

# Exhibit A: Proposed Wind Energy Systems Amendments and Organization of WCC 20.97 (Definitions)

## Chapter 20.14 WIND ENERGY SYSTEMS

Sections:

- 20.14.010 Purpose.
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- ~~20.14.080 Sound modeling and measurements.~~
- ~~20.14.090 Complaint process.~~
- 20.14.100 Abandonment, insurance, and decommissioning for WES.
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### 20.14.010 Purpose.

The purpose of this chapter is to regulate the installation and operation of wind energy conversion systems in Whatcom County for private landowners, subject to reasonable restrictions.

### 20.14.020 Definitions.

As used in this chapter, the following terms shall have the meanings indicated:

- (1) "County" shall mean the Whatcom County government.
- (2) "Decibel" means a unit of measure of sound pressure.
- (3) "dB(a)" means A-weighted sound pressure scale.
- (4) "dB(c)" means C-weighted sound pressure scale.
- (5) "FAA" shall mean the Federal Aviation Administration.
- (6) "Flicker" or "shadow flicker" means the moving shadow cast by the rotating blades of a SWES/WES, or any intermittent, repetitive, or rhythmic lighting effect that is a direct result of rotating SWES/WES blades.
- (7) "Flicker analysis" means a study showing the duration and location of flicker potential.
- (8) "Hub height" means the distance from the ground to the center axis of the rotor.
- (9) "Qualified independent acoustical consultant" means a private, third-party individual with full membership in the Institute of Noise Control Engineers (INCE), or other demonstrated acoustical engineering certification.
- (10) "MET tower" or "meteorological tower" means a structure designed to support the gathering of wind energy resource data, and includes the tower, base plate, anchors, guy cables and hardware, anemometers (wind speed indicators), wind direction vanes, booms to hold equipment, anemometers and vanes, data logger, instrument wiring, and any telemetry devices that are used to monitor or transmit wind speed and wind flow characteristics over a period of

Commented [CES1]: Moved into 20.14.060

Commented [CES2]: Definitions moved to 20.97, except those that already exist (including MET & SWES). This is something staff has been slowly doing as we bring amendments forward, with the goal of eventually having all definitions in one place.

time for either instantaneous wind information or to characterize the wind resource at a given location.

- (11) "Rotor" means a system of airfoils designed to provide a reaction force relative to the movement of the surrounding air. The rotor is connected to a hub that rotates around an axis.
- (12) "Small wind energy system (SWES)" means a wind energy conversion system, with a rated output up to and including 50 kW, consisting of: wind turbine, tower, base and associated control or conversion electronics, as well as all anchors, guy cables and hardware.
- (13) "Total height" means the distance measured from the grade plane (WCC 20.97.162) to the tip of the SWES/WES rotor blade extended to its highest point. The support tower structure may be freestanding, guyed, or a monopole.
- (14) "Tower height" means the distance measured from the grade plane (WCC 20.97.162) to the hub height of the wind turbine. This structure may be freestanding, guyed, or a monopole.
- (15) "Upwind turbine design" means a SWES/WES that has rotors and towers aligned such that the wind encounters the rotors before the tower. The tower will always be downwind of the rotors.
- (16) "Wind turbine" means the parts of the wind energy conversion system including the blades, generator and tail.
- (17) "Wind energy system (WES)" means a wind energy conversion system with a rated output greater than 50 kW consisting of: wind turbine, tower, base and associated control or conversion electronics, as well as anchors, guy cables, and hardware.

**20.14.030 Applicability.**

- (1) The requirements set forth in this chapter shall govern the siting of wind energy conversion systems used to generate mechanical or electrical energy to perform work, and which may be connected to the utility grid pursuant to Chapter 80.60 RCW, (Net Metering of Electricity), and serve as an independent source of energy, or serve as part of a hybrid system.
- (2) The requirements of this chapter shall apply to all small wind energy systems (SWES) and wind energy systems (WES) proposed after October 10, 2008 (the effective date of the ordinance codified in this chapter). Any SWES/WES for which a required permit has been properly issued prior to the effective date of the ordinance codified in this chapter shall not be required to meet the requirements of this chapter; provided, however, that any such pre-existing SWES/WES that is not producing energy for a continuous period of 12 months shall meet the requirements of this chapter prior to recommencing production of energy. No modification that increases the height of the system or increases the system output more than 25% percent shall be allowed without full compliance with this chapter.

**Commented [CES3]:** Putting the actual date in so that applicants/staff don't have to look up the ordinance.

**20.14.040 Regulatory framework.**

**.041 Permits and Zoning.**

System Type	Required Permit	Zones
MET tower	Outright permitted <sup>1</sup>	All — for up to 24 months
One or multiple SWES with a cumulative rated output up to and including 50 kW	Outright permitted <sup>1</sup>	All

**Commented [MD4]:** Duration being deleted as generally, MET towers are only used for short-term (1-2 years) data collection (except on large wind farms).

One WES with a rated output greater than 50 kW up to and including 500 kW	Administrative permit <sup>2</sup>	HH,
One or multiple WES with a rated output greater than 500kW	Conditional use permit <sup>2</sup>	
Multiple WES per parcel with a cumulative rated output greater than 50 kW	Conditional use permit <sup>3</sup>	HH
SWES/WES	Not permitted	Within and 1,000 feet beyond the boundaries of the Lake Whatcom Watershed that are recognized and approved by Whatcom County, except that roof mounted SWES that do not exceed a total height of five feet above the highest roof peak of the building on which they are mounted are allowed.
<b>System Type</b>	<b>Zones Allowed In</b>	<b>Required Permit</b>
Meteorological tower	All districts	Permitted
SWES		
<ul style="list-style-type: none"> <li>with a total height of 200 feet or less</li> </ul>	All districts	Permitted
<ul style="list-style-type: none"> <li>with a total height greater than 200 feet</li> </ul>	All districts	Administrative use permit <sup>2</sup>
WES		
	Heavy Impact Industrial, Light Impact Industrial	Administrative use permit <sup>2</sup>
	Agriculture, Rural Forestry, and Commercial Forestry	Conditional use permit <sup>3</sup>

**Commented [M5]:** Permitting shouldn't be any different in the LWW than in other areas.

<sup>1</sup> SWES, WES and Meteorological MET-towers are required to be in compliance with but not limited to WCC Title 15, Buildings and Construction, and acquire the necessary building permits.  
<sup>2</sup> Administrative use permit, WCC 22.05.028.  
<sup>3</sup> Conditional use permit, WCC 22.05.026.

**.042 Principal or Accessory Use.** A SWES/WES may be considered either as a principal or accessory use. A different existing use or an existing structure on the same lot shall not preclude the installation of a SWES/WES or a part of such facility on such lot. Any SWES/WES that is constructed and installed in

accordance with the provisions of this chapter shall not be deemed to constitute the expansion of a nonconforming use or structure.

#### 20.14.050 General requirements for SWES and WES.

##### .051 Visual Appearance – Lighting – Power Lines.

- (1) Wind turbines shall be painted a nonreflective, nonobtrusive color such as the manufacturer's default color option or a color that conforms to the environment and architecture of the community, unless Federal Aviation Administration (FAA) standards require otherwise. The ~~zoning administrator~~ Director may require a photo of a SWES/WES, of the same model as that proposed in the landowner's application, adjacent to a building or some other object illustrating scale (e.g., manufacturer's photo).
- ~~(2)~~ ~~At SWES/WES sites, the design of the buildings and related structures shall, to the extent reasonably possible, use materials, colors, textures, screening and landscaping that will blend the SWES/WES to the natural setting and the existing environment.~~
- ~~(3)~~ ~~(2)~~ No SWES/WES shall be artificially lighted, except to the extent required by the Federal Aviation Administration (FAA) or other applicable authority.
- ~~(4)~~ ~~(3)~~ No SWES/WES shall be used for displaying any advertising except for reasonable identification of the manufacturer or operator of the wind turbine.
- ~~(5)~~ ~~(4)~~ Electrical controls, control wiring, and power lines shall be wireless or underground, except where SWES/WES wiring is brought together for connection to the transmission or distribution network adjacent to that network, and except that in the Agricultural Zone the minimum installation depth for electrical controls, control wiring, and power lines is 48 inches below finish grade.
- ~~(6)~~ ~~(5)~~ The road access to the proposed site must be rated to carry an axle load sufficient to bear the weight of all materials, vehicles, and equipment delivered to the site.
- ~~(7)~~ ~~(6)~~ The compatibility of the foundation, tower, and generating unit (including rotor and rotor-related equipment) shall be certified in writing by a professional engineer licensed in Washington State. The engineer shall certify compliance with established engineering practices and compliance with all applicable adopted codes and regulations. For all SWES/WES, the manufacturer's engineer or another qualified engineer shall certify that the turbine, foundation, and tower design of the SWES/WES are compatible and within accepted professional standards, given local design criteria per WCC Title 15.
- ~~(8)~~ ~~(7)~~ The electrical system design shall be certified in writing by an electrical engineer licensed in Washington State unless waived by the ~~building~~ ~~Official~~. All SWES/WES electrical systems shall comply with requirements per the Washington State Department of Labor and Industries and the current adopted edition of the National Electrical Code when and where applicable.
- ~~(9)~~ ~~(8)~~ All SWES/WES shall meet requirements per the applicable sections of WCC ~~20.80.630, 20.80.634, and 20.80.635, et seq. (Stormwater and Drainage)~~ for erosion control and stormwater management.
- ~~(10)~~ ~~Violation of any part of this chapter of the code shall be subject to the provisions of WCC 15.04.050.~~

**Commented [MD6]:** Screening and landscaping to attempt to hide the wind turbine may impede the wind flow and reduce the effectiveness of the WES. Also, "to the extent reasonably possible" is subjective and hard to enforce consistently.

##### .052 Setback Requirements.

The following setback requirements shall apply to all SWES/WES and ~~meteorological~~ MET towers. All setbacks are measured from the property lines of the property on which the project is located:

- (1) **Setbacks Table.** Setbacks from property lines shall be as shown in the following table, measured to the outer edge of the base of the SWES/WES structure towers. Guy cables and other accessory support structures may be located within setback areas.

**Commented [CES7]:** Not necessary, as all violations of the building code are subject to 15.04.050, regardless whether it's restated here. Furthermore, they'd be in violation of Title 20 and subject to its code enforcement provisions.

System Size	Setback Requirement
Up to and including 10050 kW SWES	1.2 times total height, to a maximum of total height of SWES structure plus 20 feet. <sup>1</sup>
Greater than 10050 kW SWES	1,000 1,320 feet (one quarter mile) from a property line of any property in a non-other than the HII Zonedistrict. If the neighboring property is in an HII districtZone the setback is 1.2 times the total height from the property line. <sup>1</sup>

Footnote<sup>1</sup>: A reduction in setbacks may be approved if appropriate easements from neighboring property owners or appropriate mitigation acceptable to neighboring property owners is approved by the zoning administrator or hearing examiner and recorded against the applicable deed(s).

- (2) **Setbacks from Communication and Electrical Lines.** Each SWES/WES shall be set back from the nearest above ground public or private nonparticipating utility a distance no less than 1.2 times its total tower height, up to a maximum of tower height plus 20 feet, determined from any the existing above-ground power line or telephone line.
- (3) ~~Setbacks shall be measured to the outer edge of the base of the SWES/WES structure towers. Guy cables and other accessory support structures may be located within setback areas.~~
- (4)(3) **Setback to from Other WES.** A WES may not be placed such that it substantially disturbs the wind flow into another WES. A new WES may not be placed such that another nonparticipating WES falls within an egg-shaped exclusion zone around the new WES defined by an axis along the primary wind direction. In the upwind direction the exclusion zone shall have a semi-circular shape with a radius three times the rotor diameter of the new WES. In the downwind direction the exclusion zone shall have a semi-elliptical shape extending eight times the rotor diameter of the new WES along the axis downwind and extending three times the rotor diameter of the new WES in a direction perpendicular to the axis. In this way the new WES will be at least three of its rotor diameters behind, three to the side of, and eight in front of a pre-existing WES.
- (4) For WES located within 1,000 feet of existing structures, permit applicants shall provide additional analysis of safety risks, including estimate of range for "ice throw" from spinning blades.

**.053 Height Limitations.**

- (1) The total height of a WES shall not exceed 500 feet. MET towers cannot exceed a maximum height of 100 feet except in the Agricultural, Rural Forestry and Commercial Forestry Zones. SWES with a total height taller than 200100 feet must obtain an administrative use permit, except within the AG, CF and HII Zones. All SWES with a total height greater than 2400 feet must provide in writing that the height requested is the minimum height necessary for the SWES to operate efficiently, and provide approved justification for the proposed height and analysis according to recognized industry standards.

**20.14.060 Sound levels, modeling and measurement.**

- (1) **.061 SWES Sound Levels, Performance, and Measurement Standards.** Audible sound is not to exceed 20 dB(a) above ambient background noise or 45 dB(a), whichever is greater, at any point beyond the project property line. Detectable infrasound or C-weighted sound pressure is not to exceed 20 dB(c) above ambient background noise or a maximum of 45 dB(c), whichever is greater, except that there is no infrasound or C weighted sound pressure requirement at property lines adjacent to HII Zones. During normal operation, the SWES/WES shall comply with the sound requirements of the zoning district in which it is located. The facility shall maintain sound levels at project boundaries that are under the maximum levels for the adjacent receiving properties based on the receiving

**Commented [MD8]:** Changed to be consistent with U.S. Dept of Energy model ordinance. When establishing setback distances, the intended protective effect must be balanced with economic considerations for wind projects so that accommodating a setback does not unduly threaten the feasibility of the project. In the rare event that a tower collapses or sheds ice, experience has shown that falling components land in a small radius around the tower base. (chrome-extension://efaidnbmnnpbpcjpcglclefindmkaj/https://spar.knorthwest.org/wp-content/uploads/WindPermitToolkit\_WA\_Sept-2015.pdf).

**Commented [MD9]:** I would recommend reducing this to one times the total height, to be consistent with the above comment.

**Commented [MD10]:** I would recommend reducing this to one times the total height, to be consistent with the above comment.

**Commented [CES11]:** Moved to subsection (1)

**Commented [MD12]:** Wind turbine rotors must be placed higher than surrounding obstructions in order for the rotor blades to access the smooth, steady wind flow required to function properly. Height limits in an ordinance can constrain the productivity and economic viability of a wind energy facility and discourage wind development. Height restrictions, if any, should only reflect safety concerns.

**Commented [MD13]:** Industry best practice is to install the wind turbine on a tall enough tower that the entire rotor is located a minimum of 30 feet higher than any obstacle within 500 feet of the tower. Even in ideal locations with flat, wide open terrain, the minimum recommended tower height is 60 feet. Increasing the SWES height limit above 100 feet would allow for more effective installations at sites with tall trees. Height restrictions, if any, should only reflect safety concerns. The FAA must evaluate and approve of any structure 200 feet or greater above ground level.

properties' environmental designation for noise abatement in accordance with state regulations. The facility shall at all times comply with applicable noise control regulations adopted by the Washington Department of Ecology or such other state agency with jurisdiction. The maximum sound level may be exceeded during short-term events, such as utility outages and storms.

~~.062 WES with a Cumulative Output Greater Than 50 kW Sound Level, Performance, and Measurement Standards. Audible sound is to not exceed 10 dB(a) above ambient background noise or 45 dB(a), whichever is greater, at any point beyond the project property line. Detectable infrasound or C-weighted sound pressure is not to exceed 20 dB(c) above ambient background noise or a maximum of 45 dB(c), whichever is greater, except that there is no infrasound or C-weighted sound pressure requirement at property lines adjacent to HII zones.~~

~~.063 Upwind design shall be used on all WES greater than 50 kW, unless it can be demonstrated that no detectable infrasound or C-weighted sound pressure is generated above 20 dB(c) and A-weighted sound pressure standard can be met, as required per WCC 20.14.061 and 20.14.062.~~

(2) WES proponents shall provide a report by a qualified independent acoustical consultant approved by Whatcom County PDS and in accordance with standard industry best practices, that models the sound transmission of the proposed WES at the project property lines and indicates that the WES, when operated properly, will conform to the sound performance requirements of this chapter.

(3) Noise Complaints

(a) If two or more complaints from different households are received within a two-week period regarding a particular WES located within one mile of the complainant's properties, a sound measurement will be conducted by a qualified consultant approved by Whatcom County. The cost of the sound measurement shall be paid initially by the County. Measurements shall be conducted where the complaints were documented. If an evaluation shows that the WES is operating outside of its permitted sound performance standards, the operator will have 30 days to adjust the system(s) or terminate operations, and the owner/operator shall reimburse the county for the expense of sound measurement. If the WES is shown to be in compliance, the complainant shall reimburse the County for the cost of measurement.

(b) At the discretion of Whatcom County PDS, multiple complaints may be compiled for three months at a time and then a sound study conducted at all of the locations. No WES project shall be required to conduct more than two sound measurements at any one adjacent property per year unless the WES project has expanded and/or proven to be in violation of the sound performance standards.

**Commented [MD14]:** The intent of this change is to treat wind turbines consistently with other sources of sound in a particular zone. Modern wind turbines have been designed with features that minimize the sound they emit. Sound diminishes with the square of the distance from the source, which means that doubling the distance between the source and the listener reduces the sound heard by a factor of four. The recommended setback distances included in this ordinance should be sufficient to minimize sound impacts on neighboring property during normal operations.

**Commented [MD15]:** Content moved from 20.14.090

**20.14.070 Safety.**

**.071 General Provisions for SWES/WES.**

- (1) Wind turbine towers shall not provide step bolts or a ladder readily accessible to the public; any access bolts or ladders and shall be a minimum height of 10 feet above ground level.
- (2) All electrical equipment shall be safely and appropriately enclosed from unintentional access by means such as barrier fencing, equipment cabinetry, or similar approved barriers. All access doors to wind turbine towers and electrical equipment shall remain locked except when access is necessary.
- (3) Appropriate warning signage (e.g., electrical hazards) shall be placed on wind turbine towers, electrical equipment, and SWES/WES.
- (4) Any SWES/WES found to be unsafe by the building official shall be repaired by the landowner and/or project owner to meet federal, state, and local safety standards, according to the regulatory authority of the building official and applicable provisions per WCC Title 15.

**.072 Blade Tip Clearance Height.**

- (1) The blade tip of any SWES with a cumulative rated output up to and including 50 kW shall, at its lowest point, have ground clearance of no less than 20 feet, as measured at the lowest point of the arc of the blades.
- (2) WES with a cumulative rated output greater than 50 kW shall, at its lowest point, have ground clearance of no less than 30 feet, as measured at the lowest point of the arc of the blades.

**.073 Over-Speed Controls.** All SWES/WES shall be equipped with over-speed controls to limit rotation of blades to speed below the designed limits of the system. No changes or alterations from the certified design shall be permitted unless accompanied by a licensed professional engineer's statement of certification.

**.074 Flicker Analysis for WES.** A flicker analysis is required for all WES. The analysis shall include the duration and location of flicker potential for all buildings and for roadways within a one-mile radius of each turbine within a project. The applicant shall provide a site map identifying the locations of shadow flicker that may be caused by the project and the expected durations of the flicker at these locations from sunrise to sunset over the course of a year. The analysis shall account for topography but not for obstacles such as accessory structures and trees. Flicker at any building shall not exceed 30 hours per year within the analysis area. Flicker in excess of the limits established in this chapter shall be grounds for the county or his/her designee to order operational adjustments, which may include mitigation measures requiring cessation of operation during periods when flicker affects any building, for all noncompliant WES.

**.075 Wildlife Protection for WES.**

Prior to permit approval provide documentation from a qualified professional wildlife biologist (Chapter 16.16 WCC, Article 8, Definitions) verifying the following:

- ~~(1) Endangered or Threatened Species. Development and operation of a WES shall not have a significant adverse impact on endangered or threatened fish, wildlife, plant species, their critical habitats, or other significant habitats identified in the Whatcom County Comprehensive Plan and/or other current studies or plans relevant to the region and recognized by the county.~~
- ~~(2) Other Species. The project development and/or operation plan shall be sited, designed, operated and monitored to prevent WES from having a significant adverse impact on migratory birds, raptors and bats.~~
- (1) Prior to permit approval, the applicant shall ensure compliance with WCC Chapter 16.16 (Critical Areas), including potential impacts to birds and bats, and providing documentation of compliance with Washington Department of Fish and Wildlife's "Wind Power Guidelines" for project siting and operation to minimize take of listed species, migratory birds, raptors, and bats.
- (2) The applicant shall assess and monitor proximate bird and bat habitats for activity prior to construction, and modify construction timing and activities to avoid impacts to these species.
  - (a) At a minimum, one raptor nest survey during breeding season within one mile of the project site should be conducted to determine the location and species of active nests potentially disturbed by construction activities, and to identify active and potentially active nest sites with the highest likelihood of impacts from the operation of the wind plant. A larger survey area (e.g., a two-mile buffer) is recommended if there is some likelihood of the occurrence of nesting state and/or federally threatened and endangered raptor species (e.g., ferruginous hawk, bald eagle, golden eagle).
  - (b) A minimum of one full season of use surveys is recommended to estimate the use of the project area by birds and bats. This data should be used to refine impact analyses and help determine project design.

(3) Following project start-up, the applicant shall monitor the project for a minimum of one year to estimate bird and bat fatality rates using standard protocol. The applicant shall report bird fatalities observed for the life of the project to WDFW and USFWS on a quarterly basis. Additional monitoring may be required by the County.

**20.14.080 Sound modeling and measurements.**

~~.081 Sound Modeling.~~ As part of the conditional use permit process, all WES proponents shall provide a report by a qualified independent acoustical consultant approved by Whatcom County PDS and in accordance with standard industry best practices, that models the sound transmission of the proposed WES at the project property lines and indicates that the WES, when operated properly, will conform to the sound performance requirements of this chapter.

Commented [CES16]: Content moved into 20.14.060

**20.14.090 Complaint process.**

~~If two or more complaints from different households are received within two weeks of each other, and documented at a particular site, a sound measurement will be conducted within 10 business days by a qualified consultant approved by Whatcom County.~~

Commented [CES17]: Content moved into 20.14.060

~~The cost of the sound measurement shall be the responsibility of the WES owner/operator. The operator shall reimburse the county for the expense within 10 days of billing.~~

~~Measurements shall be conducted where the complaints were documented.~~

~~If an evaluation shows that the WES is operating outside of its permitted sound performance standards, the operator will have 30 days to adjust the system(s) or terminate operations.~~

~~To avoid frivolous complaints, any household(s) that registers a complaint against a WES that is proven to be in compliance shall be responsible for the costs of any future complaints originating from the same household(s) for two years unless the WES project has expanded and/or proven to be in violation of the sound performance standards. At the discretion of Whatcom County PDS, if it appears residents are abusing the complaint process, complaints may be compiled for three months at a time and then a sound study conducted at all of the locations. No WES project shall be required to conduct more than two sound measurements at any one adjacent property per year unless the WES project has expanded and/or proven to be in violation of the sound performance standards.~~

~~Complaints originating from properties located farther than one mile from a WES project do not trigger the complaint process.~~

**20.14.100 Abandonment, Insurance, and Decommissioning for WES.**

~~.101 Abandonment.~~ Absent notice of a proposed date of decommissioning, WES project shall be considered abandoned when the project fails to operate for more than one year without the written approval of the ~~e~~Director or designee. The ~~e~~Director or designee shall determine in ~~its~~his/her decision what proportion of the project is inoperable for the project to be considered abandoned and shall notify the property owner. Within 120 days of receipt of notice of abandonment or within 120 days of providing notice of termination of operations to the ~~e~~County, the owner of a wind energy system must comply with the removal requirements in WCC 20.14.102. ~~If the property owner/project owner fails to do so remove the WES in accordance with the requirements of this section within 120 days of notice of abandonment, the eCounty shall have the authority to enter the property and physically remove the WES. Financial surety funds shall be used to pay for removal and restoration.~~

~~.102 Removal Requirements.~~ When a SWES (with a total height that exceeds the height of the underlying zone) or a WES is scheduled to be decommissioned, the project owner/property owner shall



notify the eCounty by certified mail of the proposed date of discontinued operations and plans for removal. Within 120 days of receipt of notice of abandonment or within 120 days of providing notice of termination of operations, the owner of a wind energy system must:

- ~~(1)~~ Decommissioning of a SWES shall include removal of wind turbine, tower, and above-ground cabling and electrical components. Foundations and underground cabling need not be removed. Remove all wind turbines, above-ground improvements, and outdoor storage. Property owners of WES in the HII Zone, and SWES in the AG and CF Zones, may choose to leave foundations in place and intact, partially or in whole, for approved, permitted reuse, except that in the AG Zone foundations left in place must be located such that the distance between SWES foundations and foundations of existing buildings shall not exceed 50 feet.
- ~~(2)~~ Decommissioning of a WES shall include removal of wind turbines, tower, and above-ground cabling and electrical components, removal of all below-ground project elements to a depth of 36 inches, access roads, and any other associated facilities, unless the property owner requests in writing that the access roads or other facilities be retained.
- ~~(3)~~ Remove all hazardous material from the property and dispose of the hazardous material in accordance with federal, state, and local law.
- ~~(4)~~ In addition to removing the wind turbine generator, the owner shall restore the site by planting native or other approved vegetation to minimize erosion.

**.103 Insurance.** ~~For WES, P~~proof of continuous liability insurance shall be submitted to Whatcom County indicating coverage for potential damages or injury to landowners, occupants, or other third parties. ~~For WES with a rated output greater than 50 kW t~~he required insurance is \$2,000,000 aggregate and \$1,000,000 per occurrence. Whatcom County shall be named on the liability policy as additional insured. The insurance carrier shall be instructed to notify all applicable governmental authorities of any delinquency in payment of premiums. The liability policy shall be endorsed to notify the county of any cancellation 30 days in advance. Failure to provide such insurances shall be considered abandonment and full and sufficient grounds for termination of the permit and disposal of the equipment and appurtenances as stated herein.

**.104 Financial Surety.**

- (1) As a condition of WES permit approval, the applicant shall be required to provide a form of surety (i.e., post a bond, or establish an escrow account or other means) at the amount of ~~150% percent~~ of the estimated full cost of project decommissioning, less the approved, documented salvage value of any applicable project materials and equipment, naming Whatcom County as the beneficiary, with ~~50% percent~~ due prior to final project approval, ~~25% percent~~ due within 12 months of the date of final project approval, and ~~25% percent~~ due within 24 months of the date of final project approval, to cover costs of WES removal in the event the county must remove the facility. Nothing ~~may~~ shall prevent the eCounty from seeking reimbursement from the WES project owner. The project owner is responsible to the eCounty for any costs related to decommissioning that exceed the amount of financial surety.
- (2) As part of the decommissioning plan, the applicant shall submit a fully inclusive estimate of the costs associated with removal, accounting for reasonable salvage value of any applicable project materials and equipment, prepared by a qualified professional. The decommissioning plan shall provide that the decommissioning funds shall be reevaluated every five years from the date of substantial completion of the WES to ensure sufficient funds for decommissioning and, upon mutual agreement by the applicant and the eCounty at that time, the amount of decommissioning funds shall be adjusted accordingly.
- (3) Prior to permit issuance, the applicant shall provide the eCounty with a copy of the financial surety device or another approved mechanism.

**.105 Decommissioning Plan.** As part of the permit approval process, a decommissioning plan shall be provided that outlines the anticipated means and cost of removing WES at the end of their serviceable life or upon becoming a discontinued use. The cost estimates shall be made by a competent party, such as a professional engineer, a licensed contractor capable of decommissioning, or a person, firm, partnership, corporation, or other entity with suitable expertise or experience with decommissioning, as determined by the ~~building official or designee~~. The plan shall also identify financial surety to pay for the decommissioning and removal of the WES and accessory facilities. The plan shall also address road maintenance during and after the decommissioning.

#### **20.14.110 Federal, State and Local Requirements.**

- (1) SWES/WES shall comply with all current adopted Whatcom County codes and ordinances, including but not limited to WCC Titles 15, 16, and 23.
- (2) SWES/WES must comply with regulations of the Federal Aviation Administration (FAA), along with ~~the requirements of within~~ WCC 20.80.675, (Height Limitations Surrounding Airports). If necessary, an applicant may be required to submit the following information for analysis of airspace obstructions in relation to WCC 20.80.675: mean sea level (MSL) of adjacent airports; MSL of proposed site; Euclidean distance from adjacent airports to proposed site; total elevation/height of SWES/WES structure.
- (3) All SWES/WES electrical systems shall comply with requirements per the Washington State Department of Labor and Industries and the current adopted edition of the National Electrical Code (NEC) when and where applicable.
- (4) All SWES/WES with the intention to tie to their respective utility provider's grid system shall meet the requirements of Chapter 80.60 RCW, Net Metering of Electricity.

### **Chapter 20.97 DEFINITIONS**

*Editor's note: These definitions should be placed in alphabetical order within 20.97, and all other numbers identifying definitions should be deleted.*

"Decibel" means a unit of measure of sound pressure.

"dB(a)" means A-weighted sound pressure scale.

"dB(c)" means C-weighted sound pressure scale.

"Flicker" or "shadow flicker" means the moving shadow cast by the rotating blades of a SWES/WES, or any intermittent, repetitive, or rhythmic lighting effect that is a direct result of rotating SWES/WES blades.

"Flicker analysis" means a study showing the duration and location of flicker potential.

20.97.162-Grade plane. As defined and illustrated in the definition of "building height." See WCC 20.97.040 and Figures 20.97.040 A and 20.97.040 B.

"Hub height" means the distance from the ground to the center axis of the rotor.

"Qualified independent acoustical consultant" means a private, third-party individual with full membership in the Institute of Noise Control Engineers (INCE), or other demonstrated acoustical engineering certification.

"Rotor" means a system of airfoils designed to provide a reaction force relative to the movement of the surrounding air. The rotor is connected to a hub that rotates around an axis.

**Commented [CES18]:** Definitions moved from 20.14.020 (except those that already exist). This is something staff has been slowly doing as we bring amendments forward, with the goal of eventually having all definitions in one place.

To do: need to make sure the ordinance itself has a clause in it to delete all the numbering system from 20.97.

“Total height of S/WES structure” means the distance measured from the grade plane (as defined and illustrated in the definition of “building height,” WCC Chapter 20.97) to the tip of the SWES/WES rotor blade extended to its highest point. The support tower structure may be freestanding, guyed, or a monopole.

“Tower height” means the distance measured from the grade plane (as defined and illustrated in the definition of “building height,” WCC Chapter 20.97) to the hub height of the wind turbine. This structure may be freestanding, guyed, or a monopole.

“Upwind turbine design” means a SWES/WES that has rotors and towers aligned such that the wind encounters the rotors before the tower. The tower will always be downwind of the rotors.

“Wind energy system (WES)” means one or more wind energy conversion systems with a rated output greater than 10050 kW consisting of: wind turbine, tower, base, and associated control or conversion electronics, as well as anchors, guy cables, and hardware.

**Commented [MD19]:** To be consistent with the Department of Energy's definition of small wind turbine (<https://windexchange.energy.gov/small-wind-guidebook#practical>)

*Editor's note: The following amendments make no policy changes. They're only fixing the references to definitions given that definitions will no longer have unique identifying numbers.*

### **Chapter 3.46 AFFORDABLE HOUSING INCENTIVE FUND**

#### **3.46.030 Definitions.**

*Editor's note: The following refers to footnote 1 of “Low-income housing” definition*

<sup>1</sup> See also definition of “low-income housing” as codified in WCC ~~Chapter 20.97-224~~.

### **Chapter 20.17 TEMPORARY HOMELESS FACILITIES**

#### **20.17.060 Requirements for temporary homeless facilities.**

(...)

- (3) A temporary homeless facility shall comply with the applicable regulations of this title, except that temporary homeless facilities shall not be considered structures for the purposes of calculating parcel's total lot coverage, as defined ~~by~~ in WCC ~~Chapter 20.97-247~~.

### **Chapter 20.20 URBAN RESIDENTIAL (UR) DISTRICT**

#### **20.20.130 Administrative approval uses.**

(...)

**.135** One private, noncommercial, recreational vehicle or park model trailer and one accessory guest RV per lot within pre-existing recreational subdivisions of the Foothills Subarea, as listed in the definition of “recreational subdivision” in WCC Chapter 20.97-337; provided, that the following minimum requirements and standards are met and/or followed:

(...)

### Chapter 20.32 RESIDENTIAL RURAL (RR) DISTRICT

#### 20.32.130 Administrative approval uses.

(...)

.134 One private, noncommercial, recreational vehicle or park model trailer and one accessory guest RV per lot within designated rural communities in the Foothills Subarea, as listed in the definition of "recreational subdivision" in WCC Chapter 20.97.337; provided, that the following minimum requirements and standards are met and/or followed:

(...)

#### 20.32.315 Reserve area.

(3) An easement on the subdivision plat shall establish a reserve area per ~~its~~the definition in WCC Chapter 20.97.344 that is protected in perpetuity so long as it is not within an urban growth area. The minimum percentage of the parent parcel required to be within a reserve area is shown in WCC 20.32.253.

(...)

### Chapter 20.34 RURAL RESIDENTIAL-ISLAND (RR-I) DISTRICT

#### 20.34.050 Permitted uses.

(...)

.057 Family day care homes subject to the requirements of ~~WCC 20.97.180~~the definition of ~~for~~ home occupations (see WCC Chapter 20.97).

#### 20.34.315 Reserve area.

(3) An easement on the subdivision plat shall establish a reserve area per the definition in WCC Chapter 20.97.344 that is protected in perpetuity so long as it is not within an urban growth area. The minimum percentage of the parent parcel required to be within a reserve area is shown in WCC 20.32.253.

(...)

### Chapter 20.36 RURAL (R) DISTRICT

#### 20.36.130 Administrative approval uses.

(...)

.136 In R5A and R10A zoning districts, the processing of agricultural products that originate from the permitted uses in WCC 20.40.050, provided the following criteria are met:

(...)

(4) The facility does not exceed 10,000 square feet in proposed and existing buildings (as defined ~~by~~in WCC Chapter 20.97.035) devoted to agricultural processing.

#### 20.36.150 Conditional uses.

(...)

.163 In R5A and R10A zoning districts, the processing of agricultural products that originate from the permitted uses in WCC 20.40.050, provided the following criteria are met:

(...)

- (4) The facility exceeds 10,000 square feet in proposed and existing buildings (as defined by WCC 20.97.035) devoted to agricultural processing.

**20.36.315 Reserve area.<sup>2</sup>**

- (1) An easement on the subdivision plat shall establish a reserve area per the definition in WCC Chapter 20.97-~~344~~ that is protected in perpetuity so long as it is not within an urban growth area. The minimum percentage of the parent parcel required to be within a reserve area is shown in WCC 20.36.253.

(...)

**Chapter 20.37 POINT ROBERTS TRANSITIONAL ZONE (TZ) DISTRICT**

**20.37.320 Open space reserve area.**

**.321** For the purposes of this title, an “open space reserve area” shall be defined as that portion of a subdivision or short subdivision set aside in accordance with this chapter, and permanently dedicated for active or passive recreation, critical area protection, natural resource or archaeological site preservation, wildlife habitat and/or visual enjoyment, and shall be consistent with the definition of “open space” pursuant to found in WCC Chapter 20.97-275.

(...)

**Chapter 20.40 AGRICULTURE (AG) DISTRICT**

**20.40.130 Administrative approval uses.**

(...)

**.139** Packinghouses, as identified in WCC 20.97.282.1, and slaughterhouses, as identified ~~defined~~ in WCC Chapter 20.97-423-1, which shall be located, designed, and operated so as to not interfere with the overall agricultural character of the area, provided the following criteria are met:

(...)

- (2) The facility is an accessory use, as identified in WCC Chapter 20.97-005, “Accessory use.”

(...)

**20.40.150 Conditional uses.**

(...)

**.164** Packinghouses, as identified in WCC 20.97.282.1, and slaughterhouses as identified in WCC Chapter 20.97-423-1, which shall be located, designed, and operated so as to not interfere with the overall agricultural character of the area, provided the following criteria are met:

(...)

- (3) The facility is an accessory use, as identified in WCC Chapter 20.97-005, “Accessory use.”

**Chapter 20.51 LAKE WHATCOM WATERSHED OVERLAY DISTRICT**

**20.51.330 Open space reserve area.**

- (1) For purposes of this title, an “open space reserve area” shall be defined as that portion of a subdivision or short subdivision set aside in accordance with this chapter, and permanently dedicated for active or passive recreation, critical area protection, natural resource or archaeological

site preservation, wildlife habitat and/or visual enjoyment, and shall be consistent with the definition of “open space” pursuant to WCC ~~Chapter 20.97-275~~.

#### **20.51.410 Seasonal clearing activity limitations.**

(...)

- (2) Clearing activity, as defined in WCC ~~Chapter 20.97-054~~, or forest practices regulated by Whatcom County that will result in land disturbance exceeding 500 square feet shall be prohibited from October 1<sup>st</sup> through May 31<sup>st</sup>; provided, that the director may approve an exemption to this requirement for the following activities:

(...)

### **Chapter 20.68 HEAVY IMPACT INDUSTRIAL (HII) DISTRICT**

#### **20.68.150 Conditional uses.**

(...)

**.153** Expansion of existing fossil fuel refineries. For purposes of this section, an expansion is any development (including otherwise permitted or accessory uses), vested after August 8, 2021, that meets any one of the following applicable thresholds:

(...)

- (1) Cumulatively increases the facility’s total maximum transshipment capacity for fossil fuels by more than 10,000 barrels (or 420,000 gallons) per day based upon an evaluation of physical equipment limitations conducted by a licensed professional engineer in accordance with the definition of “maximum transshipment capacity” found in WCC Chapter 20.97-230-1; or

(...)

**.154** Expansion of existing fossil fuel transshipment facilities. For purposes of this section, an expansion is any development (including otherwise permitted or accessory uses), vested after August 8, 2021, that cumulatively increases the facility’s total maximum transshipment capacity for fossil fuels by more than 10,000 barrels (or 420,000 gallons) per day, based upon an evaluation conducted by a licensed professional engineer in accordance with the definition of “maximum transshipment capacity” found in WCC Chapter 20.97-230-1.

### **Chapter 20.71 WATER RESOURCE PROTECTION OVERLAY DISTRICT**

#### **20.71.352 Open space reserve area. (Adopted by reference in WCCP Chapter 2.)**

- (2) For purposes of this title, an “open space reserve area” shall be defined as that portion of a subdivision or short subdivision set aside in accordance with this chapter, and permanently dedicated for active or passive recreation, critical area protection, natural resource or archaeological site preservation, wildlife habitat and/or visual enjoyment, and shall be consistent with the definition of “open space” ~~pursuant to in WCC Chapter 20.97-275~~.

(...)

### **Chapter 20.76 FOREST PRACTICES**

#### **20.76.110 Conversion option harvest plan (COHP).**

- (1) Optional Process. As an alternative to applying for a forest practices permit under WCC 20.76.100, an applicant may choose to submit an application for a conversion option harvest plan (COHP), as

defined in WCC ~~Chapter 20.97.086~~, that, if approved, may preserve the landowner’s option to convert forest land to a noncommercial forest use without subjecting the site to the six-year development moratorium in WCC 20.76.220.

(...)

### Chapter 20.78 TRANSPORTATION CONCURRENCY MANAGEMENT

#### 20.78.120 Definitions.

(...)

(10) “Development permit” means any order, permit or other official action of the ~~e~~County granting, or granting with conditions, an application for development as defined by ~~WCC 20.97.099~~ which that authorizes the commencement of development activity.

### Chapter 20.80 SUPPLEMENTARY REQUIREMENTS

#### 20.80.384 Sign, off-premises advertising.

*Deleted editorially.* (See WCC ~~Chapter 20.97.384~~.)

#### 20.80.410 Signs – General provisions – Applicable to all districts.

(...)

(5) Signs shall not depict or describe “specified sexual activities” or “specified anatomical areas” as defined in WCC ~~Chapter 20.97.008~~.

(...)

#### 20.80.580 Parking space requirements.

For the purpose of this ~~ordinance~~chapter, the following parking space requirements shall apply (See also WCC ~~Chapter 20.97.140~~):

(...)

#### 20.80.680 Unsuitable land.

Land ~~which that~~ is unsuitable for the development of permitted, accessory, or conditional uses as defined by WCC ~~Chapter 20.97.443~~ shall not be developed unless adequate safeguards are formulated by the developer and approved by the ~~zoning administrator~~Director. The safeguards shall be based on technical data and/or professional review as deemed necessary by the ~~Director~~administrator. If no adequate safeguards are available, the unsuitable land area shall be retained for agricultural, forestry or open space purposes.

#### 20.80.805 Animal units.

The number of animal units which are permissible in those zone districts that refer to this section shall be consistent with the following standards:

(1) Animal units shall be computed as set forth in WCC ~~Chapter 20.97.015~~; provided, that ponies and horses under one year, calves under six months, and sheep, goats and pigs under three months shall not be included when computing animal units.

(...)

**Chapter 20.82 PUBLIC UTILITIES**

**20.82.030 Conditional uses.**

The following uses shall require a conditional use permit or major project permit and shall be subject to a threshold determination in accordance with the ~~Whatcom County SEPA Ordinance~~ WCC Chapter 16.08:  
 (...)

(3) New water lines with a nominal pipe size greater than eight inches except for the following, which are permitted outright:

(...)

- (b) New water lines outside urban growth areas or limited areas of more intensive rural development (LAMIRDs) in conformance with a state approved water comprehensive plan pursuant to RCW 43.20.260 and consistent with the Whatcom County Comprehensive Plan, so long as they are water transmission lines (as defined in ~~per WCC Chapter 20.97.452~~), or provide service at an intensity historically and typically found in rural areas, per RCW 36.70A.030(17), including but not limited to agricultural uses. Water service for uses or densities not permitted in rural or resource areas shall not be extended or expanded outside urban growth areas or limited areas of more intensive rural development (LAMIRDs), except where necessary to protect basic public health and safety and the environment and when such services are financially supportable at rural densities and do not permit urban development, per RCW 36.70A.110(4).

**Chapter 22.05 PROJECT PERMIT PROCEDURES**

**22.05.010 Purpose and applicability.**

(1) The purpose of this chapter is to combine and consolidate the application, review, and approval processes for project permits and appeals as defined in WCC ~~Chapter 20.97.321~~. It is further intended for this chapter to comply with the provisions of Chapter 36.70B RCW. These procedures provide for a consolidated land use permit process and integrate the environmental review process with the procedures for review of land use decisions.

(...)

**22.05.020 Project permit processing table.**

Permit Application Processing Table	WCC Reference for Specific Requirements	Pre-Application Required (see 22.05.040)	Determination of Completeness Required (see 22.05.050)	Notice of Application Required (see 22.05.070)	Site Posting Required (see 22.05.080)	Notice of Open Record Hearing Required (see 22.05.090)	Open Record Hearing Held By: (see 22.05.090)	County Decision Maker (see 2.11.210, 22.05.120)	Appeal Body (see 2.11.210, 23.60.150(H))
Type I Applications (Administrative Decision with No Public Notice or Hearing)									
(...)									
Lot of Record/Lot Consolidation	20.83 and 20.97.220		√					Director	Hearing Examiner
(...)									