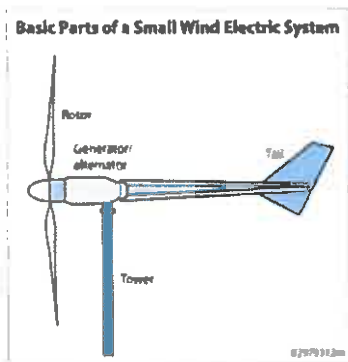


TOWN OF MAPLETON

WIND ENERGY FACILITY ORDINANCE

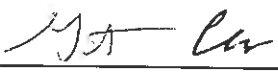


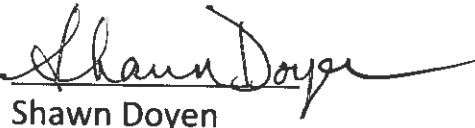
Wind Energy Facility Ordinance for Mapleton

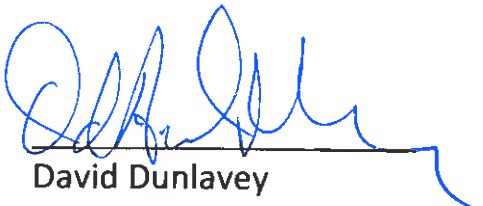
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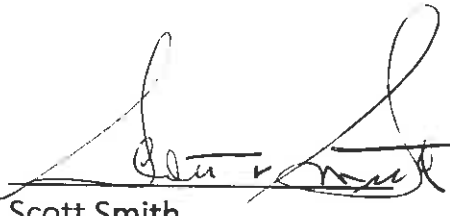
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Grant Clark


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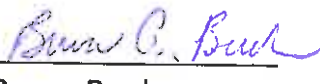

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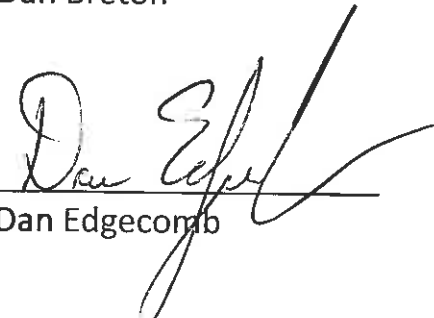
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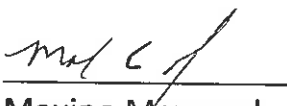

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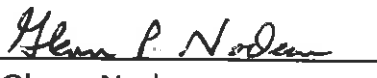

Dan Breton


Bruce Buck


Darren Chandler


Dan Edgecomb


Maxine Maynard


Glenn Nadeau

Wind Energy Facility Ordinance for Mapleton, Maine

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1.0 Title

This Ordinance shall be known as the Wind Energy Facility Ordinance for Mapleton.

2.0 Authority

This Ordinance is adopted pursuant to the enabling provisions of Article VIII, Part 2, Section 1 of the Maine Constitution; the provisions of 30-A M.R.S. § 3001 (Home Rule), and the provisions of the Planning and Land Use Regulation Act, 30-A M.R.S. § 4312, *et seq.*

3.0 Purpose

The purpose of the Ordinance is to provide for the construction and operation of Wind Energy Facilities in Mapleton, subject to reasonable conditions that will protect the public health, safety, and welfare.

4.0 Definitions

Adverse visual impact means the negative effect of a regulated activity on the visual quality of a landscape.

Applicant is the legal entity, including successors and assigns, that files an application under this Ordinance.

Approved Residential Subdivision means a residential subdivision for which all applicable land use permits have been issued, provided that the time for beginning construction under such permits has not expired.

Associated Facilities means elements of a Wind Energy Facility other than its Generating Facilities that are necessary to the proper operation and maintenance of the Wind Energy Facility, including but not limited to buildings, access roads, Generator Lead Lines and substations.

DEP Certification means a certification issued by the Maine Department of Environmental Protection pursuant to 35-A M.R.S. § 3456 for a Wind Energy Development.

Generating Facilities means Wind Turbines and electrical lines, not including Generator Lead Lines that are immediately associated with the Wind Turbines.

Generator Lead Line means a "generator interconnection transmission facility" as defined by 35-A M.R.S.A. § 3132 (1-B).

Historic Area means a Historic Site administered by the Bureau of Parks and Recreation of the Maine Department of Conservation, with the exception of the Arnold Trail.

Historic Site means any site, structure, district or archaeological site which has been officially included on the National Register of Historic Places and/or on the Maine Historic Resource Inventory, or which is established by qualified testimony as being of historic significance.

Landscape means an area characterized by its geology, landform, biota, and human influences throughout the area.

Locally-Designated Passive Recreation Area means any site or area designated by a municipality for passive recreation that is open and maintained for public use and which: a) has fixed boundaries, b) is owned in fee simple by a municipality or is accessible by virtue of public easement, c) is identified and described in a local comprehensive plan and, d) has been identified and designated at least nine months prior to the submission of the Applicant's Wind Energy Facility permit application.

Meteorological Tower (MET Tower) means a Tower used for the measurement and collection of wind data that supports various types of equipment, including but not limited to anemometers, data recorders, and solar power panels. MET Towers may also include wildlife related equipment such as ANABAT detectors, bird diverts and wildlife entanglement protectors.

Municipal Reviewing Authority means the municipal planning board, agency or office, or if none, the municipal officers.

Nacelle means the frame and housing at the top of the Tower that encloses the gearbox and generator.

Non-Participating Landowner means any landowner, other than a Participating Landowner whose land is located within Mapleton.

Occupied Building means a residence, school, hospital, house of worship, public library or other building that is occupied or in use as a primary residence or is

customarily frequented by the public at the time when the permit application is submitted.

Participating Landowner means one or more Persons that hold title in fee or a leasehold interest with sublease rights to property on which Generating Facilities or Associated Facilities are proposed to be located pursuant to an agreement with the Applicant or an entity that has entered into a written agreement with the Applicant allowing the Applicant to demonstrate the requisite right, title and interest in such property.

Person means an individual, corporation, partnership, firm, organization or other legal entity.

Planned Residence means a Residence for which all applicable building and land use permits have been issued, provided that the time for beginning construction under such permits has not expired.

Protected Location means any location that is:

- 1) accessible by foot, on a parcel of land owned by a Non-Participating Landowner containing a residence or planned residence, or an approved residential subdivision, house of worship, academic school, college, library, duly licensed hospital or nursing home near the development site at the time an application for a Wind Energy Facility is submitted under this Ordinance;
- 2) a hotel, motel, campsite or duly licensed campground that the municipal authority responsible for review and approval of the pending application under 9.1 has designated a Protected Location after making a determination that the health and welfare of the guests or the economic viability of the establishment will be unreasonably impacted by noise in excess of that allowed under section 13.1.3(b).

Residence means a building or structure, including manufactured housing, maintained for permanent or seasonal residential occupancy providing living, cooking and sleeping facilities and having permanent indoor or outdoor sanitary facilities, excluding recreational vehicles, tents and watercraft.

Scenic Resource means a Scenic Resource of either state or national significance, as defined in 35-A M.R.S.A. § 3451(9) or a scenic resource of local significance located within the municipality and identified as such in a

comprehensive plan, open space plan or scenic inventory adopted by the municipal legislative body.

Sensitive Receptor means a residence or other place or structure intended for human habitation, whether inhabited or not, public park, state or federal wildlife area, school, daycare center, elder care facility, medical facility, place of seated assemblage, nonagricultural business, or manicured area of a recreational establishment designed for public use, including but not limited to a golf course, campground or other non agricultural business licensed by a state or federal agency. A sensitive area is more likely to be sensitive to the exposure of noise, shadow flicker or other potentially adverse affects of a Wind Energy Facility.

Shadow Flicker means alternating changes in light intensity caused by the movement of Wind Turbine blades casting shadows on the ground or a stationary object.

Short Duration Repetitive Sounds means a sequence of repetitive sounds which occur more than once within an hour, each clearly discernible as an event and causing an increase in the sound level of at least 6 dBA on the fast meter response above the sound level observed immediately before and after the event, each typically less than ten seconds in duration, and which are inherent to the process or operation of the development and are foreseeable.

Sight Line Representation means a profile drawing showing prominent features, including but not limited to topography, buildings, and trees, along and in relation to a line of sight extending from an observer's eye to the lowest point visible on a proposed Tower.

Significant Wildlife Habitat means a Significant Wildlife Habitat as defined in 38 M.R.S.A. § 480-B(10).

Substantial Start means that construction shall be considered to be substantially commenced when any work beyond excavation, including but not limited to, the pouring of a slab or footings, the installation of piles , the construction of columns, or the placement of a Tower on a foundation has begun.

Tower means the free-standing structure on which a wind measuring or energy conversion system is mounted.

Turbine Height means the distance measured from the surface of the Tower foundation to the highest point of any turbine rotor blade measured at the highest arc of the blade.

Viewshed means any areas from which the proposed activity will be visible.

Visual Impact Assessment means a written assessment including narrative and visual aids that include each of the following points:

- 1) Visual Impact Visualization of the proposed activity and evaluation of potential adverse impacts of that activity within the viewshed. All scenic resources within the viewshed must be identified and the surrounding landscape must be described.
- 2) Composition. The arrangement of the component parts of a landscape. Component parts are objects or activities that usually are described in terms of color, texture, line, form, dominance and scale.
- 3) Contrast. Comparing the component parts of a landscape in terms of form, line, color, texture, dominance, or scale.
- 4) Existing uses. The current appearance and use of the landscape, considering previous human alterations.

Wind Energy Facility means a facility that uses one or more Wind Turbines to convert wind energy to electrical energy. A Wind Energy Facility includes Generating Facilities and Associated Facilities.

Wind Energy Facility, Type 1A means a Wind Energy Facility having a maximum generating capacity of less than 100kW, a maximum of one Wind Turbine and a maximum Turbine Height of 65 feet or less.

Wind Energy Facility, Type 1B means a Wind Energy Facility having a maximum generating capacity of less than 100kW and either more than one Wind Turbine, or one or more Wind Turbines with a Turbine Height greater than 65 feet.

Wind Energy Facility, Type 2 means a Wind Energy Facility having a maximum generating capacity of 100 kW or greater and which does not require a state permit issued by the Department of Environmental Protection under the Site Location of Development Act, 38 M.R.S.A. §481, *et seq.*

Wind Energy Facility, Type 3 means a Wind Energy Facility having a generating capacity of 100kW or greater and which requires a state permit issued by the Department of Environmental Protection under the Site Location of Development Act, 38 M.R.S.A. §481, *et seq.*

Wind Turbine means a system for the conversion of wind energy into electricity which is comprised of a Tower, generator, Nacelle, rotor and transformer.

5.0 Applicability

- 5.1 This Ordinance applies to any Wind Energy Facility proposed for construction in Mapleton after the effective date of this Ordinance. This Ordinance does not apply to Associated Facilities unless the Generating Facilities are located within Mapleton, in which case this Ordinance applies to both the Generating Facilities and the Associated Facilities.
- 5.2 A Wind Energy Facility that is the subject of an application determined to be complete by the Mapleton Planning Board prior to the effective date of this Ordinance shall not be required to meet the requirements of this Ordinance; provided that any physical modifications after the effective date of the Ordinance shall be subject to the permitting requirements of Section 9.2.

6.0 Conflict and Severability

- 6.1 If there is a conflict between provisions in this Ordinance, the more stringent shall apply. If there is a conflict between a provision in this Ordinance and that of another Mapleton ordinance, the provision of this Ordinance shall apply.
- 6.2 The invalidity of any part of this Ordinance shall not invalidate any other part of this ordinance.

7.0 Effective Date and Repeal of Prior Ordinances

This Ordinance becomes effective on March 18, 2013. All prior Wind Energy Facility Ordinances are repealed as of the effective date of this Ordinance.

8.0 Classification of Wind Energy Facilities

All Wind Energy Facilities shall be classified in accordance with Table 1 below:

Table 1: Classification of Wind Energy Facilities and Corresponding Local Review and Approval Authority

FACILITY TYPE	AGGREGATE CAPACITY	TURBINE HEIGHT	MAX # OF TURBINES	DEP SITE LOCATION PERMIT REQ	LOCAL REVIEW AUTHORITY	ALLOWABLE ZONES
1A	<100 kW	< 65'	1	No	CEO	R, RF, I
1B	<100 kW	> 65'	NA	No	PB	RF, I
2	≥100 kW	NA	NA	No ¹	PB	RF, I
3	≥ 100kW	NA	NA	Yes ²	PB	RF, I

¹ Per 35-A MRS §3456. DEP Certificate required if energy generated is for sale or use by a Person other than the generator.

² Per 38 MRS §482(2)

9.0 Administration

9.1 Review and Approval Authority

1. The Code Enforcement Officer is authorized to review all applications for Type 1A Wind Energy Facilities and MET Towers pursuant to section 11.0, and may approve, deny or approve such applications with conditions in accordance with the standards of the Ordinance.
2. The Mapleton Planning Board is authorized to review all applications for Type 1B, Type 2, and Type 3 Wind Energy Facilities and may approve, deny or approve such applications with conditions in accordance with this Ordinance.

9.2 Permit Required

1. No Wind Energy Facility shall be constructed or located within Mapleton without a permit issued by the Code Enforcement Officer in accordance with this Ordinance.
2. Any physical modification to an existing Wind Energy Facility that materially alters the location or increases the area of development on the site or that increases the Turbine Height or the level of sound emissions of any Wind Turbine shall require a permit modification under this Ordinance. Like-kind replacements and routine maintenance and repairs shall not require a permit modification.

9.3 Permit Applications

1. Application components. A Wind Energy Facility permit application shall consist of the application form, application fee, and supporting documents, as described below:
 - a. Application Forms. The municipality shall provide the application form which shall be signed by: 1) a Person with right, title and interest in the subject property or; 2) a Person having written authorization from a Person with right, title and interest in the subject property. The signature shall be dated and the signatory shall certify that the information in the application is complete and correct and that the proposed facility will be constructed and operated in accordance with the standards of this ordinance and all approval and permit conditions, if any.
 - b. Application Fees. Application fees shall be assessed and paid upon submission of the application in accordance with Appendix A of this Ordinance.
 - c. Supporting Documents. The application shall include all additional documents necessary to satisfy the applicable submission requirements under section 10 of this Ordinance.
2. Application Submission. The Applicant shall submit its application for a Wind Energy Facility permit to the Code Enforcement Officer who shall note on the application the date on which it was received.
3. Changes to a Pending Application

- a. The Applicant shall promptly notify the municipal entity responsible for review and approval of a pending application under section 9.1 of any changes the Applicant proposes to make to information contained in the application.
- b. If changes are proposed to a pending application after a public hearing has been held, the Mapleton Planning Board may consider those changes and continue with the review and approval process without a renewed public hearing if it determines that the changes do not materially alter the application. If the Mapleton Planning Board determines that the proposed changes do materially alter the application it shall schedule and conduct another public hearing within 30 days of that determination. In making its determination, the Mapleton Planning Board shall consider whether the proposed changes involve potential adverse effects different than or in addition to those addressed in the initial application.

9.4 Permit Application Procedures

1. Type 1A Wind Energy Facility Application

- a. Within 10 days after receiving an application, the Code Enforcement Officer shall notify the Applicant in writing either that the application is complete or, if the application is incomplete, the specific additional material needed to complete the application. The Code Enforcement Officer may waive any submission requirement if the Code Enforcement Officer issues a written finding that, due to special circumstances of the application, adherence to that requirement is not necessary to determine compliance with the standards of this Ordinance.
- b. Within 30 days after determining the application to be complete, the Code Enforcement Officer shall issue a written order: 1) denying approval of the proposed Wind Energy Facility, 2) granting approval of the proposed Wind Energy Facility or, 3) granting approval of the proposed Wind Energy Facility with conditions. In making the decision, the Code Enforcement Officer shall make findings on whether the proposed Wind Energy Facility meets the applicable criteria described in sections 12 and 13.

- c. With the agreement of the applicant, the Code Enforcement Officer may extend the procedural time frames of this section.
2. Type 1B, Type 2 and Type 3 Wind Energy Facility Applications
 - a. The Applicant is strongly encouraged to meet with the Code Enforcement Officer before submitting an application. At this pre-application meeting, the Code Enforcement Officer will explain the Ordinance's provisions, application forms, and submission requirements. The Applicant should provide photos of the proposed site and written descriptions of the proposed facility and the proposed site, including its location and lot area.
 - b. An application shall be eligible for consideration at a regularly-scheduled meeting of the Mapleton Planning Board only if the applicant submits it at least 21 days prior to the meeting.
 - c. Within 45 days after receipt of the application by the Code Enforcement Officer, the Mapleton Planning Board shall notify the Applicant in writing either that the application is complete or, if the application is incomplete, the specific additional material needed to complete the application. The Mapleton Planning Board may waive any submission requirement if it issues a written finding that, due to special circumstances of the application, adherence to that requirement is not necessary to determine compliance with the standards of this Ordinance.
 - d. The Mapleton Planning Board shall hold a public hearing for a Type 3 Wind Energy Facility application within 60 days after determining that the application is complete. The Mapleton Planning Board may decide to hold a public hearing for a Type 1B or a Type 2 Wind Energy Facility application. If it decides to hold a public hearing for a Type 1B application, the Planning Board shall hold that hearing within 30 days after determining that application is complete. If it decides to hold a public hearing for a Type 2 application, the Planning Board shall hold that hearing within 60 days after determining that the application is complete.
 - e. Within 60 days after determining that an application for a Type 1B Wind Energy Facility is complete or within 90 days after

determining that an application for a Type 2 or Type 3 Wind Energy Facility is complete, the Mapleton Planning Board shall issue a written order: 1) denying approval of the proposed Wind Energy Facility, 2) granting approval of the proposed Wind Energy Facility or, 3) granting approval of the proposed Wind Energy Facility with conditions. In making its decision, the Mapleton Planning Board shall make findings on whether the proposed Wind Energy Facility meets the applicable criteria described in sections 12, 13, and 14.

- f. With the agreement of the applicant, the Mapleton Planning Board may extend the procedural time frames of this section.

**Table 2:
Procedural Time Frames**

Facility Type	Application Completeness	Public Hearing	Final Decision
1A	≤10 days ¹	NA	<u><30 days</u> ²
1B	≤45 days ¹	<u><30 days</u> ²	≤60 days ²
2	≤45 days ¹	≤60 days ²	≤90 days ²
3	≤45 days ¹	<u><60 days</u> ²	<u><90 days</u> ²

- 1. Days after receipt of the application by the Code Enforcement Officer
- 2. Days after the application is determined to be complete

9.5 Notice of Meetings

Ten days prior to any meeting at which an application for a Type 1B, Type 2, or Type 3 Wind Energy Facility is to be considered, the Mapleton Planning Board shall send notice by first class mail, to the applicant and all owners within 500 feet for Type 1B or 5,280 feet for Type 2 or Type 3 windmills of the property on which the Wind Energy Facility is proposed to be located. The notice shall state the date, time and place of the meeting and the proposed location and the classification of the proposed Wind Energy Facility.

9.6 Public Hearings

The Planning Board shall have notice of the date, time, and place of any public hearing and the proposed location and the classification of the proposed Wind Energy Facility:

1. Published at least once in a newspaper having general circulation within the municipality. The date of the first publication shall be at least 10 days before the hearing.
2. Mailed by first class mail to the Applicant and to owners of property within 500 feet for Type 1B, or 5,280 feet for Type 2 or Type 3, of the property on which the Wind Energy Facility is proposed, at least 10 days before the public hearing. The Code Enforcement Officer shall maintain a list of property owners to whom notice is mailed in the application file. Failure of any of these property owners to receive a notice shall not invalidate the public hearing, nor shall it require the Planning Board to schedule another hearing.

9.7 Professional Services

In reviewing the application for compliance with this Ordinance, the Planning Board may retain professional services, including but not limited to those of an attorney or consultant, to verify information presented by the Applicant and to assist the Planning Board in reviewing the Application. The attorney or consultant shall first estimate the reasonable cost of such review and the Applicant shall deposit, with the municipality, the full estimated cost, which the municipality shall place in an escrow account. The municipality shall pay the attorney or consultant from the escrow account and reimburse the Applicant if funds remain after payment.

9.8 Expiration of Permits

Permits shall expire: 1) two years after the date of approval unless a substantial start on construction has occurred and; 2) three years after the date of approval unless construction of the Wind Energy Facility has been completed. If a permit for a Type 2 or Type 3 Wind Energy Facility expires, the Applicant shall implement pertinent provisions of the approved decommissioning plan. Upon the Applicant's written request, the municipal entity responsible for review and approval of the application under section 9.1 may extend either or both expiration time limits by one year.

9.9 Access

The Code Enforcement Officer shall have access to the site at all times to review the progress of the work and shall have the authority to review all records and documents directly related to the design, construction and operation of the facility to determine compliance with the requirements of the ordinance and state and federal laws and regulations.

9.10 Enforcement

1. It shall be unlawful for any Person to violate or fail to comply with or take any action that is contrary to the terms of the Ordinance, or to violate or fail to comply with any permit issued under the Ordinance, or to cause another to violate or fail to comply or take any action which is contrary to the terms of the Ordinance or any permit issued under or subject to the Ordinance.
2. If the Code Enforcement Officer or other Person charged with enforcement of municipal laws determines that a violation of the Ordinance or a permit has occurred, the Code Enforcement Officer shall provide written notice to any Person alleged to be in violation of this Ordinance or permit. If the alleged violation does not pose an immediate threat to public health or safety, the Code Enforcement Officer and the alleged violator shall engage in good faith negotiations to resolve the alleged violation. Such negotiations shall be conducted within thirty (30) days of the notice of violation and, with the consent of the alleged violator, may be extended. The Code Enforcement Officer may require the Windmill to remain inoperable during this time. Experts in the field of Wind Energy may be consulted, if necessary, at the applicant's expense.
3. If, after thirty (30) days from the date of notice of violation or further period as agreed to by the alleged violator, the Code Enforcement Officer determines, in the officer's reasonable discretion, that the parties have not resolved the alleged violation, the Code Enforcement Officer may institute civil enforcement proceedings or any other remedy at law to ensure compliance with the Ordinance or permit.

9.11 Appeals

Any Person aggrieved by a decision of the Code Enforcement Officer or the Mapleton Planning Board under this Ordinance may appeal the decision to

the Board of Appeals, as provided by section 11.4 of the Mapleton Zoning Ordinance.

10.0 Application Submission Requirements

10.1 General Submission Requirements

1. A completed application form including:
 - a. The Applicant and Participating Landowner(s)' name(s) and contact information.
 - b. The address, tax map number, zone and owner(s) of the proposed facility site and any contiguous parcels owned by Participating Landowners.
 - c. The tax map number, zone, current use, owner(s) and addresses of owner(s) of parcels that abut the proposed facility site or abut parcels of participating landowners that are contiguous with the proposed facility site.
 - d. An affirmation, signed and dated by the Applicant, that the information provided in the application is correct and that the proposed Wind Energy Facility, if approved and built, shall be constructed and operated in accordance with the standards of this ordinance and all conditions of approval, if any
2. Receipt showing payment of application fee in accordance with Appendix A.
3. A copy of a deed, easement, purchase option or other comparable documentation demonstrating that the Applicant has right, title or interest in the proposed facility site.
4. Location map showing the boundaries of the proposed facility site and all contiguous property under total or partial control of the Applicant or Participating Landowner(s) and any Scenic Resource or Historic Site within 2500 feet of the proposed development.
5. A description, to the satisfaction of the reviewing authority, of the proposed Wind Energy Facility that includes the number and aggregate generating capacity of all Wind Turbines, the Turbine Height and manufacturer's specifications, drawings, for each Wind Turbine

(including but not limited to the make, model, maximum generating capacity, sound emission levels and types of overspeed controls) and a description of Associated Facilities.

6. Site plan, drawn at a scale of not less than 1" = 50', showing the proposed location of each Wind Turbine and Associated Facilities and any of the following features located within 500 feet of any Wind Turbine: parcel boundaries, required setbacks, topographic contour lines (maximum 20-foot interval), roads, rights-of-way, overhead utility lines, buildings (identified by use), land cover, wetlands, streams, water bodies and areas proposed to be re-graded or cleared of vegetation.
 - a. In addition to the information in 6, above, site plans for Wind Energy Facilities shall show the location and average height of tree cover to be retained and the location, variety, planting height and mature height of proposed trees, if any.
7. Written evidence that the Environmental Coordinator of the Maine Department of Inland Fisheries and Wildlife (MDIFW) and that the Maine Natural Areas Program (MNAP) have both been notified of the pending application and the location and Turbine Height of all proposed Wind Turbines.
8. Written evidence that the provider of electrical service to the property has been notified of the intent to connect an electric generator to the electricity grid, if such connection is proposed.
9. Description of emergency and normal shutdown procedures.
10. Photographs of existing conditions at the site.
11. An application for a Type 1A or 1B Wind Energy Facility shall include structural drawings of the Tower foundation and anchoring system: a) prepared by the Wind Turbine or Tower manufacturer, b) prepared in accordance with the manufacturer's specifications or, c) prepared and stamped by a Maine-licensed professional engineer.
12. An application for a Type 1A or Type 1B Wind Energy Facility shall include:
 - a. a written statement, signed by the Applicant, that certifies that the proposed facility is designed to meet the applicable noise control standards under section 13.1.3 and acknowledges the Applicant's

obligation to take remedial action in accordance with section 13.1.6 if the Code Enforcement Officer determines those standards are not being met or;

- b. a written request for review under section 14.1 along with information required under Appendix B, subsection B (Submissions).
13. An Application for Type 1B, Type 2 or Type 3 Wind Energy Facility shall include a visual impact assessment from locations determined by the Planning Board.
14. An application for a Type 2 Wind Energy Facility that generates energy primarily for sale or use by a Person other than the generator, shall include, if issued at the time of application, certification from the Department of Environmental Protection pursuant to 35-A M.R.S.A. § 3456 that the Wind Energy Facility:
- a. Will meet the requirements of the noise control rules adopted by the Board of Environmental Protection pursuant to the Site Location of Development Act, 38 M.R.S.A. §481, *et seq.*;
 - b. Will be designed and sited to avoid adverse Shadow Flicker effects; and
 - c. Will be constructed with setbacks adequate to protect public safety.

If such certification has not been issued at the time of application, the Applicant shall include written evidence that the Applicant has applied for certification.

10.2 Additional Submission Requirements for an Application for a Type 2 and 3 Wind Energy Facility

- 1. Certificates of design compliance obtained by the equipment manufacturers from Underwriters Laboratories, Det Norske Veritas, or other similar certifying organizations.
- 2. Decommissioning plan in conformance with Appendix C.
- 3. Written summary of operation and maintenance procedures for the Wind Energy Facility and a maintenance plan for access roads, erosion and sedimentation controls and storm water management facilities.

4. Standard boundary survey of the subject property stamped by a Maine-licensed surveyor. The Planning Board may waive this requirement if it determines that the Applicant has provided information sufficient to identify property boundaries to the extent necessary.
5. Stormwater management plan stamped by a Maine-licensed professional engineer.
6. Sound level analysis, prepared by a qualified engineer, which addresses the standards of section 14.1.
7. Shadow Flicker analysis based on WindPro or other modeling software approved by the Department of Environmental Protection.
8. Foundation and anchoring system drawings that are stamped by a Maine-licensed professional engineer.
9. Other relevant studies, reports, certifications and approvals as may be reasonably requested by the Mapleton Planning Board to ensure compliance with this Ordinance.

11.0 Meteorological Towers (MET Towers)

Applications for Meteorological (MET) Towers shall be subject to the submission and review standards for a Type 1A Wind Energy Facility, as applicable, except that no height limitation shall apply. A permit for a MET Tower shall be valid for 2 years and 2 months from the date of issuance. The Code Enforcement Officer may grant one or more one-year extensions of this permit period. Within 30 days following removal of a MET Tower, the Applicant shall restore the site to its original condition to the extent practicable. The provisions of this section do not apply to permanent MET Towers included as Associated Facilities in approved Wind Energy Facility applications.

12.0 General Standards – Applicable to all applications.

12.1 Safety Setbacks

Wind Turbines shall be set back a horizontal distance equivalent to 150% of the Turbine Height from property boundaries, public and private rights-of-way and overhead utility lines that are not part of the proposed Generating Facility except that the entity responsible for review and approval of the application

may allow a reduced setback if the Applicant submits, in writing: 1) a waiver of the property boundary setback signed by the pertinent abutting landowner and evidence, such as operating protocols, safety programs, or a licensed professional engineer with appropriate expertise and experience with Wind Turbines, that demonstrates that the reduced setback proposed by the Applicant is appropriate.

12.2 Natural Resource Protection

A Wind Energy Facility shall not have an adverse impact on rare, threatened, or endangered wildlife, significant wildlife habitat, rare, threatened or endangered plants and rare and exemplary plant communities. In making its determination under this subsection, the municipal entity responsible for review and approval of the permit application under section 9.1 shall consider pertinent application materials and the written comments and/or recommendations, if any, of the Maine Department of Inland Fisheries and Wildlife (MDIFW) Environmental Coordinator and the Maine Natural Areas Program (MNAP).

12.3 Building Permit

All components of the Wind Energy Facility shall conform to relevant and applicable local and state and federal building codes and regulations.

12.4 Overspeed Controls and Brakes

Each Wind Turbine shall be equipped with an overspeed control system that: 1) includes both an aerodynamic control such as stall regulation, variable blade pitch, or other similar system, and a mechanical brake that operates in fail safe mode; or 2) has been designed by the manufacturer or a licensed civil engineer and found by the municipal entity responsible for review and approval of the application under 9.1, based on its review of a written description of the design and function of the system, to meet the needs of public safety.

12.5 Electrical Components and Interconnections

All electrical components of the Wind Energy Facility shall conform to relevant and applicable local, state, and national codes.

12.6 Access

All ground-mounted electrical and control equipment and all access doors to a Wind Turbine shall be labeled and secured to prevent unauthorized access. A Wind Tower shall not be climbable up to a minimum of fifteen (15) feet above ground surface.

12.7 Blade Clearance

The minimum distance between the ground and all blades of a Wind Turbine shall be 25 feet as measured at the lowest arc of the blades.

12.8 Signal Interference

The Applicant shall ensure that there will be no interference in the transmission or reception of electrical impulses beyond the property lines, including radio, telephone, television, or similar signals caused by the Wind Energy Facility.

12.9 Structure Type

With the exception of Meteorological (MET) Towers, Towers shall be monopoles with no guy wires. This requirement may be waived if the Applicant demonstrates to the satisfaction of the municipal entity responsible for review and approval of the permit application under section 9.1, that there is no practicable alternative. Bird flight diverters must be installed on any guy wires that are permitted.

12.10 Erosion Control

Erosion of soil and sedimentation shall be minimized by employing "best management practices" in the "*Maine Erosion Control Handbook for Construction: Best Management Practices*", March 2003.

12.11 Building-Mounted Wind Turbines

Building-mounted Wind Turbines are not permitted.

12.12 Visual Appearance

1. A Wind Turbine shall be a non-obtrusive color such as white, off-white or gray, or as may otherwise be required by another governmental agency with jurisdiction over the Wind Energy Facility.
2. A Wind Turbine shall not be lighted artificially, except to the extent consistent with Federal Aviation Administration recommendations or other applicable authority that regulates air safety or as is otherwise

required by another governmental agency with jurisdiction over the Wind Energy Facility.

3. A Wind Turbine shall not be used to support signs and shall not display advertising except for reasonable and incidental identification of the turbine manufacturer, facility owner and operator, and for warnings.

12.13 Visibility of Wind Turbine

The following requirements apply, to the extent practicable, to Type 1B and Type 2 Wind Energy Facilities:

1. Each Wind Turbine shall be located to maximize the effectiveness of existing vegetation, structures and topographic features in screening views of the Wind Turbine from Occupied Buildings and Scenic Resources.
2. When existing features do not screen views of a Wind Turbine from Residences and Scenic Resources, screening may be required, where feasible and effective, through the planting of trees and/or shrubs. In order to maximize the screening effect and minimize wind turbulence near the Wind Turbine, plantings should be situated as near as possible to the point from which the Wind Turbine is being viewed. Such plantings should be of native varieties.

13.0 Special Standards for Type 1A and Type 1B Wind Energy Facilities

13.1 Noise emanating from a Type 1A or Type 1B Wind Energy Facility shall be controlled in accordance with the provisions of this section or, upon the written request of the applicant, the provisions of section 14.1. If the Applicant chooses review under section 14.1, the provisions of 13.1.1, 13.1.2 and 13.1.6 shall apply, but the provisions of 13.1.3, 13.1.4 and 13.1.5 shall not apply.

1. The sound level limits contained in this section apply only to areas that are defined as Protected Locations and to property boundaries that describe the outer limits of the facility site in combination with any parcel(s) owned by a Participating Land-Owner that are contiguous with the facility site .

2. The sound level limits contained in this section do not apply to the facility site or any parcel(s) owned by a Participating Land-Owner that are contiguous with the facility site.
3. The sound levels resulting from routine operation of a Wind Energy Facility, as measured in accordance with the procedures described in section 13.1.5 or appendix B sect f. shall not exceed the limits specified for the following locations and times:
 - a. At a Protected Location with no living and sleeping quarters:

55 dBA during the Protected Location's regular hours of operation
 - b. At a Protected Location with living and sleeping quarters:
 1. Area(s) within 500 feet of living and sleeping quarters:

45 dBA between 7:00 p.m. and 7:00 a.m.

55 dBa between 7:00 a.m. and 7:00 p.m.
 2. Area(s) more than 500 feet from living and sleeping quarters:

55dBA at all times.
 - c. At property boundaries that describe the outer limits of the facility site combined with any parcel(s) owned by a Participating Land-Owner that are contiguous with the facility site:

75 dBA at all times.
4. If the Applicant submits the certification and acknowledgement required by Section 10.1.12(1), the municipal entity responsible for review and approval of the application under Section 9.1 shall determine, for purposes of issuing its approval, that the pertinent sound-level limits under section 13.1.1 have been met, subject to the Applicant's obligation to take remedial action as necessary under section 13.1.4.

5. The Code Enforcement Officer may perform measurements of sound levels resulting from routine operation of an installed Type 1A or Type 1B Wind Energy Facility at the officer's own initiative or in response to a noise-related complaint to determine compliance with the pertinent standards in section 13.1.1, or Appendix B. sect f. Such measurements shall be performed as follows:
 - a. Measurements shall be obtained during representative weather conditions when the sound of the Wind Energy Facility is most clearly noticeable. Preferable weather conditions for sound measurements at distances greater than about 500 feet from the sound source include overcast days when the measurement location is downwind of the Wind Turbine and inversion periods (which most commonly occur at night).
 - b. Sound levels shall be measured at least four (4) feet above the ground by a meter set on the A-weighted response scale, fast response. The meter shall meet the latest version of American National Standards Institute (ANSI S1.4.) "American Standard Specification for General Purpose Sound Level Meters" and shall have been calibrated at a recognized laboratory within the past year.
 - c. 5 dBA shall be added to sound levels of any Short Duration Repetitive Sound measured in accordance with paragraphs a and b.

6. The Applicant shall operate the proposed Wind Energy Facility in conformance with the sound level limits of section 13.1 or section 14.1, as applicable. If, based on post-installation measurements taken in accordance with section 13.1.3 or section 14.1, as applicable, the Code Enforcement Officer determines that the applicable sound-level limits are not being met, the Applicant shall, at the Applicant's expense and in accordance with the Mapleton Wind Energy Facility Ordinance and in consultation with the Code Enforcement Officer, take remedial action deemed necessary by the Code Enforcement Officer to ensure compliance with those limits. Remedial action that the Code Enforcement Officer may require, but shall not be limited to, one or more of the following:

- a. modification or limitation of operations during certain hours or wind conditions;
- b. maintenance, repair, modification or replacement of equipment;
- c. relocation of the Wind Turbine(s); and,
- d. removal of the Wind Turbine(s) provided that the Code Enforcement Officer may require removal of the Wind Turbine(s) only if the Code Enforcement Officer determines that there is no practicable alternative.

13.2 Discontinued Use

1. The Applicant shall prepare a decommissioning plan in conformance with Appendix C. A Type 1A or Type 1B Wind Energy Facility that is not generating electricity for twelve (12) consecutive months shall be deemed a discontinued use and shall be removed from the property by the Applicant within 120 days of receipt of notice from the Code Enforcement Officer, unless the Applicant provides information that the Mapleton Planning Board deems sufficient to demonstrate that the project has not been discontinued and should not be removed. If the Wind Energy Facility is not removed within this time period, the municipality may remove the turbine at the Applicant's expense. The Applicant shall pay all site reclamation costs deemed necessary and reasonable to return the site to its pre-construction condition, including the removal of roads and reestablishment of vegetation.
2. If a surety has been given to the municipality for removal of a Type 1B Wind Energy Facility, the Applicant may apply to the Mapleton Planning Board for release of the surety when the Wind Energy Facility has been removed to the satisfaction of the Code Enforcement Officer.

14.0 Special Standards for Type 2 and Type 3 Wind Energy Facilities

14.1 Control of Noise

Noise emanating from a Type 2 Wind Energy Facility, a Type 3 Wind Energy Facility, or, upon written request of the Applicant pursuant to section 13.1, a Type 1A or Type 1B Wind Energy Facility shall be controlled in accordance with the provisions of Appendix B.

If there is a conflict between a provision of Appendix B and another provision of this ordinance, the provision of Appendix B shall apply.

14.2 Use of Public Roads

1. The Applicant shall identify all state and local public roads to be used within Mapleton to transport equipment and parts for construction, operation or maintenance of a Type 2 or Type 3 Wind Energy Facility.
2. The Town Engineer, Road Commissioner or a qualified third-party engineer reasonably acceptable to both the Mapleton Planning Board and the Applicant and paid for by the Applicant pursuant to Section 9.7 of the Ordinance, shall document road conditions prior to construction. The Town Engineer, Road Commissioner or third-party engineer shall document road conditions again thirty (30) days after construction is complete or as weather permits.
3. The Applicant shall demonstrate, to the satisfaction of the Mapleton Planning Board, that it has financial resources sufficient to comply with subsection 4, below, and the Mapleton Planning Board may require the Applicant to post a bond or other security in order to ensure such compliance.
4. Any road damage caused by the Applicant or its contractors shall be promptly repaired at the Applicant's expense.

14.3 Warnings

A clearly visible warning sign concerning voltage must be placed at the base of all pad-mounted transformers and substations.

14.4 Artificial Habitat

To the extent practicable, the creation of artificial habitat for raptors or raptor prey shall be minimized. In making its determination under this subsection the Mapleton Planning Board shall consider comments and recommendations, if any, provided by the Maine Department of Inland Fisheries and Wildlife.

14.5 Community and Environmental Protection Setback Distances

Notwithstanding any other provision contained in this Ordinance, when any Type 2 or Type 3 wind turbines are proposed to be constructed or operated within 5,280 feet of any Sensitive Receptor or Scenic Resource, the Planning Board shall consider visual impacts on the affected property owners.

14.6 Shadow Flicker

Type 2 and Type 3 Wind Energy Facilities shall be designed to avoid adverse shadow flicker effect at any Occupied Building located on a Non-Participating Landowner's property.

14.7 Relationship to DEP Certification and Permitting

For a Type 2 Wind Energy Facility for which a DEP Certification has been submitted in accordance with section 10.1.14, the Mapleton Planning Board shall consider, to the extent applicable, pertinent findings in that certification when making its determination under sections 12.1, 14.1, and 14.6.

14.8 Local Emergency Services

1. The Applicant shall provide a copy of the project summary and site plan to local emergency service providers, including paid or volunteer fire department(s).
2. Upon request, the Applicant shall cooperate with emergency service providers to develop and coordinate implementation of an emergency response plan for a Type 2 or Type 3 Wind Energy Facility.
3. A Wind Turbine shall be equipped with an appropriate fire suppression system to address fires within the Nacelle portion of the turbine or shall otherwise address the issue of fire safety to the satisfaction of the Mapleton Planning Board.

14.9 Liability Insurance

The Applicant or an Applicant's designee acceptable to the Mapleton Planning Board shall maintain a current general liability policy for the Type 2 or Type 3 Wind Energy Facility that covers bodily injury and property damage with limits in an amount commensurate with the scope and scale of the Facility as determined by the insurer. The Applicant or its designee shall make certificates of insurance available to the Mapleton Planning Board upon request.

14.10 Design Safety Certification

Each Wind Turbine shall conform to applicable industry standards including those of the American National Standards Institute (ANSI) and at least one of the following: Underwriters Laboratories, Det Norske Veritas, Germanischer Lloyd Wind Energies, or other similar certifying organization.

14.11 Public Inquiries and Complaints

1. The Applicant or its designee shall maintain a phone number and identify a responsible Person for the public to contact with inquiries and complaints throughout the life of the Wind Energy Facility.
2. The Applicant or its designee shall make reasonable efforts to respond to the public's inquiries and complaints and shall provide written copies of all complaints and the company's resolution or response to the Code Enforcement Officer upon request.

14.12 Decommissioning

The Applicant shall prepare a decommissioning plan in conformance with Appendix C.

APPENDIX A
Application Fees

\$5.00 per thousand of value of the entire project.

APPENDIX B

Control of Noise

Pursuant to section 14.1, noise emanating from a Type 2 Wind Energy Facility, a Type 3 Wind Energy Facility, or, upon written request of the Applicant pursuant to section 13.1, a Type 1A or Type 1B Wind Energy Facility, shall be controlled in accordance with the following provisions:

A. Sound Level Limits

(1) Sound from Routine Operation of Facility.

(a) Except as noted in subsections (b) and (c) below, the hourly sound levels resulting from routine operation of the facility and measured in accordance with the measurement procedures described in subsection F shall not exceed the following limits:

(i) At any property line of the facility site or contiguous property owned by the Applicant or Participating Land Owner(s), whichever is farther from the proposed facility's regulated sound sources:

75 dBA at any time of day.

(ii) At any Protected Location in an area for which the zoning, or, if unzoned, the existing use or use contemplated under a comprehensive plan, is not predominantly commercial, transportation, or industrial;

60 dBA between 7:00 a.m. and 7:00 p.m.
(the "daytime hourly limit"), and
50 dBA between 7:00 p.m. and 7:00 a.m.
(the "nighttime hourly limit").

(iii) At any Protected Location in an area for which the zoning, or, if unzoned, the existing use or use contemplated under a comprehensive plan, is predominantly commercial, transportation, or industrial:

70 dBA between 7:00 a.m. and 7:00 p.m.
(the "daytime hourly limit"), and
60 dBA between 7:00 p.m. and 7:00 a.m.
(the "nighttime hourly limit").

(iv) For the purpose of determining whether the use of an unzoned area is predominantly commercial, transportation, or industrial (e.g. non-residential in nature), the Code Enforcement Officer shall consider the municipality's

comprehensive plan, if any. Furthermore, the usage of properties abutting each Protected Location shall be determined, and the limits applied for that Protected Location shall be based upon the usage occurring along the greater portion of the perimeter of that parcel; in the event the portions of the perimeter are equal in usage, the limits applied for that Protected Location shall be those for a Protected Location in an area for which the use is not predominantly commercial, transportation, or industrial.

- (v) When a proposed facility is to be located in an area where the daytime pre-development ambient hourly sound level at a Protected Location is equal to or less than 45 dBA and/or the nighttime pre-development ambient hourly sound level at a Protected Location is equal to or less than 35 dBA, the hourly sound levels resulting from routine operation of the facility and measured in accordance with the measurement procedures described in subsection F shall not exceed the following limits at that Protected Location:

55 dBA between 7:00 a.m. and 7:00 p.m.
(the "daytime hourly limit"), and
45 dBA between 7:00 p.m. and 7:00 a.m.
(the "nighttime hourly limit").

For the purpose of determining whether a Protected Location has a daytime or nighttime pre-development ambient hourly sound level equal to or less than 45 dBA or 35 dBA, respectively, the Applicant may make sound level measurements in accordance with the procedures in subsection F or may estimate the sound-level based upon the population density and proximity to local highways. If the resident population within a circle of 3,000 feet radius around a Protected Location is greater than 300 persons, or the hourly sound level from highway traffic at a Protected Location is predicted to be greater than 45 dBA in the daytime or 35 dBA at night, then the Applicant may estimate the daytime or nighttime pre-development ambient hourly sound level to be greater than 45 dBA or 35 dBA, respectively.

NOTE: Highway traffic noise can be predicted using the nomograph method of FHWA Highway Traffic Noise Prediction Model, FHWA-RD-77-108, December, 1978.

- (vi) Notwithstanding the above, the Applicant need not measure or estimate the pre-development ambient hourly sound levels at a Protected Location if he demonstrates, by estimate or example, that the hourly sound levels resulting from routine operation of the facility will not exceed 50 dBA in the daytime or 40 dBA at night.
- (b) If the Applicant chooses to demonstrate by measurement that the daytime and/or nighttime pre-development ambient sound environment at any Protected Location near the facility site exceeds the daytime and/or nighttime limits in subsection 1(a)(ii) or 1(a)(iii) by at least 5 dBA, then the daytime and/or nighttime limits shall be 5 dBA less than the measured daytime and/or nighttime pre-

development ambient hourly sound level at the location of the measurement for the corresponding time period.

- (c) For any Protected Location near an existing facility, the hourly sound level limit for routine operation of the existing facility and all future expansions of that facility shall be the applicable hourly sound level limit of 1(a) or 1(b) above, or, at the Applicant's election, the existing hourly sound level from routine operation of the existing facility plus 3 dBA.
- (d) For the purposes of determining compliance with the above sound level limits, 5 dBA shall be added to the observed levels of any tonal sounds that result from routine operation of the facility.
- (e) When routine operation of a facility produces short duration repetitive sound, the following limits shall apply:
 - (i) For short duration repetitive sounds, 5 dBA shall be added to the observed levels of the short duration repetitive sounds that result from routine operation of the facility for the purposes of determining compliance with the above sound level limits.
 - (ii) For short duration repetitive sounds which the municipal entity responsible for review and approval of a pending application under section 9.1 determines, due to their character and/or duration, are particularly annoying or pose a threat to the health and welfare of nearby neighbors, 5 dBA shall be added to the observed levels of the short duration repetitive sounds that result from routine operation of the facility for the purposes of determining compliance with the above sound level limits, and the maximum sound level of the short duration repetitive sounds shall not exceed the following limits:
 - (a) At any Protected Location in an area for which the zoning, or, if unzoned, the existing use or use contemplated under a comprehensive plan, is not predominantly commercial, transportation, or industrial:

65 dBA between 7:00 a.m. and 7:00 p.m., and
55 dBA between 7:00 p.m. and 7:00 a.m.
 - (b) At any Protected Location in an area for which the zoning, or, if unzoned, the existing use or use contemplated under a comprehensive plan, is predominantly commercial, transportation, or industrial:

75 dBA between 7:00 a.m. and 7:00 p.m., and
65 dBA between 7:00 p.m. and 7:00 a.m.

- (c) The methodology described in subsection 1(a)(iv) shall be used to determine whether the use of an unzoned area is predominantly commercial, transportation, or industrial.
- (d) If the Applicant chooses to demonstrate by measurement that the pre-development ambient hourly sound level at any Protected Location near the facility site exceeds 60 dBA between 7:00 a.m. and 7:00 p.m., and/or 50 dBA between 7:00 p.m. and 7:00 a.m., then the maximum sound level limit for short duration repetitive sound shall be 5 dBA greater than the measured pre-development ambient hourly sound level at the location of the measurement for the corresponding time period.
- (e) For any Protected Location near an existing facility, the maximum sound level limit for short duration repetitive sound resulting from routine operation of the existing facility and all future expansions and modifications of that facility shall be the applicable maximum sound level limit of (e)(ii)(a) or (e)(ii)(b) above, or, at the Applicant's election, the existing maximum sound level of the short duration repetitive sound resulting from routine operation of the existing facility plus 3 dBA.

NOTE: The maximum sound level of the short duration repetitive sound shall be measured using the fast response [LAF_{max}]. See the definition of maximum sound level.

(2) Sound from Construction of a Facility

- (a) The sound from construction activities between 7:00 p.m. and 7:00 a.m. is subject to the following limits:
 - (i) Sound from nighttime construction activities shall be subject to the nighttime routine operation sound level limits contained in subsections 1(a) and 1(b).
 - (ii) If construction activities are conducted concurrently with routine operation of the facility, then the combined total of construction and routine operation sound shall be subject to the nighttime routine operation sound level limits contained in subsections 1(a) and 1(b).
 - (iii) Higher levels of nighttime construction sound are permitted when a duly issued permit authorizing nighttime construction sound in excess of these limits has been granted by the Code Enforcement Officer.
- (b) Sound from construction activities between 7:00 a.m. and 7:00 p.m. shall not exceed the following limits at any Protected Location:

Duration of Activity Hourly Sound Level Limit

12 hours	87 dBA
8 hours	90 dBA
6 hours	92 dBA
4 hours	95 dBA
3 hours	97 dBA
2 hours	100 dBA
1 hour or less	105 dBA

- (c) All equipment used in construction on the facility site shall comply with applicable federal noise regulations and shall include environmental noise control devices in proper working condition, as originally provided with the equipment by its manufacturer.

(3) Sound from Maintenance Activities

- (a) Sound from routine, ongoing maintenance activities shall be considered part of the routine operation of the facility and the combined total of the routine maintenance and operation sound shall be subject to the routine operation sound level limits contained in subsection 1.
- (b) Sound from occasional, major, scheduled overhaul activities shall be subject to the construction sound level limits contained in subsection 2. If overhaul activities are conducted concurrently with routine operation and/or construction activities, the combined total of the overhaul, routine operation and construction sound shall be subject to the construction sound level limits contained in subsection 2.

B. Submissions

(1) Facilities with Minor Sound Impact.

An Applicant proposing facility with minor sound impact may choose to file, as part of the permit application, a statement attesting to the minor nature of the anticipated sound impact of their facility. An applicant proposing an expansion or modification of an existing facility with minor sound impact may follow the same procedure as described above. For the purpose of this ordinance, a facility or an expansion or modification of an existing facility with minor sound impact means a facility where the Applicant demonstrates, by estimate or example, that the regulated sound from routine operation of the facility will not exceed 5 dBA less than the applicable limits established under Section A. It is the intent of this subsection that an applicant need not conduct sound level measurements to demonstrate that the facility or an expansion or modification of an existing facility will have a minor sound impact.

(2) Other Facilities

Technical information shall be submitted describing the Applicant's plan and intent to make adequate provision for the control of noise. The applicant's plan shall contain information such as the following, when appropriate:

- (a) Maps and descriptions of the land uses, local zoning and comprehensive plans for the area potentially affected by sounds from the facility.
- (b) A description of major sound sources, including tonal sound sources and sources of short duration repetitive sounds, associated with the construction, operation and maintenance of the proposed facility, including their locations within the proposed facility.
- (c) A description of the daytime and nighttime hourly sound levels and, for short duration repetitive sounds, the maximum sound levels expected to be produced by these sound sources at Protected Locations near the proposed facility.
- (d) A description of the Protected Locations near the proposed facility.
- (e) A description of proposed major sound control measures, including their locations and expected performance.
- (f) A comparison of the expected sound levels from the proposed facility with the sound level limits of this regulation.

C. Terms and Conditions

The municipal entity responsible for review and approval of the pending application under 9.1 may, as a term or condition of approval, establish any reasonable requirement to ensure that the Applicant has made adequate provision for the control of noise from the facility and to reduce the impact of noise on Protected Locations. Such conditions may include, but are not limited to, enclosing equipment or operations, imposing limits on hours of operation, or requiring the employment of specific design technologies, site design, modes of operation, or traffic patterns.

The sound level limits prescribed in this ordinance shall not preclude the municipal entity responsible for review and approval of the pending application under 9.1 from requiring an Applicant to demonstrate that sound levels from a facility will not unreasonably disturb wildlife or adversely affect wildlife populations in accordance with 12.2. In addition, the sound level limits shall not preclude the municipal entity responsible for review and approval of the pending application under 9.1, as a term or condition of approval, from requiring that lower sound level limits be met to ensure that the Applicant has made adequate provision for the protection of wildlife.

D. Waiver from Sound Level Limits

Mapleton recognizes that there are certain facilities or activities associated with facilities for which noise control measures are not reasonably available. Therefore, the municipal

entity responsible for review and approval of the pending application under section 9.1 may grant a waiver from any of the sound level limits contained in this ordinance upon (1) a showing by the Applicant that he or she has made a comprehensive assessment of the available technologies for the facility and that the sound level limits cannot practicably be met with any of these available technologies, and (2) a finding by the municipal entity responsible for review and approval of the pending application under section 9.1 that the proposed facility will not have an adverse impact on Protected Locations. In addition, a waiver may be granted by the municipal entity responsible for review and approval of the pending application under section 9.1 if (1) a facility is deemed necessary in the interest of national defense or public safety and the Applicant has shown that the sound level limits cannot practicably be met without unduly limiting the facility's intended function, and (2) a finding is made by the municipal entity responsible for review and approval of the pending application under section 9.1 that the proposed facility will not have an adverse impact on Protected Locations. The municipal entity responsible for review and approval of the pending application under section 9.1 shall consider the request for a waiver as part of the review of a completed permit application. In granting a waiver, the municipal entity responsible for review and approval of the pending application under section 9.1 may, as a condition of approval, impose terms and conditions to ensure that no adverse sound impacts will occur.

E. Definitions

Terms used herein are defined below for the purpose of this noise regulation:

- (1) **AMBIENT SOUND:** At a specified time, the all-encompassing sound associated with a given environment, being usually a composite of sounds from many sources at many directions, near and far, including the specific facility of interest.
- (2) **CONSTRUCTION:** Activity and operations associated with the facility or expansion of the facility or its site.
- (3) **EMERGENCY:** An unforeseen combination of circumstances which calls for immediate action.
- (4) **EMERGENCY MAINTENANCE AND REPAIRS:** Work done in response to an emergency.
- (5) **ENERGY SUM OF A SERIES OF LEVELS:** Ten times the logarithm of the arithmetic sum of the antilogarithms of one-tenth of the levels. [Note: See Section F(4.2).]
- (6) **EXISTING HOURLY SOUND LEVEL:** The hourly sound level resulting from routine operation of an existing facility prior to the first expansion that is subject to this ordinance.
- (7) **EQUIVALENT SOUND LEVEL:** The level of the mean-square A-weighted sound pressure during a stated time period, or equivalently the level of the sound exposure during a stated time period divided by the duration of the period. (NOTE: For convenience, a one hour equivalent sound level should begin approximately on the hour.)

- (8) HISTORIC AREAS: Historic sites administered by the Bureau of Parks and Lands of the Maine Department of Conservation, with the exception of the Arnold Trail.
- (9) HOURLY SOUND LEVEL: The equivalent sound level for one hour measured or computed in accordance with this ordinance.
- (10) LOCALLY-DESIGNATED PASSIVE RECREATION AREA: Any site or area designated by Mapleton for passive recreation that is open and maintained for public use and which:
 - (a) has fixed boundaries,
 - (b) is owned in fee simple by Mapleton or is accessible by virtue of public easement,
 - (c) is identified and described in Mapleton comprehensive plan, and
 - (d) has been identified and designated at least nine months prior to submission of the Applicant's Wind Energy Facility permit application.
- (11) MAXIMUM SOUND LEVEL: Ten times the common logarithm of the square of the ratio of the maximum sound to the reference sound of 20 micropascals. Symbol: LAFmax.
- (12) MAXIMUM SOUND: Largest A-weighted and fast exponential-time-weighted sound during a specified time interval. Unit: pascal (Pa).
- (13) RESIDENCE: A building or structure, including manufactured housing, maintained for permanent or seasonal residential occupancy providing living, cooking and sleeping facilities and having permanent indoor or outdoor sanitary facilities, excluding recreational vehicles, tents and watercraft.
- (14) PRE-DEVELOPMENT AMBIENT: The ambient sound at a specified location in the vicinity of a facility site prior to the construction and operation of the proposed facility or expansion.
- (15) PROTECTED LOCATION: any location that is:
 - (a) accessible by foot, on a parcel of land owned by a Non-Participating Landowner containing a Residence or planned Residence, or an approved residential subdivision, house of worship, academic school, college, library, duly licensed hospital or nursing home near the facility site at the time an application for a Wind Energy Facility permit is submitted under this ordinance; or
 - (b) within a State Park, Baxter State Park, a National Park, a nature preserve owned by a land trust, the Maine Audubon Society or the Maine chapter of the Nature Conservancy, the Appalachian Trail, the Moosehorn National Wildlife refuge, a federally designated wilderness area, a state wilderness area

designated by statute, a municipal park or a locally-designated passive recreation area, or any location within consolidated public reserve lands designated by rule by the Bureau of Public Lands as a Protected Location.

At Protected Locations more than 500 feet from living and sleeping quarters within the above noted buildings or areas, the daytime hourly sound level limits shall apply regardless of the time of day.

Houses of worship, academic schools, libraries, State and National Parks without camping areas, Historic Areas, nature preserves, the Moosehorn National Wildlife Refuge, federally-designated wilderness areas without camping areas, state wilderness areas designated by statute without camping areas, and locally-designated passive recreation areas without camping areas are considered protected locations only during their regular hours of operation.

Transient living accommodations are generally not considered Protected Locations; however, in certain special situations where it is determined by the municipal entity responsible for review and approval of the application under 9.1 that the health and welfare of the guests or the economic viability of the establishment will be unreasonably impacted, the municipal entity responsible for review and approval of the application under 9.1 may designate certain hotels, motels, campsites and duly licensed campgrounds as protected locations.

This term does not include buildings and structures located on leased camp lots, owned by the Applicant used for seasonal purposes.

For purposes of this definition, (1) a Residence is considered planned when the owner of the parcel of land on which the Residence is to be located has received all applicable building and land use permits and the time for beginning construction under such permits has not expired, and (2) a residential subdivision is considered approved when the developer has received all applicable land use permits for the subdivision and the time for beginning construction under such permits has not expired.

- (16) **ROUTINE OPERATION:** Regular and recurrent operation of regulated sound sources associated with the purpose of the facility and operating on the facility site.
- (17) **SHORT DURATION REPETITIVE SOUNDS:** A sequence of repetitive sounds which occur more than once within an hour, each clearly discernible as an event and causing an increase in the sound level of at least 6 dBA on the fast meter response above the sound level observed immediately before and after the event, each typically less than ten seconds in duration, and which are inherent to the process or operation of the facility and are foreseeable.
- (18) **SOUND COMPONENT:** The measurable sound from an audibly identifiable source or group of sources.
- (19) **SOUND LEVEL:** Ten times the common logarithm of the square of the ratio of the frequency-weighted and time-exponentially averaged sound pressure to the

reference sound of 20 micropascals. For the purpose of this ordinance, sound level measurements are obtained using the A-weighted frequency response and fast dynamic response of the measuring system, unless otherwise noted.

- (20) **SOUND PRESSURE:** Root-mean-square of the instantaneous sound pressures in a stated frequency band and during a specified time interval. Unit: pascal (Pa).
- (21) **SOUND PRESSURE LEVEL:** Ten times the common logarithm of the square of the ratio of the sound pressure to the reference sound pressure of 20 micropascals.
- (22) **TONAL SOUND:** for the purpose of this ordinance, a tonal sound exists if, at a Protected Location, the one-third octave band sound pressure level in the band containing the tonal sound exceeds the arithmetic average of the sound pressure levels of the two contiguous one-third octave bands by 5 dB for center frequencies at or between 500 Hz and 10,000 Hz, by 8 dB for center frequencies at or between 160 and 400 Hz, and by 15 dB for center frequencies at or between 25 Hz and 125 Hz.

Additional acoustical terms used in work associated with this ordinance shall be used in accordance with the following American National Standards Institute (ANSI) standards:

ANSI S12.9-1988 - American National Standard Quantities and Procedures for Description and Measurements of Environmental Sound, Part 1;

ANSI S3.20-1973 - American National Standard Psychoacoustical Terminology;

ANSI S1.1-1960 - American National Standard Acoustical Terminology.

F. Measurement Procedures

- (1) **Scope.** These procedures specify measurement criteria and methodology for use, with applications, compliance testing and enforcement. They provide methods for measuring the ambient sound and the sound from routine operation of the facility, and define the information to be reported. The same methods shall be used for measuring the sound of construction and maintenance activities.

- (2) **Measurement Criteria**

- 2.1 **Measurement Personnel**

- Measurements shall be supervised by personnel who are well qualified by training and experience in measurement and evaluation of environmental sound, or by personnel trained to operate under a specific measurement plan approved by the municipal entity responsible for review and approval of the pending application under 9.1.

- 2.2 **Measurement Instrumentation**

- (a) A sound level meter or alternative sound level measurement system used shall meet all of the Type 1 or 2 performance requirements of American National Standard Specifications for Sound Level Meters, ANSI S1.4-1983.
- (b) An integrating sound level meter (or measurement system) shall also meet the Type 1 or 2 performance requirements for integrating/averaging in the International Electrotechnical Commission Standard on Integrating-Averaging Sound Level Meters, IEC Publication 804 (1985).
- (c) A filter for determining the existence of tonal sounds shall meet all the requirements of American National Standard Specification for Octave-Band and Fractional Octave-Band Analog and Digital Filters, ANSI S1.11-1986 for Order 3, Type 3-D performance.
- (d) An acoustical calibrator shall be used of a type recommended by the manufacturer of the sound level meter and that meets the requirements of American National Standard Specification for Acoustical Calibrators, ANSI S1.40-1984.
- (e) A microphone windscreen shall be used of a type recommended by the manufacturer of the sound level meter.

2.3 Calibration

- (a) The sound level meter shall have been calibrated by a laboratory within 12 months of the measurement, and the microphone's response shall be traceable to the National Bureau of Standards.
- (b) Field calibrations shall be recorded before and after each measurement period and at shorter intervals if recommended by the manufacturer.

2.4 Measurement Location, Configuration and Environment

- (a) Except as noted in subsection (b) below, measurement locations shall be at nearby Protected Locations that are most likely affected by the sound from routine operation of the facility.
- (b) For determining compliance with the 75 dBA property line hourly sound level limit described in subsection A(l)(a)(i), measurement locations shall be selected at the property lines of the proposed facility or contiguous property owned by the Applicant, as appropriate.
- (c) The microphone shall be positioned at a height of approximately 4 to 5 feet above the ground, and oriented in accordance with the manufacturer's recommendations.
- (d) Measurement locations should be selected so that no vertical reflective surface exceeding the microphone height is located within 30 feet. When this is not possible, the measurement location may be closer than 30 feet to the reflective surface, but under no circumstances shall it be closer than 6 feet.

- (e) When possible, measurement locations should be at least 50 feet from any regulated sound source on the facility.
- (f) Measurement periods shall be avoided when the local wind speed exceeds 12 mph and/or precipitation would affect the measurement results.

2.5 Measurement Plans. Plans for measurement of pre-development ambient sound or post-facility sound may be discussed with the Code Enforcement Officer.

(3) Measurement of Ambient Sound

3.1 Pre-development Ambient Sound

Measurements of the pre-development ambient sound are required only when the Applicant elects to establish the sound level limit in accordance with subsections A(1)(b) and A(1)(e)(ii)(d) for a facility in an area with high ambient sound levels, such as near highways, airports, or pre-existing facilities; or when the Applicant elects to establish that the daytime and nighttime ambient hourly sound levels at representative Protected Locations exceed 45 dBA and 35 dBA, respectively.

- (a) Measurements shall be made at representative Protected Locations for periods of time sufficient to adequately characterize the ambient sound. At a minimum, measurements shall be made on three different weekdays (Monday through Friday) during all hours that the facility will operate. If the proposed facility will operate on Saturdays and/or Sundays, measurements shall also be made during all hours that the facility will operate.
- (b) Measurement periods with particularly high ambient sounds, such as during holiday traffic activity, significant insect activity or high coastline waves, should generally be avoided.
- (c) At any measurement location the daytime and nighttime ambient hourly sound level shall be computed by arithmetically averaging the daytime and nighttime values of the measured one hour equivalent sound levels. Multiple values, if they exist, for any specific hour on any specific day shall first be averaged before the computation described above.

3.2 Post-Facility Ambient Sound

- (a) Measurements of the post-facility ambient one hour equivalent sound levels and, if short duration repetitive sounds are produced by the facility, the maximum sound levels made at nearby Protected Locations and during representative routine operation of the facility that are not greater than the applicable limits of subsection C clearly indicate compliance with those limits.
- (b) Compliance with the limits of subsection A(1)(b) may also be demonstrated by showing that the post-facility ambient hourly sound level, measured in accordance with the procedures of subsection 3.1 above during routine operation of the facility, does not exceed the pre-development ambient hourly sound level by more than one decibel, and that the sound from routine

operation of the facility is not characterized by either tonal sounds or short duration repetitive sounds.

- (c) Compliance with the limits of subsection A(1)(e)(ii)(d) may also be demonstrated by showing that the post facility maximum sound level of any short duration repetitive sound, measured in accordance with the procedures of subsection 3.1 above, during routine operation of the facility, does not exceed the pre-development ambient hourly sound level by more than five decibels.
- (d) If any of the conditions in (a), (b) or (c) above are not met, compliance with respect to the applicable limits must be determined by measuring the sound from routine operation of the facility in accordance with the procedures described in subsection 4.

(4) Measurement of the Sound from Routine Operation of Facility.

4.1 General

- (a) Measurements of the sound from routine operation of facilities are generally necessary only for specific compliance testing purposes in the event that community complaints result from operation of the facility, for validation of an Applicant's calculated sound levels when requested by the municipal entity responsible for review and approval of the pending application under 9.1, for determination of existing hourly sound levels for an existing facility or for enforcement by the Code Enforcement Officer.
- (b) Measurements shall be obtained during representative weather conditions when the facility sound is most clearly noticeable. Preferable weather conditions for sound measurements at distances greater than about 500 feet from the sound source include overcast days when the measurement location is downwind of the facility and inversion periods (which most commonly occur at night).
- (c) Measurements of the facility sound shall be made so as to exclude the contribution of sound from facility equipment that is exempt from this regulation.

4.2 Measurement of the Sound Levels Resulting from Routine Operation of the Facility.

- (a) When the ambient sound levels are greater than the sound level limits, additional measurements can be used to determine the hourly sound level that results from routine operation of the facility. These additional measurements may include diagnostic measurements such as measurements made close to the facility and extrapolated to the Protected Location, special checkmark measurement techniques that include the separate identification of audible sound sources, or the use of sound level meters with pause capabilities that allow the operator to exclude non-facility sounds.

- (b) For the purposes of computing the hourly sound level resulting from routine operation of the facility, sample diagnostic measurements may be made to obtain the one hour equivalent sound levels for each sound component.
 - (c) Identification of tonal sounds produced by the routine operation of a facility for the purpose of adding the 5 dBA penalty in accordance with subsection A(l)(d) requires aural perception by the measurer, followed by use of one-third octave band spectrum analysis instrumentation. If one or more of the sounds of routine operation of the facility are found to be tonal sounds, the hourly sound level component for tonal sounds shall be computed by adding 5 dBA to the one hour equivalent sound level for those sounds.
 - (d) Identification of short duration repetitive sounds produced by routine operation of a facility requires careful observations. For the sound to be classified as short duration repetitive sound, the source(s) must be inherent to the process or operation of the facility and not the result of an unforeseeable occurrence. If one or more of the sounds of routine operation of the facility are found to be short duration repetitive sounds, the hourly sound level component for short duration repetitive sounds shall be computed by adding 5 dBA to the one hour equivalent sound level for those sounds. If required, the maximum sound levels of short duration repetitive sounds shall be measured using the fast response [LAFmax]. The duration and the frequency of occurrence of the events shall also be measured. In some cases, the sound exposure levels of the events may be measured. The one hour equivalent sound level of a short duration repetitive sound may be determined from measurements of the maximum sound level during the events, the duration and frequency of occurrence of the events, and their sound exposure levels.
 - (e) The daytime or nighttime hourly sound level resulting from routine operation of a facility is the energy sum of the hourly sound level components from the facility, including appropriate penalties, (see (c) and (d) above). If the energy sum does not exceed the appropriate daytime or nighttime sound level limit, then the facility is in compliance with that sound level limit at that Protected Location.
- (5) Reporting Sound Measurement Data. The sound measurement data report should include the following:
- (a) The dates, days of the week and hours of the day when measurements were made.
 - (b) The wind direction and speed, temperature, humidity and sky condition.
 - (c) Identification of all measurement equipment by make, model and serial number.
 - (d) The most recent dates of laboratory calibration of sound level measuring equipment.
 - (e) The dates, times and results of all field calibrations during the measurements.

- (f) The applicable sound level limits, together with the appropriate hourly sound levels and the measurement data from which they were computed, including data relevant to either tonal or short duration repetitive sounds.
- (g) A sketch of the site, not necessarily to scale, orienting the facility, the measurement locations, topographic features and relevant distances, and containing sufficient information for another investigator to repeat the measurements under similar conditions.
- (h) A description of the sound from the facility and the existing environment by character and location.

APPENDIX C

Decommissioning Plan

- A. Pursuant to section 14.12, the Applicant shall provide a plan for decommissioning a Wind Energy Facility prepared by a Professional Engineer who has been approved by the Planning Board. The decommissioning plan shall include, but shall not be limited to the following:
1. A detailed description of the work required to physically remove all Wind Turbines, associated foundations, buildings, cabling, electrical components, and any other Associated Facilities to the extent they are not otherwise in or proposed to be placed into productive use. All earth disturbed during decommissioning must be graded and re-seeded, unless the landowner of the affected land requests otherwise in writing. Upon receipt of said request, the Planning Board, in its sole judgment and discretion, shall approve or disapprove said request within a reasonable amount of time.
 2. An estimate of the total cost of decommissioning less salvage value of the equipment and itemization of the estimated major expenses, including the projected costs of measures taken to minimize or prevent adverse effects on the environment during implementation of the decommissioning plan. The itemization of major costs may include, but is not limited to, the cost of the following activities: turbine removal, turbine foundation removal and permanent stabilization, building removal and permanent stabilization, transmission corridor removal and permanent stabilization and road infrastructure removal and permanent stabilization.
 3. No permit for a type 2 or 3 Wind Energy Facility shall be issued until Decommissioning funds, in the full amount of the total costs of decommissioning, have been posted / deposited by the applicant with a bonding company or a Federal or State-chartered lending institution (the escrow agent) authorized to conduct such business in the State of Maine and approved by the Town of Mapleton, said funds and or bond to ensure the above decommissioning.
 4. Estimates, described in section 2 above, shall be redone bi-annually on the anniversary of the granting of the Wind Energy Facility permit, and the Owner/Operator of the Wind Energy Facility shall be required to maintain Decommissioning Funds as set forth in section 3 above that are at least equal to the most recent estimate.
 5. Decommissioning Funds may be in the form of a performance bond, surety bond, bank letter of credit, or other form of financial insurance acceptable to the Town of Mapleton in its sole judgment and discretion.
 6. If the Owner/Operator of the Wind Energy Facility does not complete the decommissioning within the time prescribed in section B, the Town of Mapleton may take such action as it deems necessary, in its sole discretion, to secure the posted / deposited Decommissioning Funds and to ensure the completion of the Decommissioning. Should the decommissioning funds or bond not be sufficient to complete the decommissioning the applicant shall be solely responsible for any and all additional costs and expenses of Decommissioning, along with any and all costs and

expenses, including reasonable Attorney fees, incurred by the town to enforce the provisions hereof.

7. The Escrow Agent shall not, under any circumstance whatsoever release the Decommissioning Funds or bond except upon written approval of the Town of Mapleton.
- B. Decommissioning is required, if no significant amount of electricity is generated for a continuous period of twelve (12) months. The Wind Energy Facility shall be deemed a discontinued use and shall be removed from the property by the Applicant within 120 days of receipt of notice from the Code Enforcement Officer. The Applicant may provide evidence to the Planning Board for consideration, such as a force majeure event that interrupts the generation of electricity, that although the project has not generated electricity for a continuous period of 12 months, the project has not been abandoned and should not be decommissioned. Any changes to the approved decommissioning plan shall be subject to review and approval by the Planning Board, such review and approval to be in its sole judgment and discretion of said Planning Board.

