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## **ORDINANCE 13-11**

### **AN ORDINANCE AMENDING TITLE 10 ZONING REGULATIONS ADDITION OF CHAPTER 17 WIND ENERGY SYSTEMS**

**WHEREAS**, the South Weber City Council established Title 10 Zoning Regulations to establish various zoning requirements in order to preserve and promote the health, safety, morals, convenience, order and the general welfare of the city, its present and future inhabitants and the general public, and provide a wide array of developments; and

**WHEREAS**, the South Weber City Planning Commission held a public hearing on the 28<sup>th</sup> day of March 2013, and has made a favorable recommendation of these amendments to the South Weber City Council; and

**WHEREAS**, the South Weber City Council held a public hearing on the 14<sup>th</sup> day of May 2013, and has reviewed the amendments and recommendations made by the Planning Commission;

**NOW THEREFORE BE IT ORDAINED**, by the Legislative Body of South Weber City as follows:

**SECTION 1: The South Weber City Code shall be amended as follows:**

**SECTION 2: The South Weber City Code, Title 10 Zoning Regulations, shall be amended as follows:**

**ADD:**

**CHAPTER 17 WIND ENERGY SYSTEMS**

**SECTION A: SMALL WIND ENERGY SYSTEMS**

**10-17A-1: PURPOSE:**

The purpose of this section is to establish minimum requirements and regulations for the placement, construction, and modification of small wind energy systems as defined herein, while promoting the safe, effective, and efficient use of such systems.

**10-17A-2: DEFINITIONS:**

**ABANDONED:** A wind energy system or project shall be considered abandoned when, once installed it fails to operate for twenty-four (24) consecutive months. Exceptions may be made for catastrophic circumstances such as a natural disaster or "force majeure."

**HEIGHT:** The height of a wind turbine measured from natural grade to the tip of the rotor blade at its highest point.

**RATED NAMEPLATE CAPACITY:** The maximum rated output of electric power production equipment. This output is typically specified by the manufacturer with a "nameplate" on the equipment rated in Watts (W) or British Thermal Units (BTUs). Due to the nature of wind energy systems, Watts will be used as the standard unit in this ordinance.

**SMALL WIND ENERGY SYSTEM:** Tower mounted or roof mounted windmill systems, and all equipment, machinery, and structures utilized in connection with the conversion of wind to electricity. This includes, but is not limited to, storage equipment, electrical collection and supply equipment, transformers, service and access roads, and one or more wind turbines that has a rated nameplate capacity of 100 kW or less.

**SPECIAL USE PERMIT:** A permit provided by the land-use authority for nonconforming small wind energy systems

**TEMPORARY METEOROLOGICAL TOWER:** A temporary tower, housing, and associated wind-measuring equipment used for the purpose of establishing the viability of wind-generated energy by measuring and monitoring wind velocity, direction, shear, duration, intensity, and regularity.

**10-17A-3: DESIGN STANDARDS:**

**A. Height:** The height of small wind energy systems shall not exceed sixty (60) feet without prior approval from the Land Use Authority.

**B. Setbacks:** All small wind energy systems, including roof mounted systems, shall be set back at a distance equal to one

hundred and ten percent (110% ) of the height of the system from all inhabited structures, overhead utility lines, and public roads or public right-of-ways. Applicant must consider approximate building box of future adjacent homes when constructing a system in a new subdivision, or where a neighboring inhabited structure is not present. Wind turbines shall not be permitted in the front yards of single family residential properties.

**C. Setback Waivers:** The Land Use Authority designated to approve the permit shall

consider an exception to the minimum setbacks required if the following criteria are met:

- (a) A signed agreement of consent from abutting property owner(s) recorded with Davis County Recorder's Office, and
- (b) The public right-of-ways and power lines are not impacted by the location.

**D. Minimum Blade Height:** The minimum height of the lowest extent of a turbine blade shall be fifteen (15) feet above the ground.

**E. Color and Finish:** The small wind energy system shall be a neutral non-reflective color applied by the manufacturer that blends with the environment and complies with Federal Aviation Administration (FAA) standards. Earth-tones, gray, beige, and white are recommended.

**F. Lighting:** Small wind energy systems shall be lighted as required by the FAA.

Spotlights are prohibited, unless required by the FAA. Lighting of the small wind energy system beyond FAA standards shall be directed downward and limited to that required for safety and operational purposes.

**G. Signage and Advertising:** Signs and advertising shall be restricted to reasonable

identification of the manufacturer, operator of the small wind energy system, and utility, and safety signs. Signage standards cannot exceed the requirements of the zone in which the system resides.

**H. Access:** All access doors, climbing apparatuses, or access ways to towers and

electrical equipment shall remain locked and inaccessible by the public.

**I. Sound:** The small wind energy system and associated equipment shall not exceed

fifty (50) dBA from the nearest inhabited structure. Noise compliance must be proven by the applicant.

**10-17A-4: SITING CONDITIONS and PROPERTY MAINTENANCE:**

**A. Land Clearing, Soil Erosion, Wildlife and Habitat Impacts:** Clearing of natural

vegetation shall be limited to that which is necessary for the safe construction, operation, and maintenance of the small wind energy system and is otherwise prescribed by applicable laws, regulations, and ordinances. Once the system is operational, any land that has been disturbed and is not necessary for the functioning of the system shall be reclaimed with natural vegetation within sixty (60) days, weather permitting. Soil erosion is to be mitigated by the use of silt fencing, any accumulated product of which can be used in the site reclamation.

**B. System Conditions:** The applicant shall maintain the small wind energy system in

good condition. Maintenance shall include, but not be limited to, painting, mechanical/electrical repairs, structural repairs, and security measures. South Weber City may perform an annual inspection of electrical connections and proper maintenance of the system.

**C. Removal and Decommissioning Requirements:** Any small wind energy system that

has reached the end of its useful life or has been abandoned shall be removed. A small wind energy system shall be considered abandoned when it fails to operate for twelve (12) consecutive months. Upon a Notice of Abandonment issued by the Land Use Authority, the small wind energy system owner will have sixty (60) days to provide sufficient evidence that the system has not been abandoned, or the Land Use Authority shall have the authority to enter the owner's property and remove the system at the owner's expense. Once the system has been removed the owner is then responsible for land reclamation using the natural vegetation that was removed or disturbed upon construction of the project. To the greatest extent possible, the land shall be fully returned to its natural state within five years of the removal and decommissioning of the project. Exceptions may be made for catastrophic circumstances such as a natural disaster or "force majeure."

**D. Approved Location:** Small Wind Energy Systems may be allowed by Conditional

Use Permit application in all zones in South Weber City. Small Wind Energy Systems may be approved as tower mounted or roof mounted systems.

**10-17A-5: LAND USE AUTHORITY ISSUED PERMITS:**

**A. Permits:** Small wind energy systems shall be constructed as provided in this section

by first obtaining a conditional use permit. The system in question must be approved by the Underwriters Laboratories (UL listed). Hill Air Force Base must be included in the list of notified parties of all wind energy systems, and provided opportunity to comment on potential negative impacts the system may have. The system must meet International Building Code requirements for wind load and snow load in South Weber, UT.

**B. Modifications:** Any physical modification to an existing and permitted small wind

energy system that materially increases the size and/or type of wind turbines or other equipment shall require a conditional use permit modification under this ordinance. Replacement of an already permitted turbine with a similar size and height will not require a permit modification, but will require administrative approval.

**C. Special Use Permits:** A Special Use Permit (SUP) may be granted in the case where a proposed small wind energy system or project does not satisfy the standard criteria of the permit set forth under this ordinance. The applicant must then seek review of the proposed project and petition the Land Use Authority for a Special Use Permit. This SUP variance from the standard permit criteria will only be applicable to that specific nonconforming project.

**D. Expiration:** A permit issued pursuant to this ordinance shall expire if:

- (a) The small wind energy system is not installed and functioning within twelve (12) months from the date the permit is issued; or
- (b) The small wind energy system is abandoned.

**E. Violations:** It is unlawful for any person to construct, install, or operate a small wind

energy system that is not in compliance with this ordinance or with any condition contained in a permit issued pursuant to this ordinance. Small wind energy systems installed prior to the adoption of this ordinance are exempt.

**F. Administration and Enforcement:** This ordinance shall be administered and

enforced by the Land Use Authority or designated party therein. The Land Use Authority, upon prior notice to owner and at reasonable business hours, may enter any property for which a permit has been issued under this ordinance to conduct an inspection to determine whether the conditions stated in the permit have been met.

**G. Compliance with Laws, Ordinances, and Regulations:** The construction and

operation of all such proposed small wind energy systems shall be consistent with all applicable local, state, and federal requirements, including all applicable safety, construction, environmental, electrical, communications, and FAA requirements. If possible, the land shall be returned to its natural state within five years of the removal and decommissioning of the project.

**SECTION B: LARGE WIND ENERGY SYSTEMS**

**10-17B-1: PURPOSE:**

It is the purpose of this section to promote the safe, effective, and efficient use of large wind energy systems installed to provide electricity to utilities and to promote the adoption of renewable energy resources to reduce dependence on fossil fuel power generation.

**10-17B-2: DEFINITIONS:**

**LARGE WIND ENERGY SYSTEM:** A wind energy conversion system consisting of one or more wind turbine(s) and tower(s), with associated control or conversion electronics, which will be used for on-site and/or off-site consumption of power with a rated capacity in excess of one hundred kW.

**SHADOW FLICKER:** Alternating changes in light intensity caused by the moving blade of a wind energy system casting shadows on an object, such as a window.

**TOTAL EXTENDED HEIGHT:** The distance measured from ground level to the tip of the blade, extended at its highest point of travel.

**TOWER:** The supporting structure on which the turbine is mounted.

**TURBINE:** That portion of the wind system that is used to capture the energy of the wind and transform it into electrical or mechanical energy. The turbine includes a rotor (blades) and nacelle (generator), and on many wind systems, a tail.

**WIND MONITORING TOWER and EQUIPMENT-METEOROLOGICAL (met) TOWER:** A tower that houses or supports wind measuring equipment, such as an anemometer, for the purpose of measuring and monitoring wind velocity, duration, intensity, regularity, air temperature and pressure, etc. Met towers are typically permitted only on a temporary basis (two to five years) to help determine the viability of a wind energy system project; although more permanent met towers may also be considered.

### **10-17B-3: REQUIREMENTS:**

The following standards shall apply to all large wind energy systems:

- A. Development Agreement:** All large wind energy system applications will be required to sign a Development Agreement with South Weber City to specify the standards and conditions that will govern development of the wind energy system.
- B. Minimum parcel size:** A large wind energy system consisting of one tower must be located on a parcel that is a minimum of five acres in size. An additional acre of property is required for each additional tower.
- C.** Onsite structures may be located up to the foundation of the tower.
- D. Setback from an occupied structure:** The tower base must be setback a minimum of eight hundred (800) feet from an occupied structure.
- E. Distance from rights-of-way and property lines:** None; but all tower bases must be located on leased or owned property. The blade sweep cannot encroach upon adjoining properties, power lines, or rights-of-way without easements providing for their encroachment. The easement must be a recorded document.
- F. Setback Waivers:** The Land Use Authority designated to approve the permit shall consider an exception to the minimum setbacks required if the following criteria are met:
  - (c) A signed agreement of consent from abutting property owner(s) recorded with Davis County Recorder's Office, and
  - (d) The properties, public right-of-ways and power lines are not impacted by the location.
- G. Height:** Tower height is not to exceed two hundred and seventy (270) feet. Provided that, in all cases, the system shall comply with all applicable Federal Aviation Administration (FAA) requirements.
- H. Height of Blade (tip at low point of blade sweep from ground):** No closer than fifty (50) feet.
- I. Braking Device:** All wind turbine devices shall have braking systems when winds reach speeds in excess of sixty-five (65) miles per hour.
- J. Sign:** One project identification warning sign is permitted containing a telephone number for emergency calls, no larger than sixteen (16) square feet in size.
- K. Color/Finish:** white, earth-tone or other non-reflective color applied by the manufacturer.
- L. Telecommunication Interference:** Demonstrate that the potential for adverse electromagnetic fields and communications interference generated by the project has been evaluated and determined unlikely, conduct a Licensed Microwave Search and Worst Case Fresnel Zone (WCFZ) Analysis, including consultations with the National Telecommunications Information Administration (NTIA), Interdepartmental Radio Advisory Committee (IRAC) and the National Weather Service.

- M. Notification:** Hill Air Force Base must be notified of any large scale wind system, and provided an opportunity to review plans in order to limit interference with local flight paths and signal interference.
- N. Compliance with International Building Code (IBC):** Building permit applications for large wind energy systems shall be accompanied by standard drawings of the wind turbine structure, including the tower, base, and footings. An engineering analysis of the tower and wind turbine showing compliance with the building code and certified by a professional engineer licensed in the state of Utah shall also be submitted. The system must meet International Building Code requirements for wind load and snow load in South Weber, UT.
- O. Compliance with FAA Regulations:** Large wind energy systems must comply with applicable FAA regulations, including any necessary approvals for installations close to airports.
- P. Utility Notification:** A letter shall be provided from any interconnecting utility companies confirming approval for any interconnection.
- Q. Zoning Districts:** Large wind energy systems are permitted only in the N-R Natural Resources zoning district.
- R. Wind Study:** A wind or feasibility study must be conducted and recommend a specific location for the wind turbine. The study must also recommend an optimal height for the wind turbine and if the location is feasible for a wind turbine.
- S. Shadow Flicker:** Identify the potential of any shadow flicker effects from the project and provide sufficient documentation to demonstrate compliance with Section (B)(8)(e) of this article.
- T.** The tower shall not be climbable from the exterior.
- U. Agreement/easement for life of the project and Final Reclamation:** If the land on which the project is proposed is to be leased, rather than owned, by the wind development company, all property within the project boundary must be included in a recorded easement(s), lease(s), or consent agreement(s) specifying the applicable uses for the duration of the project.
- Also describe the decommissioning and final land reclamation plan to be followed after the anticipated useful life, or abandonment, or termination of the project, including evidence of an agreement or other commitment (i.e., bond and/or sinking fund) with affected parties (county, any lessor or property owner, etc.) that ensures proper final reclamation of the wind energy project, as well as repairing any road impacts associated with the work. All required leases, easements, bonds, or other agreements between the wind development company and the affected parties must be in place prior to commencing construction, unless specified otherwise by the conditional use permit.

**SECTION 3: This ordinance shall take effect upon posting.**

**PASSED AND ADOPTED** by the City Council of South Weber, Davis County, on this **14<sup>th</sup>** day of **May 2013**.

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**MAYOR: Jeffery G. Monroe**

**ATTEST:**

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**Erika J. Ahlstrom, CMC, City Recorder**