

SANILAC TOWNSHIP WIND PROVISIONS
For Article 6 – SPECIAL PROVISIONS

SECTION 6.50
WIND ENERGY CONVERSION FACILITIES

(a) Intent and Purpose.

It is the intent and purpose of this section to establish rules and regulations for the construction, alteration and operation of wind energy conversion facilities, while protecting the health, welfare, safety, and quality of life of the general public, and to ensure compatible land uses in the vicinity of the areas affected by such facilities. The provisions of this section shall supplement other provisions of this ordinance regarding Special Land Uses for Wind Energy Conversion Facilities. In the event of a conflict between the provisions of this section and any other section of this ordinance the provisions of this section shall apply.

(b) Definitions. The following definitions are applicable to Sections 6.50 and 6.51.

- **Ambient:** Ambient is defined as the sound pressure level exceeded 90% of the time or L90.
- **Anemometer Tower:** An instrument that measures the speed of wind.
- **ANSI:** American National Standards Institute.
- **Commercial Wind Energy Conversion System:** A Utility Grid wind energy system is designed and built to provide electricity to the electric utility grid.
- **dB(A):** The sound pressure level in decibels. Refers to the “a” weighted scale defined by ANSI. A method for weighting the frequency spectrum to mimic the human ear.
- **Decibel:** The unit of measure used to express the magnitude of sound pressure and sound intensity.
- **Decommission:** To remove or retire from active service.
- **Hub Height:** The distance from the ground level to the center of the turbine hub or horizontal rotor shaft of a WECF turbine
- **IEC:** International Electrotechnical Commission: The IEC is the leading global organization that prepares and publishes international standards for all electrical, electronic and related technologies.
- **ISO:** International Organization for Standardization: ISO is a network of the national standards institutes of 162 countries.
- **Non-participating parcel:** A parcel of real estate that is not under lease, license or other property agreement with the owner/operator of a wind energy conversion facility (WECF) or temporary metrological tower (TMT).

- **Occupied Structure:** A structure including, but not limited to, a home, office, church, school, hospital or place of business intended for human occupation and not unoccupied on a permanent basis on the date a permit for a WECF or TMT is issued. This definition shall not include agricultural buildings and shall not include manufacturing or other places of business where the noise limits established in this ordinance are regularly exceeded by the normal operations of those places excluding sound generated by a WECF or TMT.
- **Participating parcel:** A parcel of real estate which is under lease, license or other agreement with the owner or operator of a wind energy conversion facility (WECF) or temporary metrological tower (TMT). A participating parcel may consist of parcels owned by different owners. For purposes of establishing setback requirements, a participating parcel shall be under lease, license or other property agreement with the owner/operator of a WECF or TMT for the full duration of any such agreement in effect on an adjoining parcel on which a WECF or TMT is constructed.
- **Rotor:** An element of a wind energy system that acts as a multi-bladed airfoil assembly, thereby extracting through rotation, kinetic energy directly from the wind.
- **Shadow Flicker:** Alternating changes in light intensity caused by the moving blade of a wind energy system casting shadows on the ground and stationary objects, such as a window at a dwelling.
- **Sound Pressure:** Average rate at which sound energy is transmitted through a unit area in a specified direction. The pressure of the sound measured at a receiver.
- **Sound Pressure Level:** The sound pressure mapped to a logarithmic scale and reported in decibels (dB).
- **Temporary Meteorological Towers:** A structure used by the owner/operator of a proposed WECF for the purpose of gathering meteorological data to determine the feasibility of locating, constructing or erecting a WECF. A temporary meteorological tower may be referred to in this ordinance as a TMT.
- **Total Height:** The total height of a WECF or TMT shall be the distance from ground level to the center of the hub plus the distance from the center of the hub to the top of the rotor at its highest point.
- **Wind Energy Conversion Facility:**

An electricity generating facility consisting of one or more wind turbines under common ownership or control meeting either of the following requirements:

 - exceeds 100 feet in total height; or
 - produces electricity not primarily intended for use on the premises where the wind energy conversion facility is located.

This definition includes substations, towers, cables, wires, poles and other building and accessories used in the production of electricity by said facility. A wind energy conversion facility may be referred to in this ordinance as a WECF.

- Wind Turbine: A wind turbine is a device that converts kinetic energy from the wind into electrical power.

(c) Prohibited Activity.

No WECF shall be located, constructed, erected, or altered in Sanilac Township until the owner/operator thereof shall have obtained a Special Land Use Permit as provided herein and thereafter no WECF shall be altered or operated except in complete compliance with the provisions of this ordinance.

(d) Special Use.

Wind Energy Conversion Facilities shall only be allowed as a Special Land Use in the Agricultural Residential, Commercial and Industrial Districts, excluding the Exclusion Zone as provided herein.

(e) Exclusion Zone.

No WECF shall be allowed east of Ridge Road in Sanilac Township.

(f) Any application for a Special Land Use for a WECF shall include the following:

- (1) The application fee as determined by the Township Board.
- (2) An additional fee as determined by the Township Board. This fee shall be held in a segregated account, separate from any other funds held by the township and shall be used to pay all reasonable costs and expenses associated with the applicant's special land use permit application, site plan review and approval process, which costs can include, but are not limited to, attorney fees, engineering fees, consultant fees, fees for reports and studies, and extraordinary zoning administration fees and extraordinary Township planner fees. If the Zoning Administrator determines at any time during the zoning review process that the funds remaining in said account will not be sufficient to pay the anticipated expenses as provided herein, the Zoning Administrator may require the applicant to deposit additional funds in an amount deemed sufficient to pay said additional expenses. The Zoning Administrator shall mail written notice of the additional amount required to be deposited by first class mail to the address contained in the application. If the additional funds are not deposited within fourteen (14) days of the date of the mailing, the Zoning Administrator may suspend the zoning review and approval process until the additional funds are deposited. Any funds not used for the purposes provided herein shall be returned to the applicant.
- (3) Applicant Identification: The complete name and address of the applicant, the complete name and address of the owner/operator if different than the applicant and the date the application is submitted. If the name or address of the applicant or owner/operator changes at any time before or after the issuance of a Special Use Permit, written notice of said change shall be filed with the Zoning Administrator.

- (4) Project Description: A general description of the proposed project including the legal description of the property or properties on which the project would be located and an anticipated construction schedule.
- (5) Environmental Impact: Copy of the Environmental Impact Analysis Report as required herein.
- (6) Insurance: Proof of the applicant's liability insurance.
- (7) Sound Modeling Study: The applicant shall provide a predictive sound modeling study of all turbine noise for a WECF to verify that the requirements of this ordinance can be met. The sound modeling must follow International Standard, ISO 9613-2 "Acoustics – Attenuation of sound during propagation outdoors – Part 2: General method of calculation." The sound modeling study shall use the maximum apparent wind turbine sound power levels as determined by measurement according to IEC 61400 – Part 11, or as determined by analytical calculations according to the manufacturer, plus 2 dB to each frequency band. The sound power source shall be modeled at hub height. Modeling shall include topographical information and assume hard ground (G=0) for all large areas of pavement and water, and mixed ground (G=0.5) for all other land. The sound modeling study shall include a map with all proposed wind turbine locations, all noise sensitive facilities, and all participating and non-participating parcels. The sound study map shall be overlaid with sound contour lines extending out to the 45 dBA sound contour line, at 5 dBA intervals from the center of the proposed turbine.
- (8) Avian and Wildlife Impact: Copy of the Avian and Wildlife Impact Analysis Report as required herein.
- (9) Shadow Flicker: Copy of the Shadow Flicker Analysis Report as required herein.
- (10) Manufacturers' Material Safety Data Sheet(s): Documentation shall include the type and quantity of all materials used in the operation of all equipment including, but not limited to, all lubricants and coolants.
- (11) Decommissioning: Copy of the Decommissioning Plan as required herein.
- (12) Complaint Resolution: Copy of the proposed complaint resolution process as required herein.
- (13) Fire suppression plan: Copy of the Fire Suppression Plan.
- (14) Site Plan: The applicant shall submit a site plan in full compliance with Section 3.6 of this ordinance for each turbine and other wind appurtenances. Additional requirements for a WECF site plan are as follows:
 - A. The names of all owners and the property tax identification number of all participating parcels;
 - B. Project area boundaries;

- C. The condition of the participating parcel prior to any construction showing the location of all occupied structures, structures over 400 square feet that are not occupied, surface contours, trees in excess of 20 feet in height, ponds, lakes, streams, ditches, roads, driveways, utility easements, and overhead utility wires;
 - D. All items listed in the preceding provision that will be added or eliminated as the result of the proposed project;
 - E. The location of the proposed WECF and all cables, wires, poles, access roads and accessory structures;
 - F. All signage, lettering, numbering and lighting;
 - G. An accurate depiction of the WECF showing the type of construction, appearance and color;
 - H. Specifications showing the size, overall height, hub height and rotor diameter of the proposed WECF;
 - I. Additional detail(s) and information as requested by the Planning Commission.
- (g) Standards and Requirements. All WECFs shall meet the following standards and requirements:
- (1) **Setbacks.** Every WECF shall meet the following setback requirements measured from the center of the base of the tower:
 - A. 1,320 feet from any occupied structure;
 - B. 1,320 feet or 4.0 times the total height, whichever is greater, from the property line of any non-participating parcel;
 - C. 1.5 times the overall height from any public road or above ground power distribution or communication lines.
 - (2) **Safety and Security Requirements.**
 - A. No structure in a WECF shall be climbable on its exterior;
 - B. All doorways and access points in a WECF shall be secured and locked to prevent unauthorized entry;
 - C. A sign shall be placed at the base of every point of access in a WECF warning of high voltage. Said signs shall have six (6) inch letters with $\frac{3}{4}$ inch stroke;
 - D. All wind turbines shall be equipped with manual and automatic controls to limit the speed of the rotor blades to the maximum speed designated by the manufacturer;
 - E. All wind turbines shall maintain a minimum blade clearance of 50 feet from ground level.

F. All guy wires and anchors must be clearly visible to a height of six (6) feet above ground level.

(3) **Signal Interferences.**

A. No WECF shall interfere with any existing fixed broadcast, retransmission or reception antennae for radio, television, wireless telephone or other personal communication system or emergency broadcast system unless the owner/operator provides a replacement signal to the effected party at no additional cost that will restore reception to at least the level present before the operation of the WECF.

B. No WECF shall cause significant electromagnetic interference to any microwave communication link which is in operation at the time a permit for the WECF is issued.

(4) **Sound Pressure Level:**

- The audible sound from a WECF may not exceed 45 dBA Lmax or the ambient sound pressure plus 5dBA, whichever is greater, for any hour, measured 50' outside any occupied structure which was located on any participating parcel at the time a permit for the WECF was issued, measured in accordance with the methodology as hereafter provided

A. The audible sound from a WECF may not exceed 40 dBA Lmax or the ambient sound pressure plus 5dBA, whichever is greater, for any hour measured outside and immediately adjacent to any property line on any non-participating parcel at the time a permit for a WECF is issued, measured in accordance with the methodology as hereafter provided;

B. If any WECF produces a steady pure tone, the standards set forth in subparagraphs A and B shall be reduced by 5 dBA. A pure tone is defined to exist if the 1/3 octave band sound pressure level in the band, including the tone, exceeds the arithmetic average of the sound pressure levels of the two contiguous 1/3 octave bands by 5 dBA for center frequencies of 500 Hz and above, by 8 dBA for center frequencies between 100 and 160 Hz and 400 Hz or by 15 dBA for center frequencies less than or equal to 125 Hz;

C. The ambient noise level, absent any and all wind turbine noise, shall be expressed in terms of the highest whole number sound pressure level in dBA which is exceeded for more than five minutes per hour. Ambient noise level measurements shall be performed outside of a structure when wind velocities are sufficient to allow wind turbine operations but do not exceed 30 mph;

D. Any noise level falling between two whole decibels shall be the lower of the two;

(5) **Post Construction Sound Survey**

A. The applicant, subsequent owner or operator of a WECF shall complete a post construction sound survey within 12 months of the commencement of the

operation of the project. The applicant, subsequent owner or operator shall be able to determine compliance with the sound level limits set forth above. The measurements and the reporting of the data shall be conducted as described herein. The survey shall address noise complaints on file with the Township and may require additional measurement locations as deemed necessary by the Zoning Administrator. Should the sound survey indicate a non-compliant measurement, the owner of the WECF shall obtain compliance through mitigation or other measures.

1. A calibration check shall be performed and recorded before and after each measurement period.
2. The measurement period shall be two hours minimum and shall be continuously observed by a trained attendant.
3. Compliance will be demonstrated when the L_{max} Sound Level of each two-hour measurement interval is less than or equal to the L_{max} sound level limits set forth herein. Representative intervals are defined as:
 - a. Periods complying with the general method for routine measurements of ANSI S12.18. Measurements shall be made either downwind as defined in ANSI S12.18, or if the atmospheric conditions are such that the direction of the wind vector is within an angle of ± 45 degrees of the annual prevailing wind direction.
 - b. Periods where the concurrent turbine hub-elevation wind speeds are sufficient to generate within 1 dB of the maximum continuous rated sound power from the nearest wind turbine to the measurement location.
 - c. Periods where ground level gusts are equal to or less than 7 m/s (15.66 mph).

B. Measurement Locations

1. The specific measurement locations shall be chosen by the applicant, subsequent owner or operator's measurement personnel and approved by the Zoning Administrator prior to the post construction sound survey.
2. The measurement shall be performed at occupied structures for participating parcels and at parcel boundary lines for non-participating parcels. The locations shall be in close proximity to one or multiple wind turbines and/or locations which have modeled sound levels closest to limits herein. A 3:1 ratio (wind turbines to measurement locations) will be used to determine the number of measurement locations, with a minimum of eight measurement locations. The measurement locations shall include, but are not limited to, the following:

- a. A minimum of four measurements of different non-participating parcels. The measurement location shall be at the parcel boundary line nearest the closest wind turbine of the WECF.
 - b. A minimum of two measurements of different participating parcels. The measurement location shall be at the occupied structure, measured 50 feet from the façade nearest the closest wind turbine of the WECF.
 - c. Any measurement location determined necessary by the applicant, subsequent owner or operator's measurement personnel and Zoning Administrator. If both parties agree, a measurement location deemed unnecessary may be omitted from the required locations.
3. The microphone shall be positioned at a height of 5 feet \pm 1 foot above the ground, and oriented in accordance with the characteristics of the microphone so that the frequency response is as flat as possible.
 4. To the greatest extent possible, measurement locations should be located away from potential contaminating sources of noise such as major highways, industrial facilities and urban areas.
 5. To the greatest extent possible, measurement locations shall be at the center of unobstructed areas that are maintained free of vegetation and other structures or material that is greater than 2 feet in height for a 50-foot radius around the sound monitoring equipment.
 6. To the greatest extent possible, measurement locations should be at least 50 feet from any known sound source
 7. Meteorological measurements of the surface wind speed and direction shall be collected using anemometers at a height of 6.6 foot \pm 0.7 foot above the ground, near each noise measurement location. Care should be taken to avoid noise measurement contamination from the anemometer operation.
- C. Data measurement reports complying in form and substance as those for post-construction sound surveys shall be submitted to the Zoning Administrator within 45 days of completion.
1. A narrative description of the sound from the WECF for the compliance measurement period result.
 2. A narrative description of the sound measurements collected.
 3. A map showing the wind turbine locations, noise measurement locations, and all Noise Sensitive Facilities.
 4. The dates, days of the week and hours of the day when measurements were made.
 5. The wind direction and speed, temperature, precipitation, and sky condition for each measurement interval. Meteorological measurements of

the wind speed and direction will be reported at both the surface height, and at hub level (to be provided by the WECF from the closest wind turbine), based on five second integration intervals. Both the average and maximum wind speeds for each measurement interval shall be reported.

6. The wind energy output for each measurement interval for the closest wind turbine.
 7. Identification of all measurement equipment by make, model and serial number.
 8. All meteorological, sound, windscreen and audio instrumentation specifications and calibrations.
 9. All A-weighted equivalent sound levels for each measurement interval.
 10. All 1/3 octave band linear equivalent sound levels for each measurement interval and identification of tonal periods.
 11. All attendant's notes and observations.
 12. All concurrent time stamped turbine operational data including the date, time and duration of any noise reduction operation or other interruptions in operations if present.
 13. All periods removed from the data due to temperatures above or below manufacturer specifications, wind speeds above ANSI S12.18 limits.
 14. All corrections for transient background and continuous background sound according to ANSI S12.9 Part 3. All methodology, data, field notes, and calculations shall be included. Audio recordings may be submitted for identification of intrusive noise events. Audio collection shall occur through the same microphone/sound meter as the measurement data. Audio recordings shall be time stamped (hh:mm:ss), at an adequate quality for identifying events, and in mp3 format.
 15. All other information determined necessary by the Planning Commission.
- D. Measurement of the Sound from Routine Operation. As an ongoing condition of any special use permit for a WECF, the Zoning Administrator may require measurements of the sound from routine operation of the completed system. Such measurements may be required to determine compliance with this ordinance and the special use permit, to investigate a community complaint or for validation of the calculated sound levels presented to the Zoning Administrator in support of the special use permit. The measurements and the reporting of the data shall be conducted as described below. Should the measurements indicate a non-compliant measurement, the owner and the operator of the WECF shall obtain compliance through mitigation or other measures.
1. Measurement locations shall be as determined by the Zoning Administrator beforehand.

2. The measurement locations shall include, but are not limited to, the following representative locations:
 - a. For participating parcels, a minimum of one measurement location at occupied structure of the complainant, measured 50 feet from the façade nearest the closest wind turbine of the WECF.
 - b. For non-participating parcels, a minimum of one measurement location at the parcel boundary line of the complainant nearest the closest wind turbine of the WECF.
 - c. Any measurement location determined necessary by the Zoning Administrator.
 3. The microphone shall be positioned at a height of 5 feet \pm 1 foot above the ground, and oriented in accordance with the characteristics of the microphone so that the frequency response is as flat as possible.
 4. To the greatest extent possible, measurement locations should be located away from potential contaminating sources of noise such as major highways, industrial facilities and urban areas.
 5. To the greatest extent possible, measurement locations shall be at the center of unobstructed areas that are maintained free of vegetation and other structures or material that is greater than 2 feet in height for a 50-foot radius around the sound monitoring equipment.
 6. To the greatest extent possible, measurement locations should be at least 50 feet from any known sound source.
 7. Meteorological measurements of the surface wind speed and direction shall be collected using anemometers at a height of 6.6 foot \pm 0.7 foot above the ground, near each noise measurement location. Care should be taken to avoid noise measurement contamination from the anemometer operation.
 8. Data measurement reports complying in form and substance as those for post-construction sound surveys shall be submitted to the Planning Commission within 45 days of completion.
- E. General Sound Survey Methodology. The following methodology shall apply to all sound surveys directed by the provisions of this ordinance:
1. All sound studies shall be completed by an independent third party. Fees for such studies shall be paid for from the escrow funds deposited with the application for special use approval or, in case of studies conducted after the post-construction sound survey, by the owner or operator in advance.
 2. Measurement Personnel. Measurements shall be supervised by personnel who are independent of the WECF, well qualified by training and experience in measurement and evaluation of environmental sound and are

board certified members of the Institute of Noise Control Engineering (INCE).

3. Measurement Instrumentation. Measurement devices shall comply with the following requirements:
 - a. A sound level meter or alternative sound level measurement system used shall meet all of the Type 1 performance requirements of American National Standard Specifications for Sound Level Meters, ANSI S1.4.
 - b. An integrating sound level meter (or measurement system) shall also meet the Class 1 performance requirements for integrating/averaging in the International Electrotechnical Commission Sound Level Meters, IEC Publication 61672-1.
 - c. A filter for determining the existence of tonal sounds shall meet all of the Class 1 performance requirements of American National Standard Specification for Octave- Band and Fractional Octave-Band Analog and Digital Filters, ANSI S1.11.
 - d. An acoustical calibrator shall be used of a type recommended by the manufacturer of the sound level meter and that meets the Type 1 performance requirements of American National Standard Specification for Acoustical Calibrators, ANSI S1.40.
 - e. A microphone windscreen shall be used of a type that meets or exceeds the recommendations of manufacturer of the sound level meter.
 - f. The sound level meter shall have been calibrated by a laboratory within 24 months of the measurement, and the microphone's response shall be traceable to the National Bureau of Standards.
 - g. The sound level meter shall be used with the fast meter response and sampling frequency of one sample per second.
 - h. Anemometer(s) used for surface wind speeds shall have a minimum manufacturer specified accuracy of ± 1 mph providing data in five second integrations.
 - i. Compass used for surface wind direction shall have a minimum manufacturer specified accuracy of $\pm 3^\circ$ providing data in five second integrations.
 - j. Thermometer used for surface temperature shall have a minimum manufacturer specified accuracy of $\pm 2^\circ\text{C}$ providing data in five second integrations.
 - k. A digital recording device used to store the time waveform of the sound pressure levels shall comply with the requirements of ANSI/ASA S1.13.

- (6) **Visual Appearance.** All WECFs shall meet the following visual requirements:
- A. The maximum total height of a wind turbine shall be 499 feet;
 - B. Wind turbines shall be mounted on tubular towers with solid exteriors;
 - C. Wind turbines and accessory structures shall be painted a non-reflective non-obtrusive color. The exterior shall be maintained in good condition and the towers shall be repainted whenever rust, corrosion or peeling or flaking paint becomes visible;
 - D. WECFs shall not be lighted unless so required by statute, ordinance, rule or regulation. If lighting is required, an FAA approved radar activated obstruction control lighting system must be installed;
 - E. WECFs shall contain no letters, numbers or symbols other than the name of the manufacturer and the name of the owner/operator unless otherwise required by this ordinance or any other statute, ordinance, rule or regulation. Any such letters, numbers or symbols may not exceed six inches in height. Every WECF must have a sign or lettering identifying its owner/operator and containing contact information;
 - F. Electrical collection and transmission lines, transformers and conductors may be placed overhead adjacent to public roads or along easements otherwise dedicated to the transmission of electric power. All such lines, transformers and conductors shall comply with any Avian Power Line Interaction Committee (APLIC) guidelines to prevent avian mortality. All such lines at any other location shall be placed underground at a minimum depth of 48 inches below grade.
- (7) **Construction Codes, Towers, and Interconnection Standards.** WECFs shall comply with all applicable state construction and electrical codes, local building permit requirements, Federal Aviation Administration requirements, the Michigan Airport Zoning Act (Public Act 23 of 1950, MCL 259.431 et. seq.), the Michigan Tall Structures Act (Public Act 259 of 1959, MCL 259.481 et. seq.), Michigan Public Service Commission regulations, Federal Energy Regulatory Commission Interconnection Standards, and local jurisdiction airport overlay zone regulations. Any required lighting shall not exceed Federal Aviation Administration minimum standards and, to the extent possible, shall be shielded to reduce glare and visibility from the ground.
- (8) **Environmental Impact.**
- A. The applicant shall have an independent qualified professional approved by the Zoning Administrator prepare a report identifying and assessing any potential impacts on the natural environment, including wetlands and other fragile ecosystems, historical and cultural sites, and antiquities and containing a plan setting forth measures to be taken to eliminate, minimize or mitigate any adverse impacts identified. The report and plan shall be submitted to the

Township along with the Special Land Use Application. If approved, any plan shall become a requirement of the Special Land Use permit.

- B. The owner/operator shall comply with the Michigan Natural Resources and Environmental Protection Act (Public Act 451 of 1914, MCL 324.101 et. Seq.)
 - C. The applicant shall forthwith repair any damage to any public roads, drains and infrastructure caused by the construction, maintenance or operation of any WECF.
- (9) **Shadow Flicker.** The applicant shall prepare a shadow flicker modeling report showing the potential shadow flicker created by each proposed wind turbine on all occupied structures. The report shall identify the location of each occupied structure affected by shadow flicker, the expected duration of the shadow flicker at each location throughout the course of the year, the anticipated effect of shadow flicker on the occupants at each location and a plan to eliminate or mitigate the effects of shadow flicker at each location. The report and plan shall be submitted to the Planning Commission along with the Special Land Use Application. If approved, any plan shall become a requirement of the Special Land Use Permit. All turbines are to be equipped with a shadow detection system. Shadow Flicker on non-participating parcels shall not be allowed.

(10) **Avian and Wildlife Impact.**

- A. The applicant shall have an independent qualified professional approved by the Zoning Administrator prepare a report identifying and assessing any potential impacts of the Proposed WECF on wildlife. The report shall:
 - 1. identify areas requiring special scrutiny including wildlife refuges, areas containing high concentrations of birds, bat hibernacula, wooded ridge tops that attract wildlife, sites frequented by endangered species, significant bird migration pathways, and areas that have landscape features known to attract large number of raptors;
 - 2. identify the types of wildlife present in significant numbers in any area effected by the WECF project and the anticipated impact of the project on said wildlife;
 - 3. identify any threatened or endangered species in any area effected by the WECF project and the anticipated impact of the project on each threatened or endangered species;
 - 4. propose a plan to eliminate or mitigate the impact of the WECF project on wildlife, threatened species and endangered species.

The report and plan shall be submitted to the Planning commission along with the Special Land Use Application. If approved, any plan shall become a requirement of the Special Land Use Permit.

- B. Not less than 12 nor more than 24 months after the WECF begins commercial operation the applicant shall have an independent qualified professional approved by the Zoning Administrator conduct a post construction wildlife mortality study and prepare a report thereon and submit it to the Township within 30 days after its preparation. If the report reveals a significant impact on any wildlife or any impact on a threatened or endangered species, the report shall include a plan to eliminate or mitigate said impact. If approved, any plan shall become an additional requirement of the Special Land Use Permit.

(11) **Decommissioning.**

- A. The applicant shall prepare a decommissioning plan which shall include:
 - 1. the anticipated life of the project;
 - 2. the estimated decommissioning costs net of salvage; value in current dollars.
 - 3. the method of insuring that funds will be available for decommissioning and restoration;
 - 4. the manner in which the project will be decommissioned and the site restored.

A copy of the plan shall be submitted to the Township along with the Special Land Use Application.

- B. The owner/operator of a WECF shall post a bond issued by a surety approved by the Township naming the owner/operator as the principal and the Township as the obligee to ensure the decommissioning of the project is in accordance with the requirements of this ordinance. The bond shall be in an amount equal to 15% of the total WECF project cost. The bond shall remain in effect until the entire WECF project is decommissioned as provided herein.
- C. The owner/operator shall notify the Zoning Administrator in writing any time the WECF has not been used for the production of electricity for 30 consecutive days and shall notify the Zoning Administrator in writing when the production of electricity resumes.
- D. Within sixty days of any one of the following events the owner/operator of a WECF shall deconstruct and remove the WECF including all foundations to a level four feet below grade and restore all property occupied by the WECF to the condition it was in immediately prior to construction:
 - 1. The owner/operator of the WECF violates any provision of this ordinance or any conditions contained in the Special Use Permit and said violation is not cured within 30 days of the issuance of a citation or the date of mailing written notice of said violation to the address of the owner/operator on file with the Zoning Administrator;

2. The WECF is not used for the production of electricity for 12 consecutive months.
- (12) **Complaint Resolution.** The applicant shall develop a written plan to resolve complaints from persons residing in an area affected by the construction and operation of the WECF. A copy of the resolution plan shall be submitted to the Township along with the Special Land Use Application. The plan may use an independent mediator or arbitrator and shall include a time limit for acting on a complaint. Prior to commencing construction the owner/operator shall provide all residents living in the area effected by the construction and operation of the WECF with contact information, including a telephone number and where a representative can be contacted during normal business hours to file a complaint. A report of all complaints and actions taken to resolve them shall be filed with the Township on an annual basis. This process shall not preclude the Township from taking any action allowed by law on the subject of any complaint.
- (13) **Annual Inspections.** No later than September 30th of each year, the owner/operator shall file with the Township a certification prepared by an authorized representative of the manufacturer of the WECF or a professional engineer certifying that each WECF has been inspected in the 30 days preceding the certification, that it is being operated and maintained in accordance with the manufacturer's specifications, industry standards, the requirements imposed by statute, ordinance, rule or regulation. Additional inspections may be required by the Township.
- (14) **Revocation of Permit.** A permit issued pursuant to this section may be revoked upon violation of any provision of this ordinance. If a violation is alleged, the Township shall send written notice of said violation to the owner/operator of the WECF at the address on file with the Township. Said notice shall set forth the nature of the violation and shall notify the owner/operator that it has 30 days to correct the violation. If the violation is not corrected within the 30day time period, the revocation of the permit shall be placed on the agenda of a Township board meeting. The Township shall give the owner/operator at least seven days written notice of the time and place of said meeting. The owner/operator may attend and present such information as it deems appropriate regarding the revocation. The Township shall determine if a violation exists and shall determine a timetable for either correcting the violation or revoking the permit.

SECTION 6.51

ANEMOMETER TOWERS AND TEMPORARY METEOROLOGICAL TOWERS

- (a) **Intent and Purpose.** It is the intent and purpose of this section to establish rules and regulations for the construction, alteration and operation of Anemometer Towers and Temporary Meteorological Towers, while protecting the health, welfare, safety, and quality of life of the general public, and to ensure compatible land uses in the vicinity of the areas affected by such facilities. The provisions of this section shall supplement other provisions of this ordinance regarding Special Land Uses for Anemometer Towers

and Temporary Meteorological Towers. In the event of a conflict between the provisions of this section and any other section of this ordinance the provisions of this section shall apply.

- (b) **Definitions.** The definitions set forth in Section 6.50(b) are incorporated by reference.
- (c) **Prohibited Activity.** No Anemometer Tower or TMT in excess of 65 feet in total height shall be located, constructed, erected, or altered in Sanilac Township until the owner/operator thereof has obtained a Special Land Use Permit as provided herein and thereafter no Anemometer Tower or TMT shall be altered or operated except in complete compliance with the provisions of this ordinance.
- (d) **Special Use.** Anemometer Towers and Temporary Meteorological Towers shall only be allowed as a Special Land Use in the Agricultural Residential, Commercial, and Industrial Districts excluding the Exclusion Zone as provided herein.
- (e) No Anemometer Tower or Temporary Meteorological Tower shall be allowed east of Ridge Road in Sanilac Township.
- (f) Any application for a Special Land Use for an Anemometer Tower or TMT shall include the following:
 - (1) The application fee as determined by the Township Board.
 - (2) An additional fee as determined by the Township Board. This fee shall be held in a segregated account, separate from any other funds held by the township and shall be used to pay all reasonable costs and expenses associated with the applicant's special land use permit application, site plan review and approval process, which costs can include, but are not limited to, attorney fees, engineering fees, consultant fees, fees for reports and studies, and extraordinary zoning administration fees and extraordinary Township planner fees. If the Zoning Administrator determines at any time during the zoning review process that the funds remaining in said account will not be sufficient to pay the anticipated expenses as provided herein, the Zoning Administrator may require the applicant to deposit additional funds in an amount deemed sufficient to pay said additional expenses. The Zoning Administrator shall mail written notice of the additional amount required to be deposited by first class mail to the address contained in the application. If the additional funds are not deposited within fourteen (14) days of the date of the mailing, the Zoning Administrator may suspend the zoning review and approval process until the additional funds are deposited. Any funds not used for the purposes provided herein shall be returned to the applicant.
 - (3) Applicant Identification: The complete name and address of the applicant, the complete name and address of the owner/operator if different than the applicant and the date the application is submitted. If the name or address of the applicant or owner/operator changes at any time before or after the issuance of a Special Use Permit, written notice of said change shall be filed with the Zoning Administrator.

- (4) **Project Description:** A general description of the proposed project including the legal description of the property or properties on which the project would be located and an anticipated construction schedule.
- (5) **Environmental Impact:** Copy of the Environmental Impact Analysis Report as required herein.
- (6) **Insurance:** Proof of the applicant's liability insurance.
- (7) **Site Plan:** The applicant shall submit a site plan in full compliance with Section 3.6 of this ordinance for each Anemometer Tower or TMT .Additional requirements for an Anemometer Tower or TMT are as follows:
 - A. The names of all owners and the property tax identification number of all participating parcels;
 - B. Project area boundaries;
 - C. The condition of the participating parcel prior to any construction showing the location of all occupied structures, structures over 400 square feet that are not occupied, surface contours, trees in excess of 20 feet in height, ponds, lakes, streams, ditches, roads, driveways, utility easements, and overhead utility wires;
 - D. All items listed in the preceding provision that will be added or eliminated as the result of the proposed project;
 - E. The location of the proposed Anemometer Tower or TMT and all cables, wires, poles, access roads and accessory structures;
 - F. All signage, lettering, numbering and lighting;
 - G. An accurate depiction of the Anemometer Tower or TMT showing the type of construction, appearance and color;
 - H. Specifications showing the size and overall height of the proposed Anemometer Tower or TMT;
 - I. Additional detail(s) and information as requested by the Planning Commission.
- (g) **Standards and Requirements.** Every Anemometer Tower and TMT shall meet the following standards and requirements:
 - (1) **Setbacks.** Every Anemometer Tower and TMT shall meet the following setback requirements measured from the center of the base of the tower:
 - A. A distance equal to the total height of the Anemometer Tower or TMT from any non-participating parcel.
 - B. A distance equal to 1.2 times the total height of the Anemometer Tower or TMT from any public road or above ground power distribution or communication lines.

- (2) **Safety and Security Requirements**
- A. A sign shall be placed at the base of every Anemometer Tower or TMT points of access warning of high voltage. Said signs shall have six (6) inch letters with $\frac{3}{4}$ inch stroke.
 - B. All guy wires and anchors must be clearly visible to a height of six (6) feet above ground level.
- (3) **Signal Interferences.**
- A. No Anemometer Tower or TMT shall interfere with any existing fixed broadcast, retransmission or reception antennae for radio, television, wireless telephone or other personal communication system or emergency broadcast system unless the owner/operator provides a replacement signal to the affected party at no additional cost that will restore reception to at least the level present before the operation of the Anemometer Tower or TMT.
 - B. No Anemometer Tower or TMT shall cause significant electromagnetic interference to any microwave communication link which is in operation at the time a permit for the Anemometer Tower or TMT is issued.
- (4) **Visual Appearance.**
- A. Anemometer Towers and TMTs and accessory structures shall be painted a non-reflective non-obtrusive color. The exterior shall be maintained in good condition and the towers shall be repainted whenever rust, corrosion or peeling or flaking paint becomes visible;
 - B. Anemometer Towers and TMTs shall not be lighted unless so required by statute, ordinance, rule or regulation.
 - C. Anemometer Towers and TMTs shall contain no letters, numbers or symbols other than the name of the manufacturer and the name of the owner/operator unless otherwise required by this ordinance or any other statute, ordinance, rule or regulation. Any such letters, numbers or symbols may not exceed six inches in height. Every Anemometer Tower and TMT must have a sign or lettering identifying its owner/operator and containing contact information;
- (5) **Construction Codes, Towers, and Interconnection Standards.** Anemometer Towers and TMTs shall comply with all applicable state construction and electrical codes, local building permit requirements, Federal Aviation Administration requirements, the Michigan Airport Zoning Act (Public Act 23 of 1950, MCL 259.431 et seq.), the Michigan Tall Structures Act (Public Act 259 of 1959, MCL 259.481 et seq.), Michigan Public Service Commission regulations, Federal Energy Regulatory Commission Interconnection Standards, and local jurisdiction airport overlay zone regulations. Any required lighting shall not exceed Federal Aviation Administration standards and, to the extent possible, shall be shielded to reduce glare and visibility from the ground.
- (6) **Environmental Impact.**

- A. The applicant shall have an independent qualified professional approved by the Zoning Administrator prepare a report identifying and assessing any potential impacts on the natural environment, including wetlands and other fragile ecosystems, historical and cultural sites, and antiquities and containing a plan setting forth measures to be taken to eliminate, minimize or mitigate any adverse impacts identified. The report and plan shall be submitted to the Township along with the Special Land Use Application. If approved, any plan shall become a requirement of the Special Land Use permit.
- B. The owner/operator shall comply with the Michigan Natural Resources and Environmental Protection Act (Public Act 451 of 1914, MCL 324.101 et. Seq.)
- C. The applicant shall forthwith repair any damage to any public roads, drains and infrastructure caused by the construction, maintenance or operation of any Anemometer Towers or TMTs.

(7) **Decommissioning.**

- A. The applicant shall prepare a decommissioning plan which shall include:
 - (i). the anticipated life of the project;
 - (ii). the estimated decommissioning costs net of salvage; value in current dollars.
 - (iii). the method of insuring that funds will be available for decommissioning and restoration;
 - (iv). the manner in which the project will be decommissioned and the site restored.

A copy of the plan shall be submitted to the Township along with the Special Land Use Application.

- B. The owner/operator of an Anemometer Tower or TMT shall post a bond issued by a surety approved by the Township naming the owner/operator as the principal and the Township as the obligee to ensure the decommissioning of the project is in accordance with the requirements of this ordinance. The bond shall be in an amount equal to 15% of the total Anemometer Tower or TMT project cost. The bond shall remain in effect until the entire Anemometer Tower or TMT project is decommissioned as provided herein.
- C. The owner/operator shall notify the Zoning Administrator in writing any time the Anemometer Tower or TMT has not been used for the purpose for which it was originally intended for 30 consecutive days and shall notify the Zoning Administrator in writing when the use of the Anemometer Tower or TMT for the purpose for which it was originally intended resumes.
- D. Within sixty days of any one of the following events the owner/operator of an Anemometer Tower or TMT shall deconstruct and remove the Anemometer Tower or TMT including all foundations to a level four feet below grade and

restore all property occupied by the Anemometer Tower or TMT to the condition it was in immediately prior to construction:

- (i). The owner/operator of the Anemometer Tower or TMT violates any provision of this ordinance or any conditions contained in the Special Use Permit and said violation is not cured within 30 days of the issuance of a citation or the date of mailing written notice of said violation to the address of the owner/operator on file with the Zoning Administrator;
 - (ii). The Anemometer Tower or TMT is not used for the purpose for which it was originally intended for 12 consecutive months.
- (8) **Complaint Resolution.** The applicant shall develop a written plan to resolve complaints from persons residing in an area affected by the construction and operation of the Anemometer Tower or TMT. A copy of the resolution plan shall be submitted to the Township along with the Special Land Use Application. The plan may use an independent mediator or arbitrator and shall include a time limit for acting on a complaint. Prior to commencing construction, the owner/operator shall provide all residents living in the area effected by the construction and operation of the Anemometer Tower or TMT with contact information, including a telephone number and where a representative can be contacted during normal business hours to file a complaint. A report of all complaints and actions taken to resolve them shall be filed with the Township on an annual basis. This process shall not preclude the Township from taking any action allowed by law on the subject of any complaint.
- (9) **Annual Inspections.** No later than September 30th of each year, the owner/operator shall file with the Township a certification prepared by an authorized representative of the manufacturer of the Anemometer Tower or TMT or a professional engineer certifying that each Anemometer Tower or TMT has been inspected in the 30 days preceding the certification, that it is being operated and maintained in accordance with the manufacturer's specifications, industry standards, the requirements imposed by statute, ordinance, rule or regulation. Additional inspections may be required by the Township.
- (10) **Revocation of Permit.** A permit issued pursuant to this section may be revoked upon violation of any provision of this ordinance. If a violation is alleged, the Township shall send written notice of said violation to the owner/operator of the Anemometer Tower or TMT at the address on file with the Township. Said notice shall set forth the nature of the violation and shall notify the owner/operator that it has 30 days to correct the violation. If the violation is not corrected within the 30-day time period, the revocation of the permit shall be placed on the agenda of a Township board meeting. The Township shall give the owner/operator at least seven days written notice of the time and place of said meeting. The owner/operator may attend and present such information as it deems appropriate regarding the revocation. The Township shall determine if a violation exists and shall determine a timetable for either correcting the violation or revoking the permit.