Wind Energy Conversion Systems (WECS) Amendment to the Vermillion County Zoning Ordinance Ordinance #2021-13

- 1.1 PURPOSE AND SCOPE This article establishes general guidelines for the siting and use of Wind Turbine Generators, Meteorological towers (MET) and related devices and structures. This article is intended to:
 - A. Protect residential areas and neighboring properties from any potentially adverse visual or noise impacts of Wind Turbine Generators or related devices and structures.
 - B. Provide for a land use that will provide an energy source with low associated environmental impacts, protect natural resources, protect agricultural economies, and protect the health, safety, and welfare of Vermillion County residents.
 - C. Provide for the complete removal of abandoned or noncompliant Wind Turbine Generator towers, MET towers, or related devices and structures.
 - D. Allow restricted use of Wind Turbine Generator towers and MET towers of limited height.
 - E. Provisions of any and all land leases for property being used for the installation of any WECS with any Landowner must comply with all standards provided for in this document to ensure neighboring private and public assets are protected for any and all damages of any type.
 - F. The U.S. Fish & Wildlife Service must be consulted with in accordance with the USFW Land-based Wind Energy Guidelines (March 23, 2012) as referenced in Appendix A.
 - G. This article, all provisions and guidelines herein, shall be transferred with and applied to any and all ownership changes, and shall not be waived in whole or in part by any bankruptcy or other such type proceeding.

1.2 APPLICABILITY

- A. Micro Wind System towers and MET Towers less than 45 feet in height shall be permitted subject to the grant of a Special Exception from the Vermillion County Board of Zoning Appeals (BZA) exclusively in the following zoning districts: A-Agricultural, Industrial I, Industrial II, and N-1, subject to compliance with the regulations of this Ordinance and any conditions or commitments imposed at the time of the Special Exception grant, and shall be subject to all standards and the requirements of Sections 1.3 and 1.4.
- B. Wind Farms, Large Wind Turbines, WECS and MET Towers exceeding 45 feet in height, and all related devices and structures for the above, shall be permitted subject to

the grant of a Special Exception from the BZA, exclusively in the following zoning districts: A-Agricultural, Industrial I, Industrial II, and N-1 subject to compliance with the regulations of this Ordinance and any conditions or commitments imposed at the time of the Special Exception grant, and shall be subject to all standards and the requirements of Sections 1.3 and 1.4.

1.3 GENERAL REQUIREMENTS

A. Minimum Site Area.

- 1. Permits issued by Vermillion County for WECS Project located in the Agricultural zoning district shall be limited to the equivalent of 100 megawatt of production or 6000 acres calculated at 60 acres per megawatt produced. Exceptions to this size limitation for any WECS project shall only be permitted by Special Exception granted by the BZA.
- 2. The minimum site area for a Wind Turbine Generator or a MET Tower shall be as necessary to meet required setbacks, the other standards of the Vermillion County Zoning Ordinance, and as required by the Special Exception granted by the BZA.

B. Setbacks.

- 1. Micro Wind System towers and all associated features, including transmission and communication lines to and from the structure, shall be set back from any adjoining property lot line, road right-of-way; railroad right-of-way or overhead electrical transmission or distribution lines a minimum distance equal to the total height of the structure.
- 2. Each proposed Wind Turbine Generator or MET Tower, including transmission and communication lines to and from the structure, shall meet the following applicable setback requirements:
 - a. Each Wind Turbine Generator or MET Tower and all associated features shall be set back from any adjoining property lot line, road right-of-way, railroad right-of-way or overhead electrical transmission or distribution lines a minimum distance of two (2) miles from the base of the tower.
 - b. Wind Farms and WECS occupying multiple parcels may have internal property line setbacks waived by execution of a written document signed by all land owners sharing such property line. All such documents shall be recorded in the office of the Vermillion County Recorder within 45 days of the signing of each wind lease agreement and said document shall be cross referenced to the current recorded deeds. The Wind Developer shall not be permitted to submit a memorandum of lease

containing multiple lease contracts to the Vermillion County Recorder. Signed wind lease contracts not submitted to the Vermillion County Recorder's office within 45 days of signing are null and void in Vermillion County for purposes of this Ordinance.

- c. The setback distance for all WECS shall be two (2) miles from platted residential subdivisions of a municipality, healthcare facilities, and schools. Distance shall be measured from the center of the foundation at the base of the WECS to the closest Corporate Limit boundary line, healthcare facility property line, or school property line.
- C. Minimum Rotor Wind Vane or Blade Clearance. The lowest point of the arc created by rotating wind vanes or blades on a Wind Turbine Generator shall be no less than 60 feet or 1/3 of distance to the top of the hub, whichever is greater.
- D. Maximum Noise Levels. Any proposed Wind Turbine Generator shall produce sound levels that are no more than 32 decibels as measured on the dB(A) scale at the property lines of the site in question. For all towers other than Micro Wind Systems the following shall be provided:
 - 1. A noise study by a licensed acoustician chosen by the Vermillion County Area Plan Commission (APC) and paid for by the Wind Developer shall be submitted with the application for a Wind Turbine Generator tower. Said study shall be prepared by a qualified professional acoustician with no less than three years of experience conducting WECS and community noise sound studies and shall include the Vermillion County Zoning Ordinance governing noise abatements following, at a minimum:
 - a. A description and map of the project's noise producing features, including the range of noise levels expected, and the basis of the expectation;
 - b. A survey and report prepared by a qualified acoustician with no less than three years of experience conducting WECS community noise sound studies and wind development that analyzes the preexisting ambient noise (including seasonal variation) and the potentially affected residences, schools, public buildings or other noise sensitive land uses located within a two (2) mile radius of the proposed project site. Study shall include decibels for both A and C weighted scales.
 - c. A description and map of the cumulative noise impacts and any problem areas identified.
 - d. A description of the project's proposed noise control features and specific measures proposed to mitigate noise impacts for sensitive land uses.

E. Maximum Vibrations. Any proposed Wind Turbine Generator shall not produce vibrations perceptible beyond the property on which it is located or cause vibration that could be detected in nearby structures or damage underground wells.

F. Electrical Components

- 1. All electrical components of the WECS shall conform to applicable local, state, and national codes, and relevant national and international standards.
- 2. Electrical collection cables All WECS electrical collection cables between each WECS shall be located underground. All buried transmission lines shall be at a minimum depth of six (6) feet until the same reach the property line or a substation adjacent to the property line.
- 3. No electrical collection cables or communication lines may cross any neighboring property without the express written consent of the property owner, approved by the APC, and shall follow the underground burial requirements listed in item F.2 above.
- 4. During the construction, operation, decommissioning, dismantling and removal of any WECS or any of the associated devices and structures (including but not limited to the tower base, communication and transmission lines), any and all topsoil in the affected area shall be removed, stored and held separately from any excavation activity (including but not limited to trenching, ditching, digging or any other soil disturbance). After the work has been completed, then the disturbed area and extending to 100 feet in all directions shall be tilled using a sub-soiler to a minimum depth equal to that of the soil disturbance in two (2) opposing passes then the original topsoil that was removed shall be returned to the original area from where it was obtained.
- G. Interference with Reception. Any Wind Turbine Generators, including all transmission and communication lines to and from the structure, shall be constructed and operated so that they do not interfere with agricultural tiling, present and future, drainage, natural resource preservation, agricultural economies, local residential broadcast television signals, communication or microwave transmissions, GPS for agricultural use, military defense radar, navigational and radio reception to neighboring areas, electromagnetic communications including radio, telephone, cell phone and microwave.
- H. State or Federal Requirements. All proposed Wind Turbine Generators or MET towers shall meet or exceed all local, state, or federal standards and regulations.
- I. Aesthetics and Lighting. Any proposed Wind Turbine Generator or MET tower shall meet the following requirements:
 - 1. Each Wind turbine Generator or MET tower shall be subject to any

applicable standards of the Federal Aviation Administration (FAA). If any towers are not subject to FAA regulations, the towers shall be marked or identified in order to easily be identified for low-level aviation operations as noted below and subject to any requirements of the Vermillion County Zoning Ordinance or imposed as a condition of any Special Exception granted by the BZA.

- a. Each tower shall have Aircraft Detection Lighting System. A lighting plan for each WECS shall be provided to the BZA. Such plan should select and submit to the FAA a request to use and Aircraft Detection Lighting System (ADLS) approved by the FAA. The applicant shall provide to the Executive Director of the APC a copy of the FAA approval of the required ADLS prior to the installation of any tower section. The plan must describe all lighting that will be used, including any lighting that may be required by the FAA. The lighting shall be planned and developed in such a way to minimize the visual impact of the structures.
- 2. Each Wind Turbine Generator tower and MET tower may be a monopole, monotube or lattice style construction and shall be self-supporting. Towers shall not include guy wires.
- J. Signs. A sign no more than 4 square feet and no less than 2 square feet in area displaying an address, telephone number and the tower ID number for emergency calls and informational inquiries shall be posted at the Wind Turbine Generator or MET tower erected prior to a Wind Turbine Generator installation. No Wind Turbine Generator tower or MET tower or site shall include an advertising sign.
- K. Not Essential Services. Wind Turbine Generators and MET towers shall be regulated and permitted pursuant to this Article of the Vermillion County Zoning Ordinance and shall not be regulated or permitted as essential services, public utilities, or private utilities.
- L. Removal of Abandoned or Unsafe Wind Turbine Generators or MET Towers.
 - 1. Any Wind Turbine Generator or MET tower that is not operated for a continuous period of 6 months shall be considered abandoned.
 - 2. Any tower found to be unsafe or not in compliance with the Special Exception conditions related to noise or shadow flicker placed upon it by the BZA, shall be in violation of the Special Exception grant.
 - 3. The owner of any Wind Turbine Generator tower or MET tower that is abandoned or in violation of the Special Exception approval shall remove the tower within twelve (12) months of receipt of notice from the Executive Director of the APC.

- 4. In addition to removing the Wind Turbine Generator, or MET tower, including all infrastructure, transmission and communication lines, aggregate, concrete base material, and rebar, the owner shall return the property and complete agronomic soil conditions to pristine pre-construction condition.
- 5. The owner's restoration shall be approved in writing by the landowner and is subject to APC approval within such twelve (12) month period.
- 6. Failure to remove an abandoned Wind Turbine Generator or MET tower within such twelve (12) month period shall be a violation subject to enforcement action by the APC.
- 7. A decommissioning plan is required and must be approved by the APC. The plan shall provide for the method and payment of the anticipated cost of removing a WECS at the end of its serviceable life or upon its becoming discontinued or abandoned to ensure that the WECS is properly decommissioned. The decommissioning plan, for all WECS except Micro Wind Systems, shall include, at a minimum, the following:
 - a. Assurance. Written assurance that the WECS will be properly decommissioned upon the expiration of its serviceable life or in the event of its discontinuance or abandonment.
 - b. Cost Estimate. An estimate of the costs of decommissioning and removing the WECS upon the expiration of its useful life or in the event of its discontinuance or abandonment. The cost estimate shall be made by a professional engineer, contractor, or other person with expertise or experience in decommissioning and removal of WECS, shall be updated every three (3) years or upon a change in ownership of the WECS, whichever is earlier, and is subject to approval by the APC.
 - c. Financial Assurance. The cost of removal and site restoration is the full responsibility of the Applicant and transfers with any and all changes in ownership of the WECS, and shall not be waived in whole or in part by any bankruptcy proceedings. In order to provide the greatest possible financial assurance that there will be sufficient funds to remove the WECS and to restore the site, the following steps shall be followed:
 - 1). For each WECS, the Applicant shall determine an amount of money equal to the estimated removal and restoration cost.
 - 2). The APC shall require independent verification of the adequacy of this amount.
 - 3). This amount shall be secured in the form of a surety, such as surety bond, letter of credit, or other financial promise, and shall

be subject to the approval of the APC.

- d. Abandonment. The Applicant shall verify, under penalties for perjury, that all easements and leases for the WECS contain terms that provide financial assurances to the property owners to ensure that the WECS are properly decommissioned within one (1) year of the expiration of its serviceable life or upon discontinuance or abandonment.
- M. Climb Prevention. All tower designs shall include features to deter climbing or be protected by anti-climbing devices, when applicable, such as:
 - 1. Fences with locking portals at least six feet high; or
 - 2. Anti-climbing devices 15 feet vertically from the base of the tower.
 - 3. Locked tower doors.
- N. Waste Management. All solid waste whether generated from supplies, equipment, parts, packaging, or operation or maintenance of the facility, including old parts and equipment, shall be removed from the site in a timely manner consistent with industry standards. All HAZARDOUS WASTE generated by the operation and maintenance of the WECS, including but not limited to lubricating materials, shall be handled in a manner consistent with all local, state and federal rules and regulations.
- O. Utility Interconnection. The WECS, if interconnected to a utility system, shall meet the requirements for interconnection and operate as set forth in the electrical utility's then-current service regulations applicable to WECS.
- P. Warnings. A reasonably visible warning sign concerning voltage must be placed at the base of all pad mounted transformers and substations.
- Q. Drainage Repair. All damages to County maintained waterways, drainage ditches, field tiles, or any other infrastructures caused by the construction or maintenance of the WECS must be completely repaired to meet or exceed original condition, and so as not to impede the natural flow of water. All repairs must be completed within 30 days as approved by the Vermillion County Surveyor or designate, and subject annual inspection by the Vermillion County Surveyor or designate and further repair for a period of 5 years from the date of construction, or decommissioning and dismantling, as it may apply.
- R. Use of Roads. An Applicant proposing to use any county roads for the purpose of transporting WECS or substation parts or equipment for construction, operation, or maintenance of the WECS or Substation, shall comply with the following:
 - 1. All proposed routes that will be used for construction and maintenance purposes shall be identified. If the route includes a public road, it must be approved by the Vermillion County Board of Commissioners and have a signed

Road Use Agreement on file in the Vermillion County Auditor's Office. The Vermillion County Board of Commissioners shall conduct a pre-construction baseline survey to determine existing road conditions for assessing potential future damage.

- 2. All road damage caused by the construction of the WECS project equipment, the installation of same, or the removal of same, must be repaired to the satisfaction of the Vermillion County Board of Commissioners. The Vermillion County Board of Commissioners may choose to require either remediation of road repair upon completion of the project or are authorized to collect fees for oversized load permits. Further, a corporate surety bond in an amount to be fixed by a Professional Engineer shall be required by the Vermillion County Board of Commissioners to insure that future repairs are completed to the satisfaction of the County. The cost of bonding is to be paid by the applicant.
- 3. Newly constructed WECS access roads may not impede the flow of water.
- 4. All repairs must be completed in the time period agreed upon by the Vermillion County Board of Commissioners.
- 5. Throughout the life of the project as repairs to WECS are made, road repairs will be completed each time the Applicant's equipment uses county roads and as the Vermillion County Board of Commissioners deem necessary, at the Applicant's expense.
- 6. The location of all WECS maintenance and or access roads must be approved by the Vermillion County Board of Commissioners and may not be located closer than 3,000 feet to any residence as measured from the center of the access road to the corner of the residence.
- S. Dust Control. Reasonable dust control measures are required by the County during construction of the WECS. Treating with a suitable dust suppressant approved by the Vermillion County Board of Commissioners shall be used. The frequency of application shall be on an as needed basis.

T. Sewer and Water.

- 1. All WECS facilities shall comply with existing septic and well regulation as required by the Vermillion County Health Department and the State of Indiana Department of Public Health.
- 2. All wells, water towers and piping within a two (2) mile radius of each WECS site shall be inspected by a licensed certified Indiana well installer prior to and following construction, annually for a period of 10 years. All expenses associated with the inspections shall be at the expense of the developer. Any damage or contamination caused by vibration or any operations of WECS or their

construction, decommissioning and dismantling, shall be repaired at the expense of the Wind Developer and the Wind Developer is required to provide commercial water tanks and water to affected homes until an investigation is complete and problems, if caused by WECS construction or operation, are mitigated.

U. Height.

All Micro Wind System towers, MET towers, Wind Farms, Wind Turbines (Large Wind System or Small Wind System), and WECS approved under this Ordinance are subject to the height requirements as specified under Section 1 of the Vermillion County Zoning Ordinance. Heights exceeding the 45'-0" maximum may be permitted only if a variance is granted by the BZA.

- V. Fire Prevention and Emergency Response Plan and Requirements. The Wind Developer shall provide:
 - 1. A description of the potential fire and emergency scenarios that may require a response from fire, emergency medical services, police or other emergency responders.
 - 2. A designation of the specific agencies that would respond to potential fire or other emergencies.
 - 3. All emergency response training and equipment needed to respond to a fire or other emergencies including an assessment of the trainings shall be provided on an annual basis by the Wind Developer.
- W. Mitigation of Impacts. The Applicant's site plan and other documents shall illustrate and describe mitigation measures to minimize potential impacts on the natural environment including, but not limited to wetlands, avian and wildlife (migratory bird patterns and bat population effects), other fragile ecosystems, historical/cultural sites and antiquities, and all agricultural economies. The U.S. Fish & Wildlife Service must be consulted with in accordance with the USFW Land-based Wind Energy Guidelines (March 23, 2012) as referenced in Appendix A.
- X. Shadow Flicker. At no time shall a WECS tower, nacelle, or blades create shadow flicker on any non-participating landowner's property. For the purpose of this Ordinance a nonparticipating landowner shall be defined as a landowner on which a tower and its associated infrastructure does not physically sit.
- Y. Property Value Guarantee. A property value guarantee shall be offered by the Wind Developer to all landowners within a two (2) mile radius of a WECS. Fair market value will be established by, at minimum, two reputable appraisers of the landowners' choice to establish baseline data for property values at the Wind Developer's expense. If the value of a property decreases or a landowner is unable to sell his property after the

WECS is erected, the developer will pay that landowner the difference or buy the property at the baseline fair market value determined prior to construction of the WECS project.

Z. Notice. Prior to applying for a Special Exception, the Wind Developer must notify every household and landowner within a two (2) mile radius of the parcel for which said Special Exception is being sought. Such notifications must be by certified mailing.

1.4 SPECIAL EXCEPTION REQUIRED

- A. Unless exempted under Section 1.2, all Wind Turbine Generators and MET towers shall be subject to Special Exception approval and all requirements for Special Exception in accordance with the Rules of Procedure for the Vermillion County Board of Zoning Appeals Article IV, exclusively in those districts listed as: A-Agriculture, Industrial II, and N-1. In addition to the general standards of approval for Special Exception, all Special Exceptions required by this Article shall comply with the following standards of approval:
 - 1. The use shall meet all general requirements listed above in Section 1.3.
 - 2. All decommissioning money paid to Vermillion County shall be placed in an interest accruing account controlled by Vermillion County prior to the approval of any permits.
 - 3. As specified in Section 1.3, a Noise Study shall be submitted including satisfactory mitigation measures to assure that no nearby residential uses will be subjected to noise impacts greater than 32 dBA at the property line.
 - 4. A Special Exception for a proposed project, if granted by the BZA, shall be valid for a period of one (1) year. If an application for an Improvement Location Permit has not been submitted with such one (1) year period, the Special Exception shall automatically terminate and be of no further force or effect. The Applicant shall be granted a single one (1) year extension subject to the Applicant submitting a report to the BZA which shows the progress made on the project.
- B. Application Requirements. Prior to the construction of a WECS, the Applicant shall obtain the following: (1) a Special Exception from the BZA; and (2) Drainage approval as required under the Vermillion County Stormwater and Erosion Control Ordinance when deemed necessary, (3) an Improvement Location Permit from the APC.
 - 1. The Application for Special Exception. The application shall be filed with the BZA and include the following items:
 - a. A WECS Project summary, including, to the extent available: (1) Each turbine's point location, including its name plate generating capacity; the make and model of the WECS that will be installed; the maximum

height of the WECS towers measured from the base to the tip of the blade in vertical position and diameter of the WECS rotors; and (2) a description of the Applicant, Owner, and Operator, including their respective business structures.

- b. The names, addresses, and phone numbers of the Applicant, Owner and Operator, and all property owners with WECS or associated utility lines on their properties. A memorandum of lease for all leases for properties with WECS must be filed in the Vermillion County Recorder's Office within 45 days of the lease being signed.
- c. A topographic map of the project site and the surrounding area which shall encompass an area at least a two (2) mile radius from the proposed project site with contours of not more than five foot intervals.
- d. A site plan at an appropriate scale (standard sheet of 36 inches by 24 inches and individual tower site not greater than 1-inch equals 20 feet) showing the proposed location of the WECS facility, including the planned locations of each WECS tower, WECS access roads, substations, electrical cabling, and ancillary equipment. In addition, the site plan shall show: Primary structures within a two (2) mile radius of any WECS; property lines, including identification of adjoining properties; setback lines; public roads; location of all above-ground utility lines within a distance of a two (2) mile radius; recognized historic or heritage sites as noted by the Division of Historic Preservation and Archeology of the Indiana Department of Natural Resources; and any wetlands based upon a delineation prepared in accordance with the applicable U. S. Army Corps of Engineer requirements and guidelines.
- e. Location of all existing underground utility lines associated with the WECS site.
- f. All required hearing filing fees as prescribed by this ordinance.
- g. An executed Agricultural Impact Mitigation Agreement (AIMA) with the Vermillion County Board of Commissioners as referenced in Appendix B.
- h. An executed Road Use Agreement with the Vermillion County Board of Commissioners.
- i. A letter of project plan approval by the INDNR and the US Fish & Wildlife Service.
- 2. The Application for Improvement Location Permit. The Applicant shall apply to the APC for an Improvement Location Permit. In addition to the

information required on the Improvement Location Permit Application and those documents required under section 1.3, the Applicant shall provide the following information to the APC prior to the issuance of an Improvement Location Permit:

- a. Location of all utility lines within a two (2) mile radius of the proposed WECS.
- b. Location of all underground utility lines associated with the WECS site.
- c. Stamped engineer drawings of the structural components of the tower construction including the base and footings.
- d. Schematic of electrical systems associated with the WECS including all existing and proposed electrical connections.
- e. Manufacturer's specifications and installation and operation instructions and an un-redacted operations safety manual for the model of WECS that will be installed.
- f. Certification by a registered professional engineer that the towers' design is sufficient to withstand wind load requirements for structure as defined by Indiana IBCA 2012.
- g. All turbines shall be new equipment commercially available. Used, experimental or proto-type equipment still in testing shall subject to approval by the BZA as per the normal Special Exception process.
- h. Necessary recorded access easements and necessary recorded utility easements, copies of which shall be submitted to the APC.
- i. No appurtenances other than those associated with the WECS operations shall be connected to any wind tower except with express, written permission by the BZA.
- j. A transportation plan showing how vehicles would access the site and describing the impacts of the proposed energy project on the local and regional road system during construction and operation.
- k. A revegetation plan for restoring areas temporarily disturbed during construction.
- 1. A fire protection plan for construction and operation of the WECS facility (See V. Fire Prevention and Emergency Response Plan and Requirements).

- m. Any other item reasonably requested by the BZA.
- n. A drainage plan for construction and operation developed under the standards of the Vermillion County Commissioners Stormwater Management Standards and Specifications for Development or Construction within the County.
- o. An erosion control plan developed and provided in compliance with the Vermillion County Commissioners Stormwater Management Standards and Specifications for Development or Construction within the County, approved by the Vermillion County Soil and Water Conservation District and the Vermillion County Drainage Board, and all other local, state, and federal regulations.
- p. Each WECS Tower and MET tower shall require an Improvement Location Permit. The fee for each improvement Location Permit shall be subject to the fee schedule established under of Vermillion County Zoning Ordinance Wind Energy Systems.

1.5 OPERATION

- A. Interference. If, after construction of the WECS, the APC receives a written complaint related to interference with agricultural tiling, present and future, drainage, natural resource preservation, agricultural economies, local residential broadcast television signals, communication or microwave transmissions, GPS for agricultural use, military defense radar, navigational and radio reception to neighboring areas, electromagnetic communications including radio, telephone, cell phone and microwave, the Owner or Operator shall be notified in writing and the Owner or Operator shall take reasonable steps to respond within five (5) business days to resolve the complaint. Applicant, Owner or Operator shall take such actions as may be required to mitigate interference with drainage, natural resources, agricultural economies, electromagnetic communications, such as radio, telephone, microwaves, GPS for agricultural use, military defense radar or television signals caused by any WECS. In addition, the Applicant, Owner or Operator shall comply with the following:
 - 1. Failure to remedy a complaint. If the Executive Director of the APC determines that an Owner or Operator has unreasonably failed to remedy such verified interference within fifteen (15) days after the Owner or Operator received the written complaint, the Executive Director of the APC shall take appropriate action to rescind any permit or approval associated with the WECS in question. Upon such rescission, the Owner or Operator shall be required to begin the decommissioning process.
- B. Coordination with Local Fire Department.
 - 1. The Applicant, Owner or Operator shall submit to all providers of

emergency services serving the WECS Project area a copy of the as-built site map in digital format, if requested.

2. Upon request by the local fire department, the Owner or Operator shall cooperate with the local fire department to develop the fire department's emergency response plan and provide annual training and equipment for local Emergency Response Personnel on an ongoing, annual basis at the Owner's or Operator's expense.

Nothing in this section shall alleviate the need to comply with all other applicable fire laws and regulations.

- C. Materials Handling, Storage and Disposal.
 - 1. All solid wastes related to the construction, operation and maintenance of the WECS shall be removed from the site promptly and disposed of in accordance with all federal, state and local laws.
 - 2. All hazardous materials or waste related to the construction, operation and maintenance of the WECS shall be handled, stored, transported and disposed of in accordance with all applicable local, state and federal laws.
- D. An ongoing log of maintenance activities performed on all WECS shall be submitted to the Executive Director of the APC on an annual basis.
- E. Fees.
 - 1. Fee per Project: \$50,000 for the first WECS tower; the Fee for each additional WECS tower is \$10,000.
- F. Violation. Violation of this Ordinance shall be an offense punishable by a fine not to exceed \$1,000.00. Each day a violation goes un-remedied after the Applicant, Owner or Operator is sent written notice of the violation by registered mail is considered a separate offense. It is the goal of this Ordinance to promote structural safety to protect the public, and in setting an appropriate fine the nature of the offense, the degree of public safety involved, the efforts of the County, and the Applicant, Owner, or Operator to quickly and safely resolve any violation shall be considered. In the event Vermillion County takes action to enforce the Ordinance against an Applicant, Owner, or Operator, all expenses incurred by the County, including but not limited to attorneys and engineering experts, shall be reimbursed to the County by the Applicant, Owner, and Operator.

1.6 DEFINITIONS

A. "Applicant" means the entity or person who submits to the County an application for the siting of any WECS or Substation or thereafter operates or owns a WECS.

- B. "Owner" means the entity or entities with an equity interest in the WECS(s), including their respective successors and assigns. Owner does not mean (i) the property owner from whom land is leased for locating the WECS (unless the property owner has an equity interest in the WECS); or (ii) any person holding a security interest in the WECS(s) solely to secure an extension of credit, or a person foreclosing on such security interest provided that after foreclosure, such person seeks to sell the WECS(s) within one year of such event.
- C. "Operator" means the entity responsible for the day-to-day operation and maintenance of the WECS, including any third party subcontractors.
- D. "Wind Developer" means the person that enters into a wind option agreement or wind energy agreement with the owner of the real property for the purpose of developing a wind energy project.
- E. "Large Wind energy Conversion System" means a WECS with a manufacturer's rating of more than fifty (50) kilowatts per wind tower, or a total height of more than one-hundred forty (140) feet, or a swept area of more than forty (40) feet.
- F. Meteorological tower ("MET") means, for purposes of this regulation, a tower which is erected primarily to measure wind speed and directions plus other data relevant to siting a Wind Energy Conversion System.
- G. "Micro Wind System" means a building mounted WECS that has a nameplate capacity (manufacturer's rating) of 10 kilowatts or less, and projects no more than fifteen (15) feet above the highest point on the roof.
- H. "Small Wind System" means a WECS that has a nameplate capacity (manufacturer's rating)less than or equal to 100 kilowatts per wind tower, and total height of one hundred forty (140) feet or less and a swept area of forty (40) feet or less.
- I. Wind Energy Conversion System ("WECS") means all necessary devices that together convert wind energy into electricity and deliver that electricity to a utility's transmission lines, including the rotor, nacelle, generator, WECS Tower, electrical components, WECS foundation, transformer, and electrical cabling from the WECS Tower to the Substation(s), switching stations, meteorological towers, communications facilities, and other required facilities and equipment, as related to the WECS project.
- J. "Wind Farm" means an area of land with a cluster of wind turbines for driving electrical generators.
- K. "Wind Turbine" means a device that converts the wind's kinetic energy into electrical energy.

APPENDIX A

Protection of Wildlife

- 1. The US Fish & Wildlife Service must be consulted with by the Wind Energy Facility owner early in the WECS planning process. USFWS Land-based Wind Energy Guidelines (March 23, 2012 must be used to assist developers in identifying species of concern that may potentially be affected by their proposed project, including migratory birds, bats, bald and golden eagles and other birds of prey; and listed, proposed, or candidate endangered and threatened species These impacts may include:
- Collisions with wind turbines and associated infrastructure; loss and degradation of habitat from turbines and infrastructure;
- Fragmentation of large habitat blocks into smaller segments that may not support sensitive species;
- · Displacement and behavioral changes; and
- Indirect effects such as increased predator populations or introduction of invasive plants.

2. Tiered Approach

The Guidelines use a "tiered approach" for assessing potential adverse effects to species of concern and their habitats. The tiered approach is an iterative decision-making process for collecting information in increasing detail; quantifying the possible risks of proposed wind energy projects to species of concern and habitats; and evaluating those risks to make siting, construction, and operation decisions. During the pre-construction tiers (Tiers 1, 2, and 3), developers will work with the Service to identify and avoid and minimize risks to species of concern. During post-construction tiers (Tiers 4 and 5), developers will assess whether actions taken in earlier tiers to avoid and minimize impacts are successfully achieving the goals and, when necessary, taking additional steps to reduce impacts, Subsequent tiers refine and build upon issues raised and efforts undertaken in previous tiers. Each tier offers a set of questions to help the developer evaluate the potential risk associated with developing a project at the given location.

Briefly, the tiers address:

- Tier 1 Preliminary site evaluation (landscape-scale screening of possible project sites)
- Tier 2 Site characterization (broad characterization of one or more potential project sites)
- Tier 3 Field studies to document site wildlife and habitat and predict project impacts
- Tier 4 Post-construction studies to estimate impacts
- Tier 5 Other post-construction studies and research

The tiered approach provides the opportunity for evaluation and decision-making at each stage, enabling a developer to abandon or proceed with project development, or to collect additional information if required. This approach does not require that every tier, or every element within each tier, be implemented for every project.

If sufficient data are available at a particular tier, the following outcomes are possible:

- The project proceeds to the next tier in the development process without additional data collection.
- The project proceeds to the next tier in the development process with additional data collection.
- An action or combination of actions, such as project modification, mitigation, or specific post-construction monitoring, is indicated.
- The project site is abandoned because the risk is considered unacceptable.

The final Guidelines and all associated materials are available at

www.fws.gov/windenergv

APPENDIX B

AGRICULTURAL IMPACT MITIGATION AGREEMENT Between

and the VERMILLION COUNTY BOARD OF COMMISSIONERS

Pertaining to the Construction of a Commercial Wind Energy Facility in Vermillion County, Indiana

The following standards and policies are required by Vermillion County, Indiana to hel
preserve the integrity of any Agricultural Land that is impacted by the Construction an
Deconstruction of a wind energy facility. This AIMA is made and entered into between the
Commercial Wind Energy Facility Owner and the Vermillion County Board of Commissioner
LLC, an limited liability
company authorized to transact business in Indiana, hereafter referred to as "Commercial Win
Energy Facility Owner or Facility Owner", plans to develop an approximately MV
Commercial Wind Energy Facility or "Facility" in Vermillion County, which will consist of
approximately turbines, access roads, an underground collection line, a switchyard, a substation
and an operation and maintenance building site.

If Construction does not commence within four years after this **AIMA** has been fully executed, this AIMA will be revised, with the Facility Owner's input, to reflect Vermillion County's current Wind Energy Conversion System Ordinance. This AIMA, and any updated AIMA, will be filed with the Vermillion County Board of Commissioners by the Facility Owner.

This AIMA is applicable to Construction and Deconstruction activities occurring partially or wholly on privately owned Agricultural Land.

Conditions of the AIMA

The actions set forth in this AIMA shall be implemented in accordance with the conditions listed below:

- A. All Construction or Deconstruction activities may be subject to County or other local requirements. However, the specifications outlined in this AIMA shall be the minimum standards applied to all Construction or Deconstruction activities.
- B. All actions set forth in this AIMA are subject to modification through negotiation by Landowners and a representative of the Facility Owner, provided such changes are negotiated in advance of any respective Construction or Deconstruction activities.

- C. The Facility Owner may negotiate with Landowners to carry out the mitigative actions that Landowners wish to perform themselves. In such instances, the Facility Owner will offer Landowners the area commercial rate for their machinery and labor costs.
- D. All mitigative actions will extend to associated future Construction, maintenance, repairs, and Deconstruction of the Commercial Wind Energy Facility.
- E. The Facility Owner will exercise Best Efforts to determine all Landowners and Tenants affected by the Construction and Deconstruction of a Facility. The Facility Owner shall keep the Landowners and Tenants informed of the project's status, meetings, and other factors that may have an impact upon their farming operations.
- F. The Facility Owner agrees to include a statement of its adherence to this AIMA in any environmental assessment and/or environmental impact statement that may be prepared in connection with the Project.
- G. Execution of this AIMA shall be made a condition of any Special Exception approval. A copy of this AIMA shall be mailed to each Landowner. Within 30 days of execution of this AIMA, the Facility Owner shall provide postage and mailing labels to the APC for mailing to all Landowners. If the Facility Owner becomes aware that a Landowner was not included on the list of Landowners to which a copy of this AIMA was mailed, the Facility Owner shall notify the APC and provide postage and a mailing label as soon as possible.

In the case of a new Underlying Agreement with a Landowner, the Facility Owner shall incorporate this AIMA into such Underlying Agreement.

- H. The Facility Owner will implement all mitigative actions to the extent that they do not conflict with the requirements of any applicable federal, state and local rules and regulations and other permits and approvals that are obtained by the Facility Owner for the Project.
- I. If any mitigative action(s) is held to be unenforceable, no other provision shall be affected by that holding, and the remainder of the mitigative actions shall be interpreted as if they did not contain the unenforceable provision.
- J. No later than 45 days prior to the Construction or Deconstruction of a Commercial Wind Energy Facility, the Facility Owner will provide the Landowner(s) with a phone number the Landowner can call to alert the Facility Owner should the Landowner(s) have questions or concerns with the work which is being done or has been carried out on his/her property.
- K. If the Facility is sold or transferred, the Facility Owner assuming ownership of the facility shall provide notice of such sale or transfer within ninety (90) days to the County and to Landowners, and the existing Financial Assurance requirements, plus the other

terms of this AIMA, shall apply to the new Facility Owner.

- L. After Construction, the Facility Owner will provide the APC with "as built" drawings (strip maps) showing the location of all tiles lines damaged in the Construction of the Wind Farm. The drawings and GPS tile lines repair coordinates will be provided for distribution by the APC to the Soil and Water Conservation District (SWCD) and the County Surveyor for the purpose of assisting Landowners with future drainage needs.
- M. In addition, after all Construction is complete, all affected Landowners will receive a copy of the tile repairs location map with GPS coordinates identified as the electric cable crosses their property.
- N. The Facility Owner shall comply with all local, state and federal laws and regulations, specifically including the worker protection standards to protect workers from pesticide exposure.

Definitions

Abandonment: Occurs when Deconstruction has not been completed within 12 months after the wind energy facility reaches the end of its Useful Life.

Aboveground Cable: Electrical power lines installed above grade to be utilized for conveyance of power from the Wind Turbine(s) to the Wind Facility substation.

Agricultural Impact Mitigation Agreement (AIMA): The Agreement between the Commercial Wind Energy Facility Owner and the Vermillion County Board of Commissioners described herein.

Agricultural Land: Land used for Cropland, hayland, pasture land, managed woodlands, truck gardens, farmsteads, commercial ag-related facilities, feedlots, livestock confinement systems, land on which farm buildings are located, and land in government set-aside programs used for purposes as set forth above.

Best Efforts: Diligent, good faith, and commercially reasonable efforts to achieve a given objective or obligation.

Commercial Operation Date: The calendar date on which the Commercial Wind Energy Facility produces power for commercial sale, not including test power. Within ten (10) calendar days of the Commercial Operation Date, the Commercial Wind Energy Facility Owner shall notify the County and the Department of the Commercial Operation Date in writing.

Commercial Wind Energy Facility Owner (Facility Owner): A commercial enterprise that owns or operates a Wind Energy Facility of equal to or greater than 500 kilowatts in total nameplate capacity.

Construction: The installation, preparation for installation and/or repair of a Commercial Wind Energy Facility.

Cropland: Land used for growing row crops, small grains, vegetables or hay; includes land which was formerly used as Cropland, but is currently in a government set-aside program and pastureland.

Deconstruction: The removal of a Commercial Wind Energy Facility from the property of a Landowner and the restoration of that property as provided in the Agricultural Impact Mitigation Agreement. The terms "Deconstruction" and "Decommissioning" have the same meaning and, therefore, may be interchanged with each other.

Deconstruction Plan: A plan prepared by a Professional Engineer, at the Commercial Wind Energy Facility Owner expense, that includes:

- 1. the estimated Deconstruction cost per turbine, in current dollars at the time of filing, for the Commercial Wind Energy Facility, taking into account, among other things:
 - a. the number of Wind Turbines and related Commercial Wind Energy Facilities involved,
 - b. the original Construction costs of the Commercial Wind Energy Facilities,
 - c. the size and capacity of the Wind Turbines,
 - d. the salvage value of the Commercial Wind Energy Facilities,
 - e. the Construction method and techniques for the Wind Turbines and other Commercial Wind Energy Facilities, and
- 2. a comprehensive detailed description of how the Commercial Wind Energy Facility Owner plans to pay for the Deconstruction of the Commercial Wind Energy Facility.

Financial Assurance: A reclamation bond or other commercially available Financial Assurance that is acceptable to Vermillion County, with the County as primary beneficiary and the Landowners as secondary beneficiaries.

Landowner(s): Any person with an ownership interest in property that is used for agricultural purposes and that is party to an Underlying Agreement.

Professional Engineer: An engineer licensed to practice engineering in the State of Indiana, and who is determined to be qualified to perform the work described herein by mutual agreement of Vermillion County and the Commercial Wind Energy Facility Owner.

Soil and Water Conservation District (SWCD): A local unit of government that provides technical and financial assistance to eligible Landowners for the conservation of soil and water resources.

Tenant: Any person lawfully residing or leasing/renting land that is subject to an Underlying Agreement.

Topsoil: The uppermost layer of the soil that has the darkest color or the highest content of organic matter; more specifically, it is defined as the "A" horizon.

Underlying Agreement: The written agreement with a Landowner(s) including, but not limited to, an easement, option, lease, or license under the terms of which another person has constructed, constructs, or intends to construct a Commercial Wind Energy Facility on the property of the Landowner.

Underground Cable: Electrical power lines installed below grade to be utilized for conveyance of power from the Wind Turbine(s) to the Wind Facility substation.

USDA Natural Resources Conservation Service (NRCS): NRCS provides America's farmers with financial and technical assistance to voluntarily put conservation on the ground, not only helping the environment but agricultural operations too.

Useful Life: A Commercial Wind Energy Facility will be presumed to have no remaining Useful Life if: (1) no electricity is generated for a continuous period of twelve (12) months and (2) the Commercial Wind Energy Facility Owner fails, for a period of 6 consecutive months, to pay the Landowner amounts owed in accordance with the Underlying Agreement.

Wind Turbine: A wind energy conversion unit equal to or greater than 500 kilowatts in total nameplate generating capacity.

Construction and Deconstruction Requirements

1. Support Structures

- a. On Agricultural Land, only single pole support structures will be used for overland transmission not located adjacent to the Commercial Wind Energy Facility substation.
- b. Where the electric line is adjacent and parallel to highway and/or railroad right-of-way, but on privately owned property, the support structures will be placed as close as reasonably practicable and allowable by the applicable County Engineer or other applicable authorities to the highway or railroad right-of-way. The only exceptions may be at jogs or weaves on the highway alignment or along highways or railroads where transmission and distribution lines are already present.
- c. The highest priority will be given to locating the electric line parallel and adjacent to highway and/or railroad right-of-way. When this is not possible, Best Efforts will be expended to place all support poles in such a manner so as to minimize their placement on Cropland (i.e., longer than normal spans will be utilized when traversing Cropland).

2. Aboveground Facilities

Locations for Facilities shall be selected in a manner so as to be as unobtrusive as reasonably possible to ongoing agricultural activities occurring on the land that contains the facilities. The Facility Owner's compliance with applicable local, county, state, and federal statutes, rules, regulations, and ordinances, and its securing any variations or waivers to such statutes, rules, regulations, and ordinances in accordance with applicable law, in selecting such locations shall constitute compliance with this provision.

3. Guy Wires and Anchors

- a. Best Efforts will be made to place guy wires and their anchors out of Cropland, pastureland and hayland, placing them instead along existing utilization lines and on land not used for row crops, pasture or hay. Where this is not feasible, Best Efforts will be made to minimize guy wire impact on Cropland.
- b. All guy wires will be shielded with highly visible guards.

4. Underground Cabling Depth

- a. Underground electrical cables will be buried with:
 - i. a minimum of 6 feet of top cover where it crosses Cropland and pasture land,
 - ii. a minimum of 6 feet of top cover where it crosses wooded/brushy land.
- b. Notwithstanding the foregoing, in those areas where (i) rock in its natural formation and/or (ii) a continuous strata of gravel exceeding 200 feet in length are encountered, the minimum top cover will be 30 inches.

5. Topsoil Removal and Replacement

- a. Any excavation shall be performed in a manner to preserve Topsoil. Best Efforts will be made to store the Topsoil near the excavation site in such a manner that it will not become intermixed with subsoil materials.
- b. Best Efforts will be made to store all disturbed subsoil material near the excavation site and separate from the Topsoil.
- c. When backfilling an excavation site, the stockpiled subsoil material will be placed back into the excavation site before replacing the Topsoil.
- d. Refer to Item No. 7.A. through 7.D for procedures pertaining to rock removal from the subsoil and Topsoil
- e. Refer to Items No. 8.A. through 8.D. for procedures pertaining to the alleviation of compaction of the Topsoil.
- f. Best Efforts will be performed to place the Topsoil in a manner so that after settling occurs, the Topsoil's original depth and contour (with an allowance

for settling) will be restored as close as reasonably practicable. The same shall apply where excavations are made for road, stream, drainage ditch, or other crossings. In no instance will the Topsoil materials be used for any other purpose unless agreed to otherwise by the Landowner.

- g. Excess subsoil material resulting from Wind Turbine foundation excavation shall be removed from Landowner's property, unless otherwise agreed to by Landowner.
 - h. Topsoil stripping or separation is not required for the excavation of narrow trenches, those 24 inches wide or less.

6. Repair of Damaged Tile Lines

If underground drainage tile is damaged by Construction or Deconstruction, it will be repaired in a manner that assures the tile line's proper operation at the point of repair. The following shall apply to the tile line repair:

- a. The Facility Owner will work with the Landowner to identify the tile lines traversing the property included within the Underlying Agreement which will be crossed or disturbed by the Construction of the Facility. All tile lines identified in this manner will be shown on the Construction and Deconstruction Plan and staked or flagged in the locations where expected crossing or disturbance is anticipated prior to Construction or Deconstruction to alert Construction and Deconstruction crews to the possible need for tile line repairs.
- b. Tile lines that are damaged, cut, or removed shall be staked or flagged with stakes or flags placed in such a manner they will remain visible until the permanent repairs are completed. In addition, the location of damaged drain tile lines will be recorded using Global Positioning Systems (GPS) technology.
- c. If water is flowing through any damaged tile line, the Facility Owner shall utilize Best Efforts to immediately and temporarily repair the tile line until such time that the Facility Owner can make permanent repairs. If the tile lines are dry and water is not flowing, temporary repairs are not required if the permanent repairs can be made by the Facility Owner within 14 days (weather and soil conditions permitting) of the time damage occurred; however, the exposed tile lines will be screened or otherwise protected to prevent the entry of foreign materials or animals into the tile lines.
- d. Where tile lines are severed by an excavation trench (repairs shall be made using the Drain Tile Repairs, Figures 1 and 2). If there is any dispute between the Landowner and the Facility Owner on the method of permanent tile line repair, the appropriate Soil and Water Conservation District's opinion shall be considered by the Facility Owner and the Landowner.
- e. To the extent practicable, there will be a minimum of one foot of

separation between the tile line and the Underground Cable whether the Underground Cable passes over or under the tile line. If the tile line was damaged as part of the excavation for installation of the Underground Cable, the Underground Cable will be installed with a minimum one foot clearance below or over the tile line to be repaired or otherwise to the extent practicable.

- f. The original tile line alignment and gradient shall be maintained. A laser transit shall be used to ensure the proper gradient is maintained. A laser operated tiling machine shall be used to install or replace tiling segments of 100 linear feet or more.
- g. During Construction stage, all permanent tile line repairs must be made within fourteen (14) days of identification or notification of the damage, weather and soil conditions permitting. At other times, such repairs must be made at a time mutually agreed upon by the Facility Owner and the Landowner.
- h. Following Construction and/or Deconstruction activities, the Facility Owner will utilize best practices to restore the drainage in the area to the condition it was before the commencement of the Construction/Deconstruction activities. If the Facility Owner cannot agree upon a reasonable method to complete this restoration, the Facility Owner may but is not required to implement the recommendations of the Vermillion County SWCD and such implementation would resolve the dispute.
- i. Following completion of the work, the Facility Owner will be responsible for correcting or paying for the correction of all tile line repairs that fail due to Construction and/or Deconstruction, provided any such failure was identified by Landowner within twenty-four (24) months after Construction or Deconstruction. The Facility Owner will not be responsible for tile line repairs that the Facility Owner pays the Landowner to perform. Facility Owner shall use Best Efforts to utilize a local drain tile repair company.

7. Rock Removal

The following rock removal procedures only pertain to rocks found in the uppermost 42 inches of soil, which emerged on Landowner property as a result of Construction and/or Deconstruction.

- a. Before replacing any Topsoil, Best Efforts will be taken to remove all rocks greater than 3 inches in any dimension from the surface of exposed subsoil which were brought to the site as a result of Construction and/or Deconstruction.
- b. As Topsoil is replaced, all rocks greater than 3 inches in any dimension will be removed from the Topsoil which emerged at the site as a result of Construction and/or Deconstruction activities.
- c. If trenching, blasting, or boring operations are required through rocky terrain, precautions will be taken to minimize the potential for oversized rocks to

become interspersed with adjacent soil material.

d. Rocks and soil containing rocks removed from the subsoil areas, Topsoil, or from any excavations, will be hauled off the Landowner's premises or disposed of on the Landowner's premises at a location that is mutually acceptable to the Landowner and the Facility Owner.

8. Compaction and Rutting

- a. Unless the Landowner opts to do the restoration work, after the Topsoil has been replaced, all farmland areas that were traversed by vehicles and Construction and/or Deconstruction equipment will be ripped at least 18 inches deep, and all pasture and woodland will be ripped at least 12 inches deep to the extent practicable. The existence of tile lines or underground utilities may necessitate less depth. The disturbed area will then be disked. Decompaction shall be conducted according to the guidelines provided in Appendices A and B.
- b. To the extent practicable, all ripping and disking will be done at a time when the soil is dry enough for normal tillage operations to occur on land adjacent to the right-of-way.
- c. The Facility Owner will restore all rutted land to a condition as close as possible to its original condition.
- d. If there is any dispute between the Landowner and the Facility Owner as to what areas need to be ripped/disked or the depth at which compacted areas should be ripped/disked, the Vermillion County SWCD's opinion shall be considered by the Facility Owner and the Landowner.

9. Construction During Wet Weather

Except as provided below, Construction activities are not allowed on farmland where normal farming operations, such as plowing, disking, planting or harvesting, cannot take place due to excessively wet soils. Wet weather conditions are to be determined on a field by field basis and not for the project as a whole.

- a. Construction activities on prepared surfaces, surfaces where Topsoil and subsoil have been removed, heavily compacted in preparation, or otherwise stabilized (e.g. through cement mixing) may occur at the discretion of the Facility Owner in wet weather conditions.
- b. Construction activities on unprepared surfaces will be done only when work will not result in rutting which results in a mixing of subsoil and Topsoil. Determination as to the potential of subsoil and Topsoil mixing will be in consultation with the underlying Landowner, or, if approved by the Landowner, his/her designated Tenant.

10. Land Leveling

- a. Following the completion of Construction and /or Deconstruction of a Commercial Wind Energy Facility, the Facility Owner will utilize Best Efforts to restore the disturbed area to its original pre-construction elevation and contour should uneven settling occur or surface drainage problems develop as a result of said activity.
- b. If, within twenty-four (24) months after Construction or Deconstruction, uneven settling occurs or surface drainage problems develop as a result of the Construction or Deconstruction of a Facility, the Facility Owner will provide such land leveling services within 45 days of a Landowner's written notice, weather and soil conditions permitting.
- c. If there is any dispute between the Landowner and the Facility Owner as to what areas need additional land leveling beyond that which is done at the time of Construction, the Facility Owner may but is not required to implement the recommendations of the Vermillion County SWCD and such implementation will resolve the dispute.

11. Prevention of Soil Erosion

- a. The Facility Owner will work with Landowners to prevent excessive erosion on land that has been disturbed by Construction or Deconstruction of a Commercial Wind Energy Facility. Consultation with the local SWCD by the Facility Owner will take place to determine the appropriate methods to be implemented to control erosion. This is not a requirement, however, if the land is bare Cropland that the Landowner intends to leave bare until the next crop is planted.
- b. If the Landowner and Facility Owner cannot agree upon a reasonable method to control erosion on the Landowner's right-of-way, the Facility Owner may -(but is not required to) implement the recommendations of the SWCD and such implementation will resolve the dispute.

12. Repair of Damaged Soil Conservation Practices

Consultation with the Vermillion County SWCD by the Facility Owner will be carried out to determine if there are soil conservation practices (such as terraces, grassed waterways, etc.) that will be damaged by the Construction and/or Deconstruction of a Commercial Wind Energy Facility. Those conservation practices will be restored to their preconstruction condition as close as reasonably practicable in accordance with USDA Natural Resources Conservation Service technical standards. All repair costs shall be borne by the Facility Owner.

13. Damages to Private Property

The Facility Owner will reasonably compensate Landowners for damages caused by the Facility Owner. Damage to Cropland will be reimbursed to the Landowner as prescribed in the applicable Underlying Agreement

14. Clearing of Trees Brush

- a. If trees are to be removed for the Construction or Deconstruction of a Commercial Wind Energy Facility, the Facility Owner will consult with the Landowner to determine if there are trees of commercial or other value to the Landowner.
- b. If there are trees of commercial or other value to the Landowner, the Facility Owner will allow the Landowner the right to retain ownership of the trees to be removed with the disposition of the removed trees to be negotiated prior to the commencement of land clearing.
- c. Unless otherwise restricted by federal, state or local regulations, the Facility Owner will follow the Landowner's desires regarding the removal and disposal of trees, brush, and stumps of no value to the Landowner by burning, burial, etc., or complete removal from any affected property.

15. Interference with Irrigation Systems

- a. If the Construction or Deconstruction of a Commercial Wind Energy Facility interrupts an operational (or soon to be operational) spray irrigation system, the Facility Owner will establish with the Landowner an acceptable amount of time the irrigation system may be out of service.
- b. If, as a result of Construction or Deconstruction of a Facility, an irrigation system interruption results in crop damages, the Landowner will be compensated for all such crop damages per the applicable Underlying Agreement.
- c. If it is feasible and mutually acceptable to the Facility Owner and the Landowner, temporary measures will be implemented to allow an irrigation system to continue to operate across land on which a Facility is also being Constructed or Deconstructed.

16. Access Roads

- a. To the extent practicable, access roads will be designed to not impede surface drainage and will be built to minimize soil erosion on or near the access roads.
- b. Access roads may be left intact through mutual agreement of the Landowner and the Facility Owner unless otherwise restricted by federal, state, or local regulations after the Useful Life.
- c. If the access roads are removed, Best Efforts will be expended to assure that the land shall be restored to equivalent condition(s) as existed prior to their Construction, or as otherwise agreed to by the Facility Owner and the Landowner. All access roads that are removed shall be ripped to a depth of 18 inches. All ripping will be done consistent with Items 8.A. through 8.D.

17. Weed Control

- a. The Facility Owner will provide for weed control in a manner that prevents the spread of weeds onto Agricultural Land affected by Construction or Deconstruction. Spraying will be done by a pesticide applicator that is appropriately licensed for doing such work in the State of Indiana.
- b. The Facility Owner will be responsible for reimbursing all reasonable costs incurred by owners of Agricultural Land affected by Construction or Deconstruction where it has been determined that weeds have spread from land impacted by the Facility. Reimbursement is contingent upon written notice to the Facility Owner and failure to respond within forty-five (45) days after notice is received.

18. Pumping of Water from Open Excavations

- a. In the event it becomes necessary to pump water from open excavations, the Facility Owner will pump the water in a manner that will avoid damaging Agricultural Land affected by Construction or Deconstruction. Such damages include, but are not limited to: inundation of crops for more than 24 hours, deposition of sediment in ditches and other water courses, and the deposition of subsoil sediment and gravel in fields and pastures.
- b. If it is impossible to avoid water-related damages as described in Item 18.A. above, the Facility Owner will compensate the Landowner for damages to crops as prescribed in the applicable Underlying Agreement.
- c. All pumping of water shall comply with existing drainage laws, local ordinances relating to such activities and any other applicable laws, specifically including the Clean Water Act.

19. Advance Notice of Access to Private Property

- a. The Facility Owner will provide the Landowner or Tenant with a minimum of 48 hours prior notice before accessing his/her property for the purpose of Construction or Deconstruction of a Commercial Wind Energy Facility.
- b. Prior notice shall consist of either: (i) a personal contact, telephone contact or email contact, whereby the Landowner or Tenant is informed of the Facility Owner's intent to access the land; or (ii) the Facility Owner mails or hand delivers to the Landowner or Tenant's home a dated, written notice of the Facility Owner's intent. Such written or hand delivered notice shall include a phone number at which agents of the Facility Owner can be reached. The Landowner or Tenant need not acknowledge receipt of the written notice before the Facility Owner can enter the Landowner's property.

20. Indemnification

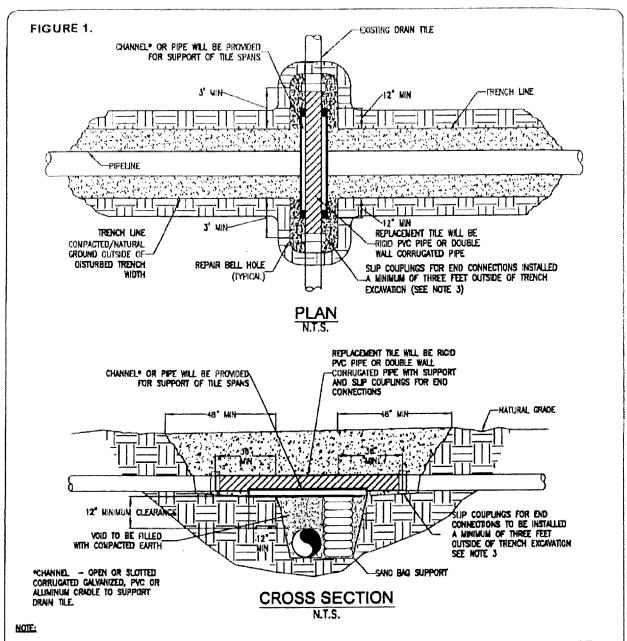
The Commercial Wind Energy Facility Owner will indemnify all Landowners, their heirs, successors, legal representatives, and assigns from and against all claims, injuries,

suits, damages, costs, losses, and reasonable expenses resulting from or arising out of Construction and/or Deconstruction, including damage to such Commercial Wind Energy Facility or any of its appurtenances, except where claims, injuries, suits, damages, costs, losses, and expenses are caused by the negligence or intentional acts, or willful omissions of such Landowners, and/or the Landowners heirs, successors, legal representatives, and assigns. In such circumstances, the Landowners, and the Landowners' heirs, successors, legal representatives, and assigns will indemnify the Facility Owner, its heirs, successors, legal representatives, and assigns from and against said claims, injuries, suits, damages, costs, losses, and reasonable expenses including but not limited to attorneys' fees and costs.

Concurrence of the	Parties to this AI	MA	
The		an	, LLC concur that
result from the Const Indiana.	truction of the wir	an an, overning the mitigation of agricultural and farm project in Vermillion County	
The effective date of	this AIMA comme	ences on the date of execution.	
STATE OF INDIAN BOARD OF COMM			
Tim Yocum			
RJ Donavan			
Britton Luther			
		_ , LLC a state name limited liability	company
By	,title		
	books turn the suit of the sui		

address

FIGURE 1



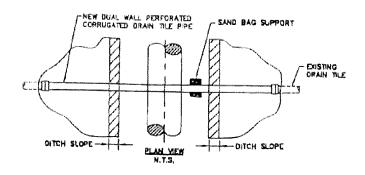
- 1. HAMEDIATELY REPAIR TILE IF WATER IS FLOWING THROUGH TILE AT TIME OF TRENCHING. IF NO WATER IS FLOWING AND TEMPORARY REPAIR IS DELAYED, OR NOT MADE BY THE END OF THE WORK DAY, A SCREEN OR APPROPRIATE 'NIGHT CAP' SHALL BE PLACED ON OPEN ENDS OF TILE TO PREVIOUS ENTRAPMENT OF ANIMALS ETC.
- 2. CHANNEL OR PIPE (OPEN OR SLOTTED) MADE OF CORRUGATED GALVANIZED PIPE, PVC OR ALLIMINUM WILL BE USED FOR SUPPORT OF DRAIN TILE SPANS.
- 3. INDUSTRY STANDARDS SHALL BE FOLLOWED TO ENSURE PROPER SEAL OF REPAIRED DRAIN TILES.

TEMPORARY DRAIN TILE REPAIR

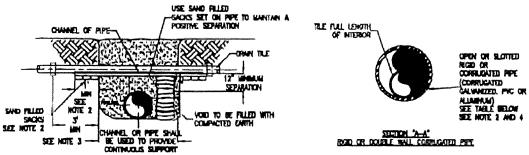
PAGE 1 of 2

FIGURE 2

FIGURE 2.



PLAN VIEW



END VIEWS

	MNINUM SUPPORT	ABLE	*****************
TILE SIZE	CHANNEL SUZE	尸形便	GUE
3,	4° (20) 5.4 (847)	4"	STO. WT.
41.5*	5" @ 0.7 MA	6"	STD. WT.
9.0	7" @ 9.8 mm	8°-10°	870. WY,
10"	10° (m) 18.3 mm	12"	STO. WT.

NOTE:

- 1. TILE REPAIR AND REPLACEMENT SHALL MAINTAIN ORIGINAL AUGNMENT GRADIENT AND WATER FLOW TO THE GREATEST EXTENT POSSIBLE. IF THE TILE NEEDS TO BE RELOCATED, THE INSTALLATION ANGLE MAY VARY DUE TO SITE SPECIFIC CONDITIONS AND LANDOWNER
- 1'-0" MINIMUM LENGTH OF CHANNEL OR RIGHT PIPE (OPEN OR SLUTTED CORRUGATED CALVANIZED, PVC OR ALLIMINUM CRACLE) SHALL BE SUPPORTED BY UNDSTURBED SOIL, OR IF CROSSING IS NOT AT RIGHT ANGLES TO PPELINE, EQUIVALENT LENGTH PERPENDICULAR TO TRENCH. SHIM WITH SAND BAGS TO UNDSTURBED SOIL FOR SUPPORT AND DRAINAGE GRADIENT MAINTENANCE (TYPICAL BOTH SIDES).
- DRAIN TILES WILL BE PERMANENTLY CONNECTED TO EXISTING DRAIN TILES A MINIMUM OF THREE FEET OUTSIDE OF EXCAVATED TRENCH LINE USING INDUSTRY STANDARDS TO ENSURE PROPER SEAL OF REPAIRED DRAIN TILES INCLUDING SUP COUPLINGS.
- 4. DIAMETER OF RIGID PIPE SHALL BE OF ADEQUATE SIZE TO ALLOW FOR THE INSTALLATION OF THE TILE FOR THE FULL LENGTH OF THE RIGID PIPE.
- OTHER NETHODS OF SUPPORTING DRAIN TILE MAY BE USED IF ALTERNATE PROPOSED IS EQUIVALENT IN STRENGTH TO THE CHANNEL/PIPE SECTIONS SHOWN AND IF APPROVED BY COMPANY REPRESENTATIVES AND LANDOWNER IN ADVANCE. SITE SPECIFIC ALTERNATE SUPPORT SYSTEM TO BE DEVELOPED BY COMPANY REPRESENTATIVES AND FURNISHED TO CONTRACTOR FOR SPANS IN EXCESS OF 20°, TILE GREATER THEN 10° DAMETER, AND FOR "HEADER" STSTEMS.
- & ALL WATERIAL TO BE FURNISHED BY CONTRACTOR.
- PROR TO REPAIRING TILE, CONTRACTOR SHALL PROBE LATERALLY INTO THE EXISTING TILE TO FULL WIDTH OF THE RIGHTS OF WAY TO DETERMINE IF ADDITIONAL DAMAGE HAS OCCURRED. ALL DAMAGED/DISTURBED TILE SHALL BE REPAIRED AS NEAR AS PRACTICABLE TO ITS DRIGHAL OR BETTER CONDITION.

PERMANENT DRAIN TILE REPAIR

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Exhibit A.

Guidelines for Conducting Proper and Successful Decompaction

- 1. Decompaction is required when all three conditions apply.
 - a. the area has been trafficked or traversed by vehicles or construction equipment, and
 - b. the soil penetrometer readings are 300 psi or greater, and
 - c. the soil strength (psi) in the right-of-way area is greater than that of the non-trafficked area.
- 2. An Environmental and/or Agricultural Inspector (AI), with experience and training in the proper identification of compacted soil and operation methods of deep decompaction tools is required to observe the daily operation of the ripper/subsoiler to ensure the conditions are appropriate for decompaction efforts and that the proper equipment is utilized and that equipment is set-up and operated correctly.
- 3. To achieve the most effective shatter of the compacted soil the following guidelines have been established:
 - a. Conduct ripping when the soil is dry. Follow the "Soil Plasticity Test Procedures" detailed in Appendix B to determine if soil conditions are adequately dry to conduct decompaction efforts.
 - b. Deep ripping shall be conducted using a ripper or subsoiling tool with a shank

length of no less than 18 inches and a shank spacing of approximately the same measurement as the shank length.

- c. Use a ripper with a knife length of no less than 2 inches more than the desired depth of decompaction.
- d. To best promote revegetation and restore crop production, a total depth of 30 or more inches of soil (Topsoil plus subsoil) is required.
- e. The minimum depths of decompaction stated above in 3.D. are required where possible. A safe distance from sub-surface structures (tile drains, pipelines, buried utilities, bedrock, etc.) must be maintained at all times. Where such structures exist, a lesser depth of decompaction will be required to prevent damage to equipment and the structures as well as to maintain a safe work environment. The allowable decompaction depth in these instances will be determined on a site by site basis.
- f. When the knives are in the soil to the desired depth, the tongue of the ripper should be parallel to the surface of the ground.
- g. Select a tractor that has enough horsepower to pull the ripper at a speed of 1.5 to 2 mph and whose footprint is of equal or lesser width than the ripper. Tracked equipment is preferred and typically required to achieve this criteria.
- h. The ripper shanks should not create ruts, channels, or mixing of the subsoil with Topsoil. A speed of 1.5 to 2 mph is recommended to minimize the risk of rutting and soil mixing. The ideal operating speed can vary with soil characteristics, tractor and ripping tool used. An excessive travel speed will often

increase mixing of soil horizons.

- i. When the equipment is set up and operated correctly, the ripper should create a wave across the surface of the ground as it lifts and drops the soil.
- j. Make one ripping pass through the compacted area. Using a penetrometer, the AI will measure the PSI between the ripped knife tracks to determine if the single ripping pass was successful. Additional passes should only be used where needed as they may reduce the effectiveness of the ripping by recompacting the soil shattered in the previous pass.
- k. If the first pass does not successfully decompact the soil, additional passes will be needed. Should multiple passes of the ripper be needed to achieve decompaction between the knives tracks of the ripping tool, the subsequent passes should be positioned so the knife tracks from the previous pass are split by the second pass. If three or more passes have been made and sufficient decompaction has not yet been achieved the AI may choose to halt further decompaction efforts in that area until conditions improve or better methods are determined.
- l. Following ripping, all stone and rock three or more inches in size which has been lifted to the surface shall be collected and removed from agricultural areas.
- m. After ripping has been conducted, do not allow unnecessary traffic on the ripped area.
- n. In Agricultural Land and Cropland that will not be replanted to vegetation by the Company, recommend to landowners to plant a cover crop (cereal rye, clover, alfalfa, tillage radish, turnips, etc.) following decompaction. Reduced compaction created by the ripper pass will not remain over time without subsequent root penetration. Root penetration into the shattered soil is necessary to establish permanent stabilized channels to conduct air and water into the soil profile. Two good sources for landowner cover crop education are http://www.mccc.msu.edu/CCinfo/cropbycrop.html and

http://mcccdev.anr.msu.edu/. For local expertise, consult with your county's Soil and Water Conservation District /USDA Natural Resource Conservation Service (NRCS) office for cover crop selection and compliance with NRCS planting deadlines.

Exhibit B.

Soil Plasticity Test Procedures

The Agricultural Inspector will test the consistency of the surface soil to a depth of approximately 4 to 8 inches using the Field Plasticity Test procedure developed from the Annual Book of ASTM Standards, Plastic Limit of Soils (ASTM D-4318).

- 1. Pull a soil plug from the area to be tilled, moved, or trafficked to a depth of 4-8 inches.
- 2. Roll a portion of the sample between the palms of the hands to form a wire with a diameter of one-eighth inch.
- 3. The soil consistency is: A. Tillable (able to be worked) if the soil wire breaks into segments not exceeding 3/8 of an inch in length. B. Plastic (not tillable) if the segments are longer than 3/8 of an inch before breaking.
- 4. This Procedure is to be used to aid in determining when soil conditions are dry enough

for construction activities to proceed.

5. Once the soil consistency has been determined to be of adequate dryness, the plasticity test is not required again until the next precipitation event.

This ordinance shall be in full force and in effect on September 28, 2021. Passed by the Board of Commissioners of Vermillion County, Indiana on the 28th day of September 2021.

Board of Commissioners Vermillion County, Indiana

Tim Yocum-President

RJ Dunavan

Britton Luther

Attest:

Attest: