, 2011. The applications were accepted by the Department for processing on January 13, 2012. The applicant proposes to construct an eight-turbine, up to 24-megawatt (MW) wind energy development, to be known as the Canton Mountain Wind Project, in the Towns of Canton and Dixfield, Maine.

As set forth in more detail below, the proposed development consists of a total of eight turbines, with associated turbine pads; reconstruction of approximately 7,231 linear feet of Ludden Lane; reconstruction of approximately 8,188 linear feet of existing logging road beginning at the end of Ludden Lane; construction of approximately 3,511 linear feet of new access road leading from the logging road to the ridgeline of Canton Mountain; approximately 7,297 linear feet of new ridgeline road connecting the turbines; a 3,500-square foot operations and maintenance building with associated 7,500-square foot parking area and 360-foot long access road; 3,425 linear feet of underground transmission lines; and 14,205 linear feet of above ground transmission lines. The proposed project is shown on a set of plans prepared for Patriot Renewables by Engineering & Management Services, Inc. (EMS) entitled "Canton Mountain Wind Project" (the Project Plans) dated December 15, 2011 and last revised June 13, 2012. The electrical collector and transmission line systems are shown on a set of plans prepared by RLC Engineering (designated as Project Number 22008), the first of which is titled "34.5 kV Underground Collector System," and dated December 8, 2011.

The project will create 4.6 acres of new impervious area and 5.3 acres of new developed area. The project meets the definition of an expedited wind energy development set forth in the Wind Energy Act, 35-A M.R.S. §3451 (4).

(1) Wind Turbines: The applicant proposes to erect eight wind turbines along the ridgeline of Canton Mountain. The applicant has proposed to use one of two different

(2) turbine models to construct the project; either GE 2.85-103 turbines or Siemens SWT 3.0-113 turbines. Each GE 2.85-103 turbine is capable of generating up to 2.85 MW of electricity, and is approximately 279 feet (85 meters) from the ground to the top of the tower. The total height from the ground to the tip of a fully extended blade is approximately 448 feet (136.5 meters) for the GE turbines, and the rotor diameter is approximately 338 feet (103 meters). Each Siemens SWT 3.0-113 turbine is capable of generating up to 3.0 MW of electricity, and is approximately 261 feet (79.5 meters) from the ground to the top of the tower. The total height from the ground to the tip of a fully extended blade is approximately 446 feet (136 meters) for the Siemens turbines, and the rotor diameter is approximately 371 feet (113 meters).

(3) Turbine Pads: The turbines will be constructed on eight turbine pads. The developed area for each turbine pad will include a turbine foundation pedestal approximately 16 feet in diameter with a surrounding 10-foot wide gravel ring, and a 50-foot by 80-foot crane pad constructed of compacted gravel or processed rock. The remaining developed area of each pad will be used as an equipment laydown area. The applicant states that the laydown areas will be allowed to re-vegetate after construction is complete. The turbine foundations and crane pads will remain as impervious area. The total impervious area associated with the eight turbine pads is approximately 1.2 acres.

(4) Access Roads and Crane Paths: The access road for the project will begin at Ludden Lane and will be approximately 18,930 feet long. The ridgeline road, between the turbine sites, will be approximately 7,297 feet long. The ridgeline road will initially be constructed as a 32-foot wide crane path to allow for passage of the crane and other equipment necessary for the assembly of the turbines. After construction is complete, the applicant plans to reduce the ridgeline road to 12 feet width. Construction of the access road will include temporary widening and other improvements to Ludden Lane from Canton Point Road to its end, approximately 7,231 linear feet. During construction, the Ludden Lane portion of the access road will vary in width from 16 to 20 feet, and after construction is complete it will be reduced to its original 14- to 18-foot width. Approximately 8,188 linear feet of existing logging roads will be widened and improved for access to the base of Canton Mountain, and approximately 3,511 linear feet of new road will be constructed to access the project area. During construction, the logging road and new access road will be 24 feet wide, and after construction is complete the access road will be reduced to 12 feet wide, and the logging roads reduced to their original width, with occasional turnouts. As shown on the plans, the reduction in width of the various roads will be accomplished either by loaming and seeding the excess road width or by placing erosion control mulch over the excess road width after the construction of the turbines and the removal of the crane, and allowing it to revegetate naturally. The disturbed area created in association with the construction of the access road and the ridgeline road will be approximately 21.3 acres. The new impervious area of these roads after construction of the project will be approximately 3.0 acres.

(5) Electrical Transmission Lines: Power from the eight turbines will be collected in one 34.5-kilovolt (kV) underground electric collector line system buried within the work limits of the ridgeline road. The underground line will continue for

approximately 379 feet along the ridgeline access road and then transition to an above ground line mounted on wooden poles. The above ground line will then run within the construction limits of the new access road for approximately 3,425 feet to the upgraded logging road, and continue above ground within the construction limits of the upgraded logging road and Ludden Lane for approximately 8,405 feet to the point where Ludden Lane intersects the transmission corridor for the Saddleback Ridge Wind Project (Department Order #L-25137-24-A-N/L-25137-TG-B-N, dated October 6, 2011). The transmission line will then follow the existing transmission line corridor for 5,800 feet to the Ludden Lane Substation (previously approved in Stormwater Permit by Rule #53422), where it will connect to the regional grid via the existing CMP Section 229 transmission line. The proposed transmission line will share poles with the transmission lines for the Saddleback Ridge Wind project for 1,410 feet within the existing transmission line corridor, and will be mounted on separate poles for the remaining 4,390 feet. Details of the electrical collector system are shown on a set of plans prepared by RLC Engineering, titled "Canton Mountain Wind Project, RLC Project Number 22008, Revision A," dated December 8, 2011. The total length of the proposed electrical collector line is 25,184 linear feet. The electrical collector line will consist of a conductor line, a neutral line, and a fiber optic communication line mounted on single-pole, double-circuit structures, except for the 1,410 feet of line that will share poles with the Saddleback Ridge Wind transmission line as described above, which will be mounted on H-frame structures. Pole structures will vary in height depending on the topography and the need to span particular features and resources. No changes to the Saddleback Ridge Wind project transmission corridor will be required to accommodate the additional structures and lines associated with the Canton Mountain Wind project.

(6) Operations & Maintenance Building and Associated Structures: The proposed wind energy development will include a 3,500-square foot Operations & Maintenance (O&M) building. The O&M building will be located off Ludden Lane, near its intersection with Canton Point Road. The O&M building is designed to accommodate up to six employees and will include 7,500 square feet of gravel parking area, 360 feet of access road, a septic system and a well. The O&M building, parking area and access road will result in the creation of 15,320 square feet of impervious area.

(7) Meteorological Towers: Currently, there is one temporary meteorological tower on the project site. The applicant proposes to permanently remove the tower during project construction.

The applicant is seeking approval under the NRPA for impacts to freshwater wetlands and streams. The applicant proposes to fill 7,325 square feet of freshwater wetlands during the construction of the access and ridgeline roads, and to convert 2,258 square feet of forested wetlands to scrub shrub wetlands in conjunction with the construction and maintenance of the electrical transmission line. After construction of the turbines is complete, the applicant will restore 4,286 square feet of temporary wetland impacts in the form of removal of timber mats and will allow vegetation to regrow in the area of the access road. The applicant also proposes to upgrade ten existing road crossings of a total of eight different streams, and to construct one new crossing of another stream, for the construction of the access road. Details of proposed wetland impacts are discussed further in Finding 17.

The applicant submitted two Permit by Rule (PBR) Notification Forms (PBR #57574 and PBR #57576) for activities under Section 10 and Section 19 standards of Chapter 305 of the Department's regulations. Section 10 activities under PBR #57574 include the replacement of one existing culvert on Ludden Lane and two existing culverts on the upgraded logging road, and the installation of one new culvert for the construction of the proposed access road in Canton. Section 19 activities include impacts to the Critical Terrestrial Habitat (CTH) surrounding a potentially significant vernal pool, identified as 9PSVP on the plans, related to the construction of the ridgeline road and Turbine #3, as well as activities impacting the significant vernal pool identified as 1SVP on the plans in construction and operation of the transmission line. PBR #57576 is for the replacement of three existing bridge crossings over Ludden Brook, and the replacement of four existing culverts along Ludden Lane and the logging road in Dixfield. The Department accepted PBR #57574 and PBR #57576 on March 5, 2014.

A. Current Use of Site: The proposed project site includes the ridgeline of Canton Mountain. Commercial timber management has recently occurred on at least two of the project parcels, and there are a number of existing developed logging roads within the project boundaries. Maine Interconnected Trail System (ITS) Trail #89 traverses the west flank of Canton Mountain, and several recreational all-terrain vehicle (ATV) trails utilize parts of the proposed access route on Ludden Lane and the logging road in the project area. Rural residential and seasonal properties are located to the east, north, northwest and southeast of the project area. Department staff visited the site on December 1, 2011, and on May 11, 2012. The Department's consultant for scenic impacts, James Palmer, visited the site and surrounding scenic resources of state or national significance on February 29, 2012.

B. Public Interest: While the application was being reviewed, the Department received comments from several members of the general public; the people who submitted comments or made inquiries are "interested persons," as defined in Department Rules, Chapter 2(1)(J) for the purposes of this application review.

No requests for a public hearing were received, however, in accordance with Department policy, the Department held two public meetings on this application pursuant to 38 M.R.S. §345-A(5). The purpose of these meetings was to provide an opportunity for all interested persons to present their comments to the Department and submit information into the Department's record. The Department held one public meeting on March 22, 2012, in the Canton Municipal Building in the Town of Canton, Maine. After releasing a Draft Staff Analysis for public review on July 17, 2013, another public meeting was held on July 24, 2013, at the Canton Fire Station. The Department sent letters to all abutters of the project notifying them of the meetings as well as to the Canton and Dixfield town offices, and published notices for each meeting in a local newspaper. A total of approximately 60 people were in attendance at each of the two meetings. Oral comments were presented by 10 people at the first meeting, and by 28 people at the second meeting. The Department accepted into the record all information that was presented at the public meetings, and subsequently received additional communications via electronic mail. Overall, a total of 44 people submitted comments or information into the public record. The communications describing

concerns about the proposed project that were related to standards that are reviewed as part of the Site Law and NRPA were considered in the review of the proposal.

The Department received numerous comments from interested persons expressing concerns about impacts to wildlife, noise impacts, and impacts to scenic resources. At the first public meeting, interested persons expressed concerns that the avian radar studies of bird activity at the site were insufficient, and that the project would result in adverse impacts to Canada Geese and Bald Eagles. The applicant conducted additional avian radar studies at a nearby ridge, and after consultation with the Maine Department of Inland Fisheries and Wildlife (MDIFW), submitted the results of that study to supplement the original survey. Review of the Canton Mountain Wind project was put on hold to allow those studies to be completed, and to allow the Department sufficient time to properly review changes to the project proposed by the applicant during the review period. At the second public meeting, it was again contended by interested persons that adverse impacts to avian populations would result from construction and operation of the project. Interested persons also contended that old-growth woods and deer wintering areas would be destroyed by the project. Concerns regarding wildlife and habitat are addressed in Finding 7 below.

Interested persons expressed concerns about the sound generated by the project and its impact on nearby residences. Sound impacts from the project are addressed in Finding 5 below.

Interested persons also expressed concerns about the scenic impact of the project and its possible effect on property values and quality of life for people living near the project area. Potential impacts to property values are not a factor in the Department's analysis under the law; however evidence relating to factors considered under the Scenic Impacts statutory licensing criteria is addressed in Finding 6 below.

Other concerns expressed by interested persons include economic viability of the project, job creation, fire hazard, tangible benefits, sufficiency of decommissioning funds, public safety, and potential impacts to an old cemetery. All comments were noted but were only considered to the extent that they addressed permitting criteria and were thus within the scope of the Department's review of the proposed project.

C. Comments on the Draft Order: The Department issued a draft order for public comment on May 12, 2014. The comment period on the draft order closed on May 19, 2014. The Department's responses to any comments on the draft order that addressed applicable review criteria are discussed in the appropriate findings below. One interested person, Mr. Michael Bond, commented that the public comment period was insufficient. The Department notes that the public comment period of five working days is provided for in Chapter 2 of the Department's rules.

2. TITLE, RIGHT, OR INTEREST:

The project site is comprised of 14 parcels of land. Five different entities individually own one or more of eleven of the parcels. The applicant demonstrated title, right, or interest in these 11 properties by submitting copies of wind energy facility ground leases between the applicant and the five property owners.

One of the 11 leased parcels, owned by Helen Industries, Inc., is divided by the applicant's lease, and two (nonresidential) portions of this property are not under the applicant's control. The applicant submitted an easement on the portions of the

Helen Industries, Inc. parcel not under lease. This property is undeveloped and actively managed as a timber lot. In the easement the landowner waives any objection to the placement of one turbine nearer than 1.5 times the turbine height from the boundary of the parcel, waives any objection to shadows or shadow flicker from the proposed wind project being cast onto the parcel, and allows sound generated from the project to impact the parcel at levels greater than state or local maximum allowable levels.

The applicant submitted three property agreements between its parent company, Patriot Renewables (Patriot), and the owners of the three remaining properties comprising the total of 14 discussed above. The first of these property agreements is a lease between Thorndike Industries (grantor) and Patriot (grantee) for the twelfth parcel comprising the project site. Patriot has stated its intent to assign this lease to the applicant.

The remaining two property agreements are an Option to Acquire Easement between Bayroot LLC (grantor) and Patriot (grantee), and a Land Purchase Option Agreement between Linwood and Roxanne Worster (owners) and Patriot (optionee). Patriot has stated its intent to assign these options to Saddleback Ridge Wind (Saddleback), another subsidiary of Patriot, and Saddleback's intent to subsequently lease to the applicant the rights necessary for it to use Saddleback's power line poles on the Bayroot LLC parcel for a separate power line connecting the Canton Mountain Wind Project to the Central Maine Power company's 115kV Transmission Line 229. Patriot has stated Saddleback's intent to lease a portion of the Worster parcel to the applicant to construct the proposed 3,500 square-foot O&M building and all associated facilities, and to improve and maintain Ludden Lane as shown on the Project Plans. The Worster parcel and the Bayroot LLC parcel are the final two parcels of the 14 that make up the project site as described above.

The applicant submitted copies of sound and flicker easements for several residential properties that will not have any facilities constructed on them. With the easements, the landowners forego their objections to noise and shadow flicker on the properties, without limitation. The applicant submitted deeds for these properties showing that the owners of the properties have sufficient title, right or interest to grant the easements. The applicant also submitted a copy of an easement granted by 243 Darrington Road LLC allowing it to improve and maintain Ludden Lane as shown on the Project Plans. The leases, quitclaim deeds, and easements were submitted by the applicant as Appendix 2-1 to the application and addenda thereto.

The Department finds that the leases, deeds and other documents submitted by the applicant demonstrate a right to the use of the property for adequate duration and terms for the proposed project. Therefore, the Department finds that the applicant demonstrated sufficient title, right, or interest in all of the property which is proposed for development or use. Prior to the start of construction, the applicant must submit to the Department copies of the executed leases and options described above.

3. FINANCIAL CAPACITY:

The total cost of constructing the project is estimated to be $47,000,000. The applicant states that it will raise non-recourse debt financing through a third party for the proposed project. The applicant submitted a letter of support from Flagstar Bank, dated December 6, 2011, in Appendix 3-1 in the application. In the letter, Flagstar Bank states that it intends to provide financing for this project. The applicant also submitted a 2014 Certificate of Good Standing from the Massachusetts Secretary of the Commonwealth and Maine Secretary of State as Appendices 3-2 and 3-3, respectively, as part of the application. A search of the records at the office of the Maine Secretary of State found that the applicant is a corporation authorized to do business in Maine as of February 26, 2014. After amending the application to include the Siemens turbines as an option, the applicant submitted a new letter from Flagstar Bank, dated November 8, 2012, stating its intent to finance the project with the option for the more expensive Siemens turbines. After Flagstar Bank was acquired by Customers Bank, the applicant submitted a letter from Customers Bank dated May 2, 2014, stating its intent to finance the project with either the General Electric or the Siemens turbines. Prior to the start of construction, the applicant must submit 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 to be adequate under Department Rules, Chapter 373(1), to the Department for review and approval.

The Department finds that the applicant has demonstrated adequate financial capacity to comply with Department standards provided that the applicant submits final evidence of financial capacity prior to the start of construction as referenced above.

4. TECHNICAL ABILITY:

To demonstrate its technical ability to construct and operate the proposed project in compliance with State environmental standards and any permit issued, the applicant provided resume information for key persons involved with the project and a list of projects successfully constructed by the applicant's parent company, Patriot Renewables. The applicant also retained the services of several consulting firms to assist in the design and engineering of the project. These firms and their involvement in the proposed project are as follows:

- Tetra Tech EC, Inc.– natural resources assessment, historic and prehistoric archaeological resources, shadow flicker assessment, permitting assistance
- Boyle Associates – vernal pool and wetlands delineation in 2010 and 2011
- Engineering & Management Services, Inc. – civil engineering design
- RLC Engineering, LLC – electrical engineering design
- Terrence J. DeWan and Associates – visual impact analysis
- Resource Systems Group, Inc. – sound assessment
- Albert Frick Associates, Inc. – soils assessment

- Public Archaeology Lab – historic architectural resources

The Department finds that, based on Patriot Renewables' experience and the professional consultants it retained to prepare the application, the applicant has demonstrated adequate technical ability to comply with Department standards.

5. NOISE:

As set forth in 38 M.R.S. §484 (3), an applicant for a permit under the Site Law must demonstrate that it has made adequate provision for the control of noise which will be generated by the project. Thus, Canton Mountain Wind must provide evidence that the proposed project will comply with Department regulations applicable to sound levels generated by the construction, routine operation and routine maintenance of a wind energy development. Chapter 375 §10(I) sets forth hourly sound level limits ($L_{Aeq\text{-}Hr}$) that must be met at a development's property boundaries and at nearby protected locations. Chapter 375 §10(G)(16) defines a protected location as "any location accessible by foot, on a parcel of land containing a residence or approved subdivision." In addition to residential parcels, protected locations include but are not limited to schools, state parks, and designated wilderness areas.

Pursuant to Chapter 375 §10(I)(2), the hourly sound level resulting from routine operation of a wind energy development is limited to 75 decibels (dBA) at any time of day at any property line of the development or contiguous property owned or controlled by the applicant. Under the current rule, which became effective June 10, 2012, at any protected location the sound level may not exceed 55 dBA between 7:00 a.m. and 7:00 p.m., and 42 dBA between 7:00 p.m. and 7:00 a.m. When the proposed project was accepted as complete for processing on January 13, 2012, the rule set the nighttime limit as 45 dBA for Quiet Locations. Subsequent to the acceptance of the application, the Department adopted a new nighttime limit of 42 dBA for Quiet Locations. In Quiet Locations, nighttime limits at a protected location 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. Although its permit applications were deemed complete before the effective date of the current regulation, the applicant proposes to comply with the current, more restrictive, standard.

The proposed turbines are sited on the property such that the shortest distance between a turbine and a protected location is approximately 4,890 feet to the northwest. The closest protected location to the northeast is approximately 5,100 feet from the nearest turbine, and to the south is approximately 5,250 feet. All other protected locations are over one mile from the nearest turbine. All of the closest residential properties in the vicinity of the project are located in the Town of Canton. As described in Finding 2 above, the applicant acquired noise easements on ten properties in the project vicinity that result in the noise on those properties being exempt from the Department's sound limits. This exemption, as set forth in Chapter 375 §10(C)(5)(s), allows the sound generated by the operation of the project to exceed the Department's sound limits on those affected properties.

To address the Site Law standard pertaining to the control of noise, Chapter 375 §10, the applicant submitted a Noise Impact Study (NIS) prepared by Resource Systems

Group Inc. (RSG), dated December, 2011, and included as Section 5 of the application. RSG is a firm with experts experienced in evaluating noise impacts from mobile and industrial sources, including wind energy projects. The NIS considered the use of seven GE 2.75-103 turbines and one GE 2.75-100 turbine, or the use of eight Gamesa G90 turbines. The purpose of the NIS is to model expected sound levels at protected locations near the proposed Canton Mountain Wind project and to compare the model results to the noise standards in Chapter 375 §10. On March 27, 2012, the applicant submitted a modified NIS, also prepared by RSG, titled "Noise Modeling Study for Canton Wind Farm: Canton, Maine", and also dated December 2011, to reflect the acquisition of noise easements on two parcels for which easements had not been included in the earlier submittal and to address Department comments on the original NIS.

On May 22, 2012, the applicant requested that an alternative turbine, the Siemens 3.0-113 be approved for use as part of the project, and submitted supplemental information in support of this request. Included in the submission was an addendum to the modified NIS submitted on March 27, 2012. The addendum is titled "Addendum: Siemens SWT 3.0-113 Sound Modeling Results for Canton Mountain Wind", and is dated May 18, 2012. The addendum states that "Compared with the GE 2.75-103, the Siemens turbine emits more high frequency sound and less low frequency sound. Since high frequency sound is attenuated by the atmosphere more rapidly than low frequency sound, sound levels generated by the Siemens turbine will be slightly higher in volume closer to the turbines, but lower further away, as compared with the GE [turbines]." On June 21, 2012, the applicant submitted a second addendum to the NIS to address a change in the proposed tower height for the Siemens turbines from 90 meters to 79.5 meters. The addenda include modeling of the noise output in the same manner as the original NIS modeled the GE turbines. According to the addenda, the noise generated by the Siemens turbines will not exceed the standards in Chapter 375 §10(I) for daytime or nighttime operation in any regulated location near the project at any time with either tower height.

On September 17, 2012, the Department was informed by the applicant that General Electric had stopped manufacturing the GE 2.75-100 turbines, and that GE had upgraded the GE 2.75-103 turbines, giving them a higher nameplate generating capacity, and renamed them as the GE 2.85-103. The applicant requested that the GE 2.85-103 turbines be approved for use in the project. The 2.85-103 is capable of generating 2.85 MW of electricity, and has the same rotor diameter and tower height as the 2.75-103. The applicant submitted a letter from the manufacturer which stated that the "uprate resulted from improvements in the electrical system and did not impact any other operational characteristic such as acoustic performance or safety." The applicant did not revise the modified NIS in response to the upgrade, as the manufacturer's statement indicated that the sound characteristics of the new design were the same as the sound characteristics of the original design.

On May 6, 2013, the applicant informed the Department that it was no longer considering using the Gamesa G90 turbines for the project.

Finally, to demonstrate compliance with the new rules adopted by the Board specifically for wind energy developments, Chapter 375 §10(I), the applicant submitted another NIS, prepared by RSG and dated May 7, 2013, which also reflected its

acquisition of three more noise easements on nearby properties. The May 7, 2013, NIS models the noise output from the GE turbines and the Siemens turbines in the configuration proposed by the applicant. According to the study, the noise generated by the turbines will not exceed the current standards in Chapter 375 §10(I) for daytime or nighttime operation in any regulated location near the project at any time.

A. Sound Level Modeling. The applicant's noise consultant, RSG, developed a sound level prediction model to estimate sound levels from operation of the proposed project. The acoustic model was developed using the Cadna\A software program, performing calculations in accordance with a generally recognized standard for estimating the propagation of sound in the environment which is published by the International Standards Organization (ISO) as Chapter 9613-2, Attenuation of Sound During Propagation Outdoors. Cadna\A takes into account the effects of three dimensional terrain, proposed wind turbine characteristics and locations, and local environmental factors to calculate outdoor sound propagation from the wind turbines. RSG used area topography based on USGS topographic information and wind turbine locations based on project design for entry into the Cadna\A model.

RSG calculated sound levels for simultaneous operation of eight GE 2.75-103 wind turbines, and for eight Siemens SWT 3.0-113 wind turbines, all in the proposed arrangement. Based on the manufacturer's letter referenced above, the calculations for the GE 2.75-103 turbines are equally applicable to the GE 2.85-103 turbines. RSG's modeling assumptions include: all wind turbines operating at maximum sound power levels concurrently, omnidirectional downwind propagation, ground absorption factor of G=0.5 (to represent mixed ground), spectral ground attenuation, and turbine manufacturers' specifications for maximum sound power level (105.0 +/- 2 dBA for the GE 2.75-103 or 2.85-103 turbines; and 106.0 +/- 1.5 dBA for the Siemens SWT 3.0-113 turbines), plus a 1 dBA modeling uncertainty factor as approved by the Department in accordance with Chapter 375 §10(I)(7)(c)(9). No noise reduction operations are proposed for this project. Based on its modeling, the applicant predicts that no protected locations without noise easements will experience sound levels in excess of the daytime or nighttime hourly limits in Chapter 375 §10(I)(2)(b), regardless of which of the proposed turbine models is ultimately used in constructing the project.

B. Short Duration Repetitive Sound. Chapter 375 §10(G)(19) defines Short Duration Repetitive Sound (SDRS) 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." Chapter 375 §10(I)(4)(a) requires that 5 dBA be added to each average 10-minute sound level ($Leq_{A\ 10\text{-}min}$) measurement interval in which greater than five SDRS events are present.

In the May 7, 2013, NIS, RSG observed that while the cause of SDRS is debated, it is likely a function of different wind speeds at the top and bottom of a rotor (wind shear)

and/or turbulence. RSG stated that it reviewed a year of meteorological data collected from the Canton Mountain meteorological tower, and broke the data down into discrete points representing ten-minute intervals. RSG's analysis of the data found that

instances of high wind shear occur 8% of the time across all hours of the day. The NIS shows that turbulence intensity is higher at low wind speeds when sound output from the turbines is lower, and highest when wind speeds are below 3 meters per second (m/s), which is too low for turbine operation. RSG also found that 89% of the data points are below 0.20 turbulence intensity, with most of those periods where turbulence intensity was above 0.20 occurring during the daytime hours of 7:00 a.m. to 7:00 p.m. Based on this, RSG concluded that while it is not possible at this time to predict the extent of SDRS from the proposed project, its analysis indicates that the project site characteristics are not conducive to common occurrences of SDRS from turbine operation. RSG notes that the model indicates that there is a 5.6 dBA buffer between the highest modeled sound level at a protected location and the 42 dBA limit. Therefore, RSG states that even assuming constant SDRS the project would still be in compliance with the 42 dBA nighttime standard after application of the 5 dBA penalty described above.

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 dB amount based on octave center frequencies. Chapter 375 §10(I)(3) requires that 5 dBA be added to any average 10-minute sound level ($Leq_{A\ 10\text{-}min}$) for which a tonal sound occurs that results from routine operation of the wind energy development.

The May 7, 2013, NIS submitted by the applicant states that the proposed transformer creates tonal sound in three bands: 125 Hz, 250 Hz, and 500 Hz. The maximum power of the tonal sounds created by the transformers at the nearest residence to the substation is 29 dB, including the 5 dB penalty, which is well below the 42 dBA nighttime maximum allowed under Chapter 375 §10(I)(2)(b). The NIS states that the GE 2.85-103 turbines do not create tonal sound as defined in Chapter 375 §10(G)(24), and while test data is not available for the Siemens SWT 3.0-113 turbines above 160 Hz, the manufacturer warrants that they will not create tonal sound as defined in Chapter 375 §10(G)(24), irrespective of wind speed.

D. Department Review. The Department hired an independent noise consultant, Tech Environmental, Inc., to assist the Department in its review of the evidence pertaining to noise. Tech Environmental reviewed all of the materials relating to noise impacts submitted by the applicant.

Tech Environmental reviewed the modified NIS received by the Department on March 27, 2012, and submitted a Noise Impact Study Peer Review dated March 30, 2012. Tech Environmental also reviewed the applicant's May 22, 2012 submission regarding the addition of the Siemens turbine option, and the June 21, 2012 submission regarding a change in tower height for the Siemens turbine option, and provided review comments on June 1, 2012 and July 10, 2012, respectively. Tech Environmental noted in the June 1, 2012 review comments that the Siemens turbines the applicant has proposed are a lower-noise version of the SWT-3.0-113, properly known as the Siemens 106-dB-max SWT 3.0-113. Tech Environmental also reviewed the May 7, 2013 Noise Modeling Study regarding the

applicant's compliance with the 42 dBA nighttime limit, and provided review comments on June 6, 2013. Tech Environmental stated that RSG's noise model using the two uncertainty factors (2.0 and 1.0 dBA for the GE turbines, and 1.5 and 1.0 dBA for the Siemens turbines) is

conservative, and tends to overstate actual turbine sound levels. Based on the evidence in the record, Tech Environmental also stated that the ground absorption factor of 0.5 and the spectral ground attenuation assumptions result in a reasonable predictive model that provides an accurate estimate of the sound levels that can be expected in the project vicinity.

In its March 30, 2012 peer review, Tech Environmental concluded in part: "Sound levels from the wind turbines were predicted by RSG using the Cadna\A acoustic model, the International Standard ISO 9613-2 sound propagation method, and a conservative ground absorption factor of 0.5 that represents winter frozen-ground conditions. While the ISO method provides estimates of accuracy for source heights up to 30 m and the Canton Mountain wind turbines are higher at 75-85 m, this acoustic modeling approach has been found to be accurate for utility wind turbine sounds on several past projects with similar hub heights; the method is judged to be accurate for the Canton Mountain Wind Project."

Tech Environmental reviewed the information submitted by the applicant related to SDRS which included an analysis of wind shear and turbulence data for the proposed site, an SDRS analysis from an existing wind energy development, Spruce Mountain Wind, and which pointed out the fact that both the GE 2.85-103 and the SWT-3.0-113 turbines have independent blade pitch controls, in support of the RSG conclusion that SDRS events will be infrequent at Canton Mountain Wind. Tech Environmental concluded that any correction for SDRS is likely to be far less than the 5.6 dBA difference between the maximum predicted sound level at a Protected Location (36.4 dBA) and the 42 dBA nighttime limit in the Department's Regulations regarding the Control of Noise. If post-construction monitoring shows that SDRS is occurring due to project operation the 5 dBA penalty would be applied at that time and modifications would be required if necessary to ensure compliance with Department rules.

Tech Environmental reviewed the information submitted relating to tonal sound and stated in the June 6, 2013 peer review that the GE 2.85-103 turbines do not have the potential for creating a tonal sound as defined under Chapter 375, and that while no 1/3-octave band data are available for the Siemens SWT-3.0-113 turbine, the manufacturer has guaranteed that the turbine emits no tonal sound as defined by Maine DEP's Chapter 375. The June 6, 2013 peer review states that the transformers will create a tonal sound as defined, at the nearest non-participating residence, which is Receiver 45 (RSG report, Table 3). Chapter 375 §10(I)(3) of the Department's rules states that 5 dBA will be added to any average 10 minute sound level ($Leq_{A\ 10\text{-}min}$) for which a tonal sound occurs that results from routine operation of the wind energy development. The author of the Tech Environmental peer review commented "While Table 3 does not present the total broadband sound levels from the transformers alone, or from the transformers plus [the] turbines, I calculated those values as 24.8 dBA and 31.4 dBA, respectively, from the octave band modeling results. The total transformer sound level of 24.8 dBA is quite low and whether any hum is audible at protected locations will depend on the ambient sound level." Application of the 5 dBA penalty to the tonal sound results in a sound level of 29.8 dBA, which is well below the 42 dBA limit in Chapter 375.

Tech Environmental concluded that the May 7, 2013 NIS prepared by RSG is reasonable and technically correct according to standard engineering practices and the Department's regulations regarding the Control of Noise. Tech Environmental

recommended that "to ensure compliance with the Maine Noise Regulations, including the provisions regarding SDRS and tonal sound, the Department should require limited post-construction sound monitoring for the project, following the general test methodology used in other recent wind energy Land Use Permits." If the project is permitted, Tech Environmental recommended that, since "projected maximum sound levels are very low at 36 dBA and Noise Reduced Operation (NRO) is not used to achieve compliance" a single compliance test in the first year of operation would be sufficient, with testing done at one location, either Receiver 7B to the northwest or Receiver 1B to the south. Tech Environmental recommended that because other protected residences are approximately one mile or more from the turbines, sound compliance monitoring should not be required at those locations. However, Chapter 375 §10(I)(8)(e)(5) requires compliance testing in the first year and in each successive fifth year of operation until the project is decommissioned.

E. Post-construction Monitoring Program. To ensure that the modeling and predictions submitted by the applicant and deemed reasonable by the Department in the findings below correctly predict sound levels and that the project continues to meet the noise standards reflected in this permit over time, the applicant must conduct post-construction sound level monitoring at least once during the first year of project operation, and then once each successive fifth year thereafter until the project is decommissioned. Additional compliance monitoring may also be required by the Department in response to a complaint and any subsequent enforcement action by the Department, and for validation of the applicant's calculated sound levels when requested by the Department. In accordance with Chapter 375 §10(I), compliance monitoring must include the following:

1) Post construction operation compliance testing at two separate locations, Receiver 1B and Receiver 7B, must be completed within the first year of operation, and then once each successive fifth year thereafter until the project is decommissioned. Project operation compliance testing must be completed during periods when hardwood trees are without leaves.

2) Compliance testing methodology. Compliance must be demonstrated based on the following outlined conditions as set forth in Chapter 375 §10(I) and listed below. All data submittals must be accompanied by concurrent time stamped audio recordings.

    a) Sound level data must be aggregated in 10-minute measurement intervals within a given compliance measurement period (daytime: 7:00 a.m. to 7:00 p.m. or nighttime: 7:00 p.m. to 7:00 a.m.) under the conditions set forth in Chapter 375 §10(I)(8).

    b) Compliance will be demonstrated when the arithmetic average of the sound level of, at a minimum, twelve, 10-minute measurement intervals in a given compliance measurement period is less than or equal to the sound level limit set forth in Chapter 375 §10(I)(2).

    c) Alternatively, if a given compliance measurement period does not produce a minimum of twelve, 10-minute measurement intervals under the atmospheric and site conditions set forth in Chapter 375 §10(I)(8), the wind energy development may combine six or more contiguous 10-minute

measurement intervals from one 12 hour (7:00 a.m. to 7:00 p.m. daytime or 7:00 p.m. to 7:00 a.m. nighttime) compliance measurement period with six or more contiguous 10-minute intervals from another compliance measurement period. Compliance will be demonstrated when the arithmetic average of the combined 10-minute measurement intervals is less than or equal to the sound level limit set forth in Chapter 375 §10(I)(2).

3) Measurement Procedures. Measurements must be supervised by personnel who are well qualified by training and experience in measurement and evaluation of environmental sound, or by personnel trained to operate under a specific measurement plan approved by the Department. Measurement instrumentation and methodology must conform to the following criteria as set forth in Chapter 375 §10(I)(8).

a) Measurement Instrumentation.

i. A sound level meter or alternative sound level measurement system used must meet all of the Type 0 or 1 performance requirements of American National Standard Specifications for Sound Level Meters, ANSI S1.4.

ii. An integrating sound level meter (or measurement system) must also meet the Type 0 or 1 performance requirements for integrating/averaging in the International Electrotechnical Commission Standard on Integrating-Averaging Sound Level Meters, IEC Publication 61672-1 and ANSI 1.43.

iii. A filter for determining the existence of tonal sounds must meet all the requirements of the American National Standard Specification for Octave-Band and Fractional Octave-Band Analog and Digital Filters, ANSI S1.11 and IEC 61260, Type 3-D performance.

iv. The acoustical calibrator used must be of a type recommended by the manufacturer of the sound level meter and one that meets the requirements of American National Standard Specification for Acoustical Calibrators, ANSI S1.40.

v. The microphone windscreen used must be of a type recommended by the manufacturer of the sound level meter.

vi. Anemometer(s) used for surface (10 meter (m)) (32.8 feet) wind speeds must have a minimum manufacturer specified accuracy of ±1 mile per hour (mph) providing data in one second integrations and 10 minute average/maximum values for the evaluation of atmospheric stability.

vii. Audio recording devices must be time stamped (hh:mm:ss) and at a minimum 16 bit digital, recording the sound signal output from the measurement microphone at a minimum sampling rate of 24 thousand (k) samples per second to be used for identifying events. Audio

recording and compliance data collection must occur through the same microphone/sound meter and bear the same time stamp.

b) Equipment Calibration.

i. The sound level meter must have been calibrated by a laboratory within 12 months of the measurement, and the microphone's response must be traceable to the National Institute of Standards and Technology.

ii. Field calibrations must be recorded before and after each measurement period and at shorter intervals if recommended by the manufacturer.

iii. Anemometer(s) and vane(s) must be calibrated annually by the manufacturer to maintain stated specification.

c) Compliance Measurement Location, Configuration, and Environment.

Compliance measurement locations must be at Receiver 1B and Receiver 7B.

i. To the greatest extent possible, compliance measurement locations must be at the center of unobstructed areas that are maintained free of vegetation and other structures or material that is greater than 2 feet in height for a 75-foot radius around the sound and audio monitoring equipment.

ii. To the greatest extent possible, meteorological measurement locations must be at the center of open flat terrain, inclusive of grass and a few isolated obstacles less than 6 feet in height for a 250-foot radius around the anemometer location. The meteorological data measurement location need not be coincident with the sound and audio measurement location provided there is no greater than a 5 mile separation between the data collection points and the measurement locations have similar characterization, such as location on the same side of the mountain ridge.

iii. Meteorological measurements of wind speed and direction must be collected using anemometers at a 10-meter height (32.8 feet) above the ground. Results must be reported, based on 1-second integration intervals, and must be reported synchronously with hub level and sound level measurements at 10-minute measurement intervals. The wind speed average and maximum must be reported.

iv. The sound microphone must be positioned at a height of approximately 4 to 5 feet above the ground, and oriented in accordance with the manufacturer's recommendations.

v. When possible, measurement locations must be at least 50 feet from any sound source other than the wind energy development’s power generating sources.

d) Compliance Data Collection, Measurement and Retention Procedures.

i. Measurements of operational, sound, audio and meteorological data must occur as set forth in Chapter 375 §10(I)(8)(e)(7 - 10), and reproduced below in subsections vii through x.

ii. All operational, sound and meteorological data collected must be retained by the wind energy development for a period of one year from the date of collection and is subject to inspection by the Department and submission to the Department upon request.

iii. All audio data collected must be retained by the licensee for a period of four weeks from the date of collection unless subject to a complaint filed in accordance with the complaint protocol approved by the Department, is subject to inspection by the Department, and must be submitted to the Department upon request. Specific audio data collected that coincides with a complaint filed in accordance with the approved complaint protocol must be retained by the licensee for a period of one year from the date of collection, is subject to inspection by the Department, and must be submitted to the Department upon request.

iv. Written notification of the intent to collect compliance data must be received by the Department prior to the collection of any sound level data for compliance purposes. The notification must state the date and time of the compliance measurement period. Notice received via electronic mail is sufficient regardless of whether it is received during business hours.

v. Compliance data from the operation of a wind energy development must be submitted to the Department, at a minimum:

(a) Once during the first year of facility operation;

(b) Once during each successive fifth year thereafter until the facility is decommissioned;

(c) In response to a complaint regarding operation of the wind energy development as set forth in Chapter 375 §10(I)(7)(j) and any subsequent enforcement by the Department; and

(d) For validation of an applicant's calculated sound levels when requested by the Department.

vi. All sound level, audio and meteorological data collected during a compliance measurement period for which the Department has been

notified that meets or exceeds the specified wind speed parameters must be submitted to the Department for review and approval. All data submittals must be submitted to the Department within 30 days of notification of intent to collect compliance data.

vii. Measurement must be obtained during weather conditions when the wind turbine sound is most clearly noticeable, generally when the measurement location is downwind of the wind energy development and maximum surface wind speeds less than 6 mph with concurrent turbine hub-elevation wind speeds sufficient to generate the maximum continuous rated sound power from the nearest wind turbines to the measurement location. A downwind location is defined as within 45^0 of the direction between a specific measurement location and the acoustic center of the five nearest wind turbines. These conditions typically occur during inversion periods usually between 11 p.m. and 5 a.m.

viii. In some circumstances, it may not be feasible to meet the wind speed and operations criteria due to terrain features or limited elevation change between the wind turbines and monitoring locations. In these cases, measurement periods are acceptable if the following conditions are met:

(a) The difference between the L_{A90} and L_{A10} during any 10-minute period is less than 5 dBA; and

(b) The surface wind speed (10 meter height) (32.8 feet) is 6 mph or less for 80% of the measurement period and does not exceed 10 mph at any time, or the turbines are shut down during the monitoring period and the difference in the observed L_{A50} after shut down is equal to or greater than 6 dBA; and

(c) Observer logs or recorded sound files clearly indicate the dominance of wind turbine(s).

ix. Measurement intervals affected by increased biological activities, leaf rustling, traffic, high water flow, aircraft flyovers or other extraneous ambient noise sources that affect the ability to demonstrate compliance must be excluded from all compliance report data. The intent is to obtain 10-minute measurement intervals that entirely meet the specific criteria.

x. Measurements of the wind energy development sound must be made so as to exclude the contribution of sound from other development equipment that is exempt from this regulation.

e) Reporting of Compliance Measurement Data.

Compliance Reports must be submitted to the Department within 30 days of notification of intent to collect compliance data or upon request by the Department and must include, at a minimum, the following:

i. A narrative description of the sound from the wind energy development for the compliance measurement period result;

ii. The dates, days of the week and hours of the day when measurements were made;

iii. The wind direction and speed, temperature, humidity and sky condition;

iv. Identification of all measurement equipment by make, model and serial number;

v. All meteorological, sound, windscreen and audio instrumentation specifications and calibrations;

vi. All A-weighted equivalent sound levels for each 10-minute measurement interval;

vii. All L_{A10} and L_{A90} percentile levels;

viii. All 10 minute 1/3 octave band linear equivalent sound levels (dB);

ix. All short duration repetitive events characterized by event amplitude. Amplitude is defined as the peak event amplitude minus the average minima sound level immediately before and after the event, as measured at an interval of 50 milliseconds ("ms") or less, A-weighted and fast time response, e.g. 125 ms. For each 10-minute measurement interval short duration repetitive sound events must be reported by number for each observed amplitude integer above 5 dBA.

x. Audio recording devices must be time stamped (hh:mm:ss) and at a minimum 16 bit digital, recording the sound signal output from the measurement microphone at a minimum sampling rate of 24 thousand (k) samples per second to be used for identifying events. Audio recording and compliance data collection must occur through the same microphone/sound meter and bear the same time stamp. Should any sound data collection be observed by a trained attendant, the attendant's notes and observations may be substituted for the audio files during the compliance measurement period;

xi. All concurrent time stamped turbine operational data including the date, time and duration of any noise reduction operation or other interruptions in operations if present; and

xii. All other information determined necessary by the Department.

F. Complaint Response. As outlined in Chapter 375 §10(I)(7)(j), the applicant must establish a toll free complaint hotline designed to allow concerned citizens to call in noise related complaints 24 hours per day, 7 days per week. Notice of the hotline number must be sent to all abutting property owners and posted in prominent locations around the project site and within the municipal offices for the towns of Carthage,

Canton, and Dixfield. For those complaints that include sufficient information to warrant an investigation, the applicant must collect the complainant information (name, location, time of complaint and other complaint information) and the meteorological and operational data from the project at the time of the complaint, and submit that information to the Department and to the complainant within two business days of receipt of the complaint. The applicant must plot complaint locations and key information on a project area map to evaluate complaints for a consistent pattern of

site, operating and weather conditions; and submit this analysis to the Department with a comparison of these patterns to the compliance protocol outlined above so the Department may determine whether testing under additional site and operating conditions is necessary; and if so, must propose a testing plan that addresses the locations and the conditions under which the pattern of complaints has occurred. The applicant will be responsible for the reimbursement of all costs incurred by the Department in the review of any noise related complaint, as provided for in 38 M.R.S. Chapter 2 §352.

In response to the draft order, one interested person, Ms. Alice McKay Barnett, objected to the requirement for the complaint protocol to be managed by the licensee. Ms. Barnett stated that complaints should be handled by the town health authority rather than the licensee. The Department notes that there is no local health authority in either Canton or Dixfield. Another interested person, Mr. Michael DiCenso, commented that the regulatory standards in Chapter 375 §10(I) for noise generated by a wind energy development are inadequate to protect people. The Department notes that the standards in question were subject to extensive review and public comment before their enactment, and were enacted in accordance with the rulemaking procedures in statute. Another interested person, Mr. Michael Bond, commented that the proposed GE 2.85MW turbines have not been correctly tested for sound impacts, and that wind direction has not been sufficiently analyzed. The Department notes that these same concerns were expressed by Mr. Bond on September 17, 2013, in response to the draft Board Order for the Saddleback Ridge Wind Project, and were reviewed by Tech Environmental. At that time, Tech Environmental stated that "[t]he RSG sound production model uses International Standard ISO 9613-2 for sound propagation, and has been previously validated as accurate in sound compliance testing [at] other operating wind energy projects in Maine," and that "[t]he meteorological data collected by RSG at the project site were not used in the acoustic model, which instead makes worst-case assumptions regarding sound propagation." The Department considered these comments along with the other information in the record regarding the complaint protocol for the proposed project, and notes that the proposed project has been reviewed under the applicable standards in effect at the time the application was received, and has also been reviewed under the newer standards adopted June 10, 2012.

G. Department Findings. After consideration of the information submitted in the application, review comments on that material, the submissions from interested persons, and comments by the Department's review agents, as well as the comments on the draft order, the Department finds that the methods used by the applicant for modeling sound generated by the proposed project are appropriate, and are likely to accurately predict sound levels that will be experienced at protected locations during project operation. The Department further finds that the proposed project will meet the applicable standards of Chapter 375 §10(I), including those standards regarding tonal

sound and SDRS, and that the applicant has made adequate provision for the control of noise from the proposed project, provided that: (1) the applicant submits specific details of the compliance locations for review and approval to the Department prior to operation; (2) the applicant implements the complaint protocol outlined above; and (3) the applicant submits sound level monitoring reports in accordance with the post-construction monitoring program described above.

To confirm that the modeling accurately predicted sound levels and to ensure that the standards are met, both initially and on an ongoing basis, the Department finds that the applicant must implement the post-construction monitoring program, including complaint response, and the additional requirements as described above. Upon a finding of non-compliance by the Department, the applicant must take short term action immediately to adjust operations to reduce sound output to applicable 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 compliance plan that proposes actions to bring the project into compliance at all the protected locations surrounding the development. This compliance plan must include, among other strategies, consideration and analysis of how potential turbine shutdown scenarios may bring the project into compliance with the terms of this permit. The Department will review any such compliance plan and may require additional mitigation or alternative measures. If immediate actions to bring the project into compliance are not undertaken or are not successful while the process of generating and obtaining approval of a longer term plan is taking place, enforcement action may be taken to ensure compliance with the Site Law, applicable provisions of Chapter 375 §10, and this permit.

6. SCENIC CHARACTER:

In order to demonstrate that the proposed project would not have an unreasonable effect on scenic character or uses related to scenic character, the applicant submitted a visual impact assessment (VIA) for the project, including wind turbines and associated facilities, which was prepared by Terrence J. DeWan and Associates (DeWan), dated December 16, 2011. The applicant submitted a second VIA, dated May 17, 2012, analyzing the potential scenic impacts of the alternative Siemens SWT 3.0-113 turbines described in Finding 1 above, and correcting a minor error in the first VIA which caused the renderings of the towers in the photosimulations to appear thicker than they should have. These studies evaluated potential scenic impacts on the viewshed within an 8-mile radius of the proposed generating facilities. Finally, the applicant submitted a memorandum from DeWan dated June 22, 2012, in conjunction with a proposal by the applicant to reduce the tower height for the Siemens turbines from 90 to 79.5 meters. Both VIAs concluded that the associated facilities for the proposed project would not be visible from any SRSNS. The Department hired a third party consultant, James F. Palmer of Scenic Quality Consultants (SQC), to review the Scenic Character section of the application and provide the Department with comments.

35-A M.R.S. § 3452 (1) provides in pertinent part 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 and 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… 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…38 M.R.S. § 484 (3).

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 § 484 (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.

In a letter to the applicant dated February 27, 2012, the Department determined that the potential visual impact of the associated facilities of the proposed project would be evaluated under the standards in the Wind Energy Act, 35-A M.R.S. §3452.

35-A M.R.S. § 3452 (3) provides that:

> A finding by the [Department] that the development's generating facilities are a highly visible feature in 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 SRSNS. In making its determination under subsection 1, the [Department] 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 proposed Canton Mountain 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, substations, and generator lead transmission lines as defined by 35-A M.R.S. § 3451 (1). The towers are subject to FAA standards for lighting, to minimize risks to aircraft flying in the project vicinity. The Department required the applicant to conduct a visual impact assessment for each SRSNS within a three mile radius of the proposed project. Although not specifically required by the Department, the applicant also elected to review potential visual impacts in the area between three and eight miles of the proposed project.

In its determination under the Site Law and the NRPA of whether the applicant has demonstrated that the proposed project would have an unreasonable impact on scenic character and existing uses related to scenic character, as set forth above, the Department considers the criteria provided in the Wind Energy Act that further specify and limit the criteria of the Site Law and the NRPA for expedited wind energy developments. This analysis includes the following factors, as set forth in 35-A M.R.S. §3452 (3):

(A) The significance of any potentially affected scenic resource(s) of state or national significance (SRSNS);

(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 any affected SRSNS and the potential effect of the generating facilities' presence on the public's continued use and enjoyment of the SRSNS; and

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

35-A M.R.S. §3451 (9) defines a SRSNS, in part, as an area or place owned by the public or to which the public has a legal right of access. The applicant's VIA reviewed the categories of SRSNS, identified the following potentially affected SRSNS and assessed the impacts to be as follows:

1.) National Natural Landmarks. The VIA found no National Natural Landmarks within an eight mile radius of any turbine or associated project facilities.

2.) Historic Resources. The applicant conducted historic resource surveys which found that there are six properties on the National Register of Historic Places within eight miles of the project. The applicant's assessment is as follows, that of these only two would have views of the proposed turbines:

The Holmes-Crafts Homestead is located in Jay, 3.8 miles from the project site. The project will not be visible from this location due to intervening evergreen vegetation.

The Jay-Niles Memorial Library is located on Route 4 in North Jay, 3.7 miles from the project site. This is a public library in active use. One turbine will be visible looking west from the front of the library during leaf-on conditions. Up to eight turbines will be visible during leaf-off conditions.

The Goodspeed Memorial Library is located in Wilton, 5.8 miles from the project site. The project will not be visible from this location due to intervening structures, topography and vegetation.

The Bass Boarding House is located in Wilton, 5.7 miles from the project site. The project will not be visible from this location due to intervening structures, topography and vegetation.

The North Jay Grange Store is located in North Jay, 3.6 miles from the project site. One turbine will be visible looking west from the rear or beside the store during leaf-on conditions. Up to eight turbines will be visible during leaf-off conditions.

The Nelson Family Farm is located in Livermore, 7.0 miles away from the project site. The project will not be visible from this location due to intervening topography.

3.) National or State Parks. There are no National or State Parks within an eight mile radius of the project.

4.) Great Ponds. There are ten great ponds located within an 8-mile radius of the project that are listed in "Maine's Finest Lakes, the Results of the Maine Lakes Study" published by the Maine State Planning Office or "Maine Wildlands Lakes Assessment" published by the Maine Land Use Regulation Commission. Nelson Pond and Forest Pond are the only two of these lakes with scenic resources rated either Significant or Outstanding and therefore considered a SRSNS pursuant to 35-A M.R.S. § 3451 (9)(D).

Forest Pond is 45 acres in size and is located in Canton. It is listed in the Maine Lakes Study as having Significant scenic quality. It is remote and undeveloped. There appears to be recent logging activity in the area around the pond. Recreational use of the pond includes boating, fishing, ice fishing, camping and swimming. Approximately 75% of the pond will have views of up to eight turbines at a distance of 3.8 to 4.6 miles.

Nelson Pond is 18 acres in size and is located in Livermore. It is listed in the Maine Lakes Study as having Significant scenic quality. There is one residence at the northwestern end of the pond. The area around the pond is wooded. Recreational use of the pond includes fishing and swimming. The project will not be visible from Nelson Pond due to intervening topography and vegetation.

5.) Scenic Rivers. The VIA found no designated Scenic River or Stream segments within eight miles of the project.

6.) Scenic Viewpoints or Trails. The VIA found no scenic viewpoints on state public reserved lands and no trails used exclusively for pedestrian use within eight miles of the project.

7.) Scenic Turnouts. The VIA found no scenic turnouts off of a public road designated as a scenic highway by the Maine Department of Transportation within eight miles of the proposed project.

8.) Scenic Viewpoints located in the Coastal Area. The applicant's VIA states that the project is not located within eight miles of a coastal area, nor are there any scenic coastal viewpoints within eight miles of the project.

The applicant's VIA includes a summary of field investigations, photo-simulations and viewshed mapping, descriptions of the visible components of the project, a description of the project area, and assessments of the potential visual impacts to SRSNS. The VIA concludes, based on DeWan's examination of the context, significance, existing public use, viewer expectations, project impact, and the potential effect on public use for each of the SRSNS, that "while low to moderate visual impacts are anticipated, the

Canton Mountain Wind Project should not have an unreasonable adverse impact on scenic values and existing uses of SRSNS." The VIA also concludes that the associated facilities for the project (transmission lines, O&M building, and related improvements) will not be visible from any SRSNS, and therefore will have no impact on views from SRSNS, and that they will not be of a location, character, or size to cause an unreasonable adverse visual effect on the scenic character of the study area.

Three interested persons expressed concerns regarding the project's visual impact on Forest Pond, and one interested person expressed concerns about the scenic impact on Mount Blue State Park. Mount Blue State Park is more than eight miles from the nearest turbine or associated facilities of the project, and therefore visual impacts of the project on the park are considered insignificant as set forth in the Wind Energy Act.

The Department's third party scenic impact consultant, SQC, visited the identified SRSNS within eight miles of the proposed project with potential views of the project. SQC also reviewed the geographic information system data used for the applicant's VIA submissions and conducted additional analysis. SQC used ArcGIS 10 software to perform visibility analyses and to review the visual simulations provided in the VIA to determine representational accuracy. SQC submitted review comments on the December 16, 2011 VIA to the Department in a document entitled "Review of the Canton Mountain Wind Project Visual Impact Assessment" dated March 20, 2012 (March 2012 VIA Review), and submitted additional comments in response to the May 17, 2012 VIA in a document titled "Review of the Visual Impacts from the Proposed Turbine Change for the Canton Mountain Wind Project" dated June 28, 2012(June 2012 VIA Review).

The VIA Reviews by SQC evaluated each scenic impact under the evaluation criteria described in §3452 of the Wind Energy Act in relation to the proposed project. In short form, the scenic impact criteria are: (1) significance of resource, (2) character of surrounding area, (3) typical viewer expectation, (4) development's purpose and context, (5) extent, nature and duration of uses, (6) effect on continued uses and enjoyment, and (7) scope and scale of project views. In Table 3 of the March 2012 VIA Review, and again in Table 3 of the June 2012 VIA Review, SQC summarizes its assessment of the impacts for each SRSNS. The following is a summary of the identical overall scenic impact ratings found in both of the SQC reports:

Scenic Resource	Overall Scenic Impact
Historic Sites	
Holmes-Crafts Homestead	None
Goodspeed Memorial Library	None
Bass Boarding House	None
North Jay Grange Store	None
Jay-Niles Memorial Library	Low
Nelson Family farm	None
Great Ponds	
Forest Pond	Low-Med
Nelson Pond	None

In the March 2012 VIA Review, SQC concludes: "Overall [the applicant's] VIA is accurate and clearly presented. Additional analyses were conducted for this review, including visibility mapping of turbines, fieldwork at each of the potential[ly impacted] SRSNS, and visualizations at the photosimulation viewpoints that indicated which turbines would have FAA warning lights."

In the June, 2012 VIA Review, SQC concluded that "there would be no appreciable change in visibility between the GE turbines and the Siemens turbines throughout the 8-mile study area." On the basis of the applicant's submissions and this analysis by SQC, the Department determined that the reduction in tower height from 90 meters to 79.5 meters for the Siemens turbines would not result in any increase to scenic impacts from the project.

The Department considered the concerns expressed by interested persons regarding scenic impacts to Forest Pond. Based on the information in the applicant's VIA, the project would only be minimally visible from Forest Pond, taking up at most an angle of 11 degrees along the horizon. Furthermore, the VIA states that no users of Forest Pond were found, and public access is not readily available. The Department concludes that impacts to the scenic quality of Forest Pond due to the construction and operation of the proposed project will not be unreasonably adverse.

In response to the draft order, interested persons expressed concerns that scenic impacts to areas in the Town of Jay, including Routes 4, 140, and 133, as well as the Androscoggin River, had not been considered. The Department notes that none of the areas referred to by the interested persons is a SRSNS. Another interested person, Mr. Michael Bond, expressed concerns that the initial user surveys collected by the applicant are now out of date. The Department notes that there were no user intercept surveys conducted for the Canton Mountain Wind project. Mr. Bond also contended that the eight mile limit for a visual impact analysis is insufficient, and that the project's potential impact on uses related to scenic character has been significantly understated. The Department notes that the eight mile limit for visual impact analysis is provided for in the Wind Energy Act, 35-A M.R.S. 34-A §3452(4). The Department further notes that Mr. Bond's comments regarding uses related to scenic character do not refer to uses relating to any particular SRSNS, and that both the applicant's VIA submissions and the Department's consultant's review do not indicate any potential for

such impacts. The Department considered these concerns along with the other information in the record regarding potential scenic impacts expected as a result of the proposed project.

The Department considered the applicant's VIA submissions, the concerns expressed by interested parties, the comments from SQC, and comments on the draft Order. Based on SQC's reviews, the Department finds that the applicant's Visual Impact Assessments are reasonable and accurate, and were prepared using appropriate methodology and technology. The Department finds that while parts of the proposed project will be visible from three SRSNS in the project vicinity, the visibility will be minimal, and will not result in an unreasonable adverse impact to the scenic character or uses related to scenic character of any of the SRSNS within eight miles of the proposed project.

Based on the information presented in the applicant's VIA submissions, the design of the proposed project, review comments from SQC, comments from interested persons, and in consideration of the evaluation criteria pursuant to 35-A M.R.S. § 3452 (3), the Department finds that the applicant has made reasonable accommodation to minimize visual impacts to SRSNS in the project vicinity, and that no aspect of the project will have an unreasonable adverse effect on the scenic character, or existing uses related to scenic character of SRSNS.

7. WILDLIFE AND FISHERIES:

To demonstrate that the applicant made adequate provision for the protection of wildlife and fisheries as required, and that the proposed project would not unreasonably harm significant wildlife habitat and fisheries under the Site Law, the NRPA, Chapter 335 and Chapter 375 §15, the applicant submitted the results of a series of ecological field surveys conducted by Tetra Tech EC, Inc. (Tetra Tech), including avian and bat surveys; wetland delineations; rare, threatened, and endangered species surveys; and vernal pool surveys within the project area. In its preparation of the application, Tetra Tech consulted with the Department and other natural resource review agencies, including the Maine Natural Areas Program (MNAP), the Maine Department of Inland Fisheries and Wildlife (MDIFW), the Maine Historic Preservation Commission (MHPC), the U.S. Fish and Wildlife Service (USFWS), and the U.S. Army Corps of Engineers (USACOE).

A. Significant Vernal Pools. Tetra Tech conducted vernal pool surveys of the project area during the amphibian breeding season (April and May) in 2010 and 2011. Field surveys were conducted to identify protected vernal pools out to a minimum of 500 feet beyond the project work limits along the access road, out to at least 750 feet beyond the work limits on the ridgeline where the turbines would be located, and out to at least 200 feet from the centerline of the proposed transmission corridor. Surveys were conducted during the optimal period for identification of significant vernal pools (SVP) for both years, approximately two weeks after the start of peak chorusing activity of pool-breeding amphibians. Twenty vernal pools were identified within the field survey area. One of these vernal pools was classified as a SVP, one was classified as a potentially significant vernal pool (PSVP), seven were classified as natural vernal pools, ten were classified as barren vernal pools, and one was classified

as an amphibian breeding area. PSVPs have the physical characteristics of NRPA-regulated vernal pools but are only classified as SVPs if they also meet at least one of the biological criteria identified in Chapter 335, the Department's Significant Wildlife Habitat Rules. Only PSVPs and SVPs are regulated by the NRPA as significant wildlife habitat.

The applicant submitted a Permit by Rule (PBR) Notification Form, Chapter 305, Section 19, for activities in, on or over significant vernal pool habitat. PBR #57574 was approved on March 5, 2014 for impacts to the PSVP and SVP. The proposed project will impact less than 25% of the adjacent critical terrestrial habitat, and no impact will be within 100 feet of the PSVP, which are the standards for approval under

Section 19 of Chapter 305. The identified SVP was previously described in the submissions accompanying the permit application for the Saddleback Mountain Wind Project, Department Order #L-25137-24-A-N/L-25137-TG-B-N, and is located outside the work limits for the proposed transmission line for this project, in the area of the transmission corridor where the proposed transmission line for Canton Mountain Wind will be co-located with the transmission line for the Saddleback Mountain Wind project as described in Finding 1(A)(4) above. A minimum of 75% of the adjacent critical terrestrial habitat associated with the SVP will remain undisturbed.

B. Inland Waterfowl and Wading Bird Habitat. The proposed project area does not contain Inland Waterfowl and Wading Bird Habitat mapped by MDIFW in areas proposed for wind turbines, access roads, collector lines, and associated structures.

C. Deer Wintering Areas. The proposed project area does not contain any MDIFW mapped Deer Wintering Areas in areas proposed for wind turbines, access roads, collector lines, and associated structures.
Interested persons expressed concerns regarding the proposed project's potential impacts to deer populations, including concerns regarding habitat destruction. The Department considered the concerns expressed by interested persons regarding destruction of habitat due to construction of the project and its effect on deer populations. MDIFW did not identify any Deer Wintering Areas in the project vicinity, and a search of the Department's Geographic Information Systems database did not find any protected deer habitat in the project vicinity. Therefore, the Department determined that no unreasonably adverse impacts to deer habitat would result from construction and operation of the proposed project.

D. Rare, Threatened, and Endangered Species. Tetra Tech conducted a survey for Rare, Threatened, and Endangered (RTE) plant and animal species within the project area. In addition to that survey, the bird and bat surveys conducted in 2010 also included investigations for RTE species or Species of Special Concern on the project site. While no RTE species were documented, several resident and migratory, state-listed species of special concern were found in the project area.

The avian migrant stopover study was conducted during the spring and fall migration seasons of 2010, and consisted of manual counts at points along transects, visually and audibly identifying individual birds at each location. In the spring survey, seven state

listed species of special concern were identified: American redstart

(*Setophaga ruticilla*), black-and-white warbler (*Mniotilta varia*), chestnut-sided warbler (*Dendroica pensylvanica*), evening grosbeak (*Coccothraustes vespertinus*), white-throated sparrow (*Zonotrichia albicollis*), wood thrush (*Hylocichla mustelina*), and yellow warbler (*Dendroica petechia*). In the fall survey, four state listed species of special concern were identified: American redstart (*Setophaga ruticilla*), black-and-white warbler (*Mniotilta varia*), chestnut-sided warbler (*Dendroica pensylvanica*), and white-throated sparrow (*Zonotrichia albicollis*). No federally or state listed threatened or endangered species were documented during either survey.

The bat acoustic study documented three long-distance migratory bat species which are state-listed species of special concern: the hoary bat (*Lasiurus cinereus*), the silver-haired bat (*Lasionycteris noctivagans*), and the eastern red bat (*Lasiurus borealis*). Call sequences attributed to these species represented approximately nine percent of all call sequences recorded during the test period.

Raptors were surveyed during the spring and fall migration periods of 2010. No state or federally listed threatened or endangered species were observed during the spring migration period. During the fall migration period, one individual of a state listed endangered species, a peregrine falcon (*Falco peregrinus*), was observed. Two state listed species of special concern were also documented during the fall survey: bald eagles (*Haliaeetus leucocephalus*) were seen five times, and northern harriers (*Circus cyaneus*) were seen twice.

For terrestrial species, Tetra Tech conducted surveys for the roaring brook mayfly (*Epeorus frisoni*), an endangered species, and the northern spring salamander (*Gyrinophilus p. porphyriticus*), a species of special concern, as recommended by MDIFW. Surveys were conducted during the 2010 field season. No streams containing habitat suitable for roaring brook mayflies were identified in the project area, and therefore no presence/absence sampling was conducted for that species. Northern spring salamanders were found within three streams on site (Ludden Brook, Fletcher Brook, and an unnamed stream, identified on plans as #CASBW8). Ludden Brook is crossed three times by Ludden Lane, and the proposed upgrades to Ludden Lane include replacement of the existing bridge crossings with wider bridges, and lengthening the crossings to accommodate greater volumes of water during periods of high flow. These crossings are addressed in Permit-By-Rule notification #53599 as described in Finding 1(A) above. The applicant stated that the stream base under the bridges will remain natural gravel to minimize any potential impacts to northern spring salamander habitat. No impacts are proposed for Fletcher Brook and the stream identified as #CASBW8. No RTE plant species were identified within the project boundaries.

E. Migratory Birds, Bats, and Raptors. Tetra Tech first conducted avian and bat surveys during the spring migration, summer residency and fall migration periods of 2010. The purposes of the studies were to document avian and bat occurrences in the study area, to provide baseline information on the avian and bat communities around the project area, and to facilitate a project design that minimizes potential avian and bat impacts. Data for the avian survey was collected by radar and by direct observation.

Data for the bat survey was collected using acoustic monitoring. In response to a request from MDIFW, Tetra Tech submitted data from a second year of avian and bat

monitoring, which was collected at Colonel Holman Ridge during the 2012 spring and fall migration periods. Colonel Holman Ridge is located approximately three miles northwest of the proposed project. In comments dated December 6, 2012, MDIFW stated that due to the proximity and similarity of Colonel Holman Ridge to the proposed Canton Mountain project site, radar studies performed at Colonel Holman could serve as a supplemental dataset for the proposed project.

Surveys were targeted to provide data to help assess the project's potential to impact birds and bats; RTE plants and animals; breeding amphibians; and wetlands. The scope of the surveys was based on a combination of methods employed within the wind power industry for pre-construction surveys to address regulatory requirements, with guidance provided by the Department, USFWS, MDIFW and USACOE.

In addition to the avian and bat surveys, Tetra Tech consulted with MDIFW and the Department to collect information on existing inland waterfowl and wading bird habitats (IWWH) in the project vicinity. The applicant stated that the only IWWH in the vicinity is at the southern end of Ludden Brook and west of Ludden Lane, over 250 feet outside the project's work limits, and that it will not be impacted by the project.

The applicant also submitted a supplemental avian assessment (the Kerlinger Report), dated September, 2012, prepared by Dr. Paul Kerlinger, Ph.D., a consulting expert with experience in analyzing impacts on avian and bat populations from industrial wind projects. The Kerlinger Report assesses risks to night migrating birds at the proposed project based on comparison of the data gathered at Canton Mountain in 2010 and at Colonel Holman Ridge in 2012 by Tetra Tech with data gathered at other sites in the eastern United States where similar radar studies have been conducted, the projects constructed, and the results of post-construction monitoring and analysis are available to show actual project impacts. The Kerlinger Report concludes that the overall number of bird fatalities at the proposed project will not likely be great and it is highly improbable that the number will be biologically significant with respect to the viability of any species.

In the 2010 and 2012 avian studies, Tetra Tech used a MERLIN avian radar system to automatically and continuously record bird and bat activity in the vicinity of the proposed project during both the spring and fall migration periods. During the 2010 field seasons, Tetra Tech conducted spring and fall raptor migration surveys, a spring breeding bird survey, spring and fall migrant stopover surveys, and spring and fall bat acoustic surveys. Tetra Tech stated that the 2010 raptor migration studies found low passage rates as compared to surveys taken at Bradbury Mountain (spring 2010) and at Cadillac Mountain (fall 2010), using the same methodology on the same dates and covering a similar number of hours of observation. The avian radar studies found relatively low passage rates as compared to surveys conducted by Tetra Tech at Saddleback Ridge and Spruce Mountain (fall 2010). Tetra Tech stated that bat activity levels and timing of movements documented at the project site were not indicative of large migratory movements of bats during the survey periods.

On May 16, 2012, the Department was notified by Tetra Tech that a data processing error had caused the avian radar survey to be inaccurate as originally presented.

Tetra Tech provided a new analysis dated May 16, 2012, in which the responsible subcontractor, DeTect, Inc., had re-analyzed the data. The new analysis indicated that the passage rates for migratory birds were significantly lower than originally reported. On June 14, 2012, Department and MDIFW staff met with representatives from DeTect, Tetra Tech, and the applicant to discuss the data processing error and the new analysis with the corrected results. Department and MDIFW staff agreed that the corrective methods used were appropriate and accurate.

Based on the avian and bat surveys, Tetra Tech concluded that in both the spring and fall survey periods, the median and mean flight heights were above the rotor swept zone. Tetra Tech concluded that the site does not appear to be in a major avian migratory pathway and does not appear to have an unusual or increased potential for impacts to avian and bat species compared to other mountains in Maine. Post-construction surveys will evaluate the risk to birds and bats and will provide the necessary data to confirm the actual impacts of the project.

Interested persons expressed concerns regarding the proposed project's potential impacts to wildlife, including concerns regarding migratory birds and bats and the adequacy of the applicant's studies. Concerns included the appropriateness of using study results from Colonel Holman Mountain, the project's proximity to the Androscoggin River, and the error in the original survey. One interested person made an unsubstantiated claim that wind turbines kill 200 birds per day.

The applicant's original avian radar survey and bat acoustic survey, and the second avian and bat surveys, were reviewed by the Department and by MDIFW, and after data corrections were applied to the first avian radar survey, were found to be credible and to have been conducted at the appropriate times of year when the maximum numbers of birds and bats would be present.

The Department considered the concerns expressed by interested persons regarding the adequacy of the applicant's avian and bat studies and potential impacts to birds and bats. As described above, the Department was notified of a data problem with the original study, and subsequently met with MDIFW, the applicant, Tetra Tech and DeTect in order to understand the error and the correction. Based upon the discussions at that meeting, the Department determined that the method used to correct the initial study results was appropriate. In order to assess the project's impacts to birds and bats as accurately as possible once the project is operational, the applicant will be required to implement a post-construction mortality monitoring plan, and based on the results of the monitoring, may be required to modify project operations to mitigate impacts. The post-construction monitoring requirements are discussed in detail in subsection F below.

MDIFW reviewed the proposed project and the evidence submitted by the applicant. In comments dated March 20, 2012, MDIFW stated that during pre-application consultation with the applicant, it raised concerns regarding the proximity of the proposed Canton Mountain Wind project to the Androscoggin River corridor. MDIFW stated that large river corridors are known to be utilized by migrating passerines, or

songbirds, often in greater numbers than other landscape features. Upon review of the uncorrected data from the 2010 avian radar survey, MDIFW concluded that the survey data supported its concerns regarding the proposed site, and that the data indicate a

higher rate of passage of passerines below the rotor swept zone than any other project proposed to date within the State of Maine. MDIFW recommended that a second year of radar surveys be conducted to determine whether the initial results represent an isolated event, or whether they are truly representative of nocturnal passerine passage at this site. On December 6, 2012, after reviewing the corrected data from the original 2010 avian radar surveys, the data from the 2012 avian radar surveys, and the Kerlinger Report, MDIFW stated that when considering the total number of migrants detected by the radar surveys, while the percentage of migrants passing through the rotor swept zone at Canton Mountain is relatively high compared to other wind energy projects in Maine, those percentages alone do not warrant project design modifications.

MDIFW also commented on the potential impacts to bats and expressed concern that as a result of White Nose Syndrome, populations of several Maine bat species have declined precipitously, and consequently it is critical to minimize any additional sources of mortality to ensure survival of these species. In its March 20, 2012 comments, MDIFW cited recent studies (Arnett et al. 2009 & 2010, Baerwald et al. 2009) at operating wind facilities that have indicated that increasing the cut-in speed (the wind speed at which the turbine is allowed to begin rotating) for operating turbines from the manufacturer's stated minimum requirement for power generation, typically in the area of 3.0 meters per second (m/s), to 5.0 m/s, has significantly decreased turbine-caused fatalities for bats. MDIFW strongly recommended that this method of operation be adopted to reduce bat mortality, with curtailment of operations from one-half hour before sunset to one-half hour after sunrise between April 20 and October 15 for the life of the project, whenever wind speeds drop below 5.0 m/s. Tetra Tech responded, in a letter dated November 5, 2012, that its review of recent studies indicated that further study is needed to determine the effectiveness of this mitigation technique taking into consideration site specific factors. Tetra Tech further argued, based on its pre-construction studies, that the Canton Mountain site is not likely to present a high risk for bat mortality. The applicant proposed to work with MDIFW to design a post-construction monitoring plan to determine whether bat mortality occurs at this site, and to develop a tiered approach to reduce impacts to bats if the Department finds that the post-construction monitoring results indicate the need for such mitigation. In its December 6, 2012 comments, MDIFW reiterated its recommendation for seasonal nighttime operational curtailment when wind speed is below 5 m/s. In a letter dated January 16, 2013, Tetra Tech stated that increasing cut-in speeds for the entire six month period from April to October at the Canton Mountain Wind project is not supported by site-specific bat surveys and the currently available science, but in the interest of minimizing impacts to bat populations and, in response to MDIFW's request for operational curtailment, the applicant proposed to increase turbine cut-in speeds from 3 m/s to 5 m/s at all turbines from June 1 – September 15, from one half-hour before sunset to one-half hour after sunrise, when ambient air temperatures are greater than 38 degrees Fahrenheit (3° C).

MDIFW submitted revised comments and recommendations on January 22, 2014, in response to the imminent listing of the Northern Long-eared Bat (*myotis septentrionalis*) as an endangered species under the Federal Endangered Species Act, and in light of the listing

of the little brown bat (*Myotis lucifugus*) as a Species of Special Concern under the Maine Endangered Species Act. MDIFW stated that in order to protect endangered bats, "[w]ind turbines [must] operate only at cut-in wind speeds exceeding 5.0 [m/s] each night (from at

least ½ hour before sunset to at least ½ hour after sunrise) during the period April 20 – June 30;
[at speeds exceeding] 6.0 [m/s] each night (from at least ½ hour before sunset to at least ½ hour after sunrise) during the period July 1 – September 30; [and at speeds exceeding] 5.0 [m/s] each night (from at least ½ hour before sunset to at least ½ hour after sunrise) during the period October 1 – October 15. Cut-in speeds [should be] determined based on mean wind speeds measured at hub heights of a turbine over a 10-minute interval. Turbines [should] be feathered during these low wind periods to minimize risks of bat mortality. These [recommended] cut-in speeds are independent of ambient air temperature."

In response to the draft order, one interested person, Mr. Michael Bond, expressed concerns that the impact of the eight proposed turbines on birds and bats of the Canton Mountain area has also been significantly underestimated. Mr. Bond also contended that Canton Mountain is "a major migratory site." No evidence in support of either contention was provided. The Department notes that the applicant provided extensive monitoring data documenting avian and bat presence in the project area, and that MDIFW reviewed all of the data provided and found it credible. The Department considered Mr. Bond's comments along with the other information in the record regarding potential impacts to migratory birds, bats and raptors expected as a result of the proposed project.

Based upon the review comments received from MDIFW, the Department finds that Maine's bat populations are increasingly vulnerable due to the effects of White Nose Syndrome. The Department finds that uncurtailed operation of the project's wind turbines would cause an unreasonable adverse impact to bats. Therefore, the Department finds that it is reasonable to require the above-described operational curtailment to minimize risks to vulnerable bat populations. The Department further finds that curtailment should be applied to each turbine in the project individually, based upon wind conditions registered by the monitoring equipment associated with each individual turbine. In the event that monitoring equipment fails or malfunctions at a particular turbine, curtailment of that turbine should be based upon wind conditions registered at the nearest functioning monitoring equipment. The applicant may request the Department to review the curtailment protocol in the future based on site-specific data it gathers during project operation, specifically based on studies of bat activity during the curtailment periods and bat mortality at the site. The applicant should work with MDIFW to design appropriate studies to demonstrate the effectiveness and appropriateness of the curtailment.

F. Post-construction Monitoring. MDIFW requested that the applicant be required to implement a post-construction bird and bat mortality monitoring plan to ensure that there are no unreasonable adverse impacts on birds and bats. The applicant proposed a post-construction monitoring program that would include mortality searches at the proposed turbines. The applicant proposed to conduct two non-consecutive years of post-construction mortality surveys within the first five years of project operation. Surveys would include carcass searches, searcher efficiency trials and scavenger removal assessments in order to determine avian and bat mortalities. The applicant

The applicant proposed to conduct the surveys between April 1 and November 1. before commencing field work, the applicant proposed to contact MDIFW and USFWS to determine appropriate search intervals, appropriate number of turbines to be surveyed, and to discuss any other logistical constraints related to scavenger removal

and searcher efficiency trials. The first round of surveys would take place within the first year after the project is fully operational. The applicant proposed to review the findings with MDIFW and make adjustments based on MDIFW's recommendations for the second survey, which would most likely occur during year three or four of operation. The post-construction monitoring plan would be reviewed by MDIFW and the USFWS and would need to be approved by the Department prior to operation of any wind turbines, and re-evaluated and approved by the Department prior to the commencement of the second survey.

In its review comments, MDIFW stated that post-construction monitoring protocols for wind projects are rapidly evolving, and recommended that the applicant coordinate the development of survey methods with MDIFW and the Department well in advance of any field work and prior to project operation. The post-construction monitoring protocol for the proposed project would be adaptive as results from operating wind energy developments provide new information on possible ways to minimize impacts on birds and bats.

In its revised comments dated January 22, 2014, MDIFW requested all bat carcasses observed during the course of the bird carcass monitoring to be documented and reported to MDIFW. MDIFW also requested that all post-construction monitoring plans be submitted to MDIFW for review and approval prior to implementation. MDIFW specifically recommended that the following parameters be included as part of the project's post-construction avian mortality monitoring plans:

1. Daily mortality searches should be conducted during peak migration periods (tentatively April 15 - June 1 and August 1 – October 15, subject to slight adjustment in response to new data) during years 1, 2, and 3 of project operation.

2. All turbines at the project should be searched.

3. Radar should be used concurrently with mortality searches in years 1, 2, and 3 of project operations to collect data for use in correlating observed mortality with nightly passage rates. Radar studies should be conducted at times that maximize nightly data collection.

4. Records should include weather and turbine operation variables.

5. Carcass persistence trials should be used to provide corrections for searcher efficiency and scavenger removal rates.

6. A fourth year of mortality monitoring during years 4 - 6 of operations may be required based upon initial findings. Any changes to monitoring techniques in the fourth year should be developed with MDIFW review and approval.

In its review of the applicant's proposal for post-construction monitoring of potential Effects on bats, the Department considered the extent of White Nose Syndrome in

Maine bat populations and MDIFW's recommendations regarding post-construction monitoring. In light of the extreme stress on bat populations due to White Nose Syndrome, the Department finds that the monitoring protocol proposed by MDIFW is appropriate.

All survey results will be evaluated by the Department and by MDIFW staff. In response to the results, the Department may require one or more adaptive management measures in an effort to minimize wildlife mortalities at one or more turbine sites. Based on recent research findings and the results of operation, and based on MDIFW's review of the survey results, if the Department determines that unexpected adverse effects to wildlife are occurring, measures that may be required include, but are not limited to:

(1) Modified Operations. If one or more turbines is found to be causing unreasonable adverse impacts as determined by the Department, the Department may require suspending operation of any such turbine or turbines completely, or suspending operation for periods during which the Department determines the unreasonable impacts are occurring, provided there is a basis to expect that a non-operating turbine will pose less risk than an operating turbine. For example, if impacts were occurring at night during certain periods of fall migration at a particular turbine, the Department may require that the applicant modify or suspend the operation of that turbine during those high-risk nights.

(2) On-Site Habitat Management. The applicant may be required to implement habitat management measures in the vicinity of the turbines to modify wildlife behavior and reduce the risk of impacts. Any such measures may be required by the Department in response to specific concerns or impacts that are related to habitat factors. Examples include, but are not limited to, modifying the type or extent of vegetation cover, forest openings, perching and nesting sites, or cover for prey species.

(3) Habitat Protection. The applicant may be required to provide appropriate compensatory mitigation for wildlife impacts such as the protection or enhancement of wildlife habitat with functions and values similar to those impacted by the project. The Department will determine the need for and appropriateness of any compensatory mitigation.

Prior to the start of operation, the applicant must submit a post-construction monitoring plan to the Department for review and approval. The monitoring plan, including the survey protocol and its implementation method, must be developed in consultation with MDIFW, must address the recommendations of MDIFW enumerated above, and must be inclusive of both migratory and non-migratory movement periods. The Department may require that it be adjusted in the future depending on the type and severity of observed impacts. Additional measures may be considered by the Department based on future research findings.

The Department finds that the proposed project will not have an unreasonable adverse effect on fisheries and wildlife habitat protected under the NRPA, provided that the curtailment protocol recommended by MDIFW and outlined in Finding 7(F) above is implemented, and that the monitoring protocols described above are implemented at

the site and that any required adjustments to project operational guidelines are made in response to Department and MDIFW analysis of the results of monitoring at the site.

G. Streams and associated fisheries. The applicant proposes to upgrade ten existing stream crossings, five perennial and five intermittent, during the upgrade of Ludden Lane and the unnamed logging road, and to install one new crossing of an

intermittent stream during the construction of the proposed access road to the ridgeline. These activities were approved and requirements for them are addressed in PBR #57574 and PBR #57576, as described in Finding 1(A) above.

Interested persons expressed concerns regarding potential impacts to spring salamanders and regarding the width of riparian buffer strips proposed by the applicant to reduce potential impacts to fisheries. In its March 20, 2012 comments, MDIFW expressed concern regarding potential impacts to fisheries, and recommended that the applicant expand its proposed 75-foot riparian buffer to 100 feet along streams known to support fish wherever practicable. The Department considered the concerns expressed by interested persons and MDIFW regarding the width of buffer strips and potential impacts to northern spring salamanders. In light of these concerns, the Department requested that the applicant utilize a 100-foot riparian buffer to protect fisheries wherever practicable. The applicant agreed to this request.

Based on the Department's review of the information submitted in the application, comments received from interested persons, and MDIFW's review comments, the Department finds that the proposed project will not unreasonably harm fisheries habitats, provided that the applicant utilizes the 100-foot riparian buffer recommended by MDIFW wherever practicable, and the proposed 75-foot riparian buffer in other areas as discussed above.

8. HISTORIC SITES AND UNUSUAL NATURAL AREAS:

Historic Sites: On behalf of the applicant, Tetra Tech conducted a Phase 0 Archaeological Reconnaissance Survey and Phase 1 Prehistoric Archaeological Investigation with shovel tests and a photographic record. Tetra Tech also conducted a reconnaissance-level historical architecture survey.

A. Surveys. In Section 8 of the application, the applicant submitted the results of the Phase 0 Archaeological Reconnaissance Survey in a report entitled "Phase 0 Archaeological Reconnaissance Survey Report, Canton Mountain Wind Project, Towns of Dixfield and Canton, Oxford County, Maine," prepared by Tetra Tech dated October, 2011. Tetra Tech conducted documentary research at the Maine Historic Preservation Commission (MHPC), and conducted field surveys of the project site. There are no previously recorded prehistoric archaeological sites or surveys within a two mile radius around the project study area, nor are there any prehistoric sites eligible for nomination or listed in the State or National Register

of Historic Places located within the area potentially affected by the project. No prehistoric or historic artifacts or possible indications of prehistoric features were observed during the Phase 0 pedestrian archaeological survey for the project. Based)

identified within the project area. Access to the other two ASAs for Phase 1B Investigations was denied by the owner of the property on which they are located. No historic period artifacts or any indications of prehistoric or historic cultural features were recovered from any of the survey work.

B. Historic Architecture Survey. A historic architecture reconnaissance survey was conducted in accordance with the requirements of Section 106 of the

National Historic Preservation Act of 1966. The survey report and the analysis of the historic architecture was prepared by Tetra Tech, and included in the application as Attachment 8-2.

This survey was conducted for a five mile radius of the proposed wind turbines, and up to eight miles from the turbines in cases of properties listed on the National Register with potential view of the project. The survey addressed potential impacts to a total of 605 potentially eligible, eligible, and listed properties identified under Section 106 criteria. The survey found the proposed project would have no adverse effect on any listed historic properties, and has the potential to adversely affect one property which is potentially eligible for listing on the National Register. The survey found no historic properties that would be directly impacted by the proposed project. The Tetra Tech survey identified six properties in the eight mile visual impact survey area that are listed in the National Register of Historic Places: the Holmes-Crafts Homestead, the Goodspeed Memorial Library, the Bass Boarding House, the North Jay Grange Store, the Jay-Niles Memorial Library, and the Nelson Family Farm. Based on the results of the visual impact assessment conducted by TJD&A and discussed in Finding 6 above, Tetra Tech concluded that the proposed project would have no unreasonable adverse impact on these six properties.

An interested person contacted the Department with inquiries regarding the possible impact of the project on the Canton Mountain Cemetery, which was claimed to be the burial place of several of the early settlers of Canton. Research by Department staff found no evidence that the Canton Mountain Cemetery is located within the project work area, and the applicant's archaeological survey found no evidence of any such old burial grounds within either the transmission corridor or the project work area. The interested person also raised concerns regarding the potential for the improvements to Ludden Lane to affect an area of the Dunn Cemetery shown on old maps. The applicant submitted a report from a certified archaeologist indicating that after surveying the area in question, it is unlikely that the area had been used as a cemetery. The MHPC reviewed the report and recommended that the project be allowed to proceed as planned with the understanding that burials could potentially be present east of Ludden Lane in the area of the Dunn Cemetery. MHPC recommended that if any indications of burials are found during construction, construction activities in the vicinity should cease and town officials and MHPC should be notified so that a course of action can be determined. The applicant stated that it does not object to this recommendation in a letter dated August 14, 2012.

In response to the draft order, one interested person, Ms. Elaine Robichaud of the Maliseet Nation, expressed concerns that as the spiritual elder of the Nation she had not been consulted regarding potential impacts in the area of the Dunn Cemetery, and that

she requested an archaeological study of the area prior to the start of construction. The Department considered these concerns, and notes that the report described above addresses the area in question, and further notes that potential impacts to historical or archaeological aspects of sites related to historic or prehistoric occupation by Native Americans are regulated by the Army Corps of Engineers and the Bureau of Indian Affairs, and are not subject to review or approval by the Department.

The MHPC reviewed the studies submitted by the applicant. In a letter dated November 16, 2010, MHPC commented that, based on the definitions in the Site Law and the Wind Energy Act, there are no historic sites (archaeological or architectural) in the project area, and therefore the proposed project will have no direct or scenic impact on such resources. Based on the Department's review of the survey information submitted in the application and MHPC's review comments, the Department finds that the proposed development will not have an adverse effect on the preservation of any historic sites either on or near the project site provided that the applicant's engineer or the third-party inspector discussed in Finding 11 oversees all excavations in the vicinity of the Dunn Cemetery to ensure that no burial sites are disturbed, and that operations are halted if burials are discovered. If burials are discovered, construction activities in the vicinity must cease and Town officials, MHPC and the Department must be notified. The applicant must work with MHPC and Town officials to determine how to proceed. The Department must be notified of any resulting changes in project design and a permit amendment must be obtained if the proposed changes require it.

Unusual Natural Areas: To determine whether any unusual natural areas, including areas with rare, threatened, and endangered (RTE) species occur within the scope of the project, the applicant consulted with the Maine Natural Areas Program. After reviewing its records, the Maine Natural Areas Program stated that there are no known rare or unique botanical features in the vicinity of the project site. The applicant's affiliate, Saddleback Ridge Wind, conducted a field survey along the shared portion of the transmission corridor in 2010 in an attempt to identify rare and exemplary biological features in the project vicinity. The field survey, and the records search by the Maine Natural Areas Program, found no rare plants or unique natural communities occurring within the electric transmission line corridor.

Based on its review of the applicant's rare community's survey and the comments from the Maine Natural Areas Program, the Department finds that the proposed development will not have an adverse effect on any unusual natural areas either on or near the development site.

9. BUFFER STRIPS:

The applicant proposes to maintain vegetated buffers for stormwater management and waterbody protection. Buffers for the proposed project include three different types of buffers: no-disturbance buffers around roads and turbines, a transmission corridor buffer, and waterbody buffers at streams and wetland crossings. The vegetation cutting practices which have been proposed to preserve and maintain buffers include areas of no cutting, limited and selective clearing, and mechanized clearing combined with selective use of herbicides. These proposed vegetation cutting practices are as follows:

A. Access Road, Crane Path, and Turbine Buffers. The application stated that for wind turbine projects a 250-foot to 300-foot radius around each turbine is typically cleared, resulting in a circular impact, however for this project the applicant has proposed a design which minimizes the clearing, resulting in smaller, irregularly-shaped openings. The applicant states that it has maximized the use of relatively level terrain on the ridge to minimize cuts and fill slope extensions on the road shoulders. In addition, with the exception of a 10-foot

area surrounding the turbine foundations, all workspace in the vicinity of the towers will be loamed, seeded and re-vegetated following construction.

Access to the project will be via Ludden Lane, an existing 14- to 18-foot-wide, three mile long gravel road that will be widened to 16 to 20 feet total width to accommodate equipment during construction. A new 3,425-foot-long section of access road will extend from the end of Ludden Lane to the ridgeline, and will be 24 feet wide during project construction. The 7,175-foot-long ridgeline road will be 32 feet wide during project construction. After construction, all roads will be reduced to 12 feet in width, or in the case of Ludden Lane, the greater of 12 feet or the original road width, with periodic turnouts throughout the entire access road system. The reduction in road width will be accomplished by actively revegetating the downslope section of new roads, or the widened area of the road in the case of existing roads. The roads will remain at the reduced width throughout the operating life of the project, unless they need to be widened to allow a crane to be brought to the site for maintenance purposes. Any areas of new disturbance or damaged revegetated areas due to crane access after construction is complete will be restored after the crane is removed from the site.

The new access road connecting the logging road to the ridgeline road will have a 12-foot wide vegetated meadow buffer on the downslope side, with a minimum 35-foot-wide limited-disturbance forested buffer further downslope. The ridgeline road will have an approximately 20-foot wide vegetated meadow buffer on the downslope side of the road, and will also have a 35-foot wide limited disturbance forested buffer further downslope. The buffers are shown on the construction plans as amended, revision date June 13, 2012.

B. Transmission Line Buffers. The area within the electrical transmission line corridor will require vegetative cutting to meet line safety and reliability goals. The applicant proposes to employ a Vegetation Management Plan (VMP), in accordance with ISO-New England safety standards, to control the growth of vegetation beneath the transmission line. Transmission line corridor construction and maintenance procedures will provide for the retention of low ground cover to the greatest extent practicable during construction, and restoration and stabilization of areas affected by construction. Maintenance activities will be conducted with the intention of promoting long-term growth of low vegetation as specified in the Department's *Minimum Performance Standards for Transmission Line Corridors*. Within the corridor, vegetation capable of growing to a height sufficient to threaten the wires will be removed, and low-growing vegetation will be retained in an ongoing active management program.

C. Stream Buffers. The applicant proposed to maintain a 75-foot riparian buffer adjacent to Department-regulated rivers, streams and brooks with the exception of crossings and existing roads. The applicant stated that the project was designed to maintain a 100-foot setback from waterbodies for pole placement. The use of herbicides would be prohibited within the proposed 75-foot riparian buffers and within 25 feet of any wetlands with water visible at the surface, and the applicant proposed to prominently mark these areas in the field with signs clearly prohibiting the use of herbicides. Additionally, no refueling

or maintenance of equipment would be performed within the 75-foot riparian buffer areas or within 25 feet of any wetlands with water visible at the surface. As discussed in Finding 7 above, the applicant has agreed to utilize a 100-foot riparian buffer to protect fisheries wherever practicable.

D. Wetlands. The applicant proposes to minimize clearing of vegetation in wetland areas and within any amphibian breeding areas which do not meet the requirements to be considered Significant Vernal Pools but which may still support the breeding activities of some amphibians.

E. Vegetation Maintenance Plan. The applicant submitted a VMP (Attachment 10-1 of the application) entitled "Canton Mountain Wind Project Vegetation Management Plan." The plan summarizes vegetation management methods and procedures that will be utilized by the applicant for the transmission line corridor, and describes maintenance requirements and restrictions associated with vernal pools, wetlands, stream crossings and riparian buffers.

F. Stormwater Management Buffers. Buffers for stormwater management are discussed in Finding 11 below.

The Department finds that the applicant has made adequate provision for buffer strips provided that the applicant complies with the post-construction VMP submitted in the application, and that all visual screening buffers, forested stormwater treatment buffers, and stream buffers are permanently marked on the ground pursuant to Chapter 500 Stormwater Management rules prior to the start of construction, provided that herbicides are not used within any waterbody buffers or within 25 feet of any wetlands with water visible at the surface, and provided that no refueling or maintenance of equipment is performed within waterbody buffer areas. Further, prior to the start of operation, the applicant must record buffer deed restrictions with the Registry of Deeds for the subject parcels. The deed restrictions must be consistent with the Chapter 500 Stormwater Management Rules and have attached a plot plan for the parcels, drawn to scale, that specifies the location of all buffers on the parcels. The applicant must submit a copy of the recorded deed restrictions, including the plot plans, to the Department within 90 days of the recording.

10. SOILS:

The applicant submitted Class B High Intensity and Class L Linear Soil Surveys for the proposed project site, prepared by Albert Frick Associates, Inc., and dated January 25, 2011. These reports are contained in Section 11 of the application and conclude that

the soils are generally appropriate for the proposed construction activities. The reports were reviewed by staff from the Division of Environmental Assessment (DEA) of the Department. A modified Class D Soil Survey was previously done for the transmission corridor approved for the Saddleback Mountain Wind Project, a portion of which will be shared by the Canton Mountain Wind Project. That modified Class D survey was included as part of this application.

The Department finds that the applicant has submitted sufficient evidence that the soils on the project site present no limitations to the proposed project that cannot be overcome through standard engineering practices.

11. STORMWATER MANAGEMENT:

The construction of the proposed project will disturb a total of 33.4 acres of land. The applicant proposes that at the completion of construction, it will re-vegetate all but 5.3 acres of developed area, of which 4.6 acres will be impervious area. The Site Law requires that a proposed development must meet the standards for stormwater management found in 38 M.R.S. §420-D and the standard for erosion and sedimentation control in §420-C. To demonstrate that the proposed project meets the requirements of §§420-D and 420-C and the standards set forth in Chapter 500 of the Department Rules, the applicant submitted a stormwater management plan based on the Basic, General, and Flooding Standards contained in Chapter 500, and an erosion and sedimentation control plan. The proposed project is not located in the watershed of a lake most at risk or an urban impaired stream. Stormwater quality treatment will be achieved with various Best Management Practices (BMPs) and buffers as described in the application. The applicant's post-development drainage analysis shows no increase in peak flow rates and no increase in runoff volume for a 25-year storm event. The applicant proposes to achieve stormwater treatment and flooding mitigation with numerous buffers that will provide treatment and mitigation through absorption, disconnected impervious area, and lengthening of flow paths.

The applicant proposes to utilize the Department's Third-Party Inspection Program to monitor stormwater management practices and erosion control measures on site during construction.

A. Basic Standard:

(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 of the Department's rules 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 the Department's Division of Watershed Management (DWM). DWM commented that the applicant's erosion control plan is an acceptable plan and a good starting point for providing erosion control protection during construction. However, based on site and weather conditions during construction, additional erosion and sedimentation control measures may be necessary. Regular inspection by a professional engineer will also be necessary to assure proper implementation and maintenance of the proposed erosion control measures, and the identification of any additional measures that may be needed.

Given the level of disturbance, steep slopes, and close proximity to water resources, 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. The inspecting engineer must, at a minimum, make weekly visits to the project site while the project is under construction, report on the erosion and sedimentation controls and any problems encountered

during the inspections, and recommend any corrective measures that must be taken. During construction, any area of instability or erosion must be corrected immediately and maintained until the site is completely stabilized or vegetation is established.

Erosion control details must be included on the final construction plans and the erosion control narrative must be included in the project specifications to be provided to the construction contractor. Prior to 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.

(2) Inspection and Maintenance: The applicant submitted a maintenance plan that addresses both short and long-term maintenance requirements. The maintenance plan is based on the standards contained in Appendix B of Chapter 500. This plan was reviewed and found acceptable by DWM. The applicant will be responsible for the maintenance of the stormwater management system.

(3) Housekeeping: 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 the maintenance plan, the Department finds that the proposed project meets the Basic Standards contained in Chapter 500(4)(A), provided that the applicant conducts a pre-construction meeting and retains the third-party inspector approved by the Department to oversee project construction as described above.

B. General Standards:

The applicant's stormwater management plan proposes general treatment measures designed 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. Mitigation for the non-linear portion of the project (the O&M building) is proposed to be achieved by using an underdrained soil filter design that DWM has reviewed and approved in accordance with Chapter 500

DWM commented that the applicant’s erosion control plan is an acceptable
utilize a natural forested buffer in combination with erosion control mix berms and an additional meadow buffer to be constructed on the re-vegetated portion of the crane path and access road. The proposed access roads meet the definition of "a linear portion of a project" in Chapter 500 and the applicant is proposing to provide stormwater treatment for over 77% of the volume from the impervious area of the linear portions of this project. The applicant is proposing to provide treatment for 100% of the non-linear impervious areas. The Department finds that both the linear portion of the project and the non-linear portion of the project will meet the standards of Chapter 500 §(4)(B)(2) (b). Tor the linear portions of the project, the applicant proposes to

The forested, limited disturbance stormwater buffers will be protected from alteration through the execution of a Declaration of Restrictions for each leased property. The applicant has provided a sample Declaration of Deed Restrictions using the language contained in Appendix G of Chapter 500. Each Declaration of Restrictions must have attached to it a plot plan, drawn to scale, that specifies the location of the buffers on the property affected. The Declarations of Restrictions must be recorded prior to the start of operation, and the applicant must submit copies of the recorded deed restrictions, including the plot plans, to the Department within 90 days of their recording.

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

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 Standards. The applicant must retain the services of a professional engineer to inspect the construction and stabilization of the road ditch turnouts, underdrained soil filter, and level spreaders to be built on the site. Inspections must at a minimum consist of weekly visits to the site to inspect each turnout from initial ground disturbance to final stabilization. If necessary, the inspecting engineer will interpret the turnouts' locations and construction plans for the contractor. The inspecting engineer must notify the Department in writing within 14 days of the completion of construction and stabilization of the turnouts and level spreaders.

Accompanying the engineer's notification must be a log of the engineer's inspections giving the date of each inspection, the time of each inspection and the items inspected on each visit.

Based on the stormwater system's design the Department finds that the applicant has made adequate provision to ensure that the proposed project will meet the General Standards contained in Chapter 500(4)(B), provided that the applicant adheres to the required protocol for inspections of the ditch turnouts, underdrained soil filter and level spreaders, the buffers are permanently marked on the ground, and copies of the recorded deed restrictions are submitted to the Department as outlined above.

C. Flooding Standard:

For the majority of the site, the applicant is not proposing a formal stormwater management system to detain stormwater from 24-hour storms of 2-, 10-, and 25-year frequency. Instead, since the project site is located adjacent to the Androscoggin River, the applicant requested a waiver from the Flooding Standard pursuant to Department Rules, Chapter 500(4)(E)(2)(b). The applicant states that stormwater will be discharged from developed areas as sheet flow, similar to existing conditions, and that stormwater calculations indicate there will be an insignificant increase in peak flow rates or runoff volume from the Project.

The runoff from the O&M building pad will be treated by a vegetated underdrained soil filter system where the runoff is captured and retained, and then passed through a filter bed engineered from specific soil media, including silty sand and organic material. After passing through the filter, the runoff will be collected via a perforated underdrain pipe and discharged downslope. A plunge pool will be constructed if necessary to prevent channelization of the outflow.

One interested person expressed concerns regarding potential impacts to a 100-year floodplain in the area of Ludden Lane. The applicant stated that the project design balances cuts and fills in the floodplain area to ensure no loss of flood storage capacity. The Department considered the concerns expressed by the interested person and the applicant's plans regarding flooding potential and determined that the applicant's design considerations are adequate to prevent increased risk of flooding in the floodplain area near Ludden Lane.

The Department's DWM reviewed the analysis of the watersheds involved in the proposed project for potential flooding impacts. The applicant's model shows the project's impact on the weighted curve number of each watershed and the subsequent impact to peak flows for these watersheds for the 25-year, 24-hour storm. The evidence shows that the weighted curve number for each subwatershed will exhibit a negligible change in response to project construction and operation. This change is well within the model tolerances and does not take into consideration the redistribution of flows in the buffer areas that will lengthen the time of concentration for all the watersheds. DWM's analysis is that the model demonstrates that the project meets the

Flooding Standard requirement of maintaining the pre-construction peak flows for the 2, 10 and 25 year, 24-hour storm at the property boundary.

The following minor adjustments may be made during construction without advance notice to the Department provided they do not impact protected natural resources and that they 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 other than wind turbines, or a reduction in structure size); relocation of a structure within the identified clearing limits; changes to 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 up or down as long as the change in elevation does not result in new 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 without revision or modification of the permit, but must be reflected in the final as-built drawings: minor changes which do not increase overall project impacts or project footprint and which do not impact any protected natural resources so long as any new areas of impact have been surveyed for protected natural resources and so long as the minor changes 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 lateral shift of up to 100 feet in a turbine clearing area; and adjustments to culvert locations based on field topography. The applicant must submit final as-built plans for the project to the Department within 90 days of the commencement of project operations.

Based on the system's design and DWM's review, the Department finds that the applicant has made adequate provision to ensure that the proposed project meets the Flooding Standard contained in Chapter 500(4)(E) for channel limits and runoff areas, and peak flow from the project site.

The Department further finds 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.

12. GROUNDWATER:

Pursuant to the Site Law an applicant must demonstrate that the proposed development will not pose an unreasonable risk that a discharge to a significant groundwater aquifer will occur. The NRPA requires a determination that the proposed activity will not violate any state water quality law, including those governing the classification of the state's waters. The Maine Geological Survey data indicates that the nearest significant aquifer to the project is located along the Androscoggin River approximately one

quarter mile to the south of the proposed O&M building and approximately 8,700 feet from the nearest turbine. There are no mapped significant sand and gravel aquifers on the project site. A single drilled well is proposed to serve domestic water needs at the project's O&M building.

The applicant submitted a Spill Prevention, Control, and Countermeasures (SPCC) plan detailing steps to be taken to prevent groundwater contamination during construction. The applicant stated that the potential sources of groundwater contamination during construction will be fuel and hydraulic and lubricating oils used in the operation of vehicles and construction equipment. The plan includes general operational requirements, storage and handling requirements, and training requirements to prevent spilling of oil, hazardous materials or waste. The plan also sets out spill reporting and cleanup requirements should a spill occur. No herbicides will be used, stored, mixed, or transferred between containers within the stream buffer areas, and no fuel storage or refueling of equipment will be allowed in these buffers. Prior to the start of any construction, site preparation, or maintenance, the applicant must flag the boundaries of any such setbacks in the field. All staff must receive suitable training to recognize and comply with these setback markers and requirements. Prior to any application of herbicides or other use of chemicals or petroleum products during maintenance of the transmission line, the transmission line right-of-way must be checked for any new construction that would require establishment of setbacks for herbicides or other use of chemicals or petroleum products, and any such setback must be clearly flagged in the field.

DEA reviewed the applicant's proposals for protecting groundwater and recommended that prior to operation of the proposed facility the applicant should be required to submit an SPCC plan addressing storage and handling of petroleum products and other potential contaminants during operation of the facility. In consideration of DEA's recommendation, prior to operation of the facility the applicant must submit an operational SPCC plan to the Department for review and approval.

Based on the distance between the project and the nearest aquifer, the absence of mapped significant sand and gravel aquifers on the site, and the applicant's SPCC Plan for construction, the Department finds that the proposed project will not have an unreasonable adverse effect on ground water quality provided that the applicant submits an operational SPCC plan to the Department for review and approval prior to operation.

13. WATER SUPPLY:

The Site Law requires that an applicant demonstrate that it has made adequate provision for the water supply needed for a proposed project. This proposed project will not require a water supply for the operation of the wind turbines or the electrical equipment. The only anticipated demand for water will be at the O&M building. The O&M building will house a maximum of six staff people and will provide bathroom facilities and potable water for the staff. The applicant stated that 90 gallons per day will be required to provide for these purposes. An individual well will be drilled on-site to supply potable water to the O&M building.

The applicant also stated that non-potable water will be needed for dust abatement during project construction. The applicant stated that this water will not be withdrawn from groundwater sources or from rivers or streams. The applicant proposes to use a tanker truck to bring water to the site from Wilson Pond in Wilton. The Department finds that the proposed amount of withdrawal will not have any impact on lake water levels.

The applicant's proposal to supply water to the project has been reviewed by the Department's DEA, which had no objection to the applicant's proposals provided the final location of the water supply well is shown on as-built drawings.

Based on the evidence submitted regarding water use, and the proposed sources of water for the project, the Department finds that the applicant has made adequate

provision for securing and maintaining a sufficient and healthful water supply provided that the final location of the water supply well is shown on as-built drawings submitted to the Department within 60 days of the completion of its construction.

14. WASTEWATER DISPOSAL:

The Site Law requires that an applicant demonstrate that it has made adequate provision for sewerage facilities. The applicant stated that the only potential generation of wastewater would be from the domestic water usage at the proposed O&M building. The applicant submitted a design for a subsurface wastewater disposal system adequate to accommodate the wastewater of up to six employees. This equates to approximately 90 gallons of wastewater per day. There will be no commercial or industrial wastewater generation associated with the proposed project.

The applicant submitted a subsurface wastewater disposal system design (HHE-200 form) dated December 29, 2010 and updated on January 30, 2014, prepared by Albert Frick, a licensed professional site evaluator. The applicant also submitted the soil survey map and report discussed in Finding 10. Prior to system installation, the local plumbing inspector must certify that the design of the wastewater disposal system complies with the Maine Subsurface Wastewater Disposal Rules. The applicant stated that the wastewater disposal system will be built on suitable soils adjacent to the O&M building, and a minimum of 100 feet from the water supply well.

The applicant's proposal for wastewater disposal was reviewed by DEA, which had no objection to the applicant's proposals provided the final location of the wastewater disposal system is shown on as-built drawings.

Based on the information submitted and DEA's review, the Department finds that the proposed wastewater disposal system will be built on suitable soil types provided that the local plumbing inspector approves the design and installation, and that the final location of the wastewater disposal system is shown on as-built drawings submitted to the Department within 60 days of the completion of its construction.

15. SOLID WASTE:

The Site Law requires an applicant to demonstrate that it has made adequate provision for the disposal of the solid waste generated by a proposed development. The applicant stated that the development of the site and construction of the turbines will generate approximately 200 cubic yards of construction debris, packaging materials, and associated wastes. The applicant stated that it plans to contract with Archie's Inc., which will haul the construction and demolition debris to the Crossroads Landfill in Norridgewock, Maine.

All marketable trees located in the footprint of the proposed turbine pads and roads will be harvested and sold for timber or pulp. Non-marketable wood waste will be processed and used as mulch on the site. Stumps will remain in place wherever possible. Any stumps that are removed will be shredded and used on site for erosion control mulch.

Solid waste produced during operation of the proposed project is expected to be limited to general office waste from the O&M building. The applicant stated that it will contract with Archie's Inc., which will haul the office waste to the Crossroads Landfill. The applicant submitted a letter from Archie's Inc. which stated that Archie's Inc. is capable of providing the solid waste disposal services necessary at the proposed project.

The applicant estimates approximately 114 to 193 gallons of waste oil per turbine will be generated when the turbine oil is changed every three to five years. The applicant proposes that Archie's Inc. will transport the waste oil either back to its facility in Mexico, Maine for use as fuel in its waste oil furnace, or to another facility with a waste oil furnace.

The Department's Bureau of Remediation and Waste Management (BRWM) reviewed the applicant's proposals for solid waste disposal, and stated that the Crossroads Landfill is in substantial compliance with the Department's Solid Waste Management Regulations of the State of Maine, and that Archie's Inc. is licensed to transport the solid waste generated at the site over the roads of Maine. BRWM stated that the applicant's proposals for solid waste disposal and for waste oil disposal are adequate.

Based on the above information and BRWM's review, the Department finds that the applicant has made adequate provision for solid waste disposal.

16. FLOODING:

The applicant does not propose to construct any structure within a flood zone. Approximately 934 linear feet of the existing Ludden Lane is located within the FEMA-mapped 100-year floodplain associated with Ludden Brook. The proposed widening of Ludden Lane includes this section. As discussed in Finding 11, the Department has reviewed the applicant's plans for stormwater management and found that the project is unlikely to have any adverse impact on downstream flooding or to cause any loss in the floodwater storage capacity of the 100-year floodplain. The

Department finds that the proposed project is unlikely to cause or increase flooding or cause an unreasonable flood hazard to any structure.

17. WETLAND IMPACTS:

Tetra Tech conducted surveys to locate wetland and waterbody resources on the Canton Mountain Wind Project site and summarized the results of that work in Section 7 of the Site Law application and Section 6 of the NRPA application. Field surveys were conducted in survey corridors encompassing the project area including: the proposed access road, the crane road located along the ridgeline, the turbine pads and the area around the pads, the unshared portion of the electrical transmission corridor, the laydown area, and the O&M building. The results of these surveys are summarized as follows:

- Seventy-five wetlands were identified within the field survey area. Of these wetlands, 31 were classified as palustrine emergent wetlands, 33 were classified as palustrine forested wetlands, and 11 were classified as palustrine scrub shrub wetlands;

- Twenty-two streams were identified in the field survey; and

- Two potentially significant vernal pools were identified in the field survey, as discussed in Finding 7(A).

The applicant proposes to permanently fill 3,039 square feet of forested freshwater wetlands for the construction of the access road and the crane road, and to temporarily alter an additional 4,286 square feet of freshwater wetlands by placement of timber mats to support construction equipment or where temporary clearing of vegetation is necessary for construction activities during construction of the access road and the transmission line. All equipment involved with the construction of the transmission line will work on construction mats when in wetlands. The applicant also proposes to convert 2,258 square feet of forested wetlands to scrub shrub wetlands for construction of the roadside transmission line. The transmission line right-of-way will be maintained in accordance with the applicant's Vegetation Management Plan (VMP) which is included in Section 8 of the NRPA application as attachment 8-1.

The applicant proposes to cross eleven streams during the construction of the proposed access road and upgrade of the existing Ludden Lane and logging roads. Culvert and bridge replacements or installations will be accomplished by working from existing roadways.

Chapter 310 of the Department's rules interprets and elaborates on the NRPA criteria pertaining to wetlands and waterbodies, such as streams. The rules guide the Department in its determination of whether a project's impacts would be unreasonable. A proposed project would generally be found to be unreasonable if it would cause a loss of wetland area, functions and values and there is a practicable alternative to the project that would be less damaging to the environment. Each application for a wetland or waterbody alteration permit must provide an analysis of alternatives in order to demonstrate that a practicable alternative with less impact does not exist.

A. Avoidance. Tetra Tech prepared an alternatives analysis for the proposed project which was submitted as section 7 of the NRPA application; an impact avoidance and minimization analysis which was submitted as section 8; and a summary

of resource impacts which was submitted as section 9. These analyses address multiple factors that were considered in the selection of the site, including quality of the wind resource; logistics of delivering power to market; compatibility with existing land uses; and environmental impacts. The application stated that efforts to avoid wetland impacts in the planning of this project included utilizing existing roads where possible; and siting the turbine pads, transmission line corridor, and other project facilities to avoid and minimize resource impacts. Overall, the applicant proposes to permanently fill 3,039 square feet of freshwater wetlands during the construction of the entire project. There is one new permanent stream crossing proposed. The access road will cross 11 streams, with 10 upgraded culverts or bridges, and one new culvert. Approximately 2,258 square feet of forested freshwater wetlands will be permanently converted to scrub shrub wetlands with the installation and maintenance of the electrical transmission line.

B. Minimal Alteration. The amount of wetland and waterbodies to be altered must be kept to the minimum amount necessary for meeting the overall purpose of the project. In the areas where wetland impacts could not be avoided, the applicant stated that it had minimized wetland impacts by using various techniques, including narrowing road shoulders where possible, relocating roads and turbines, and relocating transmission poles. The applicant will further minimize wetland alterations by implementing the VMP discussed in Finding 9(B) and (E).

C. Compensation. In accordance with Chapter 310 5(C)(6)(a)(ii), compensation is not required for impacts associated with the proposed project, because the project will not permanently alter more than 15,000 square feet of freshwater wetlands.

Based on the Department's review of the wetlands and waterbodies surveys and the proposed layout of the project as shown on plans submitted by the applicant, the Department finds that the applicant has avoided and minimized wetland and waterbody 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 the applicant implements the proposed VMP.

18. AIR QUALITY:

Pursuant to the Site Law, an applicant must demonstrate that the proposed development would not adversely affect air quality. Emissions from construction activities will include exhaust from construction vehicles and dust from the use of a rock crusher and general construction activities. The applicant stated that the project is unlikely to have an adverse effect on air quality, because wind turbines produce electricity without producing air emissions.

The site will be monitored by the applicant for dust control during construction. Dust is not anticipated to be a problem, as most of the project roads and pads will be covered with crushed stone. Potential sources of dust will be further minimized by covering areas of exposed soil or sand with stump and brush grindings. Calcium chloride or

water will be used as needed to address any dust problems that may become a nuisance to neighboring properties or where safety and visibility are compromised. Treatment will be on an as-needed basis as ordered by the resident engineer or the third-party inspector.

The applicant proposes using a rock crusher on the project site during the construction of the proposed project. The applicant states that the crusher will be licensed by the Department's Bureau of Air Quality and will be operated in accordance with that license.

The Department finds that no significant source of air emissions has been identified with the exception of the rock crusher and dust emissions as described above, and the proposals for limiting emissions are adequate. If a rock crusher is utilized on site, the applicant must ensure that the crusher is licensed by the Department's Bureau of Air Quality before it is used, and that it will be operated in accordance with that license.

19. ODORS:

The applicant stated that the clearing and construction phase of the proposed project will not create significant odors, other than from equipment exhaust.

The Department finds that the proposed project will not be a significant source of odors.

20. BLASTING:

Pursuant to the Site Law, any blasting for a proposed project must be conducted in compliance with 38 M.R.S. § 490-Z §14. The applicant indicated that blasting is likely to be necessary in the area of the turbines and possibly in some places along the ridge road. Should blasting be necessary, a blasting plan will be developed and a pre-blast survey conducted in accordance with the Department’s Performance Standards for Quarries, 38 M.R.S. § 490-Z(14). The applicant proposes to balance cuts and fills on the project site and reuse as much material as possible.

Prior to any blasting on the project site, the applicant will be required to submit the final plans for pre-blast surveys of structures to the Department for review and approval.

The Department finds that the applicant has made adequate provision for effective control of any blasting sites provided that, prior to any blasting on the project site, the applicant submits a final blasting plan, as well as plans for a pre-blast survey which includes all structures within 2,000 feet of any blast location, to the Department for review and approval.

21. WATER VAPOR:

The proposed project does not involve any significant sources of water vapor emissions.

22. ACCESS TO SUNLIGHT:

Chapter 375(13) recognizes that some existing structures utilize active or passive solar energy systems for purposes such as heating air or water, and that in those instances, it may be an unreasonable effect on existing uses to deny access to direct sunlight.

The applicant stated that no part of the proposed project will block access to direct sunlight for structures utilizing solar energy through active or passive systems.

Based on the applicant's submittal, the Department finds that the proposed project will Not have an unreasonable effect on any existing solar energy uses.

23. 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. Wind direction and the spatial relationships between a wind turbine and receptor are key factors related to shadow flicker duration. At separations of greater than 1,000 feet between wind turbines and receptors, shadow flicker usually occurs where 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), 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 as Section 26 of the application. This analysis was subsequently updated to include the Siemens turbine alternative proposed for the project. The applicant utilized WindPRO, a wind modeling software program, to model expected shadow flicker effects on adjacent properties from the eight proposed turbine locations. The applicant used historic sunshine data as listed by the www.city-data.com website for Livermore Falls, Maine, and wind data collected by the on-site meteorological tower over an approximately 16-month period. The applicant assumed the worst case scenario, that all receptors have a direct in-line view of the incoming shadow flicker sunlight. Further, the analysis does not take vegetative screening into account between a turbine and a receptor.

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. The applicant's shadow flicker analysis identified 13 receptors within approximately 6,000 feet of the CMW turbines. Table 26-1, in Section 26 of the application, gives the distances between the turbines and nearby receptors. The residential structure identified in the applicant's study as the closest to a turbine is approximately 2,040 feet from the nearest turbine. The furthest receptor studied was approximately 5,986 feet from the nearest turbine.

The applicant submitted an easement option on one adjacent parcel. This property is undeveloped and actively managed as a timber lot. The easement removes the landowner's right to object to shadows or shadow flicker from the proposed wind project onto the parcel.

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. The applicant's analysis of thirteen potential shadow flicker receptors, using historical and on site modeling assumptions, indicated potential exposures between zero and 23 hours, 18 minutes per year. The applicant stated that when vegetation is taken into consideration, actual impacts are expected to be less.

The Department finds that 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 showing a maximum exposure of 23 hours, 18 minutes per year, the Department finds that the proposed project will not unreasonably cause shadow flicker to occur over adjacent properties.

24. PUBLIC SAFETY:

The Site Law requires that an applicant demonstrate that the proposed project will be constructed with setbacks adequate to protect public safety. To address this issue, the applicant submitted evidence concerning the stability of the two turbines proposed for use. The proposed project will use either GE 2.85 MW turbines or Siemens 3.0 MW turbines. The proposed GE turbines have been certified by TUV NORD, a wind power product certification authority, to withstand Class IIB wind gusts, as defined by the International Electrotechnical Commission (IEC) Standard 61400-1 "Wind Turbine Generator Systems-Part 1: Safety Requirements" (Standard). Class II under the Standard considers an annual extreme wind speed at hub height of 44.6 meters per second (m/s) (99 miles per hour) and 50-year wind events of 59.5 m/s (133 mph). The applicant submitted evidence that the GE 2.85 MW wind turbine meets acceptable International safety standards in the form of a Statement of Compliance issued by TUV NORD dated September 20, 2013. The proposed Siemens turbines have been certified by Det Norske Veritas (DNV), a wind power product certification authority, to withstand Class IA wind gusts, as defined by the IEC Standard. Class I under the Standard considers an extreme wind speed at hub height of 52.5 m/s (117 mph), and 50-year wind events of 70 m/s (156 mph). The applicant submitted evidence that the Siemens 3.0 MW wind turbine meets acceptable international safety standards in the form of a Statement of Compliance issued by DNV dated September 19, 2011.

The Department recognizes that locating wind turbines a safe distance away from any occupied structures, public road or other public use area is of utmost importance. In determining the extent of the 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 DNV. Based on these sources, the Department generally requires that wind turbines be set back from the property line, occupied structures and/or public areas a distance equal to a minimum of 1.5 times the maximum blade height of the wind turbine. The maximum blade height of the GE feet,

both measured from the ground to the tip of a fully extended turbine blade. Based on the Department's setback specifications, the minimum setback distance to the nearest property line should be 672 feet for the GE turbines, and 669 feet for the Siemens turbines. A review of the application indicates that all of the turbines except Turbine #8 are set back an adequate distance from the property boundaries for all proposed alternatives. Turbine #8 is approximately 337 feet from the closest property boundary.

The applicant has acquired an easement on the parcel affected by the placement of Turbine #8 in which the property owner gives up its right to object to the placement of one turbine nearer than 1.5 times the turbine height from the boundary of the parcel. The affected parcel is currently managed as a timber lot, with no existing development.

All other safety setbacks will be met on the parcels owned or leased for the development by the applicant, and no occupied structures or public areas are within 669 feet of the other turbines. The Department finds that adequate safety setbacks are provided in the proposed project's design.

Interested persons expressed concerns regarding the fire hazard presented by the proposed project. Concerns include the ability of the Canton Fire Department to fight a fire in a turbine, access to potential fire sites, and the liability for and potential costs associated with fighting a fire. The Department consulted with the State Fire Marshall and the Maine Forest Service (MFS). MFS commented that statistically there is much less wildfire risk from wind turbines than many other activities that take place in the forest, but that it is nevertheless possible that a windmill may cause a fire. MFS stated that if a wildfire does start, it will be fought the same as any other wildfire. At the July 24, 2013 public meeting, the Canton Fire Chief commented that access to the project vicinity will be enhanced by the construction of the new access road and ridgeline road.

In response to concerns expressed by interested persons, the Department requested that the applicant submit a Fire Protection Plan (FPP) for the proposed project. The applicant submitted an FPP dated June 19, 2013, and prepared by GL Garrad Hassan, a consulting firm that provides technical advice and assistance in the energy industry. The FPP was reviewed by Department staff and revised in response to staff comments, and a revised FPP dated June 21, 2013 was submitted. The FPP lays out an emergency response procedure for fire and other hazardous situations that may potentially arise at the project. The procedures proposed include shutting down any turbines involved in a fire, immediate notification of the local fire department and notification of the Department in writing within 24 hours.

The Department finds that the applicant has provided documentation in the form of standards of compliance by the manufacturer and certification by an engineer that the wind generation equipment has been designed to conform to applicable industry safety standards, and has demonstrated that the proposed development has been sited such that it will not present an unreasonable safety hazard to adjacent properties or adjacent property uses. The Department further finds that the applicant submitted sufficient evidence which demonstrates that the proposed project has been sited with adequate safety related setbacks from adjacent properties and existing uses. The Department finds that the revised FPP adequately and appropriately addresses emergency response in case of a fire at the site.

25. DECOMMISSIONING:

As required by the Wind Energy Act, in order to facilitate and ensure appropriate removal of the wind generation equipment when it reaches the end of its useful life, an applicant must demonstrate, in the form of a decommissioning plan, the means by which decommissioning will be accomplished. The proposed wind turbine generators are designed and certified by independent agencies for a minimum expected

operational life of 20 years. The applicant submitted a decommissioning plan as Section 29 of the application. The applicant revised the original decommissioning plan based upon concerns expressed by the Department, and submitted a final

decommissioning plan on May 10, 2013. The decommissioning plan includes a description of the trigger for implementing the decommissioning, a description of work required, an estimate of decommissioning costs, and a demonstration of financial assurance for fully funding the cost of decommissioning the project prior to commencement of construction.

A. Description of trigger for implementation of decommissioning. The applicant's decommissioning plan states 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 where the cause of the interruption of generation is beyond the reasonable control of the licensee and which results in the project not generating electricity for 12 months, the applicant's proposed plan allows the licensee to submit to the Department for review and approval reasonable evidence in support of a request that it not be required to decommission the project at that time. The decommissioning plan also provides for decommissioning one or more individual turbines in the event that a turbine fails to produce electricity for a period of 18 months. Time during which such a turbine produces no electricity, but during which a replacement part or component required to operate the turbine has been ordered will not count towards the 18-month period, provided that the applicant submits evidence to the Department that the needed part or component has been ordered. In the case where the applicant is actively seeking permits to replace a non-producing turbine for which replacement components are not available, the time spent seeking such permits will also not count towards the 18-month period.

Under the applicant's plan, decommissioning would begin if twelve months of no generation occurs. An exception to the requirement would be allowed for a force majeure event, however the Department finds that the applicant's proposed definition of "force majeure" is exceedingly broad, and instead the definition would be as follows: The Department considers a force majeure to mean fire, earthquake, flood, tornado, or other acts of God and natural disasters; and war, civil strife or other similar violence. In the event of a force majeure event which results in the absence of electrical generation by one or more turbines for twelve months, by the end of the twelfth month of non-operation the applicant must demonstrate to the Department that the project, or any single turbine, would 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 in the decommissioning plan outlines how 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, 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 component(s) proposed to be left on-site to the Department for review and approval. In the event of the decommissioning of an individual turbine, that turbine will be

deconstructed down to the foundation, as described above; however, the foundation and belowground components will be left in place until either another turbine is installed or the entire project is decommissioned. If a replacement turbine is installed,

the existing foundation will be reused or reconstructed to the extent possible for use with the new turbine.

C. Cost estimates for decommissioning. The applicant stated that the total cost of decommissioning, minus salvage value, is estimated to be $327,768 if the GE turbines are used; and $477,688 if the Siemens turbines are used. A detailed breakdown of decommissioning costs is included in the final decommissioning plan.

D. Financial assurance. The applicant proposed to ensure that financial assurance for decommissioning costs will be fully established prior to commencement of construction. In order to account for possible fluctuations in the salvage value of turbine components and other costs used in calculating the decommissioning cost, the applicant proposes to re-evaluate the decommissioning cost every three years after commencement of construction, and adjust the financial assurance accordingly.

The applicant proposes to provide financial assurance in the form of a performance bond, surety bond, letter of credit, or other acceptable form of financial guarantee. The applicant stated that financial assurance will be in place at all times during the operation of the project.

The applicant proposes to make the Department the obligee of any performance bond or other instrument used to prove financial assurance. The Department will have the right to call the bond in the event of non-performance. The trigger for the Department's third party rights will be the dissolution of the project's owner or if the project ceases to generate electricity for a continuous period of twelve months, as described in (1) above; if a single turbine fails to generate electricity for a continuous period of 18 months as described in (1) above; and/or the failure of the licensee to perform its decommissioning obligations under this permit. Upon completion of the decommissioning and restoration of the site any remaining balance of the financial assurance will be returned to the applicant.

Interested persons commented on the applicant's decommissioning plan regarding erosion control requirements during decommissioning, and cost estimates used in calculating overall decommissioning costs. The Department considered the concerns expressed regarding decommissioning. In the final decommissioning plan, the applicant presented a detailed breakdown of the costs associated with decommissioning the project, including a detailed analysis of the salvage value of the physical

components of the project. The final decommissioning plan indicates that the applicant will follow all Best Management Practices during the decommissioning process, including erosion control. The Department finds that the provisions for estimating the cost of decommissioning are accurate, and that the applicant's proposal regarding erosion control during decommissioning is adequate.

In response to the draft order, one interested person, Mr. Michael Bond, expressed concerns that the salvage values provided by the applicant are substantially overestimated. As an example, Mr. Bond stated that "in Massachusetts earlier this year,

the cost to dismantle one turbine tower was $14 million." The Department notes that an article published in the National Wind Watch on March 12, 2013, regarding removal of wind turbines in Falmouth, Massachusetts states that it would cost "from $12.25 million to $15.23 million to take down both turbines. That amount includes $5.71 million to pay the debt on Wind 1; $4.86 million to $5.88 million to pay the debt on Wind 2; and $1.54 million to $3.4 million to shut down and remove the turbines and restore the Wastewater Treatment Facility site to its previous condition." The Department further notes that an article published in the Cape Cod Times on May 3, 2014, indicates that both turbines are still operational. The Department considered these comments along with the other information in the record regarding the decommissioning plan for the proposed project.

The Department finds that the applicant's proposal outlines an adequate decommissioning plan and a mechanism to execute the plan, with the incorporation of the Department's definition of "force majeure" as discussed above, provided that the plan is implemented and that salvage values are reassessed every time the decommissioning costs are estimated in accordance with the schedule above, the updated estimated total decommissioning costs are submitted to the Department for review and approval, and the financial assurance is adjusted to cover 100% of the revised total decommissioning costs each time the costs are reassessed.

26. TANGIBLE BENEFITS:

The Site Law requires that a proposed expedited wind energy project demonstrate that it will provide significant tangible benefits as defined in the Wind Energy Act, 35-A M.R.S. § 3454.

The applicant submitted a description of the tangible benefits to be provided by the Canton Mountain Wind Project as Section 28 of the application. The applicant made changes to its submission in response to concerns expressed by the Department and submitted a revised Section 28 on January 1, 2013. The revised Section 28 describes tangible benefits that the project will provide to the State of Maine and to the host community of Canton, including economic benefits and environmental benefits. The applicant stated that the project is expected to generate approximately 69,900 megawatt-hours per year, enough to power approximately 11,300 households. The applicant stated that this output will be reduced somewhat due to the requirement to curtail operations to minimize impacts to bats as described in Finding 7 above.

The applicant described the employment benefits in part as follows: "On average, the Project would employ 40 to 50 construction workers for five to six months and up to 75 workers during peak construction times." The applicant stated that materials

located close to the site will be used as much as possible to construct the project, giving local stone quarries and construction material suppliers procurement opportunities. In addition, the applicant stated that local businesses such as motels, restaurants, gas stations, and retail stores will see increases in activity during construction. After construction is complete, the project is expected to employ a maintenance staff of two to three full-time workers. The applicant stated that there will be a need for ongoing road maintenance, plowing, and landscaping services.

The applicant proposes to establish a Community Benefit Fund to be administered by and to provide tangible benefits to the Town of Canton. The applicant proposes to

make payments to the Fund of at least $4,000 per turbine per year for the first 15 years of operation, and at least $6,000 per turbine per year for each subsequent year of operation. The applicant has entered into an agreement with the Town of Dixfield to provide tangible benefits consisting of an initial one-time cash payment of $10,000, and additional payments of $2,000 per year for the life of the project. The applicant proposes to file a Tangible Benefits Report with the Department within six months of the conclusion of years 1, 5, 10 and 15 of project operation, detailing the economic and environmental benefits contributed by the project to the Towns of Canton and Dixfield, and to the State of Maine. In the interest of maintaining accurate and current records, the Department may request annual summaries of tangible benefits provided by the proposed project throughout the operational life of the development.

The applicant also states that the project will increase energy diversity, thereby helping to reduce volatility in the cost of electricity in Maine. The applicant states that the project will help Maine meet its commitments under the Regional Greenhouse Gas Initiative, which establishes limits for emissions associated with the generation of electricity.

Interested persons submitted comments to the Department regarding the tangible benefits associated with the proposed project, expressing concerns regarding provision of benefits to the Town of Dixfield, the adequacy of the amount of tangible benefits proposed, a desire for preferential employment of local people, and that the project would not produce any jobs. One interested person praised the projects provision of tangible benefits to a local ATV group. The Department considered the concerns expressed regarding tangible benefits to be provided by the project. The Wind Energy Act, 35-A M.R.S. §3454(2), requires an applicant for an expedited wind energy development to establish a community benefits package valued at no less than $4,000 per turbine per year, averaged over a 20-year period. The Department finds that the applicant's proposal for funding the Community Benefit Fund described above meets the requirement in 35-A M.R.S. §3454(2). The Department has no authority to require the applicant to hire employees from any specific geographic area. Nevertheless, the applicant has indicated that local employment and businesses would benefit from the project through local purchase of materials and provision of services.

In response to the draft order, one interested person, Mr. Dan McKay, commented that tangible benefits should be accounted as gain/loss summaries to include costs incurred by local municipal services and individuals. The Department notes that the applicant has met the Wind Energy Act's requirement to demonstrate that the proposed project will provide tangible benefits in the form of a Community Benefits Package valued at a

minimum of $4,000 per turbine per year, averaged over a 20-year period, and that any other tangible benefits provided by the project are not subject to any minimum value standards. Another interested person, Mr. Michael Bond, stated that tourism and real estate values decline in the vicinity of wind projects, and that the tangible benefits are not enough to offset the losses. The Department notes that there are no statutory review criteria for tourism or real estate values relating to the approval of wind energy developments. The Department considered these comments along with the other information in the record regarding tangible benefits expected as a result of the proposed project.

Based upon consideration of all of the benefits proposed by the applicant, comments from interested persons and comments on the draft order, the Department finds that the

applicant has demonstrated that the proposed project will provide significant tangible benefits to the host community and surrounding area pursuant to 35-A M.R.S. §3454, provided that the above-described payments are made to the Town of Canton and the Town of Dixfield, and provided that the applicant files the tangible benefits reports as described above.

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

A. The proposed activity will not unreasonably interfere with existing scenic, aesthetic, recreational, or navigational 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 that the applicant implements the operational curtailment protocol recommended by MDIFW as discussed in Finding 7(E); and that the applicant performs post-construction mortality searches and monitoring as discussed in Finding 7(F).

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 is not on or adjacent to a sand dune.

I. The proposed activity is not 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 Department makes the following conclusions pursuant to 38 M.R.S. §§ 481 et seq.:

A. The applicant has provided adequate evidence of financial capacity, and of technical ability to develop the project in a manner consistent with state environmental standards provided that prior to the start of construction the applicant submits evidence that it has secured financing for the project as described in Finding 3 above.

B. The development will not adversely affect existing uses, scenic character, air quality, water quality or other natural resources in the municipality or in neighboring municipalities provided that: the applicant implements and follows the post-construction noise monitoring protocol as outlined in Finding 5(E), including pre-construction establishment of the specific sound level compliance locations at Receiver 1B and Receiver 7B; the applicant initiates the complaint hotline and response protocol as outlined in Finding 5(F); prior to operation, the applicant submits a finalized post-construction avian, bat, and raptor post-construction monitoring protocol established in consultation with MDIFW to the Department for review and approval and the project is operated in accordance with the curtailment protocol recommended by MDIFW as discussed in Finding 7(E); the applicant conducts mortality searches in accordance with the methods recommended by MDIFW as discussed in Finding 7(F); all excavations in the area of the Dunn Cemetery are overseen by either the applicant's engineer or the Third-Party Inspector as discussed in Finding 8; the applicant complies with the post-construction VMP; the applicant establishes and maintains a minimum 75-foot riparian buffer from rivers, streams and brooks, increased to a 100-foot riparian buffer wherever practicable, and refrains from using herbicides within all riparian buffers and within 25 feet of wetlands as discussed in Finding 9(C), and these areas are prominently marked in the field with signs clearly prohibiting the use of herbicides; all visual screening buffers, forested stormwater treatment buffers, and stream buffers are permanently marked on the ground prior to the start of construction; all required deed restrictions are recorded and copies of the recorded deed restrictions, including the plot plans, are submitted as described in Finding 11; any rock crushers used on site are approved in accordance with Finding 18; and the as-built plans described in Findings 11, 13 and 14 are submitted to the Department as discussed in those respective Findings.

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 pre-blast survey as described in Finding 20.

D. The proposed development meets the standards for storm water management in Section 420-D and the standard for erosion and sedimentation control in Section 420-C provided that the applicant holds a pre-construction meeting, retains a third-party inspector to oversee project construction as described in Finding 11(A),

adheres to the required protocol for inspections of the ditch turnouts, underdrained soil filter and level spreaders, permanently marks buffers on the ground, and submits a copy of the recorded deed restrictions, all as described in Finding 11.

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 an operational SPCC plan for review and approval as described in Finding 12.

F. The applicant has made adequate provision of utilities, including water supplies, sewerage facilities, solid waste disposal and roadways required for the development and the development will not have an unreasonable adverse effect on the existing or proposed utilities and roadways in the municipality or the area served by those

services provided that the applicant submits an as-built drawing showing the final location of the water supply well, O&M building and wastewater disposal field to the Department within 60 days of the completion of those structures.

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 significantly compromise views from a scenic resource of state or national significance such that the development will have an unreasonable adverse effect on the scenic character or existing uses related to scenic character of the area.

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

J. The proposed development will not present an unreasonable safety hazard to adjacent properties or adjacent property uses.

K. The applicant has made adequate provision and demonstrated sufficient financial capacity to achieve decommissioning of the wind power facility provided that the decommissioning costs and salvage values are re-evaluated and the funding updated according to the schedule and methods described in Finding 25, and that the decommissioning fund is fully funded prior to the start of construction.

L. The proposed development will provide significant tangible benefits to the host community and surrounding area, provided that the applicant establishes the Community Benefit Fund and makes the payments to the Towns of Canton and Dixfield, and provided that the applicant files the tangible benefits reports as described in Finding 26.

THEREFORE, the Department APPROVES the application of CANTON MOUNTAIN WIND, LLC to construct a 24MW wind energy development project with associated facilities, known as the Canton Mountain Wind Project, to be located in the Towns of Canton and Dixfield, as described above, SUBJECT TO THE FOLLOWING CONDITIONS and all applicable standards and regulations:

1. The Standard Conditions of Approval, a copy 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 its activities or those of its 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 shall provide a copy of the executed assignment to the applicant of the lease between its parent company, Patriot Renewables, LLC, and Thorndike Industries; a copy of the assignment to the applicant of development rights under the easement between the applicant's sister company, Saddleback Ridge Wind, LLC (Saddleback), and Bayroot, LLC, executed after assignment of the option held by Patriot; and a copy of the applicant's lease from Saddleback for the Worster parcel, purchased by Saddleback after assignment and exercise of Patriot's option, all as described in Finding 2.

6. Prior to the start of construction, the applicant shall submit evidence that it has finalized and received a loan or other line of credit from Customers Bank or other financial institution authorized to do business in Maine in accordance with 38 M.R.S. §484(1) and Chapter 373 §1, to the Department for review and approval.

7. Prior to project operation, the applicant shall submit the specific sound level compliance locations at Receiver 1B and Receiver 7B to the Department for review and approval. If either or both of these locations is unavailable due to denial of access by the landowner or any other reason, the applicant shall submit alternate locations as close as practicable to the unavailable location(s) to the Department for review and approval prior to project operation, along with an explanation of the reason(s) that the preferred location(s) are unavailable.

8. The applicant shall implement the sound level complaint response protocol outlined in Finding 5. The applicant shall set up a toll free complaint hotline designed to allow concerned citizens to call in noise related complaints 24 hours per day, 7 days per week. The hotline number shall be clearly noticed to all abutting property owners and posted in prominent locations around the project site and within the towns of Carthage, Canton, and Dixfield municipal offices. For those complaints that include sufficient information to warrant an investigation, the applicant shall, within two business days of receipt of the complaint, collect the complainant information (name, location, time of complaint and other pertinent information),

   along with the meteorological and operational data from the project at the time of the complaint, and submit that information to the Department and to the complainant. The applicant shall plot complaint locations and key information on a project area map to evaluate complaints for a consistent pattern of site, operating and weather conditions; and submit this analysis to the Department with a comparison of these patterns to the compliance protocol outlined above so the Department may determine whether testing under additional site and operating conditions is necessary; and if so, shall propose a testing plan that addresses the locations and the conditions under which the pattern of complaints has occurred. The applicant will be responsible for the reimbursement of all costs incurred by the Department in the review of any noise related complaint. If the Department finds that the project is not in compliance with this Order, the applicant shall take short

term action immediately to adjust operations to reduce sound output to acceptable levels under Chapter 375 §10(I). Within 60 days of a determination of non-compliance by the Department, the applicant shall submit, for review and approval, a compliance plan that proposes actions to bring the project into compliance at all the protected locations surrounding the development.

9. The applicant shall submit sound level monitoring reports in accordance with the post-construction monitoring program described in Finding 5. Reports shall be submitted for the first year of project operation, and every fifth year thereafter until the project is decommissioned; in response to a complaint and any subsequent enforcement action as requested by the Department; and for validation of the applicant's calculated sound levels when requested by the Department. If the Department finds that the project is not in compliance with this Order, the applicant shall take short term action immediately to adjust operations to reduce sound output to acceptable levels under Chapter 375 §10. Within 60 days of a determination of non-compliance by the Department, the applicant shall submit, for review and approval, a compliance plan that proposes actions to bring the project into compliance at all the protected locations surrounding the development.

10. The project shall be operated according to the curtailment protocol described in Finding 7. Wind turbines shall operate only at cut-in wind speeds exceeding 5.0 meters per second each night (from at least ½ hour before sunset to at least ½ hour after sunrise) during the period April 20 – June 30; at speeds exceeding 6.0 meters per second each night (from at least ½ hour before sunset to at least ½ hour after sunrise) during the period July 1 – September 30; and at speeds exceeding 5.0 meters per second each night (from at least ½ hour before sunset to at least ½ hour after sunrise) during the period October 1 – October 15, the beginning and end dates of each curtailment period subject to slight modification based on recommendations from MDIFW or the Department. Cut-in speeds shall be determined based on mean wind speeds measured at hub heights of a turbine over a 10-minute interval. Turbine blades will be feathered during curtailment periods to minimize risks of bat mortality. Curtailment shall be applied independently of ambient air temperature. Curtailment shall be applied to each turbine in the project individually, based upon wind conditions registered by the monitoring equipment associated with each individual turbine. In the event that monitoring equipment fails or malfunctions at a particular turbine, curtailment of that turbine shall be

based upon wind conditions registered at the nearest functioning monitoring equipment.

11. Prior to operation of the project, the applicant shall submit a finalized post-construction avian, bat, and raptor post-construction monitoring protocol established in consultation with MDIFW to the Department for review and approval.

12. The applicant shall perform post-construction mortality searches at all eight turbine locations, as well as radar monitoring of nightly passage rates, during peak migration periods in accordance with a plan approved by MDIFW as discussed in Finding 7.

13. The applicant shall comply with the post-construction VMP as discussed in Finding 9.

14. The applicant shall not use herbicides within all 75-foot riparian buffers or within 25 feet of wetlands, and shall not refuel vehicles or equipment in these areas as discussed in Finding 9(C). Riparian buffers shall be extended to 100 feet wherever practicable. The buffers and wetlands shall be prominently marked in the field with signs clearly prohibiting the use of herbicides and of refueling in the area.

15. The applicant shall 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.

16. Prior to 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.

17. Prior to the start of operation, the applicant shall execute and record all required deed restrictions with the Registry of Deeds, including the appropriate buffer (stormwater and stream) deed restrictions, all with attached plot plans, drawn to scale. Copies of the recorded deed restrictions shall be forwarded to the Department within 90 days of their recording.

18. Prior to the start of construction, the locations 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 and marked on the drawings. 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. Locations of protective buffers will be permanently marked on the ground following the construction phase of the project.

19. The applicant shall submit a blasting plan and a pre-blast survey conducted in accordance with the Department’s Performance Standards for Quarries, 38 M.R.S.

    § 490-Z §14, to the Department for review and approval prior to any blasting on the project site.

20. The applicant shall hire a professional engineer to inspect the construction and stabilization of the road ditch turnouts, underdrained soil filter, and level spreaders to be built on the site as discussed in Finding 11(B). Inspections must at a minimum consist of weekly visits to the site to inspect each turnout from initial ground disturbance to final stabilization. If necessary, the inspecting engineer shall interpret the turnouts’ locations and construction plans for the contractor. The inspecting engineer shall notify the Department in writing within 14 days of the completion of construction and stabilization of the turnouts, underdrained soil filter, and level spreaders.

21. The applicant’s engineer or the third-party inspector shall inspect any excavations in the vicinity of the Dunn Cemetery to ensure that no burial sites are disturbed,

and that operations are halted if burials are discovered. If burials are discovered, construction activities in the vicinity shall cease and Town officials, MHPC and the Department shall be notified. The applicant shall work with MHPC and Town officials to determine how to proceed, and the Department shall be notified of any resulting changes in project design.

22. Prior to the commencement of project operations, the applicant shall submit an operational SPCC to the Department for review and approval.

23. Within 60 days of the installation of the well and wastewater disposal field at the O&M building site, the applicant shall submit an as-built drawing showing the locations of the well and the wastewater disposal field and any other completed structures in the vicinity, along with a statement confirming that the structures were constructed at their approved locations.

24. If a rock crusher is utilized on site, the applicant shall ensure that the crusher is licensed by the Department's Bureau of Air Quality and that it is operated in accordance with that license.

25. Within 90 days of the commencement of project operations, the applicant shall submit as-built plans of the project to the Department. Any changes from the approved project design shall be noted on the plans.

26. The applicant shall establish a Community Benefit Fund and make annual payments to the Town of Canton of at least $32,000 for the first 15 years of operation, and at least $48,000 per year for each subsequent year of operation of the project from the Fund. The applicant shall also make a one-time cash payment of $10,000 to the Town of Dixfield, and additional payments to the Town of Dixfield of $2,000 per year for the life of the project. The applicant shall file a Tangible Benefits Report with the Department within six months of the conclusion of years 1, 5, 10 and 15 of project operation, detailing the economic and environmental benefits contributed by the project to the Towns of Canton and Dixfield, and to the State of Maine.

27. Prior to the start of construction, the applicant shall provide financial assurance in a form acceptable to the Department for 100% of the funds necessary to fully decommission the project. The amount of the financial assurance shall be reassessed every three years after the initiation of project operations, and funding adjusted so as to assure ongoing availability of 100% of the funds necessary to fully decommission the project. The facility shall be decommissioned when it ceases to generate electricity for a continuous period of twelve months. In the case of a force majeure event (fire, earthquake, flood, tornado, or other acts of God and natural disasters; or war, civil strife or other similar violence) which results in the project not generating electricity for 12 months, the licensee may submit to the Department for review and approval reasonable evidence in support of a request that it not be required to decommission the project at that time. An individual turbine shall be decommissioned if that turbine fails to produce electricity for a period of 18 months. Time during which such a turbine produces no electricity, but during which a replacement part or component required to operate the turbine has been ordered will not count towards the 18-month period, provided that the

applicant submits evidence to the Department that the needed part or component has been ordered. In the case where the applicant is actively seeking permits to replace a non-producing turbine for which replacement components are not available, the time spent seeking such permits will also not count towards the 18-month period. In the case of a force majeure event which results in the absence of electrical generation by one or more turbines for twelve months, by the end of the twelfth month of non-operation the applicant shall demonstrate to the Department that the project, or any single turbine, would 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.

THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.
DONE AND DATED IN AUGUSTA, MAINE, THIS _____ DAY OF _____, 2014.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
For: Patricia W. Aho, Commissioner

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES…

ET/L25558ANBN/ATS#74232&74257

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

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:		

DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: March 2012 **Contact: (207) 287-2811**

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's ("DEP") Commissioner: (1) in an administrative process before the Board of Environmental Protection ("Board"); or (2) in a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S.A. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S.A. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S.A. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This INFORMATION SHEET, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S.A. §§ 341-D(4) & 346, the *Maine Administrative Procedure Act*, 5 M.R.S.A. § 11001, and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 CMR 2 (April 1, 2003).

HOW LONG YOU HAVE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed after 30 calendar days of the date on which the Commissioner's decision was filed with the Board will be rejected.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, c/o Department of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017; faxes are acceptable for purposes of meeting the deadline when followed by the Board's receipt of mailed original documents within five (5) working days. Receipt on a particular day must be by 5:00 PM at DEP's offices in Augusta; materials received after 5:00 PM are not considered received until the following day. The person appealing a licensing decision must also send the DEP's Commissioner a copy of the appeal documents and if the person appealing is not the applicant in the license proceeding at issue the applicant must also be sent a copy of the appeal documents. All of the information listed in the next section must be submitted at the time the appeal is filed. Only the extraordinary circumstances described at the end of that section will justify evidence not in the DEP's record at the time of decision being added to the record for consideration by the Board as part of an appeal.

WHAT YOUR APPEAL PAPERWORK MUST CONTAIN

Appeal materials must contain the following information at the time submitted:

1. *Aggrieved Status*. The appeal must explain how the person filing the appeal has standing to maintain an appeal. This requires an explanation of how the person filing the appeal may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions or conditions objected to or believed to be in error.* Specific references and facts regarding the appellant's issues with the decision must be provided in the notice of appeal.
3. *The basis of the objections or challenge.* If possible, specific regulations, statutes or other facts should be referenced. This may include citing omissions of relevant requirements, and errors believed to have been made in interpretations, conclusions, and relevant requirements.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
5. *All the matters to be contested*. The Board will limit its consideration to those arguments specifically raised in the written notice of appeal.
6. *Request for hearing.* The Board will hear presentations on appeals at its regularly scheduled meetings, unless a public hearing on the appeal is requested and granted. A request for public hearing on an appeal must be filed as part of the notice of appeal.
7. *New or additional evidence to be offered.* The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered by the Board in an appeal only when the evidence is relevant and material and that the person seeking to add information to the record can show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process or that the evidence itself is newly discovered and could not have been presented earlier in the process. Specific requirements for additional evidence are found in Chapter 2.

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, made easily accessible by DEP. Upon request, the DEP will make the material available during normal working hours, provide space to review the file, and provide opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer questions regarding applicable requirements.
3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed the license normally remains in effect pending the processing of the appeal. A license holder may proceed with a project pending the outcome of an appeal but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge receipt of an appeal, including the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, and any materials submitted in response to the appeal will be sent to Board members with a recommendation from DEP staff. Persons filing appeals and interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, a license holder, and interested persons of its decision.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court, see 38 M.R.S.A. § 346(1); 06-096 CMR 2; 5 M.R.S.A. § 11001; & M.R. Civ. P 80C. A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. Failure to file a timely appeal will result in the Board's or the Commissioner's decision becoming final.

An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S.A. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452 or for judicial appeals contact the court clerk's office in which your appeal will be filed.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.