

**Town of Cumberland
Small Wind Turbine Ordinance
Adopted, Effective 11-9-09**

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1.0 Title

This Ordinance shall be known as the Small Wind Turbine Ordinance for The Town of Cumberland, Maine.

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 Small Wind Turbines in both residential and non-residential districts in Cumberland, Maine, subject to reasonable conditions that will protect the public health, safety, and welfare.

4.0 Definitions

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 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 Small Wind Turbine 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 have a height restriction of 175 feet, rather than the Small Wind Turbine limit of 150 feet. MET Towers may also include wildlife related equipment such as ANABAT detectors, bird diverts and wildlife entanglement protectors. METs erected on a temporary basis for the purpose of determining wind availability shall not be subject to the 150' height restriction.

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 the Town of Cumberland.

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.

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.

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 5 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.

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.

Small Wind Turbine means a Wind Energy Facility having a maximum generating capacity of less than 10kW, and a maximum Turbine Height of 150 feet. Only turbines that meet this definition are allowed in the Town of Cumberland.

Wind Energy Facility A Small Wind Turbine and any associated facilities, or a MET Tower.

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

5.0 Applicability

- 5.1 This Ordinance applies to any Small Wind Turbine or MET tower proposed for construction in the Town of Cumberland after the effective date of this Ordinance. This Ordinance does not apply to Associated Facilities unless the Generating Facilities are located within the Town of Cumberland, in which case this Ordinance applies to both the Generating Facilities and the Associated Facilities.
- 5.2 A Small Wind Turbine that is the subject of an application determined to be complete by the Code Enforcement Officer 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 Town of Cumberland 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

This Ordinance becomes effective upon approval by the Cumberland Town Council.

8.0 Administration

8.1 Review and Approval Authority

The Code Enforcement Officer is authorized to review all applications for Small Wind Turbines and MET Towers pursuant to section 10.0, and may

approve, deny or approve such applications with conditions in accordance with the standards of the Ordinance.

8.2 Permit Required

1. No Wind Turbine or MET shall be constructed or located within the Town of Cumberland without a permit issued in accordance with this Ordinance.
2. Any physical modification to an existing Small Wind Turbine 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.

8.3 Permit Applications

1. Application components. A Small Wind Turbine permit application shall consist of the application form, application fee, and supporting documents, as described below:
 - a. Application Forms. The Town 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 the Town of Cumberland Fee 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 Small Wind Turbine 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. The Applicant shall promptly notify the Code Enforcement Officer of any changes the Applicant proposes to make to information contained in the application.

8.4 Permit Application Procedures

1. Small Wind Turbine 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 Small Wind Turbine or, 3) granting approval of the proposed Small Wind Turbine with conditions. In making the decision, the Code Enforcement Officer shall make findings on whether the proposed Small Wind Turbine 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.

8.5 Professional Services

In reviewing the application for compliance with this Ordinance, the Town may retain professional services, including but not limited to those of an attorney or consultant, to verify information presented by the Applicant and to otherwise assist the Code Enforcement Officer in preparing a decision. The attorney or consultant shall first estimate the reasonable cost of such review and the Applicant shall deposit with the

Town, the full estimated cost, which the Town shall hold in a separate review account. The Town shall pay the attorney or consultant from the escrow account and reimburse the Applicant if funds remain after final payment.

8.6 Expiration of Permits

Permits shall expire: 1) One year after the date of approval unless a substantial start on construction has occurred and; 2) two years after the date of approval unless construction of the Small Wind Turbine has been completed. Upon the Applicant's written request, the Code Enforcement Officer may extend either or both expiration time limits by one year.

8.7 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.

8.8 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 under the Ordinance.
2. If the Code Enforcement Officer determines that a violation of the Ordinance or the 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 and concluded within thirty (30) days of the notice of violation. With the consent of the alleged violator, this time period may be extended.
3. If, after thirty (30) days from the date of notice of violation or further period as agreed to by the Town and the alleged violator, the Code Enforcement Officer determines that the parties have not resolved the alleged violation, the Code

Enforcement Officer may institute civil enforcement proceedings pursuant to 30-A M.R.S. §4452 or pursue any other available legal or equitable remedy to ensure compliance with the Ordinance or permit.

4. Applications for Small Wind Turbines shall be approved in writing by the Code Enforcement Officer. The decision of the Code Enforcement Officer shall be mailed to abutters within 300 feet from the property boundary line.
5. Any appeal of the Code Enforcement Officer's decision must comply with Sections 603.3 through 603.6 of the Zoning Ordinance. Notice of the hearing on the appeal shall be mailed to abutters within 300 feet from the property line.

8.9 Appeals

Any Person aggrieved by a decision of the Code Enforcement Officer or the under this Ordinance may appeal the decision to the Board of Adjustment and Appeals. The appeal shall be subject to the procedures established by Section 603 of the Zoning Ordinance.

9.0 Application Submission Requirements

9.1 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 and lot numbers, 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 Small Wind Turbine, 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.

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).
5. Description of the proposed Small Wind Turbine generating capacity, the Turbine Height and manufacturer's specifications for each Small 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 showing the proposed location of each Small Wind Turbine and Associated Facilities and any of the following features located within 500 feet of any Small 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.
7. 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.
8. Description of emergency and normal shutdown procedures.
9. Photographs of existing conditions at the site.
10. An application for a 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.
11. An application 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 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.

10.0 Meteorological Towers (MET Towers)

Applications for Meteorological (MET) Towers shall be subject to the submission and review standards for a Small Wind Turbine. A permit for a MET Tower shall be valid for 1 year 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 Small Wind Turbine applications.

11.0 General Standards

11.1 Height Restrictions

No windmills shall exceed 150' in height. Turbine height is defined as 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.

11.2 Safety Setbacks

Small 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 Code Enforcement Officer may allow a reduced setback if the Applicant submits, in writing: 1) a written permission to reduce property boundary setback signed by the pertinent abutting landowner that provides that the permission will remain in effect as long as the Small Wind Turbine remains on the property and that the permission will be recorded in the Cumberland County Registry of Deeds 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 Small Wind Turbines, that demonstrates that the reduced setback proposed by the Applicant is appropriate.

11.3 Natural Resource Protection

A Small 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 as identified by the Maine Department of Inland Fisheries and Wildlife. In making its determination under this subsection, the municipal entity responsible for review and approval of the permit application under section 8.1 shall consider all pertinent application materials.

11.4 Building Permit

All components of the Small Wind Turbine shall conform to relevant and applicable local and state building codes.

11.5 Overspeed Controls and Brakes

Each Small 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 Code Enforcement Officer, after review of a written description of the design and function of the system, to meet the needs of public safety.

11.6 Electrical Components and Interconnections

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

11.7 Access

To reduce the potential for trespass and injury, all ground-mounted electrical and control equipment and all access doors to a Small 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.

11.8 Blade Clearance

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

11.9 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 Small Wind Turbine.

11.10 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.

11.11 Visual Appearance

1. A Small 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.
2. A Small 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. No towers will be used for any purposes other than those specifically stated in this ordinance.
3. The system's tower and blades shall be a non-reflective, neutral color that blends the system and its components into the surrounding landscape to the greatest extent possible and incorporates non-reflective surfaces to minimize any visual disruption.

12.0 Noise Standards

- 12.1 Noise emanating from Small Wind Turbines shall be controlled in accordance with the provisions of this section.
 1. The sound level limits contained in this section apply to property boundaries that describe the outer limits of the facility site in combination with any parcel(s) owned by a Participating Landowner 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 Landowner that are contiguous with the facility site.
 3. The sound levels resulting from routine operation of a Small Wind Turbines, as measured in accordance with the procedures described in section 13.1.5 shall not exceed 60 dBA at the property boundary that describe the outer limits of the facility site combined with any parcel(s) owned by a Participating Landowner that are contiguous with the facility site.
 4. If the Applicant submits the certification and acknowledgement required by Section 9.11, 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 have been met, subject to the Applicant's obligation to take remedial action as necessary under section 13.1.6.

5. The Code Enforcement Office may perform measurements of sound levels resulting from routine operation of an installed Small Wind Turbines 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. Such measurements shall be performed as follows:
 - a. Measurements shall be obtained during representative weather conditions when the sound of the Small Wind Turbines 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 Small 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 Small Wind Turbine in conformance with the sound level limits of section 13.1. If, based on post-installation measurements taken in accordance with section 13.1.3, 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 Town of Cumberland, Small Wind Turbine 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, includes, 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.

13.0 Discontinued Use

1. A Small Wind Turbine 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 Planning Board deems sufficient to demonstrate that the project has not been discontinued and should not be removed. If the Small Wind Turbine 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. [Adopted, effective November 9, 2009]