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

DEPARTMENT ORDER

IN THE MATTER OF

EVERGREEN WIND POWER II, LLC	) SITE LOCATION OF DEVELOPMENT ACT
Oakfield, Aroostook County	) NATURAL RESOURCES PROTECTION ACT
OAKFIELD WIND PROJECT	) FRESHWATER WETLAND ALTERATION
L-24572-24-A-N (approval)	) WATER QUALITY CERTIFICATION
L-24572-TF-B-N (approval)	) FINDINGS OF FACT AND ORDER

Pursuant to the provisions of 38 M.R.S.A. Sections 481 et seq., 480-A et seq., 35-A M.R.S.A. § 3401, et seq., and Section 401 of the Federal Water Pollution Control Act, the Department of Environmental Protection has considered the application of EVERGREEN WIND POWER II, 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: The applicant proposes to construct a 51-megawatt (MW) wind energy development, known as the Oakfield Wind Project, in the Town of Oakfield in Aroostook County, Maine. The project site is located on the east side of Thompson Settlement Road in the Town of Oakfield. The proposed development consists of 34 wind turbines in 36 potential locations, with associated turbine pads, electrical collection infrastructure, an electrical interconnection substation, meteorological (met) towers, and an Operations & Maintenance (O&M) building for a total of 45.1 acres of new impervious area and approximately 50 acres of new developed area. The proposed Oakfield Wind Project meets the definition of an expedited wind energy development set forth in 35-A M.R.S.A. §3451 (A).

1.) Wind Turbines. The applicant proposes to construct 34 General Electric 1.5 wind turbines, each of which is capable of generating 1.5-MW. The turbines will be constructed in a northern and a southern array along Sam Drew Mountain and other ridges in the Oakfield Hills. Each turbine is approximately 262 feet (80 meters) in height from the ground to the center of the hub; the total height from the ground to the tip of a fully extended turbine blade is approximately 389 feet (118.6 meters).

2.) Turbine Pads. The turbines will be constructed on 34 turbine pads. Each turbine pad will encompass approximately 1.1 acres; including a 25 foot diameter turbine foundation pedestal with surrounding 10 foot gravel ring, and a 40 by 60 foot crane pad constructed of compacted gravel or processed rock, all within a circular cleared

and graded construction laydown area approximately 250 feet in diameter. The laydown areas will be allowed to re-vegetate; however, the turbine foundations, crane pads and drives will remain as impervious area. Impervious area associated with each turbine pad is approximately 5,890 square feet. The total amount of impervious area associated with the (34) crane pads is approximately 4.6 acres.

3.) Access Roads and Crane Path. The applicant proposes to construct approximately 15.3 miles of access roads and crane path, of which approximately 2.2 miles will be upgraded existing roads. The primary public road to the site for component delivery, operations, and maintenance will be Thompson Settlement Road. The access road for the project will begin at Thompson Settlement Road and will be approximately 24 feet in width. Approximately 1400 feet of the Thompson Settlement Road and 1800 feet of Nelson Road will be upgraded for access to the northerly portion of the project. Between the turbine sites the access road will initially be constructed as a 32-foot wide gravel "crane road" to accommodate the assembly crane for turbine construction. The crane road widths will be reduced to 16 feet where practical by loaming and reseeding the excess width after the construction of the turbines and removal of the crane. The total amount of impervious area associated with the access roads and crane paths will be approximately 39 acres.

4.) Electrical Transmission Lines. Power from the 34 turbines will be collected in a 34.5-kilovolt (kV) collector line totaling approximately 12 miles. The collector line will be mounted to single pole structures. Pole structures will vary in height from 35to 45 feet, depending on the grade and the need to span particular features and resources. The collector line will require approximately 60 feet of additional clearing where co-located with the access roads and crane roads, and a clearing width of 100 feet where not co-located. The collector line will extend 1.2 miles from turbine N15, following an existing woods road where possible, to a Maine Public Service Company (MPS) 69kV line at the north end of the project. The collector line will join the MPS line at a new electrical substation to be located off of Ridge Road.

5.) Electrical Collector Substation. At the collector substation, power will be converted to 69 kV for transmission to the regional market through transmission lines owned and operated by MPS. The existing MPS line is currently operating at 44 kV, but will be upgraded to 69 kV from the new project substation to the MPS Mullens Substation in Houlton. No infrastructure upgrades to the existing line are necessary other than the construction of the new project substation. The collector substation will occupy approximately 0.56 acres.

6.) Operations & Maintenance (O &M) Building and Associated Structures. The proposed wind energy development will include an operations and maintenance building and associated gravel parking area, located at the junction of the project access road and Thompson Settlement Road. The building will be approximately 8,380 square feet. With associated access drive and parking area, the total impervious area associated with the O&M building will be approximately 0.5 acres.

7.) Meteorological Towers. The proposed project will include the construction of four permanent 80 meter meteorological towers to monitor and assess wind conditions. One existing 40 meter tower on Sam Drew Mountain will also be maintained.

The applicant is also seeking approval under the Natural Resources Protection Act (N.R.P.A.) for impacts to wetlands and one significant vernal pool (SVP). The applicant proposes to permanently fill 2,440 square feet of forested, scrub shrub, and emergent freshwater wetlands and to clear 8,790 square feet of wetland vegetation for construction of the transmission lines. The project will result in the alteration of the upland habitat of one significant vernal pool, where the project crane road comes within approximately 200 feet of the SVP, leaving 82% of the critical terrestrial habitat undisturbed.

The applicant submitted a Natural Resources Protection Act, Permit By Rule (PBR) application, under Section 10 of Chapter 305 of the Department's regulations (PBR #47798). This PBR application is for a stream crossing on the project's proposed access road. The applicant proposes to impact 66 linear feet of stream at this crossing. Details of the stream crossing and photographs of the stream were submitted as Exhibits 3 and 4 of the PBR application. The Department accepted PBR #47798 on April 29, 2009. The applicant also submitted a Notice of Intent to comply with requirements of the Maine Construction General Permit.

Details of the proposed wind energy development are shown on a set of plans, the first sheet of which is entitled "Sheet Index/Legend/General Notes," prepared by SGC Engineering, LLC, and dated March 2, 2009, with a last revision date of November 16, 2009.

Interested parties have argued that the applicant is currently planning a future expansion of the Oakfield Wind project, and that any future expansion should be reviewed with this application. The Department recognizes that the applicant may be considering its future expansion options, but has seen no plans for an expansion. The current application presents a complete project which addresses all of the Department's review criteria. Any future expansion would require a new application to the Department, and the combined projects would be required to satisfy all review criteria then in effect.

B. Current Use of Site: The proposed project site includes the ridgelines of the Oakfield Hills and Sam Drew Mountain. Commercial timber management is common in this area and there are existing logging roads on the site. Undeveloped forestlands, agricultural lands, rural residential and seasonal residential properties are located in the area surrounding the project site.

C. Public Interest: While the application was being reviewed, the Department received numerous comments from the general public, generally from the areas surrounding the project site. These persons are "interested parties", as defined in Department Rules, Chapter 2(1)(I), for the purposes of this application review.

In consideration of the level of public interest in wind power projects, the Department held a public meeting pursuant to 38 M.R.S. §345-A(5). The purpose of this meeting was to provide all interested parties with an opportunity to present their comments to the Department and submit information into the Department's record. The Department held the public meeting on July 16, 2009 in the Oakfield Community Center in the Town of Oakfield, Maine. The meeting was held in conjunction with the Town of Oakfield's Wind Energy Review Committee described below. Eight members of the public offered comments or asked questions at that meeting. The Department accepted all information that was presented into the record and subsequently received additional letters and supplemental documents regarding specific aspects of the proposed project.

D. Municipal Review Committee: The town of Oakfield formed a Wind Energy Review Committee (Review Committee), a subcommittee of the Board of Selectmen and the planning board, to conduct a municipal review of the proposed project. The Review Committee hired a civil engineering consultant, a noise consultant, and legal counsel to assist in the review. The committee issued a final report dated September 4, 2009, which was entered into the Department's record on this application. On September 16, the Oakfield Board of Selectmen adopted the final report, and on September 28 at an Oakfield town meeting various warrants relating to the recommendations of this report were approved by a majority of the Oakfield citizens present and voting.

In response to the recommendations of the Review Committee the applicant submitted a letter dated September 15, 2009, modifying its application before the DEP to reflect agreements made with the Town of Oakfield regarding noise monitoring protocols, tonal sound compliance procedures, a commitment by the applicant that any future development would maintain compliance with the Department's quiet area sound level limits found at Chapter 375(10)(C)(1)(v), a commitment to the implementation of a sound complaint response process, the performance of pre-blast surveys, and a commitment regarding decommissioning. These modifications are discussed in Findings 5, 10, and 24 below.

2. TITLE, RIGHT, OR INTEREST:

To demonstrate title, right, or interest in the property proposed for development the applicant submitted copies of deeds, leases and lease options between the applicant and the property owners for the proposed project site and the associated electric power lines and substation. The application includes deeds which show that the property owners who are leasing to the applicant have ownership over the parcels which are the subject of the leases.

The Department finds that the deeds, leases and lease options submitted by the applicant demonstrate a right to the reasonable use of the property and adequate duration and terms for the proposed project and its associated uses sufficient for the processing of this application. 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.

3. FINANCIAL CAPACITY:

The total cost of the project is estimated to be $125,000,000.00. The applicant submitted a letter from HSH Nordbank (HSH), dated March 13, 2009, that states HSH has arranged over $900 million in financing for First Wind Holdings, LLC (First Wind), including an approximately $267 million turbine supply loan a portion of which was used to purchase the turbines for the Oakfield project. The applicant is a wholly-owned project subsidiary of First Wind. The March 13 letter also states that HSH is a likely candidate to provide financing for the remainder of the Oakfield project, subject to various reviews and approvals. Prior to the start of construction, the applicant must submit evidence to the Department for review and approval 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 another form of financial assurance determined by the Department to be adequate pursuant to Chapter 373(1).

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:

The applicant provided resume information for key persons involved with the project and a list of projects successfully constructed by the applicant. 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:

- Stantec Consulting – natural resource assessment, permitting
- SGC Engineering, LLC – civil and electrical engineering design, property research and acquisition
- Landworks – visual impact analysis
- Terrence J. DeWan and Associates – visual impact analysis
- Resource Systems Engineering (RSE) – sound assessment
- TRC/Northeast Cultural Resources – prehistoric archaeological resources
- Independent Archaeological Consulting – historic archaeological resources
- Public Archaeology Lab – historic architectural resources
- Albert Frick Associates, Inc. – soils assessment

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

5. NOISE:

The applicant submitted a sound level study entitled "Sound Level Assessment", completed by Resource Systems Engineering (RSE) and dated April 2, 2009. The sound level study was conducted to model expected sound levels from the proposed Oakfield

Wind Project and to compare the model results to operational standards pursuant Chapter 375 (10), the Site Location of Development Rules.

The Oakfield Wind Project must comply with Department regulations applicable to sound levels from construction, routine operation and routine maintenance. Chapter 375 §10 applies hourly sound level limits (L_{Aeq-Hr}) at facility property boundaries and at nearby protected locations. Chapter 375 §10 (G) (16) defines protected locations 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.

The hourly equivalent level resulting from routine operation of a development is limited to 75 dBA at any development property boundary as outlined in Chapter 375 § 10 C (1) (a) (I). The hourly equivalent sound level limits at any protected location varies depending on local zoning or surrounding land uses and existing (pre-development) ambient sound levels. At protected locations within commercially or industrially zoned areas, or where the predominant surrounding land use is non-residential, the hourly sound level limits for routine operation are 70 dBA daytime (7:00 a.m. to 7:00 p.m.) and 60 dBA nighttime (7:00 p.m. to 7:00 a.m.). At protected locations within residentially zoned areas or where the predominant surrounding land use is residential, the hourly sound level limits for routine operation are 60 dBA daytime (7:00 a.m. to 7:00 p.m.) and 50 dBA nighttime (7:00 p.m. to 7:00 a.m.). Where the daytime pre-development ambient hourly sound level is equal to or less than 45 dBA and/or nighttime ambient hourly sound level is equal to or less than 35 dBA, the Department's strictest "Quiet Location" limits of 55 dBA daytime and 45 dBA nighttime apply.

In recognition of the rural nature of the site, the applicant proposes to operate the project in compliance with the Department's most restrictive, "Quiet Location" sound limits of Chapter 375 §10 (H) (3) (1). This application of Quiet Location limits is consistent with Department standards. For such Quiet Locations, the hourly sound level limits for routine operation are 55 dBA daytime (7:00 a.m. to 7:00 p.m.) and 45 dBA nighttime (7:00 p.m. to 7:00 a.m.). In all cases, 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.

A. Sound Level Modeling. The applicant's noise consultant, RSE, 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 uses three dimensional terrain, proposed wind turbine characteristics and locations plus environmental factors to calculate outdoor sound propagation from the wind turbines. Area topography and wind turbine locations, for entry into CADNA/A, were provided to RSE by Stantec Consulting based on USGS topographic information and project design.

RSE calculated sound levels for simultaneous operation of General Electric 1.5MW wind turbines at all 36 prospective turbine locations. Calculations were based on the apparent sound power spectrum produced at full sound power plus an uncertainty factor of plus 2 dBA based on GE Energy specifications and measurement by RSE of similar turbines during full operation. The wind turbines were treated as point sources at the hub height of 80 meters above base/grade elevation. An additional 3 dBA was added to calculated sound levels to allow for any inaccuracy of the sound level modeling calculations and measurements.

Sound levels from wind turbine operation were modeled in the area surrounding the proposed project site. Nine residential receiver points (R1 to R9) in the vicinity of the proposed project were selected by the applicant as representative of where, excluding purchased, leased or easement parcels, the Department's most restrictive quiet area nighttime limits apply. These receiver points are the locations closest to the wind turbines in various directions where sound levels have the greatest potential to exceed sound limits.

Table 3 in the Sound Level Assessment shows the estimated sound levels from the proposed wind turbine operation at each of the nine receiver points. The results presented in Table 3 indicate that sound levels at full sound power production of the proposed project will be from 42 to 45, at or below the nighttime sound level limit of 45 dBA hourly equivalent sound level at the closest protected locations. Results also indicate that sound levels at full sound power production of the wind project will be from 10 to13 dBA below the 55 dBA daytime hourly equivalent limit. Results of the sound level modeling are as follows:

Receiver	Distance to Nearest Wind Turbine in Feet	Estimated Sound Level	Nighttime Sound Limit
R1	2,550	44	45
R2	1,950	42	45
R3	2,160	43	45
R4	1,990	44	45
R5	2,200	44	45
R6	1,850	45	45
R7	2,190	44	45
R8	1,860	43	45
R9	2,690	44	45

B. Tonal Sound. According to 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. The Sound Level Assessment states that General Electric 1.5MW turbine performance specifications and measurements of operating turbines by RSE indicates that the applicable tonal threshold of 8dB from Chapter 375 §10.G.(24) is not likely to be exceeded. Therefore, the Assessment determined that the General

Electric 1.5MW wind turbines are not expected to generate regulated tonal sounds as set forth in Chapter 375.

C. Municipal Review Committee. The Town of Oakfield's Wind Energy Review Committee retained the services of Resource Systems Group, a professional engineering noise consultant, to address sound and noise issues related to the proposed project. As a result of that review the Town of Oakfield recommended additional measures to ensure compliance with the Department's quiet area sound level limits. The applicant, by letter dated September 15, 2009, agreed to the following measures and incorporated these measures into the proposed Oakfield Wind Project application before the Department:

i. The applicant proposes to implement a Sound Complaint Response and Resolution Protocol to provide a transparent process for identifying and responding to potential sound complaints. This protocol includes measures to ensure a consistent approach to documenting complaints, a process for the applicant to communicate with the Town and the Department regarding potential complaints, and flexibility for ensuring appropriate actions are taken in response to potential complaints. A copy of the protocol is attached to the September 15 letter.

ii. The applicant proposes to implement a post-construction monitoring protocol consistent with the following:

Within 12 months from when the project becomes operational, Evergreen shall conduct sound monitoring at two or more representative locations around the project. These locations shall be chosen in consultation with the Department and the Town based on how well they represent local meteorology and their relative noise impact from the wind turbines (highest potential to exceed the applicable noise standards). In addition, special consideration shall be given to landowners that have registered sound complaints. The April 6, 2009 Rollins protocol shall be followed except that the weather conditions in Section b of the protocol shall be relaxed if certain conditions described in the proposal are met.

iii. The applicant has agreed that if tonal sounds cause an exceedance of Chapter 375.10 sound limits, Evergreen will promptly notify the Department and the Town. Evergreen will then expedite an investigation of the sound level exceedance and the associated tonal sound and develop a mitigation plan and schedule to achieve compliance with the applicable sound level limits. Evergreen will provide copies of the mitigation plan to the Department and the Town, implement the mitigation plan, and provide a written report describing the actions taken and new measurement results that demonstrate compliance. Mitigation options could include reduction of the overall sound level and/or the tonal sound component. The Department reserves the right to order immediate actions to be taken to mitigate such sounds while this process is taking place, or to take such other enforcement action it finds appropriate.

iv. The applicant has restated its commitment that the project will comply with the 45 dBA quiet nighttime limit during nighttime hours at applicable regulatory locations even if the pre-development ambient sound level is more than 35 dBA. Similarly, the project will comply with the 55 dBA quiet daytime limit during daytime hours at applicable regulatory locations even if the pre-development ambient sound is greater than 45 dBA.

v. The applicant has stated its commitment that any future First Wind wind power project sited proximate to the project that is the subject of the application will be sited and operated in a manner to ensure that the combined sound, i.e. the sound associated with the existing project and potential future project, complies with the quiet noise limits at applicable regulatory locations.

Interested Party Comments. Interested parties submitted comments and evidence regarding sound levels from the proposed project. Specifically, concerns were raised in regards to the potential health effects related to low frequency sound from wind turbines, the sufficiency of the background studies and modeling submitted by the applicant, the breadth of the Department's standards for noise, and whether the proposed project would generate SDR sound. The most extensive comments were submitted by E-Coustic Solutions (ECS), a professional sound engineering firm, which was retained by interested parties to review the proposed project. ECS submitted extensive comments and documentation relating to sound from wind power projects.

Human Health Effects. First, interested parties raised concerns regarding potential human health effects from wind turbine noise, particularly infrasound low frequency sound less than 250 Hz from wind turbines. Infrasound is sound that is generally considered to be less than 20 Hz, the normal limit of human hearing.

The Maine Center for Disease Control (MCDC) within the Department of Health and Human Services (DHHS) reviewed the materials submitted by interested parties pertaining to potential health effects associated with wind turbine sound. MCDC issued a report titled "Wind Turbine Neuro-Acoustical Issues" dated June, 2009, which reviewed a variety of materials relating to the sound impacts of wind turbines. In that report the MCDC found "no evidence in peer-reviewed medical and public health literature of adverse health effects from the kinds of noise and vibrations heard by wind turbines other than occasional reports of annoyances, and these are mitigated or disappear with proper placement of the turbines from nearby residences." Based on a review of the recent health impact related submissions by interested parties to this project, MCDC found that these submissions did not alter its opinion on this issue.

The Department has also reviewed the reports of two recent scientific literature reviews relating to wind turbine sound and health effects. The first was prepared by Exponent, Inc. for the Wisconsin Public Service Commission and is titled "Evaluation of the Scientific Literature on the Health Effects Associated with Wind Turbines and Low Frequency Sound" and dated October 20, 2009. The second was prepared for the American Wind Energy Association (AWEA) and Canadian Wind Energy Association

(CWEA) by a panel of seven medical and acoustic experts and is titled "Wind Turbine Sound and Health Effects, An Expert Panel Review," and dated December 2009. Both of these reports support the MCDC's findings. The Exponent report concludes in part: "It is clear that some people respond negatively to the noise qualities generated by the operation of wind turbines, but there is no peer-reviewed, scientific data to support a claim that wind turbines are causing disease or specific health conditions. Annoyance regarding the wind turbines is an elusive factor that could underlie a majority of the health complaints being attributed to wind turbine operations."
The AWEA/CWEA panel reached consensus on the following conclusions:

- There is no evidence that the audible or sub-audible sounds emitted by wind turbines have any direct adverse physiological effects.
- The ground-borne vibrations from wind turbines are too weak to be detected by or to affect, humans.
- The sounds emitted by wind turbines are not unique. There is no reason to believe, based on the levels and frequencies of the sounds and the panel's experience with sound exposures in occupational settings, that the sounds from wind turbines could plausibly have direct adverse health consequences.

Based on its review of all of the material submitted regarding the potential health effects of wind turbines the Department finds that compliance with Chapter 375§10 is likely to ensure that there are no adverse health effects due to the proposed project.

Accuracy of Modeling. Second, the interested parties stated that the applicant's sound modeling did not accurately predict the sound levels likely to be experienced at protected locations, and the noise modeling should have been performed by calculating line sources rather than point sources. As described below, the applicant's modeling has been reviewed by a noise consultant hired by the Department which found that modeling to be reasonable and technically correct according to standard engineering practices.

Short Duration Repetitive (SDR) Sounds. Interested parties commented that the applicant's noise analysis failed to adequately address SDR sound, specifically, the thumping noise produced by the turbine blades. Maine's noise regulations require a 5 dB penalty to be added to the predicted sound level to adjust for this type of repetitive sound.

SDR sounds are a sequence of sound events, each clearly discernible, that cause an increase of 6 dBA or more in the sound level observed before and after an event. SDR sound events are typically less than 10 seconds in duration and occur more than once within an hour. Published studies of noise from wind turbine operations indicate that sound levels can fluctuate over brief periods as noted by the passage of wind turbine blades and typically range from 2 to 4 dBA. The applicant stated that operations of the proposed project are not expected to result in the 6 dBA increase required to be SDR sounds as set forth in Chapter 375.10.

In response to this concern EnRad commented that its experience with its review of the compliance monitoring data from the Stetson Wind Project, a project previously developed by the applicant who is now in operation, was that Short Duration Repetitive

Sound was not observed using a rigorous protocol under very favorable geometric and atmospheric conditions. A tonal sound was observed periodically at 3150 Hz, but did not result in a penalty that effectively changed findings.

Interested parties commented that the sound impacts to protected locations around Pleasant Lake would be worse than predicted because sound carries across surfaces of water. The Department notes that the applicant's noise prediction modeling assigned no ground absorption attenuation to lake surfaces, as appropriate for a hard, reflective surface, and found levels at Pleasant Lake to be in compliance with the Department's regulations.

Interested parties raised questions about the validity of certain noise easements which the applicant submitted. These easements relate to lots in a subdivision which are subject to the restriction: "The lot shall be used only for single family residential purposes and no commercial or business activity shall be conducted on the lot." Interested parties argued that the easements and the reception of noise from the wind turbines would constitute a "commercial or business activity" being conducted on the lot and that such easements would violate the deed restrictions. The Department's conclusion is that the agreement of these neighboring landowners to tolerate noise levels on their property in excess of the levels set by the Department's regulations for a protected location does not constitute conducting a commercial or business activity on that neighboring property. Moreover, restrictions on the free use of property have been strictly construed against such limitations by Maine courts. The Department does not have the legal jurisdiction to ultimately determine whether the landowners' grants of these easements violate the deed restrictions, as such a determination can only be made by a court; however, the Department finds that, for the purposes of determining compliance with the Department's noise standards, these easements are acceptable. In the event the easements were challenged and declared invalid by a court, the applicant would be required to take other actions to assure compliance with the noise standards at these four protected locations.

Interested parties submitted comments which raised a question as to whether the applicant had made proper disclosures to the parties entering into the noise easements. The Department finds that this is a contractual question between the parties to the easement and beyond the scope of the Department's review. In the event a party to such an easement was to successfully challenge the validity of the easement in court, the applicant would be required to take other actions to assure compliance with the noise standards at these four protected locations.

Department Review. The Department retained a third party noise consultant, EnRad Consulting (EnRad), to review the sound level study that was submitted by the applicant and other materials relating to sound submitted by interested parties. In comments dated December 18, 2009, EnRad stated that the Oakfield Wind Project noise assessment is reasonable and technically correct according to standard engineering practices and the Department Regulations on Control of Noise (06-096 CMR 375.10).

EnRad commented that the Oakfield Wind Project prediction model is based on the following assumptions

- individual wind turbine spherical wave fronts,
- mixed ground cover attenuation (general) and reflective water surfaces,
- atmospheric attenuation based on 10°C, 70% RH,
- no attenuation due to foliage or barriers,
- all wind turbines operating at maximum sound power output and
- all wind turbines operating under moderate downwind conditions simultaneously.

EnRad also commented that the incorporation of an uncertainty factor of + 5 dBA for maximum equipment specification potential inaccuracy under stable atmospheric conditions and measurement methodology uncertainties resulted in a reasonable prediction model that is conservative at times.

To confirm that the modeling accurately predicted sound levels and ensure that the sound level limits in this permit are met, EnRad recommended that the Oakfield Wind Project be required to conduct routine operational noise compliance measurements at a minimum of six protected locations designated in the application noise assessment as "Receiver Positions" R1, R4-7 and R9, and provided recommendations for addressing these locations in the final monitoring plan. EnRad stated that these particular sites not only represent the highest predicted sound levels, but also address both the northern and southern turbine arrays from multiple directions and elevations. EnRad recommended that the applicant should be required to demonstrate compliance at these locations based on following outlined conditions for 12, 10-minute measurement intervals per monitoring location meeting 06-096 CMR 375.10 requirements.

EnRad further stated that background ambient monitoring may be required in the areas where extraneous sounds could potentially or do complicate routine operation compliance assessment. If required, background ambient monitoring locations and times will be determined with concurrence from the Department.

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

b. Measurements will be obtained during weather conditions when wind turbine sound is most clearly noticeable, i.e. when the measurement location is downwind of the development and maximum surface wind speeds are ≤6 mph with concurrent turbine hub-elevation wind speeds sufficient to generate the maximum continuous rated sound power from the five nearest wind turbines to the measurement location. Measurement intervals affected by increased biological activities, leaf rustling, traffic, high water flow or other extraneous ambient noise sources that affect the ability to demonstrate compliance will be excluded from reported data. A downwind location is defined as within 45° of the direction between a specific measurement location and the acoustic center of the five nearest wind turbines.

c. Sensitive receiver sound monitoring locations should be positioned to most closely reflect the representative protected locations for purposes of demonstrating compliance with applicable sound level limits, subject to permission from the respective property owner(s). Selection of monitoring locations should require concurrence from MDEP.
d. Meteorological measurements of wind speed and direction should be collected using anemometers at a 10-meter height above ground at the center of large unobstructed areas and generally correlated with sound level measurement locations. Results should be reported, based on 1-second integration intervals, and be reported synchronously with hub level and sound level measurements at 10 minute intervals. The wind speed average and maximum should be reported from surface stations. Department concurrence on meteorological site selection is required.

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

f. Compliance data collected in accordance with the assessment methods outlined above for representative locations selected in accordance with this protocol will be submitted to the Department for review and approval prior to the end of the first year of facility operation. Compliance data for each location will be gathered and submitted to the Department at the earliest possible opportunity after the commencement of operation, with consideration for the required weather, operations, and seasonal constraints.

The Department finds that the sound modeling techniques used by the applicant are in keeping with standard industrial sound modeling protocols, and the review of compliance monitoring data from the Stetson Wind Project has shown the modeling techniques used by RSE to be reasonable, nevertheless, to confirm that the modeling accurately predicted sound levels and to ensure that the standards are met, the Department finds that the applicant must implement the assessment plan referenced above, including the modifications to which the applicant agreed in response to the Town of Oakfield's Wind Energy Review Committee and the additional requirements proposed by EnRad as described above. If the compliance data indicates that the Oakfield Wind Project is not in compliance with Department standards as described above, 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 the project into compliance with the terms of this permit.

The Department will consult with sound engineering professionals in the review of any such compliance plan and reserves the right to require additional mitigation measures. The Department reserves the right to order immediate actions to be taken to mitigate such sounds while this process is taking place, or to take such other enforcement action it finds appropriate.

The Department finds that the applicant has made adequate provision for the control of noise from the proposed project, provided that the applicant implements the monitoring and compliance plans described above.

6. SCENIC CHARACTER, VISUAL QUALITY, & EXISTING USES:

In order to assess the potential scenic impact of the Oakfield Wind Project on resources of state and/or national significance, the applicant submitted a visual assessment of the project area which was prepared by LandWorks, Landscape Architecture, Planning, Graphic Design (LandWorks), dated March 19, 2009. This initial study focused on the viewshed within an 8-mile radius of one or more of the proposed turbine locations.

Subsequent to the submission of the application, it was discovered by the applicant that the portion of Pleasant Lake which lies within T4R3 WELS is listed on the "Maine Wildlands Lakes Assessment" as having significant scenic resources. This omission was due to the fact that the copy of this lakes list, which was posted on the State's Wind Power Task Force website, and on which the applicant relied, was missing three pages. Pleasant Lake was listed on one of these missing pages. The applicant discovered this omission and submitted an Addendum, Visual Assessment of the Proposed Oakfield Wind Project, prepared by LandWorks and dated June 30, 2009.

The Department received approximately 50 public comments from property owners on Pleasant Lake, expressing concerns relating to the visual impact of the proposed project on Pleasant Lake and other issues. These comments included a petition dated September 12, 2009, which was signed by approximately 46 persons. Comments relating to Pleasant Lake were also submitted on behalf of the Powers Family Trust (Powers Trust) which controls approximately two thirds of the shoreline of Pleasant Lake. The Powers Trust comments included comments from Philip Powers, a member of the trust, dated September 10, 2009, and from Jean Vissering of Jean Vissering Landscape Architecture, dated September 21, 2009. The applicant responded to these comments in a November 2, 2009, submission which included materials relating to visual impact prepared by LandWorks and by Terrence J. DeWan & Associates Visual Consultants.

In response the concerns relating to visual impacts to Pleasant Lake, Department staff also toured Pleasant Lake by boat with a representative of the Island Falls Lakes Association and a representative of the applicant on September 23, 2009.

Title 35-A § 3452 (1) in pertinent part provides 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…Title 38 § 484

(3) or § 480-D the Department shall determine, in a manner provided in subsection 3, whether the development significantly compromises views from a scenic resource of state or national significance… . Except as otherwise provided in subsection 2, determination that a wind energy development fits harmoniously into the existing natural environment in terms of potential effects on scenic character and existing uses related to scenic character is not required for approval under…Title 38, section 484 § 3.

Title 35-A § 3452 (2) provides in pertinent part that:

The primary siting authority (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.

Title 35-A § 3452 (3) provides that:

In making its determination pursuant to subsection 1, and in determining whether an applicant for an expedited wind energy development must provide a visual impact assessment in accordance with subsection 4, the Department shall consider:

(A) The significance of the potentially affected scenic resource of state or national significance;
(B) The existing character of the surrounding area;
(C) The expectations of the typical viewer;
(D) The expedited wind energy development's purpose and the context of the proposed activity;
(E) The extent, nature and duration of potentially affected public uses of the scenic resource of state or national significance and the potential effect of the generating facilities' presence on the public's continued use and enjoyment of the scenic resource of state or national significance; and
(F) The scope and scale of the potential effect of views of the generating facilities on the scenic resource of state or national significance, including but not limited to issues related to the number and extent of turbines visible from the scenic resource of state or national significance, the distance from the scenic resource of state or national significance and the effect of prominent features of the development on the landscape.

A finding by the Department that the development's generating facilities are a highly visible feature 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 scenic resource of state or national significance. In making its determination under subsection 1, the primary siting authority shall consider insignificant the effects of portions of the development's generating facilities located more than 8 miles, measured horizontally, from a scenic resource of

state or national significance.

Title 35-A § 3452 (4) provides, in pertinent part that:

> An applicant for an expedited wind energy development shall provide the Department with a visual impact assessment of the development that addresses the evaluation criteria in subsection 3 if the Department determines such an assessment is necessary in accordance with subsection 3. There is a rebuttable presumption that a visual impact assessment is not required for those portions of the development's generating facilities that are located more than 3 miles, measured horizontally, from a scenic resource of state or national significance. The Department may require a visual impact assessment for portions of the development's generating facilities located more than 3 miles and up to 8 miles from a scenic resource of state or national significance if it finds there is substantial evidence that a visual impact assessment is needed to determine if there is the potential for significant adverse effects on the scenic resource of state or national significance…

The proposed Oakfield Wind Project contains "generating facilities" including wind turbines and towers as defined by 35-A M.R.S.A. § 3451 (5) and "associated facilities" such as buildings, access roads, substations, and generator lead transmission lines as defined by 35-A M.R.S.A. § 3451 (1). The proposed Oakfield Wind Project is subject to the expedited wind energy development standards outlined above and, to the extent applicable, 38 M.R.S.A. § 484 (3).

The Department requires that an applicant conduct a visual impact assessment within a three mile radius of the proposed project. Although not specifically required by the Department, the applicant elected to review potential visual impacts within eight miles of the proposed project. The applicant's visual assessment identified scenic resources of state or national significance as defined pursuant to 35-A §3451(9):

1.) National Natural Landmarks (NNL). The applicant's review found no NNL within an eight mile radius of any turbine or associated project facilities.

2.) Historic Resources. The applicant conducted several historic resource surveys, which indicated that there are two properties on the National Register of Historic Places within eight miles of the Project area.
• Oakfield Station on Station Road in Oakfield Village (1.8 miles)
The LandWorks assessment states that the project will not be visible from this location due to screening vegetation and intervening topography, including in the winter when leaves are off deciduous trees.
• Oakfield Grange on Ridge Road and Thompson Settlement Road in Oakfield Village (1.7 miles)
The LandWorks assessment states that some views may be possible from this site.

3.) National or State Parks. The applicant's review found no National or State Parks within an eight mile radius of any turbine or associated project facilities.

4.) Great Ponds. There are two great ponds located to the south of the proposed project, Pleasant Lake and Mattawamkeag Lake, that are designated as having "significant" scenic resources according to "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, pursuant to 35-A M.R.S.A. § 3451 (9)(D).

As noted above, the Department received a number of public comments from interested parties, including representatives of the owners of the eastern portion of Pleasant Lake, relating to the visual impacts of the proposed project on these lakes, primarily relating to Pleasant Lake, the lake nearest the turbines. In response to these comments Department staff took a boat tour of Pleasant Lake with a representative of the local lake association and a representative of the applicant. Materials from the applicant's LandWorks June 30, 2009, visual assessment as well as materials submitted by the interested parties were reviewed from various points on the lake during the tour. Subsequent to that tour representatives of the owners of the eastern portion of Pleasant Lake submitted additional comments on the LandWorks assessment and the applicant submitted responses to those comments.

Pleasant Lake is approximately 1 mile from the nearest proposed turbine location. Mattawamkeag Lake is approximately 3.25 miles from the nearest proposed turbine location. Both lakes are rated "significant" for scenic quality. Only the eastern portion of Pleasant Lake which is in Maine's unorganized territory has an undeveloped shoreline. The western portion, located in Island Falls, is developed with many lakeshore homes and camps, with rural development visible beyond the lakeshore development. The public boat launch which provides access to Pleasant Lake is located at the western end of the lake, so boaters using the public launch must travel through the developed portion of the lake to access the scenic eastern portion. The eastern portion of the lake is located in T4R3 WELS and is held in a single ownership. Based on these facts and its review of all of the material submitted by the applicant and the interested parties the Department finds that the applicant's visual assessments have adequately assessed the impacts to Pleasant Lake, and the more distant Mattawamkeag Lake. Weighing the various arguments presented against the statutory criteria cited above, the Department finds that the proposed project will not have an unreasonable adverse scenic impact on Pleasant Lake or Mattawamkeag Lake.

5.) Scenic Rivers. The applicant's review found no Scenic River or Stream segments within an eight mile radius of any turbine or associated project facilities.

6.) Scenic Viewpoints or Trails. The applicant's review found no scenic viewpoints on state public reserved land or on a trail used exclusively for pedestrian use within eight miles of the proposed project within an eight mile radius of any turbine or associated project facilities.

7.) Scenic Turnouts. The applicant's review found no scenic turnouts off a public road designated as a scenic highway by the Maine Department of Transportation within an eight mile radius of any turbine or associated project facilities.

OTHER EXISTING USES:

Verizon Wireless and its affiliate, Rural Cellular Corporation commented that the siting of wind towers, including the areas affected by the turning blades, should take into account and avoid interfering with existing microwave connections between its towers in Island Falls, Patten, Smyrna and Hodgdon. Verizon submitted coordinates and maps of the connections between these towers. Stantec Consulting, for the applicant, reviewed these materials and commented that the connections do not pass through the project area. Review of the materials by the Department confirms that none of the connections pass through or near the project.

Based on the project's location and design and in consideration of the evaluation criteria pursuant to 35-A M.R.S.A. § 3452 (3), the Department finds that the applicant has made reasonable accommodation to fit the development into the natural environment 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 scenic resources of state or national significance, or other existing uses in the area.

7. WILDLIFE AND FISHERIES:

The applicant submitted the results of a series of ecological field surveys conducted by Stantec Consulting, including avian and bat surveys, wetland delineations, rare, threatened, and endangered plant species surveys, and vernal pool surveys within the project area. In the preparation of the application Stantec consulted with the Department and other natural resource review agencies, including the Maine Department of Conservation Maine Natural Areas Program (MNAP), the Maine Department of Inland Fisheries and Wildlife (MDIFW) and the U.S. Fish and Wildlife Service (USFWS). Stantec also reviewed available wildlife habitat databases and published natural resource classification systems including the Database of Essential Habitats and Sensitive Natural Areas as categorized by MDIFW; Land Use Regulation Commission (LURC) Land Use Maps; Natural Landscapes of Maine the MNAP natural community classification system (Gawler and Cutko 2004); and Biophysical Regions of Maine (McMahon (1990). The results of these reviews are summarized in section 7 of the application. The site-specific field surveys conducted by Stantec include:

- Bat detector surveys in the fall of 2007 and the spring and summer of 2008;
- Nocturnal songbird migration surveys using radar in the spring and fall of 2008;
- Daytime raptor migration surveys in the spring and fall of 2008; and
- Wetland, vernal pool, and vegetation surveys in the spring, summer, and fall of 2008, and a vernal pool survey in the spring of 2009.

Surveys were targeted to provide data to help assess the project's potential to impact birds and bats, rare, threatened and endangered (RTE) plants and animals, breeding

amphibians, and wetlands. The scope of the surveys was based on a combination of developing standard methods within the wind power industry for pre-construction surveys and upon guidelines outlined by USFWS and MDIFW. Avian and bat mortality through direct or near collisions with the turbines are two of the primary wildlife impacts expected from the proposed project. The applicant stated that, once constructed, the turbines and associated facilities are anticipated to pose little threat to terrestrial wildlife.

A.) Significant Vernal Pools. Stantec conducted a vernal pool survey of the project area in May, 2008. This delineation identified 22 vernal pools and 19 potential vernal pools. Of these vernal pools and potential vernal pools, only one was within 500 feet of any proposed project activity. In the spring of 2009 Stantec conducted a vernal pool survey of the pool and found it to meet the Department's identification criteria for a Significant Vernal Pool (SVP) pursuant to Chapter 335, Significant Wildlife Habitat. The project crane path comes within approximately 200 feet of this SVP. The total impact for old and new activities to upland critical terrestrial habitat in this SVP habitat totals 18%. The applicant states that the road cannot be moved further away from the SVP due to slope limitations at that location.

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 GIS mapped Deer Wintering Areas in areas proposed for wind turbines, access roads, collector lines, and associated structures.

D.) Rare, Threatened, and Endangered (RTE) Species. Stantec Consulting conducted an RTE species survey for plant and animal species within the project area wetlands. In addition to that survey, bird and bat surveys conducted during 2007 and 2008 were also capable of documenting RTE species or Species of Special Concern if any were present. Two plant species of Special Concern were discovered during the 2008 surveys, large toothwort (Cardamine maxima) and Goldies fern (Dryopteris goldiana). None of these plants were observed in the areas proposed for project development. Five observations of bald eagles were documented during initial raptor surveys. The bald eagle is currently listed as a Threatened Species in Maine. The applicant conducted additional eagle surveys in the summer of 2009, during which seven observations of bald eagles were documented. Stantec commented that the risk of adverse impact to bald eagles from the project is low, based on the best available information, including observations of eagle activity in the Project area (during both migration and nesting seasons), studies of avian mortality at operating wind facilities, and direct observations of turbine collision avoidance behavior by eagles.

Interested parties have questioned the adequacy of the applicant's assessment of risk to bald eagles. Based on the studies submitted, the requirements for post-construction monitoring and on review comments from MDIFW, and the Department finds that the

applicant has adequately addressed bald eagle usage of the project area and the project is not likely to significantly impact bald eagle populations in the area.

E.) Migratory Birds, Bats, and Raptors. Stantec conducted nocturnal radar surveys during the spring and fall 2008 migration periods to monitor nighttime migratory bird activity at the project site. Based on the results of nocturnal radar surveys, diurnal raptor surveys, and acoustic bat surveys, Stantec observed that passage rates in the project area are comparable to other radar sites in the vicinity, and flight height and flight direction data indicate that the majority of migratory birds are flying at a height sufficient to avoid the proposed turbines and blades. Stantec also observed that the diurnal raptor surveys indicated that passage rate of raptors is low compared to other sites in the area and acoustic bat data suggests that the number of bats in the project area is comparable to other sites geographically similar to Oakfield. Stantec concluded that operation of the proposed project is not expected to pose a significant threat to birds and bats.

Interested parties commented that the proposed project will negatively affect the bald eagles that utilize the Pleasant Lake area. The applicant conducted routine monitoring of raptor activity (including eagles) during fall and spring. MDIFW concluded that results from the studies showed relatively low use of the ridgeline being proposed for development by bald eagles during the surveys. Based upon results of the applicant's wildlife studies and MDIFW's comments, the Department finds that the proposed project is not located in an area of significant bald eagles usage, and the construction and operation of the project will not significantly impact populations of this species.

MDIFW determined that the survey results submitted by the applicant are consistent with other pre-construction studies conducted for wind power projects that MDIFW has reviewed in Maine. MDIFW believes that additional pre-construction studies at this site are not necessary.

MDIFW recommended that a detailed post-construction monitoring plan should be developed in conjunction with MDIFW. The post-construction monitoring efforts should be at least as rigorous as the pre-construction efforts, and include an appropriate amount of radar studies allowing for comparison with preconstruction radar data. This monitoring plan should be conducted in three separate years after the proposed project is placed on-line, specifically after years 1, 3, and 5. MDIFW stated that post-construction monitoring protocols must incorporate a sampling effort at all turbine locations in order to determine the extent of any impacts to wildlife. Monitoring must be done at the individual turbine scale as well as at the project scale. Sampling all turbine locations provides the opportunity to assess whether individual turbines pose an undue risk to wildlife. This sampling scheme will guide MDIFW and the Department in the assessment of appropriate measures for ensuring the avoidance or minimization of any unreasonable adverse impacts, recognizing that new research and technology is constantly developing. Based on recent research findings, 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 a turbine is found to be causing unreasonable adverse impacts as determined by the Department in conjunction with MDIFW, the Department may require suspending operation for periods determined by the Department to be of highest risk, provided there is good reason 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, the Department may require that the applicant modify the operation of the turbine during those high-risk nights; and

(2) On-Site Habitat Management. The applicant may be required to conduct 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 consultation with MDIFW 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; and

(3) Habitat Protection. The applicant may be required to provide appropriate compensatory mitigation for wildlife impacts such as protection or enhancement of wildlife habitat with a similar function and value similar to that impacted by the project. The Department in consultation with MDIFW will determine the need for and appropriateness of any compensatory mitigation.

The post-construction monitoring plan also must include a survey of bald eagle activity associated with the Project. The survey protocol must be developed in consultation with MDIFW and the USFWS, and must be inclusive of both migratory and non-migratory periods. How the post-construction monitoring plan is implemented will be determined by the Department, and will be dependent on the type and severity of impacts, cost benefit considerations, and practicality. Additional measures may be considered by the Department depending on future research findings. Post-construction monitoring shall begin in the first year of the project's operation. The applicant must submit a finalized post-construction monitoring protocol to the Department for review and approval prior to the start of operation.

F.) Other Wildlife (Loons). Interested parties commented that loons frequent Pleasant Lake, that the applicant failed to consider loons in their wildlife studies, and that the proposed project will negatively affect this population of loons. Loons are protected by state and federal laws that prohibit the harassment of wildlife; however, they are not classified as a rare, threatened, or endangered avian species. Preconstruction studies done by the applicant for the proposed project indicate that loons do not utilize the ridgeline.

G.) Streams and associated fisheries. The streams that will be affected by the project consist of a small perennial stream and two intermittent streams. The applicant has proposed one road crossing of the perennial stream. The intermittent streams will be crossed by power line rights-of-way. A review by MDIFW found that there were no fisheries concerns related to the project. Review of the perennial stream by the Atlantic

Salmon Commission found that the impacted stream was unlikely to provide salmon habitat.

The Department finds that the applicant has avoided and minimized impacts to significant wildlife habitat to the greatest extent practicable, and that the proposed project represents the least environmentally damaging alternative that meets the overall purpose of the project. Moreover, the Department finds that the activity will not degrade any significant wildlife habitat, unreasonably disturb wildlife, or unreasonably affect use of the site by the subject wildlife, provided that the applicant submits a finalized post-construction avian, bat, and raptor (including bald eagles) post-construction monitoring protocol to the Department for review and approval prior to the beginning of operation of the Oakfield Wind Project, provided that post-construction monitoring is performed by the applicant, and provided that all in-stream work is conducted from July 15 – September 30.

8. HISTORIC SITES AND UNUSUAL NATURAL AREAS:

Historic Sites: The applicant conducted historic architecture, Euro-American archaeological, and historic archaeological investigations of the proposed project area to determine potential impacts on historic resources.

A. Surveys. In Section 8 of the application the applicant submitted the results of documentary research and field surveys for historic and Euro-American archaeological resources entitled "Phase 0 Archaeological Survey: Oakfield Wind Project, Oakfield, Aroostook County, Maine," prepared by Independent Archaeological Consulting, LLC (IAC) dated March 2, 2009, and revised March 23, 2009. IAC conducted documentary research at the Maine Historic Preservation Commission (MHPC), and conducted field surveys of the project site. Areas identified as potentially sensitive for prehistoric archaeological resources were: the existing East Branch of the Mattawamkeag River crossing at Red Bridge, and new crossings of Moose Brook. The applicant does not propose any changes at the Red Bridge crossing, and IAC found the Moose Brook crossing to have low sensitivity for archaeological resources. No areas of likely prehistoric stone exploitation were found. The phase 0 archaeological survey identified five historic homestead locations potentially impacted by the project. The applicant has conducted phase 1 surveys of these sites in coordination with the MHPC. No impacts to archaeological resources have been identified by these surveys.

   The findings of the Phase 0 archaeological survey and the follow-up Phase 1 work related to five historic homestead locations have been reviewed by the Maine Historic Preservation Commission which found the surveys sufficient and commented that no further work was necessary regarding archaeological resources.

B. Historic Architecture Survey. A historic architecture survey was conducted in accordance with the requirements of Section 106 of the National Historic Preservation Act of 1966. The report and analysis of the historic architecture was prepared by PAL, Inc., dated March 2009, and is seen in the application in Appendix

8-3. This survey was conducted for an eight mile radius of the proposed wind turbines. The PAL survey found no historic properties that would be directly impacted by the proposed project. The PAL survey identified two properties in the survey area that are listed in the National Register of Historic Places, Oakfield Station and Oakfield Grange #414. Based on the results of the visual impact assessment conducted by LandWorks and discussed in section 6 above, PAL concluded that the proposed project would have no impact on these two properties. The PAL survey assessed potential indirect effects for 28 other properties that were potentially eligible for listing in the National Register. The applicant conducted further consultation with the MHPC, which identified two of these potentially eligible historic resources as requiring the preparation of a National Register of Historic Places Multiple Property Documentation Form to mitigate for indirect visual impacts from the project. The applicant has agreed to perform this documentation.

Unusual Natural Areas: To determine if unusual natural areas, including rare, threatened, and endangered (RTE) species occur with the scope of the project, the applicant consulted with the Maine Natural Areas Program. In a letter dated July 16, 2007, the Natural Areas Program stated that there are no rare botanical features documented specifically within the project area.

Additionally, Stantec Consulting completed field investigations in 2008 that included wetland delineations, vernal pool surveys, and a landscape analysis-based RTE plant field survey. The survey characterized the existing natural communities and assessed the potential of the on-site natural communities to support RTE plant species. Two RTE species were observed during the field surveys, large toothwort (Cardamine maxima) and Goldies fern (Dryopteris goldiana). Neither species was observed in areas proposed for development.

The Department finds that the proposed development will not have an adverse effect on the preservation of any historic sites or unusual natural areas either on or near the development site, provided the applicant prepares documentation of two potentially eligible historic resources and submits that documentation to the MHPC and the Department prior to commencement of project operation.

9. BUFFERS:

The applicant proposes to maintain vegetated buffers for stormwater management, phosphorus control, and water body protection. Buffers for the proposed project include no-disturbance buffers around roads and turbines, a corridor buffer, and waterbody buffers at streams and other crossings. The vegetation cutting practices which have been proposed to preserve and maintain buffers include no cutting, limited and selective clearing, and mechanized clearing combined with selective use of herbicides.

1.) Access Road, Crane Path, and Turbine Buffers. The applicant proposes to maintain forested buffers for access roads and turbines. These buffers are restricted ground disturbance areas designed for the purpose of creating a visual screen and providing stormwater runoff and phosphorus treatment, which is further described in Finding 11.

Sixteen feet of the proposed 32 foot wide crane paths and most of the turbine pad areas, specifically the construction laydown area for each turbine, will be allowed to re-vegetate in order to provide additional buffering capacity.

2.) Generator Lead Buffers. The area within the generator lead corridor will require vegetative cutting to meet line safety and reliability goals. The applicant proposes to employ ISO-New England safety standards in the vegetative management of the collector line. Corridor construction and maintenance procedures will provide for the retention of low ground cover to the greatest extent practicable during construction, restoration and stabilization of areas affected by construction, and ongoing maintenance activities with the intention of promoting long-term growth of low vegetation.

3.) Stream Buffers. The applicant proposes to maintain a minimum of a 25 foot wide forested buffer along streams crossed by the generator lead line and streams adjacent to new access roads. The use of herbicides will be prohibited within all waterbody buffers and within 25 feet of any wetlands with water visible at the surface. Additionally, no refueling or maintenance of equipment will be performed within waterbody buffer areas. No permanent structures will be placed within 100 feet of any stream. Further, tree cutting in stream buffer areas will be limited to hand removal of capable species greater than eight feet tall.

Vegetation Maintenance Plan. The applicant submitted a vegetation maintenance plan (Appendix 10-1 of the application) entitled "Post-Construction Vegetation Maintenance Plan" prepared by Stantec Consulting and dated February, 2009. The plan summarizes vegetation maintenance methods and procedures that will be utilized by the applicant for the transmission line corridor, and describes maintenance requirements and restrictions associated with waterbody crossings. Further, the plan provides procedures for managing or removing osprey nests built on power line structures, describes a system for identifying restricted areas, and summarizes training requirements for personnel and contractors.

The Department finds that the applicant has made adequate provision for buffer strips provided that the applicant complies with the post-construction vegetation management plan submitted in the application, and that all visual screening buffers and stormwater treatment buffers are marked on the ground pursuant to Chapter 500 Stormwater Management rules within 60 days of the start of operation. Further, prior to the start of operation, the applicant must record deed restrictions with the Registry of Deeds for the subject parcels. The deed restrictions must be consistent with Chapter 500 Stormwater Management Rules and have attached a plot plan for the parcels, drawn to scale, that specifies the location of all stormwater 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 A High Intensity and Class L Linear Soil Surveys for the proposed project site prepared by Albert Frick Associates, Inc. and dated January 2009. These reports are contained in Section 11 of the application and concluded that the soils are generally appropriate for the proposed construction activities.

All of the soils reports were reviewed by staff from the Division of Environmental Assessment (DEA) of the Department's Bureau of Land and Water Quality. DEA also reviewed a blasting plan submitted by the applicant, which outlines the proposed procedures for blasting in the area of the turbine foundations, the proposed access roads in areas requiring significant cut, and underground power line trenches.

In response to the Town of Oakfield's Wind Energy Review Committee the applicant has also stated a commitment that pre-blast surveys will include bedrock wells and Evergreen (or its contractor) will provide written notice to the Town and all landowners with structures within 2,000 feet of any blasting area at least three (3) days prior to commencing any blasting operations.

Prior to any blasting on the project site, the applicant must submit a pre-blast survey to the Department. All blasting must be conducted in compliance with the provisions set forth by 38 M.R.S. § 490-Z (14).

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 provided that the applicant submits a pre-blast survey to the Department prior to any blasting on the project site.

11. STORMWATER MANAGEMENT:

The proposed project includes approximately 45.1 acres of new impervious area and 50 acres of new developed area. The proposed project lies within the watershed of the Mattawamkeag River, Spaulding Lake, Meduxneakeag (Drews) Lake, and Skitacook Lake. The applicant submitted a stormwater management plan based on the basic, general, and flooding standards contained in Department Rules, Chapter 500. Under the general standards, the applicant is applying the phosphorous methodology to address impacts to Spaulding Lake, Meduxneakeag (Drews) Lake, and Skitacook Lake. Stormwater quality treatment will be achieved with various road side buffers, ditch turnout buffers, and stone bermed level spreader buffers, and two grassed underdrained soil filters. Stormwater flooding mitigation will be achieved with flow distribution through the use of road side buffers, ditch turnout buffers, stone bermed level spreaders, and three grassed underdrained soil filters.

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 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 Division of Watershed Management (DWM) of the Department's Bureau of Land & Water Quality. DWM commented that the applicant's erosion control plan is 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 which become necessary.

Given the size and nature of the project site, the applicant must retain the services of a third party inspector in accordance with the Special Condition for Third Party Inspection Program, which is attached to this Order. The inspecting engineer should make weekly visits to the project site and report on the erosion and sedimentation control efforts, and problems encountered during the inspections, if any, and recommend corrective measures which 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 will be included on the final construction plans and the erosion control narrative will be included in the project specifications to be provided to the construction contractor. Prior 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. This plan was reviewed by DWM. The maintenance plan is based on the standards contained in Appendix B of Chapter 500. The applicant will be responsible for the maintenance of all common facilities including the stormwater management system.

(3) Housekeeping: The 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).

B. General Standards:

The applicant's stormwater management plan includes general treatment measures that will 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 collector substation and Operations & Maintenance building) is being achieved by using Best Management Practices that will provide stormwater treatment for 95.3% of the impervious area and 95.3% of the developed area. 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 76.2% of the volume from the impervious area and 76.2% of the developed area.

Because of the proposed project's location partially within the watersheds of Spaulding Lake, Meduxnekeag (Drews) Lake, and Skitacook Lake, stormwater runoff from the portion of the project site in these lakes' watersheds will be treated to meet the phosphorus standard outlined in Chapter 500(4)(C). The applicant's phosphorus control plan was developed using methodology developed by the Department and outlined in "Phosphorus Control in Lake Watersheds: A Technical Guide for Evaluating New Development". For this project, the permitted phosphorus export is 3.237 pounds of phosphorus per year to Spaulding Lake, 6.028 lbs/yr to Meduxnekeag Lake, and 2.384 lbs/yr to Skitacook Lake. The applicant proposes to remove phosphorus from the project's stormwater runoff by utilizing the stormwater treatment methods discussed above and incorporating a Phosphorous Restriction Zone totaling approximately 155 acres discussed in Finding 9. The proposed stormwater treatment will be able to reduce the export of phosphorus in the stormwater runoff equal to the maximum permitted phosphorus export for the project site.

The forested, limited disturbance stormwater buffers will be protected from alteration through the execution of a Declaration of Restrictions. The Declaration of Restrictions must have attached to it a plot plan, drawn to scale, that specifies the location of the buffers. The applicant proposes to use the deed restriction language contained in Appendix G of Chapter 500. The Deed Restriction must be recorded prior to the start of construction, and the applicant must submit a copy of the recorded deed restriction including the plot plan to the Department within 90 days of its 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 shall include, but are not limited to, a combination of field flagging and clearly marked 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. DWM recommended that the applicant retain the services of a professional engineer to inspect the construction and stabilization of the road ditch turnouts and stone bermed level spreaders to be built on the site. Inspections must consist of weekly visits to the site to inspect each turnout and level spreader's construction, stone berm material and placement, and settling basin from initial ground

disturbance to final stabilization. If necessary, the inspecting engineer will interpret the turnouts' and spreaders' location and construction plan for the contractor. Once the turnouts and spreaders are constructed and stabilized, the inspecting engineer will notify the Department in writing within 14 days to state that the turnouts and spreaders have been completed. 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, the items inspected on each visit, and include any testing data or sieve analysis data of the berm media.

The applicant must also retain the services of a professional engineer to inspect the construction and stabilization of the grassed underdrained soil filters. The same protocol as listed above must be followed. The engineer must include data that includes information about the filters' effectiveness and determine any maintenance items needed.

Based on the stormwater system's design and DWM's review, the Department finds that the applicant has made adequate provision to ensure that the proposed project will meet the Chapter 500 General Standards provided that the applicant adheres to the required protocol for inspections of the ditch turnouts, level lip spreaders, and grassed underdrained soil filters as outlined above.

C. Flooding Standard:

The applicant is proposing to utilize a stormwater management system based on estimates of pre- and post-development stormwater runoff flows obtained by using Hydrocad, a stormwater modeling software that utilizes the methodologies outlined in Technical Releases #55 and #20, U.S.D.A., Soil Conservation Service and detains stormwater from 24-hour storms of 2-, 10-, and 25-year frequency.

DWM reviewed the analysis of the watersheds involved in the proposed project for flooding. DWM commented that the nature of the linear project creates relatively little impervious area in any one sub-watershed. The applicant analyzed the impact of the conversion of cover type on the wider watershed area. The project has been designed to turn out or buffer as much of the road impacts as possible. This creates a large amount of disconnected impervious area, keeps flows from exiting the site in concentrated flow, and lengthens the flow path in a manner that will mitigate for local flooding impacts. As a result of this analysis the applicant has determined that in the Mattawamkeag River Watershed there is a slight increase in the modeled Post- Development Flows from the project. This impact is spread out over the entire 6515 acre watershed and results in <0.04 cfs / acre. This increase is less than 5% across the watershed and is an insignificant increase which will not have an unreasonable impact on the watershed.

An interested party commented that a meteorological tower site developed by the applicant in Island Falls has caused flooding of the Dyer Brook, and expressed concern that the Oakfield project would cause flooding. The Island Falls met tower is not part of the Oakfield project. As noted above, DWM has reviewed the applicant's plans for

stormwater management on the Oakfield project and the Oakfield project is expected to result in an insignificant increase in stormwater runoff.

The following minor adjustments may be made during construction without advance notice to the Department provided they do not impact regulated resources and are reflected in the final as-built drawings: changes that result in a reduction in impact and/or footprint (such as a reduction in clearing or impervious area, and elimination of structures or a reduction in structure size); location of a structure within the identified clearing limits; the type of foundations used; additional drainage culverts, level spreaders or rock sandwiches; changes to culvert size or type provided the hydraulic capacity of the substitute 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 and do not require a revision or modification of the permit but must be reflected in the final as built drawings: minor changes that do not increase overall project impacts or project footprint and which do not impact any regulated resources as long as any new areas of impact have been surveyed for environmental resources and do not affect other landowners. These changes include adjustments to horizontal or vertical road geometry that do not result in changes to the stormwater management plan; a shift of up to 100 feet in a turbine clearing area; and adjustments to culvert locations based on in field topography.

Other modifications not exempted from licensing requirements by statute or rule require written approval before the modification may be undertaken.

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 will meet the Chapter 500, Flooding Standard for channel limits and runoff areas, and peak flow from the project site.

12. GROUNDWATER:

The applicant submitted the Maine Geological Survey, "Significant Sand and Gravel Aquifers" map for the Oakfield Quadrangle, which encompasses the proposed project site. There are no mapped significant sand and gravel aquifers on the project site. The Maine Geological Survey data indicates that the nearest aquifer is located along the East Branch of the Mattawamkeag River to the west of the project. A single drilled well is proposed to serve domestic needs at the project's Operations & Maintenance building. The proposed project is not anticipated to affect any significant sand and gravel aquifers.

Spill Prevention, Control, and Countermeasures (SPCC) plan. 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 applicant submitted general operational requirements, storage and

handling requirements, and training requirements to prevent spilling of oil, hazardous materials or waste. The application also sets out spill reporting and cleanup requirements should such an event occur. The applicant proposes to submit a final SPCC plan for the operation of the facility within six months after the commencement of facility operations. No herbicides will be used, stored, mixed, or transferred between containers within the stream buffer areas, and no refueling of equipment will be allowed in these buffers. Prior to 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 in maintenance of the right of way, the 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.

The Department's Division of Environmental Assessment (DEA) reviewed the applicant's proposals for protecting groundwater and recommended that installation of the well and wastewater disposal system in accordance with the proposed plans should be confirmed after construction.

The Department finds that the proposed project will not have an unreasonable adverse effect on ground water quality provided that, subsequent to construction, the applicant submits a site drawing showing the location of the Operations and Maintenance building well and confirming the wastewater disposal field was constructed at the approved location. Within six months of the commencement of facility operations, the applicant must submit a final SPCC plan for the operation of the facility for review and approval.

13. WATER SUPPLY:

The proposed project will not require water supply for the operation of the wind turbines or the electrical equipment. The only anticipated demand for water will be at the Operations & Maintenance building. A private water well will be drilled on-site to supply potable water to the Operations & Maintenance building. During construction, the applicant or its contractors will supply drinking water to workers. Drinking water will be supplied either from an existing public water supply or by bottled or other bulk water supply.

The application states that non-potable water will be needed for dust abatement at a rate of up to 20,000 gallons per day during construction. This water will not be withdrawn from groundwater sources or from rivers or streams. The application states that a 4,000 gallon tanker truck will bring water to the site from local lakes. The department finds that the proposed amount of withdrawal is not anticipated to have any impact on lake water levels.

The applicant's proposals for water supply have been reviewed by the Department's Division of Environmental Assessment, which found no objection to the applicant's

proposals. The Department finds that the applicant has made adequate provision for securing and maintaining a sufficient and healthful water supply.

14. WASTEWATER DISPOSAL:

The applicant stated that the only potential generation of wastewater would be from the domestic water needs at the proposed Operations & Maintenance building. The applicant has submitted a design for a septic system designed to handle waste water from up to 10 employees, with an allowance for 5 additional visitors to the site. This equates to approximately 225 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 February 27, 2009, and prepared by Albert Frick, a licensed professional site evaluator. The applicant also submitted the soil survey map and report discussed in Finding 10. The design of the wastewater disposal system complies with the Subsurface Wastewater Disposal Rules. The septic disposal system will be built on suitable soils and will be sited on the Maintenance Facility Lot a minimum of 100 feet from the water supply well.

The applicant's proposal for wastewater disposal was reviewed by DEA, which found the proposal to be adequate. Based on the materials submitted and DEA's comments, the Department finds that the proposed wastewater disposal system will be built on suitable soil types.

15. SOLID WASTE:

The development of the site and construction of the turbines will generate approximately 1,180 cubic yards of construction debris, packaging materials, and associated wastes. All construction and demolition debris generated will be disposed of at the Juniper Ridge Landfill, which is in substantial compliance with the Solid Waste Management Regulations of the State of Maine. By letter, dated February 25, 2009, Juniper Ridge Landfill stated that the landfill has the capacity to accept this construction waste. This facility is located in West Old Town.

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 ground or chipped and used as mulch on the site. Stumps will only be removed where necessary for placement of a structure or for proper matting or travel. Stumps will be buried on-site in an area of less than one acre.

Solid waste produced during operation of the proposed project is expected to be limited to general office waste from the operations and maintenance building. The applicant will contract with a licensed waste hauler to periodically transport this office waste to the Oakfield Transfer and Recycling Center.

The Department's Bureau of Remediation and Waste Management reviewed the applicant's proposal for solid waste disposal, and stated that the proposal is adequate provided that construction debris is transported directly to the Juniper Ridge landfill. The applicant has committed to transporting construction related solid waste to the Juniper Ridge landfill. Any change in these plans would require the approval of the Department.

Based on the above information and the Bureau of Remediation and Waste Management review, the Department finds that the applicant has made adequate provision for solid waste disposal.

16. FLOODING:

The proposed project is not located in a flood zone. 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. Based upon information in the record, 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 AND WATERBODY IMPACTS:

Stantec Consulting conducted the applicant's surveys for wetland and waterbody resources on the Oak Wind Project site and summarized the results of that work in Section 7 of the application. The surveys addressed the ridgeline, including five turbine corridors, the proposed access road corridors, and the proposed electrical collection system and substation. The results of these surveys are summarized as follows:

- Stantec identified a total of 154 resources along the ridgeline, 13 of which are streams with no adjacent wetland. Of these 154 resources, 24 contain streams, 9 contain vernal pools, 13 contain potential vernal pools, and 29 would be considered Wetlands of Special Significance. Six of the 15 vernal pools identified would be considered Significant Vernal Pools.
- Stantec identified a total of 78 resources within the access road corridors, 4 of which are streams with no adjacent wetland. Of these 78 resources, 22 contain streams, and 23 would be considered Wetlands of Special Significance. Four of these Wetlands of Special Significance occur within mapped MDIFW Significant Inland Bird and Wading Waterfowl Habitat. Seven vernal pools were also identified, none were Significant Vernal Pools.
- Stantec identified a total of 24 wetlands and 1 waterbody within the collection line corridor and substation parcel. Of the 24 wetland resources, 6 contain streams and 5 would be considered Wetlands of Special Significance. No vernal pools were identified.

Freshwater Wetland Impacts. The applicant proposes to permanently fill 2,440 square feet of wetlands, and clear vegetation from an additional 3,590 square feet of wetlands for the construction of the access roads. The applicant proposes to clear vegetation from 5,200 square feet of wetlands for the electrical collector system. The applicant also

proposes to use temporary construction mats on 715 square feet of wetlands during construction activities along the electrical collector system.

Rivers, Streams and Brooks. Three streams are proposed to be crossed in the construction of the project. The access road will cross one of these streams, a small perennial stream, impacting 66 linear feet of the stream. The electrical collector system crosses one small perennial stream and one intermittent stream; however, no in-stream work is anticipated for these crossings. To minimize impacts to fisheries, the applicant proposes to implement a vegetative management plan and impose a 25 foot riparian stream buffer width along all streams as described in Finding 9.

Chapter 310 interprets and elaborates on the NRPA criteria pertaining to wetlands. 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 alteration permit must provide an analysis of alternatives in order to demonstrate that a practicable alternative does not exist.

A. Avoidance. Stantec Consulting prepared an alternatives analysis for the proposed project which was submitted as section 1A of the application. This analysis addresses multiple factors that were considered in the selection of the site. These factors include quality of the wind resource, geography, compatibility with existing land uses, costs and logistics of delivering power to market, and environmental impacts. The analysis also discusses the factors leading to the choice of the proposed transmission line route from five alternative routes. The application states that efforts to avoid wetland impacts in the planning of this project included using existing roads and placing roads and turbine platforms outside of wetland areas to the maximum extent practicable. The only project component for which the applicant is proposing permanent wetland fill impacts is the access road network. Overall, the applicant proposes to permanently fill 2,440 square feet of forested, scrub shrub, and emergent freshwater wetlands and to clear 8,790 square feet of wetland vegetation due to construction of the roads and transmission lines. The access roads require only one stream crossing, and the transmission lines cross two streams.

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. The applicant took precautions to avoid crossing flat areas of wetlands with roads. In the areas where wetland impacts could not be avoided, the applicant minimized wetland impacts by using various techniques. Some techniques used to minimize impacts included narrowing road shoulders where possible and modifying cut and fill slopes on both roads and turbine pads. The applicant maximized buffers to allow larger riparian areas between roads and turbine pads and the wetland areas. The applicant also designed roads through some areas to ensure that they crossed at the most narrow point of the wetland and would have minimal effect on the larger wetland area's function. The use of the existing road in the design of the collector line also minimizes wetland impacts.

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 applicant is proposing to permanently alter less than 15,000 square feet of freshwater wetland.

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 vegetative management plan contained in the application.

18. AIR QUALITY:

The applicant stated that construction activities may cause temporary effects on air quality in the form of exhaust from construction vehicles and dust from unpaved roads. However, effects will be minimal due to the location of the proposed project in a rural setting and the limited duration of construction in any one place. Routine maintenance of the transmission line will create will not create significant emissions from maintenance vehicles and will be similar to emissions currently produced by maintenance of other existing transmission lines.

Dust created by construction equipment is anticipated along existing logging roads, although the level of dust created will be similar to existing ongoing logging operations in the proposed project area. No treatment is generally applied except where safety and visibility may be problematic. However, the applicant proposes to treat some areas with calcium chloride, water, or other approved dust control agent where dust may be a nuisance to neighbors. Treatment will be on an as-needed basis as ordered by the resident engineer. Other areas such as construction entrances to public roads will have crushed stone pads that will limit dust and mud tracking. Dust is not anticipated to be an issue along the transmission right-of-way.

The applicant does not propose using a rock crusher on the project site during the construction of the proposed project; however, if a rock crusher is required to be utilized on site, the applicant must insure that the crusher is licensed by the Department's Bureau of Air Quality and is being operated in accordance with that license.

The Department finds that no significant source of air emissions has been identified with the exception of dust emissions as described above, and the proposals for limiting dust emission are adequate, provided that if a rock crusher is utilized on site, the applicant must insure that the crusher is licensed by the Department's Bureau of Air Quality and is being 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 limited, short term odors from equipment exhaust.

Clearing activity will be conducted with standard forestry equipment under controlled conditions. If burning of vegetation is anticipated, burning will be accomplished in compliance with local and state open burning requirements. Any brush burning will be supervised by a construction supervisor and environmental inspector.

No significant sources of odors have been identified.

20. ALTERATION OF CLIMATE/WATER VAPOR:

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

21. ACCESS TO SUNLIGHT:

The proposed project will not significantly affect any adjacent properties access to sunlight.

22. 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 not the sun seen through a rotating wind turbine rotor nor what an individual might view moving through the shadows of a wind farm. Shadow flicker does not occur when the sun is obscured by clouds or fog or when the turbine is not rotating. The spatial relationships between a wind turbine and receptor, as well as wind direction are key factors related to shadow flicker duration. At distances of greater than 1,000 feet between wind turbines and receptors, shadow flicker usually only occurs at sunrise or sunset when the cast shadows are sufficiently long. For situations 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 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, prepared by Stantec Planning and Landscape Architecture, PC, dated March 24, 2009. This analysis was submitted as Section 26 of the application. The applicant utilized WindPRO, a wind modeling software program, to model expected shadow flicker effects on adjacent properties from the 36 potential turbine locations. The applicant assumed a worst case scenario by assuming that the sun is shining every day and that all receptors face the turbine directly. 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 nearest potential receptor identified in the applicant's study was approximately 2,400 feet from the nearest turbine. There are no residential structures that are not subject to an easement at a distance less than 2,400 feet from the nearest proposed turbine location. The furthest receptor studied was approximately 3,200 feet from the nearest turbine. There were 20 potential impacted receptors identified in this range.

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 Stantec analysis of twenty potential shadow flicker receptors, using worst case modeling assumptions, indicated potential exposures between 2 and 24 hours per year. Using actual wind direction data from the site and 2008 sunshine data from the nearest National Atmospheric and Oceanic Administration reporting station (Caribou) to the modeling yielded expected impacts of from 20 minutes to 4.5 hours per year. Stantec stated that when vegetation were taken into consideration, actual impacts would be expected to be even less.

The Department finds that the shadow flicker modeling conducted by the applicant is credible and based upon the proposed project's location and design and results of the shadow flicker analysis, the Department finds that the proposed project will not unreasonably cause shadow flicker to occur over adjacent properties.

23. PUBLIC SAFETY:

The proposed project will use General Electric 1.5 megawatt (1.5 sle) wind turbine generators. The turbines have been certified by Germanischer Lloyd, a wind power product certification authority, to withstand Class IIA wind gusts, as defined by the International Electrotechnical Commission Standard 61400-1 "Wind Turbine Generator Systems-Part 1: Safety Requirements." The Standard considers an extreme wind speed at hub height of 42.5 meters per second. The applicant submitted evidence that the General Electric 1.5sle wind turbine meets acceptable safety standards in the form of a Statement of Compliance issued by Germanischer Lloyd dated December 19, 2008.

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 establishing a recommended safety setback, the Department considered industry standards for wind energy production in climates similar to Maine, as well as the guidelines recommended by certifying agencies such as Det Norske Veritas. Based on these sources, the Department recommends that all wind turbines be set back from the property line, occupied structures or public areas, at a minimum of 1.5 times the maximum blade height of the wind turbine. The maximum blade height of the General Electric 1.5 sle is 389 feet from the ground to the tip of the fully extended turbine blade. Based on the Department setback specifications, the minimum setback distance to the nearest property line should be 584 feet. The applicant states that all proposed turbine

locations are greater than 584 feet from any abutting property lines. This is also demonstrated by the plans submitted with the application.

The Town of Oakfield's Wind Energy Review Committee identified snowmobile trails that may fall within the 584 foot safety setback. The applicant has agreed to work with the Town and interested parties to relocate those trails. The applicant will be required to submit a report of these efforts and any further actions planned regarding these trail relocations to the Department for review and approval prior to commencement of project operation.

The Department finds that the applicant has provided documentation in the form of standards of compliance by the manufacturer that the wind generation equipment has been designed to conform to applicable industry safety standards and has demonstrated that the proposed 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 appropriate safety related setbacks from adjacent properties and existing uses, provided a report of trail relocation efforts is submitted to the Department for review and approval prior to commencement of project operation.

24. DECOMMISSIONING PLAN:

The General Electric 1.5 wind turbine generators are designed and certified by independent agencies for a minimum expected operational life of 20 years. In order to facilitate and ensure appropriate removal of the wind generation equipment when it reaches the end of its useful life, the Department requires an applicant to demonstrate, in the form of a decommissioning plan, the means and methods by which decommissioning will be accomplished. The applicant submitted a decommissioning plan as Section 29 of the application. The decommissioning plan includes a description of the trigger for implementing the decommissioning plan, a description of work required, an estimate of decommissioning costs, and a demonstration of financial assurance.

1.) Description of trigger for implementation of decommissioning. The applicant states that the wind generation facility will be decommissioned when and if it ceases to generate electricity for a continuous period of twelve months. In the case of mitigating circumstances such as force majeure event, the applicant may submit to the Department for review and approval, reasonable evidence that the project has not been abandoned and should not be decommissioned.

2.) Description of work. The description of work contained in Section 29 of the application outlines how the turbines and other components of the proposed project will be dismantled and removed from the site. Pursuant to Department guidelines, 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 owner must submit a plan for continued beneficial use

of any wind energy development component proposed to be left on-site to the Department for review and approval.

3.) Cost estimates for decommissioning. The applicant stated that the total cost of decommissioning, minus salvage value, is estimated to be $935,531. A detailed breakdown of decommissioning costs is included in Section 29 of the application.

4.) Financial assurance. The applicant will ensure that financial assurance for decommissioning costs will be fully established at least five years prior to expected end of useful economic life of the project as follows. On or prior to December 31 of each calendar year for years 1-7 commencing with project construction activities, an amount equal to $50,000 will be reserved in the form of a performance bond, surety bond, letter of credit, parental guaranty or other acceptable form of financial assurance, to the Decommissioning Fund. On or prior to December 31 of year 15 of the project's operation, the estimated cost of decommissioning, minus salvage value, will be reassessed and an amount equal to the balance of such updated estimated cost of decommissioning, less salvage value and less the amounts reserved in years 1-7, will be reserved for decommissioning and site restoration. The applicant states that financial assurance will be kept in place until such time as the decommissioning work has been completed, provided that to the extent available as liquid funds, the financial assurance may be used to offset the costs of the decommissioning. The applicant shall structure the financial assurance such that the Department will have third-party authority to access and utilize the decommissioning funds for the specific purpose of accomplishing decommissioning and site restoration as described in the application. The trigger for the Department's third party rights shall be the dissolution of the project's owner or if the project ceases to generate electricity for a continuous period of twelve months.

In response to the Town of Oakfield's Wind Energy Review Committee the applicant has also stated a commitment that on or prior to the end of calendar year 15 of the project's operation, Evergreen will simultaneously submit to the Town and the DEP the reassessed estimated cost of decommissioning (minus salvage value).

Interested parties have stated that the applicant's decommissioning cost estimates are not substantiated, that the salvage value estimate is unsubstantiated, and that the decommissioning plan is insufficiently funded.

The Department considered the concerns raised by interested parties. The applicant provided an estimate and provisions for the total cost of decommissioning less salvage value of the equipment. The Department finds that the applicant has made adequate provisions for demonstrating a decommissioning plan and a means to execute the plan provided that the applicant submit revised estimates of decommissioning costs and appropriate demonstration of financial assurance to cover the full revised cost estimates no later than December 31 of year 15 of operation of the proposed project to the Department for review and approval.

25. TANGIBLE BENEFITS:

The applicant has submitted a description of the tangible benefits likely to be provided by the Oakfield Wind Project as Section 28 of the application. In that description the applicant states that the project will provide significant tangible benefits to the State of Maine and to the host community of Oakfield, including economic benefits and environmental benefits.

The applicant contends that the host community will benefit through lease payments for land, employment opportunities, the local purchase of materials and supplies, taxes paid on the project and a proposed annual Community Benefit Fund payment. The local host community and immediately surrounding areas can benefit through construction-related employment opportunities and the ancillary economic benefits of that construction activity. There will be the opportunity for direct jobs for activities such as tree clearing and excavation, and ancillary jobs in businesses that support construction such as lodging, restaurant, fuel and concrete supply. Following the construction phase, Evergreen Wind Power II, LLC (Evergreen II) anticipates hiring three to eight permanent employees to operate and maintain the facility. The project is likely to provide a direct economic benefit to the approximately 34 local landowners participating in the project through land leases and easements.

The State of Maine is also expected to see economic benefits from the estimated $130 million dollar project cost, a significant portion of which is expected to be spent on development, engineering, and construction-related activities provided by Maine firms. The applicant has submitted lists of Maine businesses already engaged with the Oakfield project, and a list of Maine businesses that benefited from the similarly sized Stetson wind project as an example of the employment and economic benefits likely to result from the Oakfield project.

The applicant contends that the project will increase energy diversity, thereby helping to reduce electric price volatility in Maine. The project will help Maine meet its commitments under the Regional Greenhouse Gas Initiative (RGGI), which establishes limits for emissions associated with the generation of electricity. The project will also have the capacity to generate approximately 135,000 megawatt hours of electric generation each year with no air or water pollution and with no greenhouse gas emissions, a leading cause of global warming.

Community Benefits Fund. The applicant has agreed with the Town of Oakfield to establish a Community Benefits Fund. This fund would be used at the Town's discretion to provide direct economic benefits to its citizens by creating new programs or funding existing programs such as low income home heating assistance or energy conservation and/or efficiency. The applicant would contribute $5,000 per MW of installed capacity per year, for a maximum total contribution of $255,000 per year for up to twenty years, to this Fund. This proposal has been accepted by the Town of Oakfield by a vote on September 28, 2009.

Interested parties stated that the tangible benefits of the project are inadequate. The Department reviewed the concerns expressed by interested parties, as well as comments submitted by the Maine Department of Labor and the Maine State Planning Office. Based upon consideration of all of the benefits proposed by the applicant, information in the record, and interested parties' comments, 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 § 3454.

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.A. Sections 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 submits a finalized post-construction avian, bat and raptor (including eagles) monitoring protocol to the Department for review and approval prior to the start of operation of the Oakfield Wind Project and implements the approved protocol as described in Finding 7, and provided all in-stream work is conducted between July 15 and September 30.

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.A. 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. Sections 481 et seq.:

A. The applicant has provided adequate evidence of financial capacity and technical ability to develop the project in a manner consistent with state environmental standards provided that prior to the start of construction, the applicant submits evidence for review and approval 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 another form of financial assurance determined by the Department pursuant to Chapter 373(1), as described in Finding #3.

B. The applicant has made adequate provision for fitting the development harmoniously into the existing natural environment and 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 the sound compliance assessment plan and submits to the Department for review and approval, if necessary, a revised compliance plan that demonstrates that the project will be in compliance at all the protected locations surrounding the development as discussed in Finding 5.

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 to the Department prior to any blasting occurring on the project site, and provided that if a rock crusher is utilized on site, the applicant insures that the crusher is licensed by the Department's Bureau of Air Quality and is being operated in accordance with that license.

D. The proposed development meets the standards for stormwater management in Section 420-D and the standard for erosion and sedimentation control in Section 420-C provided that the applicant adheres to the required protocol for inspections of the ditch turnouts, level lip spreaders, and grassed underdrained soil filters as outlined in Finding 11, and provided that the applicant retain the services of a third party inspector in accordance with the Special Condition for Third Party Inspection Program.

E. The proposed development will not pose an unreasonable risk that a discharge to a significant groundwater aquifer will occur.

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 area served by those services provided that the applicant submits a final SPCC plan for the operation of the facility for review and approval prior to the start of operation

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 activity will not unreasonably cause shadow flicker effects to occur over adjacent properties.

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

J. The activity will provide significant tangible benefits to the host community and surrounding area.

THEREFORE, the Department APPROVES the application of EVERGREEN WIND POWER II, LLC, to construct a 51-megawatt wind energy development project, known as the Oakfield Wind Project, in the Town of Oakfield, Maine, 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. Prior to the start of construction, the applicant shall submit final evidence for review and approval that it has been granted a line of credit or loan by a financial institution authorized to do business in this State or evidence of another form of financial assistance determined by the Department to be adequate pursuant to Chapter 373(1) of the Department's Rules.

5. The applicant shall implement the sound level compliance assessment plan referenced in Finding 5 and submit the results to the Department for review and approval, within one calendar year of the start of operation of the Oakfield Wind Project.

6. If sound compliance measurements completed in accordance with Special Condition #5 above determine that the Oakfield Wind Project is not in compliance at all protected locations, 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. This compliance plan shall include, among other strategies, consideration and analysis of how potential turbine shutdown scenarios may cause the wind energy development to operate in compliance with the terms of this permit. The Department

reserves the right to require additional mitigation measures found necessary by the Department.

7. Prior to the start of operation of the Oakfield Wind Project, the applicant shall submit a finalized avian, bat and raptor monitoring protocol developed in consultation with MDIFW, to the Department for review and approval. The applicant shall implement the approved monitoring protocol and submit the results of this monitoring to MDIFW and to the Department for review and approval in accordance with a schedule to be established in the protocol. The Department reserves the right to require implementation of mitigation measures found necessary by the Department.

8. Prior to the start of operation of the Oakfield Wind Project, the applicant shall submit documentation of two potentially eligible historic resources identified by Maine Historic Preservation Commission, to the MHPC and to the Department.

9. Prior to the start of operation of the Oakfield Wind Project, the applicant shall record a Declaration of Restrictions for all stormwater treatment buffers with the Registry of Deeds for the subject parcel. The deed restriction shall have attached to it a plot plan for the parcel, drawn to scale, that specifies the location of all stormwater buffers on the parcel. The applicant shall submit a copy of the recorded Declaration of Restrictions including the plot plan(s) to the Department within 90 days of its recording.

10. Prior to the start of construction, the applicant shall temporarily mark or flag the limits of all areas proposed to be cleared on the ground.

11. Prior to construction, the applicant shall permanently mark on the ground all buffer areas that are designated to provide stormwater treatment pursuant to the Chapter 500 Stormwater Management Rules. Methods of marking the ground shall include, but are not limited to, a combination of field flagging and clearly marked signage.

12. Prior to any blasting on the project site, the applicant shall submit a pre-blast survey to the Department. All blasting shall be conducted in compliance with the provisions set forth by 38 M.R.S.A. § 490-Z (14), and the applicant shall follow all applicable limits on ground vibration at inhabitable structures not owned or controlled by the applicant in conformance with the U.S Bureau of Mines Report of Investigations 8507.

13. If a rock crusher is required to be utilized on site, the applicant must ensure that the crusher is licensed by the Department's Bureau of Air Quality and is being operated in accordance with that license.

14. Prior to the start of construction, the applicant shall conduct a pre-construction meeting to discuss the construction schedule and the erosion and sediment control plan with the appropriate parties. This meeting shall be attended by the applicant’s representative, Department staff, the design engineer, the contractor, and the third-party inspector.

15. The applicant shall retain the services of a third party inspector in accordance with the Special Condition for Third Party Inspection Program as described in Finding 11.

16. The applicant shall adhere to the required protocol for inspections of the ditch turnouts, level lip spreaders, and grassed underdrained soil filters as described in Finding 11.

17. Prior to the start of operation, the applicant shall submit final as built plans reflecting any minor changes necessitated by conditions encountered in construction. These plans shall also show the location of the well and septic system at the operations building, and shall be submitted to the Department for review and approval.

18. Prior to the start of operation, the applicant shall submit a final SPCC plan for operation of the facility.

19. No later than December 31 of year 15 of operation of the Oakfield Wind Project, the applicant shall submit to the Department for review and approval, updated estimates of decommissioning costs and evidence that the final decommissioning financial assurance mechanism has been established. The financial assurance instrument shall be designed to allow the Department access to the decommissioning funds, if necessary, to implement the decommissioning process.

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.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

ATS#69815&69816 / L24572an&bn

Department of Environmental Protection

SITE LOCATION OF DEVELOPMENT (SITE)
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.

1. **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 the plans, proposals and supporting documents is subject to the review and approval of the Board prior to implementation. Further subdivision of proposed lots by the applicant or future owners is specifically prohibited, without prior approval by the Board of Environmental Protection, and the applicant shall include deed restrictions to this effect.**

2. **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.**

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

4. **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.**

5. **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.**

6. **If the construction or operation of the activity is not begun within two 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. Reapplications for approval shall state the reasons why the development was not begun within two years from the granting of the initial approval and the reasons why the applicant will be able to begin the activity within two years from the granting of a new approval, if granted. Reapplications for approval may include information submitted in the initial application by reference.**

7. **If the approved development is not completed within five years from the date of the granting of approval, the Board may reexamine its approval and impose additional terms or conditions or prescribe other necessary corrective action to respond to significant changes in circumstances which may have occurred during the five-year period.**

8. **A copy of this approval must be included in or attached to all contract bid specifications for the development.**

9. **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.**

(2/81)/Revised November 1, 1979

DEPLW 0429

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. **Initiation of Activity Within Two Years.** If construction or operation of the activity is not begun within two 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 shall state the reasons why the applicant will be able to begin the activity within two years form the granting of a new permit, if so granted. Reapplications for permits may include information submitted in the initial application by reference.

F. **Reexamination After Five Years.** If the approved activity is not completed within five years from the date of the granting of a permit, the Board may reexamine its permit approval and impose additional terms or conditions to respond to significant changes in circumstances which may have occurred during the five-year period.

G. **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.

H. **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.

I. **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 MANAGEMENT LAW 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) Initiation of project within two years. If the construction or operation of the activity is not begun within two 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.

(6) Reexamination after five years. If the project is not completed within five years from the date of the granting of approval, the department may reexamine its approval and impose additional terms or conditions or prescribe other necessary corrective action to respond to significant changes in circumstances or requirements which may have occurred during the five-year period.

(7) 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.

(8) 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.

(9) 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

November 16, 2005

Special Condition
for
Third Party Inspection Program

THIRD-PARTY INSPECTION PROGRAM

1.0 THE PURPOSE OF THE THIRD-PARTY INSPECTION

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

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

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

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

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

2.0 SELECTING THE INSPECTOR

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

3.0 THE INSPECTOR'S QUALIFICATIONS

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

1) a degree in an environmental science or civil engineering, or other demonstrated expertise,

2) a practical knowledge of erosion control practices and stormwater hydrology,

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

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

5) the ability to clearly document activities being inspected,

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

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

party inspector.

4.0 INITIATING THE INSPECTOR'S SERVICES

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

5.0 TERMINATING THE INSPECTOR'S SERVICES

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

6.0 THE INSPECTOR'S DUTIES AND RESPONSIBILITIES

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

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

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

3) Prior to construction, the inspector will become thoroughly familiar with the project plans and specifications, including those for building detention basins, those for installing the erosion control measures to be used on the site, and those for temporarily or permanently stabilizing disturbed soils in a timely manner.

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

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

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

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

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

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

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

the MDEP.

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

7.0 INSPECTION REPORTS

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

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

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

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

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

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

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

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

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

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

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

Third Party Inspection Form

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

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

SITE CHARACTERISTICS:

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

PROGRESS OF WORK:

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

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

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

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