

1 **SECTION 35 – RENEWABLE ENERGY ORDINANCE**

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4 **SECTION 1 TITLE**

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6 The title of this ordinance is the Faribault County Renewable Energy Ordinance, and will be
7 referred to herein as “THIS ORDINANCE”.
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9 The existing Faribault County Wind Energy Conversion Systems Ordinance previously adopted
10 on August 19, 2010, is hereby repealed. The adoption of this Ordinance, however, shall not
11 effect nor prevent any pending or future prosecution or legal action to abate, any existing
12 violation of the previous Faribault County Wind Energy Conversion Systems Ordinance provided
13 the violation is also a violation of this Ordinance. Nor shall this relieve any person or entity from
14 obligations imposed under the previously adopted ordinance.
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17 **SECTION 2 PURPOSE**

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19 This Ordinance is established to regulate the installation and operation of Renewable Energy
20 Systems within Faribault County not otherwise subject to siting and oversight by the State of
21 Minnesota pursuant to Minnesota Statutes Chapters 216F, 216C.25, and 500.30, and Minnesota
22 Rules Chapter 1325.1100, as amended. In no case shall the provisions of this Ordinance
23 guarantee rights to renewable energy development.
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25 Faribault County’s goal is to promote the effective and efficient use of Renewable Energy
26 Systems and to facilitate economic opportunities for local residents consistent with public health,
27 safety and general welfare.
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30 **SECTION 3 JURISDICTION**

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32 The regulations of this Ordinance shall apply to all the area of Faribault County outside the
33 incorporated limits of municipalities.
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36 **SECTION 4 INTERPRETATION**

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38 Where the provisions of this Ordinance impose greater restriction than those of any statute, other
39 ordinance or regulations, the provisions of this Ordinance shall be controlling. Where the
40 provisions of any statute, other ordinance or regulation impose greater restrictions than this
41 Ordinance, the provisions of such statute, other ordinance or regulation shall be controlling.
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SECTION 5 DEFINITIONS

Accessory Structure or Facility – Any building or improvement subordinate to a principal use which, because of the nature of its use, can reasonably be located at or greater than normal structure setbacks.

Accessory Use – A use clearly incidental or subordinate to the principle use of a lot or a building located on the same lot as the principle use.

Aggregated Project – Those which are developed and operated in a coordinated fashion, but which have multiple entities separately owning one or more of the individual WECS within the larger project. Associated infrastructure such as power lines and transformers that service the facility may be owned by a separate entity but are also included as part of the aggregated project.

Airfoil – A part such as a blade, with a flat or curved surface, designed to provide a desired reaction force when in motion relative to the surrounding air.

Airport Influence Zone – All land which lies within 10,000 feet of any part of Runway 16/34 and 3/21 at the Blue Earth Municipal Airport, and 5,000 feet of any part of the Wells Municipal Airport.

Applicant – Any person, provider, firm, partnership or company who files an application for any permit required for the construction, replacement, or alteration of WECS or any component thereof.

Array (solar) – Any number of solar photovoltaic modules or panels connected together to provide a single electrical output.

Array (photovoltaic) – A group of solar photovoltaic modules connected together to increase voltage and/or power to the level required for a given system.

Array (tracking) – A solar array that follows the path of the sun during the day to maximize the solar radiation it receives.

Awning – A sheet of material stretched on a frame and used to keep the sun or rain off a storefront, window, doorway, patio, or deck.

Azimuth – A clockwise measurement around the horizon in degrees, beginning and ending at true north.

Board of Adjustment – An officially constituted quasi-judicial body appointed by the County Board whose principle duties are to hear appeals from decisions of the Zoning Administrator and, where appropriate, grant variances from the strict application of this Ordinance.

Building – Any structure having a roof for the shelter, support or enclosure of persons, animals, or chattel, or property of any kind; and when separated by party walls without openings, such portion of such building so separated shall be deemed a separate building.

C-BED (Community-Based Energy Development) Project – As defined in Minnesota Statutes 216B.1612, as amended. Based on the total name plate generating capacity, C-BED Projects are considered to be (1) Micro-WECS, (2) Non-Commercial WECS or (3) Commercial WECS as defined in this Section.

Campground – A facility licensed by the Minnesota Department of Health for the purpose of camping.

Church – As defined in Minnesota Statute 272.02.

Comprehensive Land Use Plan – Means the policies, statements, goals, and interrelated plans for private and public land and water use, transportation, and community facilities including recommendations for plan execution, documented in texts, ordinances and maps which constitute the guide for the future development of the unincorporated areas of the County.

Conditional Use – Means a specific type of structure or land use listed in the official control that may be allowed but only after an in-depth review procedure and with appropriate conditions or restrictions as provided in the official zoning controls or building codes and upon a finding that: (1) certain conditions as detailed in the Zoning Ordinance exist and (2) the structure and/or land use conform to the Comprehensive Land Use Plan, if one exists, and are compatible with the existing neighborhood.

County – Faribault County, Minnesota.

County Board – Faribault County Board of Commissioners.

Decibel – A unit of measure of sound pressure.

Department – The Faribault County Planning and Zoning Department, or other entity designated by the County Board to administer and implement this Ordinance.

Development Agreement – A written agreement that may incorporate a Road Use and Repair Agreement, a Public Drainage System Agreement, or other project specific provisions as required to address a project's impact on the County's public infrastructure.

Drainage System – "Drainage system" means a system of ditch or tile, or both, to drain property, including laterals, improvements, and improvements of outlets, established and constructed by a drainage authority. Drainage system includes the improvement of a natural waterway used in the construction of a drainage system and any part of a flood control plan proposed by the United States or its agencies in the drainage system, as defined in Minn. Statute 103E.005.

Dwelling – A building, or portion thereof, designed exclusively for residential occupancy; the term does not include hotels, motels, tents, tent trailers or recreational vehicles.

Electromagnetic Communications – The use of an electromagnetic wave to pass information between two points.

FAA – Federal Aviation Administration.

Fall Zone – The area, defined as the furthest distance from the tower base, in which a guyed tower may collapse in the event of a structural failure.

Feeder Line – Power line that transports electrical power from one or more wind turbines or individual transformers associated with individual wind turbines to the point of interconnection with the electric power grid. In the case of interconnection with the high voltage transmission systems, the point of interconnection shall be the substation serving the WECS.

Flicker – The moving shadow cast by the rotating blades of a WECS, or any intermittent, repetitive, or rhythmic lighting effect that is a direct result of rotating WECS blades.

Flicker Analysis – A study showing the duration and location of flicker potential.

Generator Nameplate Capacity – The maximum rated output of electrical power production of a generator under specific conditions designated by the manufacturer with a nameplate physically attached to the generator.

Maximum Design Tilt (Solar Energy Systems) – Maximum tilt, or angle, is vertical, or ninety (90) degrees for a solar energy system designed to track daily or seasonal sun position or capable of manual adjustment on a fixed rack.

Meteorological Towers – For the purposes of this ordinance, meteorological towers which are erected primarily to measure wind speed and directions plus other data relevant to siting WECS. Meteorological towers do not include towers and equipment used by airports, the Minnesota Department of Transportation, or other similar applications to monitor weather conditions. These are considered tower facilities and are included in Section 21 – Tower Ordinance of the Faribault County Zoning Ordinance.

Micro-WECS – A WECS which is less than one hundred (100) feet in hub height.

Minimum Design Tilt (Solar Energy System) – Minimum tilt, or angle, is horizontal, or zero (0) degrees for a solar energy system designed to track daily or seasonal sun position or capable of manual adjustment on a fixed rack.

Modular (Solar) – A number of individual solar cells connected together in an environmentally protected housing producing a standard output voltage and power. Multiple modules/panels can be assembled into an array for increased power and/or voltage.

Nameplate Capacity – The total maximum rated output of a solar energy system.

Noise Profile – A study certifying the WECS is in compliance with Minnesota Chapter 7030, as amended, of the Minnesota Pollution Control Agency noise standards.

Non-Participating Property Boundaries – Property where the landowner has control of wind and land rights. Not part of a developer WECS project.

Non-Prevailing Wind – The non-dominant wind direction in the County.

Owner – Entity or entities with any equity interest in the WECS, including their respective successors and assigns. Owner does not mean the landowner from whom the land is leased for locating the WECS, or any person holding a security interest in the WECS 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 at the earliest practicable date.

Participating Property Boundaries – Developer has site control of wind and land rights for the purpose of installation of WECS. This control may be attained through fee title ownership, easement, or other appropriate contractual relationship.

Photovoltaic Device – A system of components that generates electricity from incident sunlight by means of the photovoltaic effect, whether or not the device is able to store the energy produced for later use.

Power Line – An overhead or underground conductor and associated facilities used for the transmission or distribution of electricity.

Power Purchase Agreement (PPA) – Legally enforceable agreement between two or more persons where one or more of the signatories agrees to provide electrical power and one or more of the signatories agrees to purchase the power.

Preliminary Acoustic Study – A study certifying the WECS will be in compliance with Minnesota Chapter 7030, as amended, of the Minnesota Pollution Control Agency.

Prevailing Wind – The predominant wind direction in the County.

Project – A WECS or combination of WECS.

Project Owner – An individual or entity with legal ownership of a WECS project.

Public Conservation Lands – Land owned in fee title by State or Federal agencies and managed specifically for grassland conservation purposes, including but not limited to State Wildlife Management Areas, State Parks, State Scientific and Natural Areas, Federal Wildlife Refuges and Waterfowl Production Areas. For the purposes of this section, public conservation lands will also include lands owned in fee title by non-profit conservation organizations. Public conservation lands do not include private lands upon which conservation easements have been sold to public agencies or non-profit conservation organizations.

Public Drainage System – Those drainage systems established or under the jurisdiction of a Drainage Authority under MN Statutes 103D or 103E.

Renewable Energy – Energy from sources that are not easily depleted such as moving water (hydro, tidal and wave power), biomass, geothermal energy, solar energy, wind energy, and energy from solid waste treatment plants.

Renewable Energy System Permit – Permit developed by the Department, and approved, as needed, by the County Board.

Roof Pitch – The final exterior slope of a building roof calculated by the rise over the run, typically but not exclusively expressed in twelfths, such as 3/12, 9/12, or 12/12.

Rotor – A system of airfoils connected to a hub that rotates around an axis.

Rotor Blades – See Airfoil.

Rotor Diameter (RD) – The diameter of the circle described by the moving rotor blades.

School – As defined in Minnesota Statute 120A.05, as amended, and private schools excluding home school sites.

Solar Cell – The basic unit of a photovoltaic solar panel.

Solar Collector – A device, structure, or part of a device or structure for which the primary purpose is to transform solar radiant energy into thermal, mechanical, chemical, or electrical energy.

Solar Daylighting – A device specifically designed to capture and redirect the visible portion of the solar spectrum, while controlling the infrared portion, for use in illuminating interior building spaces in lieu of artificial lighting.

Solar Easement – A right, whether or not stated in the form of a restriction, easement, covenant, or condition, in any deed, will, or other instrument executed by or on behalf of any owner of land or solar sky space for the purpose of ensuring adequate exposure of a solar energy system as defined in Section 216C.06, Subdivision 17, to solar energy. Required contents of a Solar Easement are defined in Minnesota Statute Section 500.30.

Solar Energy – Radiant energy received from the sun that can be collected in the form of heat or light by a solar collector.

Solar Energy Device – A system or series of mechanisms designed primarily to provide heating, cooling, electrical power, mechanical power, solar daylighting or to provide any combination of the foregoing by means of collecting and transferring solar generated energy into such uses either by active or passive means. Said systems may also have the capacity to store energy for future utilization. Passive solar energy systems shall clearly be designed as a solar energy device, such as a trombe wall, and not merely part of a normal structure, such as a window. A solar energy device shall not be considered an agricultural building.

Solar Energy System – A set of devices that the primary purpose is to collect solar energy and convert and store it for useful purposes including heating and cooling buildings or other energy-using processes, or to produce generated power by means of any combination of collecting, transferring, or converting solar energy. This definition also includes structural design features, the purpose of which is to provide daylight for interior lighting.

Solar Energy System, Accessory Use – A solar energy system that is secondary to the primary use of the parcel on which it is located and which is directly connected to or designed to serve the energy needs of the primary use. Excess power may be sold to a power company.

Solar Energy System, Active – A solar energy system whose primary purpose is to harvest energy by transforming solar energy into another form of energy or transferring heat from a collector to another medium using mechanical, electrical, or chemical means.

Solar Energy System, Building Integrated – An active solar energy system that is an integral part of a principal or accessory building, rather than a separate mechanical device, replacing or substituting for an architectural or structural component of the building. Such systems include, but are not limited to, solar energy systems that function as roofing materials, windows, skylights, wall mounted, and awnings.

Solar Energy System, Grid-Intertie – A photovoltaic solar energy system that is connected to an electric circuit served by an electric utility company.

Solar Energy System, Ground-Mounted – A solar collector, or collectors, located on the surface of the ground. The collector or collectors may or may not be physically affixed, or attached to the ground. Ground-mounted systems include pole-mounted systems. These systems are not considered an agricultural structure for purposes of this Ordinance.

Solar Energy System, Large – A solar energy system with a nameplate capacity of forty (40) kilowatts or more. Also may be considered a Solar Farm.

Solar Energy System, Off-Grid – A photovoltaic solar energy system in which the circuits energized by the solar energy system are not electrically connected in any way to electric circuits that are served by an electric utility company.

Solar Energy System, Passive – A solar energy system that captures solar light or heat without transforming it to another form of energy or transferring the heat via a heat exchanger.

Solar Energy System, Photovoltaic – An active solar energy system that converts solar energy directly into electricity.

Solar Energy System, Primary Use – A solar energy system which is the primary land use for the parcel on which it is located and which generates power for sale to a power company, or other off-premise consumer.

Solar Energy System, Reflecting – A solar energy system that employs one or more devices designed to reflect solar radiation onto a solar collector. This definition includes systems of mirrors that track and focus sunlight onto collectors located at a focal point. The collectors may be thermal or photovoltaic.

Solar Energy System, Roof-Mounted – A solar collector, or collectors, located on the roof of a building or structure. The collector or collectors may or may not be physically affixed, or attached to the roof.

Solar Energy System, Small – A solar energy system with a nameplate capacity of forty (40) kilowatts or less.

Solar Farms - A solar array composed of multiple solar panels on ground-mounted rack or poles which is not directly connected to or designed to serve the energy needs of the primary use but rather for the primary purpose of wholesale sales of generated electricity. Solar farms include but are not limited to community solar gardens which are defined as a solar-electric (photovoltaic) array that provides retail electric power (or a financial proxy for retail power) to multiple community members or businesses residing or located off-site from the location of the solar energy system, consistent with Minn. Statutes 216B.1641 or successor statute. A community solar system may be either an accessory or a principal use. Also may be considered a large solar energy system.

Solar Heat Exchanger – A component of a solar energy device that is used to transfer heat from one substance to another, either liquid or gas.

Solar Hot Air System – Also referred to as solar air heat; or a solar furnace. An active solar energy system that includes a solar collector to provide direct supplemental space heating by heating and re-circulating conditioned building air. The most efficient performance typically means vertically mounted on a south-facing wall.

Solar Hot Water System – Also referred to as a solar thermal. A system that includes a solar collector and heat exchanger that heats or preheats water for building heating systems or other hot water needs, including domestic hot water and hot water for commercial or industrial purposes.

Solar Mounting Devices – Devices that allow the mounting of a solar collector onto a roof surface, wall, or the ground.

Structure – Any building or appurtenance, including decks, except aerial or underground utility lines, such as sewer, electric, telephone, telegraph, gas lines, towers, poles, and other supporting facilities.

Substations – Any electrical facility designed to convert electricity produced by wind turbines for interconnection with transmission lines.

Total Name Plate Capacity – The total of the maximum rated output of the electrical power production equipment for a WECS project.

Total Height – The highest point, above ground level, reached by a rotor tip or any other part of the WECS.

Tower Facility – Any structure that may include a tower, antenna(s), equipment buildings, anchor points and other related equipment used by broadcast services and/or wireless telecommunications services and/or data collection devices. These facilities are regulated in Section 21 of the Faribault County Zoning Ordinance.

Transmission Line – Those electrical power lines that carry voltages of at least 69,000 volts (69 KV) and are primarily used to carry electric energy over medium to long distances rather than directly interconnecting and supplying electric energy to retail customers. (Substation to grid intersection) would be required to follow General Regulations, **Section 15 – General Guidelines** of the Zoning Ordinance.

Wind Easement – A right, whether or not stated in the form of a restriction, easement, covenant, or condition, in and deed, will, or other instrument executed by or on behalf of any owner of land or airspace for the purpose of ensuring adequate exposure of a wind power system to the winds.

Wind Energy Conversion System or WECS – Any device such as a wind charger, windmill, or wind turbine which converts wind energy to a form of usable energy.

Wind Energy Conversion System – Commercial – A WECS of equal to or greater than 100 kW (10MW) in total name plate generating capacity and/or any WECS over 200’.

Wind Energy Conversion System - Non-Commercial – A WECS of less than 100 kW (.01 MW) in total name plate generating capacity, and under 200’.

Wind Energy Conversion Systems, Large - LWECS – Large Wind Energy Conversion Systems, or “LWECS” means any combination of WECS with a combined nameplate capacity of 5,000 kilowatts (5MW) or more

Wind Energy Conversion Systems, Small - SWECS – Small Wind Energy Conversion Systems, or “SWECS” means any combination of WECS with a combined nameplate capacity of 5,000 kilowatts (5MW) or less. These systems are permitted by the local government unit.

Wind Energy Conversion System Tower – Towers include vertical structures to which the nacelle and rotor are attached.

Wind Energy Conversion System Tower Height – The distance from the top of the WECS foundation to the rotor blade at its highest point.

Wireless Telecommunication – Any ground or roof mounted structure built for the purposes of supporting, elevating or attaching antenna(s) for broadcasting of cellular, personal communications, specialized mobilized radio, enhanced specialized mobilized radio, paging, and similar services. For all sections of this Ordinance, wireless telecommunication shall not be considered a public utility.

Wind Turbine – A wind turbine is any piece of electrical generating equipment that converts the kinetic energy of blowing wind into electrical energy through the use of airfoils or similar devices to capture the wind.

Zoning Ordinance – The Faribault County Zoning Ordinance.

Conversion Chart –

Power (kilowatts)	Power (megawatts)
0 kW	0 MW
1 kW	0.001 MW
10 kW	0.01 MW
100 kW	0.1 MW
1000 kW	1 MW
10000 kW	10 MW
100000 kW	100 MW
1000000 kW	1000 MW

SECTION 6 PERMITTING PROCEDURES

Renewable Energy System Permits, Conditional Use permits, and Variances shall be applied for and reviewed under the procedures established in the Faribault County Zoning Ordinance and Minnesota Statutes Chapter 394, except where noted below.

Subdivision 1 Permit Requirements

No person, business, firm or corporation shall construct, install, alter, or expand any Renewable Energy System in Faribault County without first obtaining the required permits. A Renewable Energy System Permit is required for all systems.

1. A Conditional Use Permit is required for all systems in the following categories:
Wind Energy Conversion System Non-Commercial and Commercial
Solar Energy Systems, Large and Reflecting

2. Refer to Section 7, Subdivision 1 and Subdivision 2 for a detailed chart.

Subdivision 2 Permit Standards

A Renewable Energy System Permit will be amended, as necessary, and approved by the County Board. These permits will be supplied to the applicant by the Department.

Subdivision 3 General Standards

All Renewable Energy Systems must follow all General Standards listed in Section 8 and Section 9 of this Ordinance.

Subdivision 4 Fees

The fee schedule shall be established, and may be reviewed and revised periodically, by the County Board.

Subdivision 5 Development Agreement

A Development Agreement will be required for any Large or Commercial Wind Energy Conversion System and for any Large Solar Energy System.

SECTION 7 DISTRICT REGULATIONS FOR WECS AND SOLAR ENERGY SYSTEMS

Subdivision 1 Permitted, Conditionally Permitted, and Not Allowed WECS

WECS will be Permitted (P), Conditionally Permitted (CP) or Not Allowed (NA) based on the generating capacity and land use district as established in the table below:

DISTRICT	NON-COMMERCIAL WECS	COMMERCIAL WECS
Agricultural Districts:		
A-1 Shoreland	Conditionally Permitted	Not Allowed
A-2 General	Permitted	Conditionally Permitted
Residential Districts:		
R-1 Rural	Conditionally Permitted	Not Allowed
R-2 Shoreland	Conditionally Permitted	Not Allowed
R-3 Manufactured Home Park	Conditionally Permitted	Not Allowed
Business District:		
B-1 Highway Service	Conditionally Permitted	Conditionally Permitted
B-2 General	Conditionally Permitted	Conditionally Permitted
Industry Districts:		
I-1 Light	Conditionally Permitted	Conditionally Permitted
I-2 Heavy	Conditionally Permitted	Conditionally Permitted
Floodplain:	Not Allowed	Not Allowed

Subdivision 2 Permitted, Conditionally Permitted, and Not Allowed Solar Energy Systems

Non-Reflecting Solar Energy Systems will be Permitted (P), Conditionally Permitted (CP) or Not Allowed (NA) based on the generating capacity and land use district as established in the table below:

DISTRICT	SMALL		LARGE	REFLECTING
Agricultural Districts:				
A-1 Shoreland	Permitted		Conditionally Permitted	Not Allowed
A-2 General	Permitted		Conditionally Permitted	Conditionally Permitted
Residential Districts:				
R-1 Rural	Permitted		Not Allowed	Not Allowed
R-2 Shoreland	Permitted		Not Allowed	Not Allowed

R-3 Manufactured Home Park	Conditionally Permitted	Conditionally Permitted	Conditionally Permitted
Business Districts:			
B-1 Highway Service	Permitted	Conditionally Permitted	Not Allowed
B-2 General	Permitted	Conditionally Permitted	Not Allowed
Industry Districts:			
I-1 Light	Permitted	Conditionally Permitted	Not Allowed
I-2 Heavy	Permitted	Conditionally Permitted	Not Allowed
Floodplain:	Not Allowed	Not Allowed	Not Allowed

Subdivision 3 Permitted and Conditional Uses for Reflecting Solar Energy Systems

Reflecting Solar Energy Systems are only allowed in the A-2 General Agriculture Zoning District through the Conditional Use Process.

SECTION 8 SETBACKS AND GENERAL STANDARDS FOR WECS

Subdivision 1 WECS SETBACKS **The setback shall be measured from future road easement/rights-of-way if a planned change or expansion is known.

All WECS shall adhere to the setbacks established in the following table:

	Non-Commercial	Commercial
Participating Property Boundaries	1.1 times the total height	1.25 times the total height
Non-Participating Project Boundaries	3 x 5 rotor diameter	3 x 5 rotor diameter
Dwelling(s) (Residence)(s)	750 feet minimum or sufficient distance to meet noise standards. Whichever is greater	1,000 feet minimum or sufficient distance to meet noise standards. Whichever is greater
Road Easement/Rights-of-Way (ROW))[*] Trails	250' from edge of Public Road Easement/ROW or 1.1 times the total height, whichever is greater	250' from edge of Public Road Easement/ROW or 1.1 times the total height, whichever is greater
Other Rights-of-Way (Railroads, power lines, communication towers, etc)	1.1 times the total height	To be considered by the Planning Commission
Public conservation lands managed as grasslands	50'	600 feet or as determined by the Planning Commission
Wetlands, USFW Types III, IV, and V	50'	600 feet or as determined by the Planning Commission
Public Drainage Systems	30' from the centerline of any buried public drainage tile system, and 50' from the top edge of an open public ditch	As specified in the Public Drainage System Protection Agreement
Noise Standard	Minnesota Rule 7030	Minnesota Rule 7030

Subdivision 2 Additional Setbacks

1. Public and Private Airports including Heliports – No turbines or associated facilities shall be located so as to create an obstruction to navigable airspace of public and private airports or helipads. Setbacks or other limitations determined in accordance with MN/DOT Office of Aeronautics and FAA Requirements, and the Airport Zoning Ordinances as established throughout the county.
2. The setback for new dwellings (unless it is owned by the applicant) shall be reciprocal in that no dwelling shall be constructed within the same setback as a new turbine would need to meet to an existing dwelling.
3. Substations and Accessory Structures or Facilities not located within the road easement/right-of-way, must have a centerline of road setback of 100' and are required to be consistent with the filing requirements outlined in Section 15, General Regulations of the Zoning Ordinance. These shall not be considered Essential Services.

Subdivision 3 Safety and Design Standards

1. Engineering Certification is required within the Development Agreement. Manufacturer's engineer or another qualified engineer shall certify that the turbine, foundation and tower design of the WECS is within accepted professional standards, given local soil and climate conditions.
2. Clearance – Rotor blades or airfoils must maintain at least 30 feet of clearance between their lowest point and the ground.
3. Warnings – For all Commercial WECS, a sign or signs shall be posted on the tower, transformer and substation warning of high voltage. Signs with emergency contact information shall also be posted on the turbine or at another suitable point.

Subdivision 4 Height Standards

1. All WECS 200' and over will be required to meet the FAA Tall Tower Standards.
2. Review Title 14, Code of Federal Regulations, FAA, Part 77.13, as amended, Construction or Alteration Requiring Notice.

Subdivision 5 Tower Configuration Standards

1. All WECS shall be installed with a tubular, monopole type tower.
2. Color and Finish – All wind turbines- that are part of WECS shall be white, grey, or another non-obtrusive color. Blades may be black in order to facilitate deicing. Finishes shall be matte or non-reflective.
3. Lighting must comply with FAA Advisory Circular 70/7460-1K, as amended, Obstruction Marking and Lighting.
4. Other Applicable Standards:

- 567 a. Feeder lines, including communications that are equal to or less than 35 kV in
568 capacity, installed as part of a WECS shall be located in the road easement/right
569 of way, and buried [where reasonably feasible]. These shall not be considered an
570 Essential Service.
- 571 b. Other signage on site shall comply with the Zoning Ordinance. The manufacture's
572 or owner's company name and/or logo may be placed upon the WECS nacelle.
- 573 c. Solid and hazardous wastes, including but not limited to crates, packaging
574 materials, damaged or worn parts, as well as used oils and lubricants, shall be
575 removed from the site and disposed of in accordance with all applicable local,
576 state and federal regulations.
- 577
- 578 5. Orderly Development – Upon issuance of a Conditional Use Permit, all Commercial
579 WECS shall notify the MN Geospatial Information Office Staff of the project location and
580 details on the survey form specified by the Environmental Quality Board.
- 581 6. All WECS shall comply with Minnesota Rules 7030, as amended, governing noise.
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- 583 7. Electrical codes and standards for all WECS and accessory equipment and facilities shall
584 comply with the National Electrical Code and other applicable standards.
- 585
- 586 8. Federal Aviation Administration (FAA) – All WECS shall comply with FAA standards and
587 permits.
- 588
- 589 9. Uniform Building Code – All WECS shall comply with the Uniform Building Code adopted
590 by the State of Minnesota.
- 591
- 592 10. Fire Protection and Emergency Services – Prior to initiating construction activity related
593 to the WECS project, the applicant will communicate and coordinate with local fire,
594 emergency services, and Faribault County their needs and plans related to all aspects of
595 the WECS project to assure adequate preparedness and response is executed in the
596 event these services are required.
- 597
- 598 11. 911 Address – A 911 address will be issued for each wind turbine or access road
599 included in a project.
- 600
- 601 12. Interference - The applicant shall mitigate interference with electromagnetic
602 communications, such as radio, telephone, microwaves, or television signals caused by
603 any WECS. The applicant shall notify all communication tower operators within two miles
604 of the proposed WECS location upon application to the County for permits. No WECS
605 shall be constructed so as to interfere with County 911, ARMER systems or Minnesota
606 Department of Transportation microwave transmissions.
- 607

608 **Subdivision 6 Discontinuation, Decommissioning, and Modification Plans**

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- 610 1. Discontinuation - All WECS shall be considered as discontinued use after one- (1) year
611 without energy production unless a plan is developed and submitted to the Department
612 outlining the steps and schedule for returning the WECS to service. All WECS and
613 accessory facilities shall be removed to ground level within 90 days of the discontinuation
614 of use.
- 615

2. Decommissioning Plan - Each Commercial WECS shall have a Decommissioning Plan outlining the anticipated means and cost of removing WECS at the end of their serviceable life or upon becoming a discontinued use. This plan must include the following:
- a. The cost estimates shall be made by a competent party; such as a Professional Engineer, a contractor capable of decommissioning or a person with suitable expertise or experience with decommissioning.
 - b. The plan shall also identify the financial resources that will be available to pay for the decommissioning and removal of the WECS and accessory facilities.
 - c. Timeframe.
 - d. The Board shall require an escrow account or surety bond equal to one hundred twenty-five (125) percent of the costs to ensure proper decommissioning.
3. Modification Plans – If at any time a WECS is modified beyond original application, a modification plan must be developed and submitted to the Department and reviewed by the Planning Commission for approval.

Subdivision 7 Avoidance and Mitigation of Damages to Public Infrastructure

If determined by the Department or the Planning Commission that the project may impact the County's public infrastructure, the Applicant will be required to complete the Development Agreement, Road Use and Repair Agreement, that includes approval by the Highway Engineer, and the Public Drainage System Protection Agreement. These agreements and any other required agreements shall be completed, and included at the time of application for a Conditional Use Permit to the Department.

Subdivision 8 Pre-Construction Meeting

Applicants for Commercial WECS will be required to conduct a Pre-Construction meeting prior to construction commencement with a written notice identifying the date, time and place of meeting and be sent to the following individuals a minimum of fourteen (14) days prior to said meeting:

- a. Township Chairman
- b. Faribault County Engineer
- c. Faribault County Sheriff/Emergency Management Director
- d. Faribault County Zoning Administrator
- e. County Commissioner of the District
- f. Others as deemed necessary

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666 **SECTION 9 GENERAL STANDARDS FOR SOLAR ENERGY SYSTEMS**
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668 **Subdivision 1 General Standards for All Solar Energy Systems**
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- 671 1. Systems shall be designed and operated in a manner that protects public safety.
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673 2. Systems shall be in compliance with any applicable Local, State and Federal regulatory
674 Standards, including, but not limited to, the State of Minnesota Building Code, as
675 amended, and the National Electric Code, as amended.
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677 3. Systems that result in the creation of one (1) or more acres of impervious surface, must
678 comply with the MPCA Construction Stormwater Permit Requirements.
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680 4. Systems shall not be used to display advertising, including; signage, streamers, pennants,
681 spinners, advertising reflectors, ribbons, tinsel, balloons, flags, banners or similar
682 materials. The manufacturers and equipment information, warning, or indication of
683 ownership shall be allowed on any equipment of the solar energy system provided they
684 comply with the prevailing sign regulations.
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686 5. The applicant shall submit a decommissioning plan, per the standards of this Ordinance,
687 with the permit application.
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689 6. Systems within the airport influence zone, as designated by the Minnesota Department
690 of Transportation or applicable Airport Safety Ordinance, must comply with FAA
691 standards and permits and are prohibited from creating or causing interference with the
692 operations of airplanes, or makes it difficult for pilots to maneuver as a result of glare or
693 otherwise endangers the landing, take off, or maneuvering of aircraft.
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696 **Subdivision 2 Small Solar Energy Systems**
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698 In addition to the General Standards, the following standards shall apply to Small Solar Energy
699 Systems:
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- 701 1. All elements of the system shall meet or exceed all district regulations based on the
702 applicable zoning district.
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705 **Subdivision 3 Large Solar Energy Systems and Solar Farms**
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707 In addition to the General Standards, the following standards shall apply to Large Solar Energy
708 Systems and Solar Farms:
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- 710 1. All elements of the system shall meet or exceed all district regulations based on the
711 applicable zoning district.
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2. Stormwater Management and Erosion and Sediment Control shall meet the requirements of the MPCA Construction Stormwater Permit requirements.
3. The manufacturer's engineer or another qualified engineer shall certify that the foundation and design of the solar energy system is within accepted professional standards, given local soil and climate conditions.
4. Power and communication lines running between banks of solar collectors and to electric substations or interconnections with buildings shall be buried underground. Exemptions may be granted in instances where shallow bedrock, water courses, or other elements of the natural landscape interfere with the ability to bury lines.
5. Screening. Systems shall be screened from residential dwelling units, abutting public easements/right-of-way, and/or other land uses. The screening plan shall show the location of fences and residential dwelling units. Fences shall be installed as part of the project and shall be screened. The project design shall include the installation and establishment of ground cover meeting the beneficial habitat standards consistent with Minnesota Statutes, section 216B.1642, or successor statutes and guidance as set by the Minnesota Board of Water and Soil Resources.
- (a) Beneficial habitat standards shall be maintained on the site for the duration of operation, until the site is decommissioned.
6. Setbacks. Setbacks shall be measured to the nearest security fence surrounding the Solar Energy System, excluding screening or berm.
- a) Large Solar Energy Systems must meet the minimum building setback for the zoning district and be located a minimum of two hundred (200) feet from a residential dwelling unit not located on the property.
- b) Large Solar Energy Systems must meet a minimum setback of 100 feet from Drainage Systems. Tile line setback distance is measured from the center line of the tile. Open ditch setback distance is measured from the top of the ditch bank. The location of the tile must be verified.
- c) Large Solar Energy Systems must meet the minimum Front Yard Regulations for the zoning district.
7. Vegetation requirements and management. The following provisions shall be met related to the clearing of existing vegetation and establishment of vegetated ground cover.
- a) Large-scale removal of mature trees on the site is discouraged. Restrictions on tree clearing, or mitigation for cleared trees may be included in the conditions.
- b) The project site design shall include the installation and establishment of ground cover meeting the beneficial habitat standards consistent with Minnesota Statutes, section 216B.1642, or successor statutes and guidance as set by the Minnesota Board of Water and Soil Resources.
- c) Beneficial habitat standards shall be maintained on the site for the duration of operation, until the site is decommissioned.
8. Fire Protection and Emergency Services – Prior to initiating construction activity related to the Large Solar Energy project, the applicant will communicate and coordinate with local fire, emergency services, and Faribault County their needs and plans related to all aspects of the project to assure adequate preparedness and response is executed in the

762 event these services are required.

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764 9. 911 Address – A 911 address will be issued for each access road included in a project.

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766 Subdivision 3A.

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768 Application requirements. The following information shall be provided to the Department
769 prior to issuance of the conditional use permit:

770 (1) A site plan showing the following:

771 (a) Existing property lines and property lines extending one hundred (100) feet from the
772 exterior boundaries, including the names of the adjacent property owners and current
773 use of those properties

774 (b) Existing public and private roads, showing widths of the roads and any associated
775 easements

776 (c) Location and size of any abandoned wells, sewage treatment systems and dumpsites

777 (d) Existing buildings and any impervious surface

778 (e) Topography at two (2) foot intervals and source of contour interval, unless
779 determined otherwise by the Department. A contour map of the surrounding properties
780 may also be required

781 (f) Existing vegetation (list type and percent of coverage; i.e. grassland, plowed field,
782 wooded areas, etc.)

783 (g) Waterways, watercourses, lakes and public water wetlands

784 (h) Approved delineated wetland boundaries

785 (i) The one hundred (100)-year flood elevation and Regulatory Flood Protection
786 Elevation, if available

787 (j) Floodway, flood fringe and/or general flood plain district boundary, if applicable

788 (k) The shoreland district boundary, if any portion of the project is located in a shoreland
789 overlay district

790 (l) In the shoreland overlay district, the ordinary high-water level and the highest know
791 water level

792 (m) In the shoreland overlay district, the toe and top of any bluffs within the project
793 boundaries

794 (n) Mapped soils according to the Faribault County Soil Survey

795 (o) Surface water drainage patterns

796 (p) Location of County Drainage Systems

797 (q) Location of private tile drainage systems, if known

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799 (2) A site plan of proposed conditions which shall contain:

800 (a) Location and spacing of solar panels

801 (b) Location and size of access roads

802 (c) Planned location of underground or overhead electric lines connecting the solar farm
803 to the building, substation or other electric load

804 (d) New electrical equipment other than at the existing building or substation that is the
805 connection point for the solar farm

806 (e) Proposed erosion and sediment control measures

807 (f) Proposed stormwater management measures

808 (g) Sketch elevation of the premises accurately depicting the proposed solar energy
809 conversion system and its relationship to structures on adjacent lots (if any);

810 (h) Changes in surface water drainage patterns

- (i) A table showing the total amount of impervious surface being added to the site, including roads, solar panels, etc.
- (j) Location, number and caliper of any trees to be removed, for trees with size greater than six (6) inches.
- (k) Acreage of solar array.
- (l) Acreage of solar array within fenced area.
- (m) Manufacturer's specifications and recommended installation methods for all major equipment, including solar panels, mounting systems and foundations for poles or racks;
- (n) The number of panels to be installed;
- (o) A description of the method of connecting the array to a building or substation;
- (p) Visual Impact Analysis. An analysis of the potential visual impacts from the project including solar panels, roads and fencing along with measures to avoid, minimize or mitigate the visual effects shall be required. A plan may be required showing vegetative screening or buffering of the system from those items to mitigate for visual impacts;
- (q) Approved snow drift assessment as a result of solar array with fencing and screening along effected roads

Subdivision 4 Accessory Use Solar Energy Systems

In addition to the General Standards, the following standards shall apply to Accessory Use Solar Energy Systems:

1. Must meet all setback and impervious surface requirements pertinent to the zoning district.
2. Height. Active solar systems are subject to the following height requirements:

(a) Building or roof-mounted solar systems shall not exceed the maximum allowed height in any zoning district. For purposes of height measurement, solar systems other than building-integrated systems shall be considered to be mechanical devices and are restricted consistent with other building-mounted mechanical devices for the zoning district in which the system is being installed.

(b) Ground or pole-mounted solar systems shall not exceed twenty-five (25) feet in height when oriented at maximum tilt.

Location within Lot. Solar systems must meet the accessory structure setback for the zoning district.

(a) Roof-mounted Solar Systems. In addition to the building setback, the collector surface and mounting devices for roof-mounted solar systems that are parallel to the roof surface shall not extend beyond the exterior perimeter of the building on which the system is mounted or built. The collector and racking for roof-mounted systems that have a greater pitch than the roof surface shall be set back from all roof edges by at least two feet.

(b) Exterior piping for solar hot water systems shall be allowed to extend beyond the perimeter of the building on a side yard exposure. (2) Ground-mounted Solar Systems. Ground-mounted solar energy systems may not extend into the side-yard or rear setback when oriented at minimum design tilt.

(c) Stormwater Management and Erosion and Sediment Control shall meet the requirements of the MPCA Construction Stormwater Permit requirements.

(d) Approved Solar Components. Electric solar system components must have documentation that the products have been independently tested by a Nationally Recognized Testing Laboratory.

(e) Compliance with State Electric Code. All photovoltaic systems shall comply with the Minnesota State Electric Code.

(f) Utility Notification. No grid-intertie photovoltaic system shall be installed until evidence has been given to the Department that the owner has notified the utility company of the customer's intent to install an interconnected customer-owned generator. Off-grid systems are exempt from this requirement.

Subdivision 5 Primary Use Solar Energy Systems

In addition to the General Standards, the following standards shall apply to Primary Use Solar Energy Systems:

1. Must meet all setback and impervious surface requirements pertinent to the zoning district.

Subdivision 6 Building Integrated Solar Energy Systems

For purposes of this Ordinance, Building Integrated Solar Energy Systems are an integral part of a dwelling or accessory building rather than a separate mechanical device, replacing or substituting for an architectural or structural component of the building. These include systems that function as roofing materials, windows, and skylights. If there is no change in the height or width of the structure, these systems would not require a Zoning/Building Permit.

Subdivision 7 Ground-Mounted and Pole-Mounted Solar Energy Systems

In addition to the General Standards, the following standards shall apply to Ground-Mounted and Pole-Mounted Solar Energy Systems:

1. Must meet all setback requirements pertinent to the zoning district.
2. Shall not exceed twenty (20) feet in height when oriented at maximum design tilt.
3. Shall not extend into the side-yard, rear-yard, or road easement/right-of-way setback when oriented at minimum design tilt.
4. Shall not have a total collector surface of area exceeding fifty percent (50%) of the footprint of the dwelling, or the largest structure currently on the parcel when a dwelling is not present, in the following zoning districts:
 - A. A-1, Shoreland Agricultural
 - B. A-2, General Agricultural
 - C. R-1, Rural Residential
 - D. R-2, Shoreland Residential
5. Shall have natural ground cover under and between the collectors and surrounding the

system's foundation or mounting device(s).

Subdivision 8 Roof-Mounted Solar Energy Systems

In addition to the General Standards, the following standards shall apply to Roof-Mounted Solar Energy Systems:

1. Shall not exceed by more than four (4) feet the maximum allowed height in any zoning district.
2. In addition to the structure setback, the collector surface and mounting devices shall not extend beyond the exterior perimeter of the structure on which the system is mounted or built, except for when such an extension is designed as an awning.
3. The collector and racking that have a greater pitch than the roof surface shall be set back from all roof edges by at least two (2) feet.
4. Exterior piping for roof-mounted solar hot water systems may extend beyond the perimeter of the structure on side and rear yard exposures.
5. Shall not cover more than eighty percent (80%) of the south-facing or flat roof upon which the collectors are mounted. Excluding building-integrated systems.

Subdivision 9 Reflecting Solar Energy Systems

In addition to the General Standards, the following standards shall apply to Reflecting Solar Energy Systems:

1. Shall be designed and operated to prevent the misdirection of reflected solar radiation onto adjacent or nearby property, public roads, or other areas open to the public.
2. Shall not be permitted to be located within Zone C as designated in the Blue Earth Airport Zoning Ordinance, as amended.

Subdivision 10 Wall-Mounted Solar Energy Systems

In addition to the General Standards, the following standard shall apply to Wall-Mounted Solar Energy Systems:

1. Shall cover no more than twenty-five percent (25%) of any exterior wall facing a front yard in the following districts:
 - A. R-1, Rural Residential
 - B. R-2, Shoreland Residential

Subdivision 11 Photovoltaic Solar Energy Systems

In addition to the General Standards, the following standards shall apply:

1. The electrical disconnect switch shall be clearly identified and unobstructed.

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2. No Grid-Intertie System shall be installed until documentation has been given to the Zoning Administrator that the owner has notified the utility company of the customer's intent to install an interconnected customer-owned generator. Documentation may consist of an interconnection agreement or a written explanation from the utility provider or contractor outlining why an interconnection agreement is not necessary. Off-grid systems are exempt from this requirement.
 3. Must have an Underwriters Laboratory (UL) listing and Solar Hot Water Systems must have a Solar Rating & Certification Corporation (SRCC) rating.

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Subdivision 12 Avoidance and Mitigation of Damages to Public Infrastructure

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If determined by the Department or the Planning Commission that the project may impact the County's public infrastructure, the Applicant will be required to complete the Development Agreement, Road Use and Repair Agreement, that includes approval by the Highway Engineer, and the Public Drainage System Protection Agreement. These agreements or other required agreements shall be completed, and included at the time of application for a Conditional Use Permit to the Department.

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Subdivision 13 Pre-Construction Meeting

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Applicant for Commercial WECS will be required to conduct a Pre-Construction meeting prior to construction commencement with a written notice identifying the date, time and place of meeting and be sent to the following individuals a minimum of fourteen (14) days prior to said meeting:

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- a. Township Chairman
 - b. Faribault County Engineer
 - c. Faribault County Sheriff/ Emergency Management Director
 - d. Faribault County Zoning Administrator

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Subdivision 14 Decommissioning

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A Decommissioning Plan shall be required as outlined below:

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1. For Small Solar Energy Systems less than 40 kW, which do not require a Conditional Use Permit, a decommissioning plan may not be required.
 2. For Large Solar Energy Systems greater than 40 kW that require a CUP, and all systems more than 40 kW, a decommissioning plan will be included as part of the application requirements, and shall consist of the following:
 - a. Outline of the anticipated means and cost of removing the system at the end of its serviceable life or upon its becoming a discontinued use. The cost estimates shall be made by a competent party, such as a professional engineer, a contractor capable of decommissioning or a person with suitable expertise or experience with decommissioning. The plan shall also identify the financial resources that will be available to pay for the decommissioning and removal of the system.

b. Decommissioning of the system must occur within sixty (60) days from either the end of the system's serviceable life; or when the system becomes a discontinued use.

c. Decommissioning shall consist of the following:

The removal of the system's foundation. An exemption from this requirement may be granted by the Conditional Use Permit granting authority if it is determined that the removal of the foundation will significantly increase erosion and/or significantly disrupt vegetation on the site.

Disposal of all solid and hazardous waste in accordance with Local, State, and Federal Waste Disposal Regulations.

The stabilization of soils and/or re-vegetation of the site as necessary to minimize erosion. The Conditional Use Permit granting authority may allow the owner to leave landscaping or designated below-grade foundations in order to minimize erosion and disruption of vegetation.

3. A system shall automatically be considered a discontinued use after one (1) year without energy production, unless a plan is developed and submitted to the Zoning Administrator outlining the steps and schedule for returning the system to service.
4. The Board shall require an escrow account or surety bond equal to one hundred twenty-five (125) percent of the costs to ensure proper decommissioning.
5. Additional decommissioning requirements may be added as additional conditions on a Conditional Use Permit, as deemed necessary.

SECTION 10 ENFORCEMENT, VIOLATIONS, REMEDIES AND PENALTIES

Enforcement of the Renewable Energy Ordinance shall be done in accordance with process and procedures established in the Faribault County Zoning Ordinance.

SECTION 11 REPEAL AND RECOMMENDATIONS

Where this Ordinance imposes greater restrictions than any other ordinance, the provisions of this Ordinance shall prevail. All other ordinances inconsistent with this Ordinance are hereby repealed to the extent of the inconsistency only.

The Faribault County Planning Commission, after proper notice and publication, held a public hearing on the adoption of this Ordinance on the 14th of June, 2016. After hearing public testimony and with due deliberation, the Planning Commission voted to recommend adoption of this Ordinance to the Faribault County Board of Commissioners.

SECTION 12 ADOPTION

The Faribault County Board of Commissioners, after proper notice and publication, held a public hearing on the adoption of this Ordinance on the 19th day of July, 2016, at the Faribault County Courthouse. After hearing public testimony and with due deliberation, the Faribault County Board of Commissioners voted to adopt this Ordinance.

SECTION 13 -EFFECTIVE DATE

This Ordinance shall be in full force and effect from and after July 19, 2016 of the date of its passage and publication according to law, whichever occurs first.

Dated this 19th day of July, 2016.

Chair
Faribault County Board of Commissioners

ATTEST:

Clerk to the Board

Amended: February 4th, 2020