

TOWN OF MOUNT VERNON WIND ORDINANCE PROPOSED CHANGES TO
LAND USE ORDINANCE

I. Add to Section 3 of the Mount Vernon Land Use Ordinance the following:

**Section 3
Definitions**

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 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. § 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.

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 [name of municipality].

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 an appropriate 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) 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, or;

3) a hotel, motel, campsite or duly licensed campground that the municipal authority responsible for review and approval of the pending application 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 this Ordinance.

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 either a Scenic Resource of state or national significance, as defined in 35-A M.R.S § 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.

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. § 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.

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, Residential means a Wind Energy Facility having a maximum generating capacity of less than 20kW, a maximum of one Wind Turbine and a maximum Turbine Height of 80 feet.

Wind Energy Facility, Large Scale Residential 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 80 feet.

Wind Energy Facility, Commercial means a Wind Energy Facility that is not exclusively for residential use and meets the definition of a commercial building or commercial use under this Ordinance.

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

II. Add to Table 4-1:

35. Wind Energy Facilities –Residential CEO all districts except RP

36. Wind Energy Facilities- Large Scale Residential PB all districts except RP

37. Wind Energy Facilities-Commercial PB all districts except RP

III. Amend Section 5(C)(2)(b) Land Use Standards

Maximum Height of ~~Buildings~~ Structures

b. Principal or accessory structures, other than Wind Energy Facilities, and expansions of existing structures which are permitted in the Resource Protection, Limited Residential, Village District and Stream Protection districts shall not exceed thirty-five (35) feet in height. ~~This provision shall not apply to structures such as transmission towers, windmills, antennas, and similar structures having no floor area.~~ The maximum height of Wind Energy Facilities shall be determined by Section 3 of this Ordinance.

IV. Add to Section 5 (C)(7) ALLOWED USES-VILLAGE DISTRICT

26. Residential Wind Energy Facility

V. Add to Section 5 (C)(8) RURAL DISTRICT USES

17. Wind Energy Facilities – Residential

18. Wind Energy Facilities - Large Scale Residential

19. Wind Energy Facilities – Commercial

VI. Add to Section 5(C) Land Use Standards:

27. Wind Energy Facilities. No Wind Energy Facility shall be constructed or located within the Town of Mount Vernon without a permit issued in accordance with this Ordinance. 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.

- a. The Code Enforcement Officer is authorized to review all applications for Residential Wind Energy Facilities and MET Towers pursuant to section 11(C) of this Ordinance and may approve, deny or approve such applications with conditions in accordance with the standards of the Ordinance.
- b. The Mount Vernon Planning Board is authorized to review all applications for Large Scale Residential and Commercial Wind Energy Facilities and may approve, deny or approve such applications with conditions in accordance with Section 6 (Site Plan Review) of this Ordinance.

28. Submission Requirements for Residential Wind Energy Facilities.

- 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 11(D) of this Ordinance.
- c. Supporting Documents. The application shall include all additional documents necessary to satisfy the applicable submission requirements under section 11 of this Ordinance.

- d. The Applicant shall promptly notify the municipal entity responsible for review and approval of a pending application under section 11 any changes the Applicant proposes to make to information contained in the application.
 - e. An application for a Residential Wind Energy Facility shall include a written statement, signed by the Applicant, that certifies that the proposed facility is designed to meet the applicable noise control standards under section 5(C)(25) of the Mount Vernon Land Use Ordinance and acknowledges the Applicant's obligation to take remedial action in accordance with Section 11(K) of the Mount Vernon Land Use Ordinance if the Codes Enforcement Officer determines those standards are not being met.
29. Residential Wind Energy Facility Safety Setbacks. A Residential Wind Energy Turbine shall be set back not less than 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 or; 2) evidence, such as operating protocols, safety programs, or recommendations from the manufacturer 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. In no case shall any Wind Turbine be built on a lot less than two acres.
30. Natural Resource Protection. A Wind Energy Facility shall not have an unreasonable adverse effect 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 5(27) of the Mount Vernon Land Use Ordinance 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).
31. Building Permit. All components of the Wind Energy Facility shall conform to relevant and applicable local and state building codes.
32. 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, based on its review of a written description of the design and function of the system, to meet the needs of public safety.

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

34. 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.

35. 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.

36. Signal Interference. The Applicant shall make reasonable efforts to avoid and mitigate to the extent practicable any disruption or loss of radio, telephone, television, or similar signals caused by the Wind Energy Facility.

37. 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.

38. 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.

39. Building-Mounted Wind Turbines. Building-mounted Wind Turbines are not permitted.

40. Visual Appearance

a. 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.

b. 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.

- c. 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.

41. Visibility of Wind Turbine

The following requirements apply, to the extent practicable, to all Wind Energy Facilities within the Town of Mount Vernon:

- a. To the extent that doing so does not inhibit adequate access to the wind resource, 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.
- b. When existing features do not screen views of a Wind Turbine from Residences, 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.

42. Noise Standards for Residential Wind Energy Facilities. Noise emanating from a Residential Wind Energy Facility shall be controlled in accordance with Section 5(C)(25) of the Mount Vernon Land Use Ordinance. The sound level limits do not apply to the facility site or any parcel owned by a participating landowner that are contiguous with the facility site.

43. Discontinued Use. A Residential 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 Codes Enforcement Officer, unless the Applicant provides information that the Code Enforcement Officer 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.

VII. Add to the last sentence of Section 6 (B) of Site Plan Review of the Mount Vernon Land Use Ordinance:

∴ Large Scale Residential Wind Energy Facilities and Commercial Wind Energy Facilities.

VIII. Add to Section 6(D) (Data Requirements) of the Site Plan Review of the Mount Vernon Land Use Ordinance:

4.-A. Additional Data Requirements for Large Scale Residential Wind Energy Facilities and Commercial Wind Energy Facilities. In addition to all other submission requirements, an applicant for a Large Scale Residential and Commercial Wind Energy Facility shall submit the following information:

- a. Description 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 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.
- b. Site plan showing the proposed location of each Wind Turbine and Associated Facilities and any of the following features located within 1000 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.
 - i. In addition to the information in B above, site plans for Large Scale Residential or Commercial 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.
- c. 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.

d. 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.

e. Description of emergency and normal shutdown procedures.

f. Photographs of existing conditions at the site.

g. An application for a Large Scale Residential or Commercial 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.

h. An application for a Large Scale Residential or Commercial Wind Energy Facility shall include:

i. a written statement, signed by the Applicant, that certifies that the proposed facility is designed to meet the applicable noise control standards under section 6(E)(11) of this Ordinance and acknowledges the Applicant's obligation to take remedial action in accordance with section 6(K) of this Ordinance if the Code Enforcement Officer determines those standards are not being met or;

ii. a written request for review under section J.

i. An Application for Large Scale Residential or Commercial Wind Energy Facility shall include the following site line, photographic and, if applicable, screening information,

a. Sight Line Representations of each Wind Turbine from the nearest Occupied Building and from at least one other representative location within 1000 feet of each Large Scale Residential Facility and within one mile of a Commercial Wind energy Facility of the Wind Turbine, such as another Occupied Building. Each Site Line Representation shall be drawn at a scale sufficiently large to make it legible. If screening is proposed, the proposed screening device, such as trees, shrubs or fencing, shall be depicted on the drawing along with the sight line as altered by the screening.

- b. A current four-inch by six-inch color photograph of the proposed site of the Wind Turbine(s) taken from viewpoints corresponding to each of the Site Line Representations.
- c. One copy of each of the photographs described in b, above, onto which is superimposed an accurately-scaled and sited representation of the Wind Turbine(s).
- j. An application for a Commercial Wind Energy Facility shall include, if issued at the time of application, certification from the Department of Environmental Protection pursuant to 35-A M.R.S. § 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. §481, et seq. ;
 - b. Will be designed and sited to avoid unreasonable 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.

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- k. Additional Submission Requirements for Large Scale Residential and Commercial 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 B.
 - 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.

6. Stormwater management plan stamped by a Maine-licensed professional engineer.
 7. Sound level analysis, prepared by a qualified engineer or noise control specialist, which addresses the standards of section 6(E)(11) and Appendix A.
 8. Shadow Flicker analysis based on WindPro or other modeling software approved by the Department of Environmental Protection.
 9. Foundation and anchoring system drawings that are stamped by a Maine-licensed professional engineer.
 10. Other relevant studies, reports, certifications and approvals as may be reasonably requested by the Planning Board to ensure compliance with this Ordinance.
1. Meteorological Towers (MET Towers). Applications for Meteorological (MET) Towers shall be subject to the submission and review standards for a Residential 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 Codes 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.

IX. Amend Section 6(E)(6) of the Site Plan Review of the Mount Vernon Land Use Ordinance:

6. Height of Building. The height of a principal structure other than Wind Energy Facilities is not to exceed 35 feet as measured from any point from the ground level around the perimeter of the structure. No accessory structure other than Wind Energy Facilities shall exceed 70 feet in height. Existing buildings with nonconforming heights proposing changes in use may be exempted from these requirements by a finding of the Planning Board. The Board must find that no future addition will be allowed unless it meets the required height and that the proposed use will have no increase adverse impact on the adjacent properties with regard to height. The maximum height of Wind Energy Facilities shall be determined by Sections 3 of this Ordinance.

X. Add to Section 6(E) Performance Standards of the Mount Vernon Land Use Ordinance:

34. Large Scale Residential and Commercial Wind Energy Facilities.

a. Safety Setbacks. Wind Turbines in a Commercial Wind Energy Facility shall be set back a horizontal distance of one mile from the property line of any non-participating parcel and at least 1500 feet from any public way or overhead utility lines. Wind Turbines in a Large Scale Residential Facility shall be set back a horizontal distance of 2500 feet from property boundaries, public rights of way and overhead utilities lines.

b. A Wind Energy Facility shall not have an unreasonable adverse effect 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 Planning Board 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).

c. Building Permit. All components of the Wind Energy Facility shall conform to relevant and applicable local and state building codes.

d. 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, based on its review of a written description of the design and function of the system, to meet the needs of public safety.

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

f. 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.

g. 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.

h. Signal Interference. The Applicant shall make reasonable efforts to avoid and mitigate to the extent practicable any disruption or loss of radio, telephone, television, or similar signals caused by the Wind Energy Facility.

i. 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.

j. 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.

k. Building-Mounted Wind Turbines. Building-mounted Wind Turbines are not permitted.

l. Visual Appearance. 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.. 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. 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.

m. Visibility of Wind Turbine. The following requirements apply, to the extent practicable, to Large Scale Residential and Commercial Wind Energy Facilities:

1. To the extent that doing so does not inhibit adequate access to the wind resource, 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.

2. When existing features do not screen views of a Wind Turbine from residences, 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.

n. Discontinued Use. A Large Scale residential or Commercial 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 Codes Enforcement Officer, unless the Applicant provides information that the 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. If a surety has been given to the municipality for removal of a Large Scale Residential Wind Energy Facility, the Applicant may apply to the Planning Board for release of the surety when the Wind Energy Facility has been removed to the satisfaction of the Codes Enforcement Officer.

o. Control of Noise. Noise emanating from a Large Scale Residential or Commercial Wind Energy Facility, shall be controlled in accordance with the provisions of 6(11) of this Ordinance. If there is a conflict between a provision of 6(11) and another provision of this ordinance, the provision of 6(11) shall apply.

p. Use of Public Roads

1. The Applicant shall identify all state and local public roads to be used within Mount Vernon to transport equipment and parts

for construction, operation or maintenance of a Large Scale Residential and Commercial Wind Energy Facility.

2. The Town Engineer, Road Commissioner or a qualified third-party engineer reasonably acceptable to both the Mount Vernon Planning Board and the Applicant and paid for by the Applicant pursuant to Section 6(C) of this 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 Planning Board that it has financial resources sufficient to comply with subsection 4, below, and the 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.

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

r. 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 Mount Vernon Planning Board shall consider comments and recommendations, if any, provided by the Maine Department of Inland Fisheries and Wildlife.

s. Shadow Flicker. Large Scale Residential and Commercial Wind Energy Facilities shall be designed so that shadow flicker will not fall on a Non-Participating Landowner's property more than 15 hours per year.

t 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 Large Scale Residential or Commercial 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 Planning Board.

u Liability Insurance. The Applicant or an Applicant's designee acceptable to the Planning Board shall maintain a current general liability policy for the Large Scale Residential and Commercial Wind Energy Facility that covers bodily injury and property damage with limits in an amount commensurate with the scope and scale of the Facility. The Applicant or its designee shall make certificates of insurance available to the Planning Board upon request.

v 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.

w 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 Codes Enforcement upon request.

x Decommissioning

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

APPENDIX A
Control of Noise

A. 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 prepared by a qualified engineer or noise control specialist.

B. Terms and Conditions

The Planning Board 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 Planning Board from requiring an Applicant to demonstrate that sound levels from a facility will not unreasonably disturb wildlife or adversely affect wildlife populations. In addition, the sound level limits shall not preclude the Planning Board 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.

C. 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 FACILITY: A Wind Energy Facility legally constructed before the effective date of this ordinance or a proposed Wind Energy Facility for which the Application is found complete on or before the effective date of this ordinance. Any facility with an approved permit application which has been remanded to the municipal entity responsible for review and approval of the application under 9.1 by a court of competent jurisdiction for further proceedings relating to noise limits or noise levels prior to the effective date of this ordinance shall not be deemed an existing facility and the ordinance shall apply to the existing noise sources at that facility.
- (7) 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.
- (8) 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.)
- (9) 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.

(10)HOURLY SOUND LEVEL: The equivalent sound level for one hour measured or computed in accordance with this ordinance.

(11)LOCALLY-DESIGNATED PASSIVE RECREATION AREA: Any site or area designated by [name of 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 [name of municipality] or is accessible by virtue of public easement,

(c) is identified and described in [name of municipality] 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.

(12)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.

(13)MAXIMUM SOUND: Largest A-weighted and fast exponential-time-weighted sound during a specified time interval. Unit: pascal (Pa).

(14)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.

(15)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.

(16) PROTECTED LOCATION: 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 facility site at the time an application for a Wind Energy Facility permit is submitted under this ordinance; or

2) 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.

(17)ROUTINE OPERATION: Regular and recurrent operation of regulated sound sources associated with the purpose of the facility and operating on the facility site.

(18)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.

(19)SOUND COMPONENT: The measurable sound from an audibly identifiable source or group of sources.

(20)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.

(22)SOUND PRESSURE: Root-mean-square of the instantaneous sound pressures in a stated frequency band and during a specified time interval. Unit: pascal (Pa).

(23)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.

(24)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.

D. 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 50 dBA (45 dBA from 8 p.m. to 7 a.m.) property line hourly sound level limit described in subsections 6(E)(11) and 6(E)(34) of this Ordinance, measurement locations shall be selected at the property lines of the proposed facility or contiguous property owned by the Applicant, as appropriate. Sound measurement shall take into account the impact of any body of water on sound levels.
- (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 Codes 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 Codes 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(1)(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 B

Decommissioning Plan

Pursuant to section 6(B)(4-A)(k), the Applicant shall provide a plan for decommissioning a Large Scale Residential or Commercial Wind Energy Facility. The decommissioning plan shall include, but shall not be limited to the following:

1. A description of the trigger for implementing the decommissioning plan. There is a rebuttable presumption that decommissioning is required if no electricity is generated for a continuous period of twelve (12) months. The Applicant may rebut the presumption by providing evidence, 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.
2. A description of the work required to physically remove all Wind Turbines, associated foundations to a depth of 24 inches, 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.

[Note: At the time of decommissioning, the Applicant may provide evidence of plans for continued beneficial use of any or all of the components of the Wind Energy Facility. Any changes to the approved decommissioning plan shall be subject to review and approval by the Planning Board.]

3. 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.
4. Demonstration in the form of a performance bond, surety bond, letter of credit, parental guarantee or other form of financial assurance as may be acceptable to the Planning Board that upon the end of the useful life of the Wind Energy Facility the Applicant will have the necessary financial assurance in place for 100% of the total cost of decommissioning, less salvage value. The Applicant may propose securing the necessary financial assurance in phases, as long as the total required financial assurance is in place a minimum of 5 years prior to the expected end of the useful life of the Wind Energy Facility.

