



## STAFF REPORT

DATE: 2/6/2018

**REGULAR**

ITEM #: 17

**MOTION**

**TO:** City Council  
**FROM:** Emily Becker, Planning Director  
**AGENDA ITEM:** Solar Energy Ordinance  
**REVIEWED BY:** Ben Prchal, City Planner

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### **BACKGROUND:**

The creation of a solar garden/solar power ordinance was an item on the 2017 Planning Commission Work Plan. The Planning Commission reviewed drafts of the ordinance at its February 27, 2017, March 27, 2017, April 10, 2017, and April 24, 2017 meetings. A public hearing was held on December 11, 2017.

### **ISSUE BEFORE COUNCIL:**

The Council is being asked to review the proposed draft ordinance and adopt Ord. 08- approving amendments to the Solar Ordinance and Resolution 2018- approving Summary Publication of the same.

### **PROPOSAL DETAILS/ANALYSIS:**

The following amendments have been made to City's Zoning Code in regards to Solar Energy Systems and Solar Farms:

- **Definitions for Solar Farm and Solar Energy System.** A definition for solar farm was added, and the definition for solar energy system was amended to match a model ordinance on solar energy systems.
- **Standards for Solar Energy Systems.** Certain standards were added including:
  - *Signage.* Signage is required for properties with solar energy systems that provides information regarding voltage, manufacturer's name, emergency telephone number, and emergency shutdown procedures.
  - *Commercial Rooftop or Building Integrated Solar Energy Systems.* Must be screened from public right-of-way.
  - *Accessory Setback, Height, and Lot Coverage.* Solar Energy Systems must comply with standards of the zoning code for accessory structures.
    - *Exemption.* Solar energy systems six square feet in size or less are exempt from this requirement.
  - *Interconnection Agreement.* Is required if connected to the electric distribution or transmission system through the existing service of the primary use on the site.

- *Glare.* The proposed amendment includes a provision that any solar energy system employing a reflector shall minimize glare and outlines ways in which this can be achieved. Additionally, the amendment proposes that any mirror-reflecting designed solar energy systems be located on properties five acres or larger and obtain a conditional use permit.
- *Safety.* The proposed amendment indicates that solar systems meet applicable code requirements.
- *Decommissioning.* The proposed ordinance amendment requires a decommissioning plan to ensure that facilities are removed after their useful life. Decommissioning shall occur when facilities are not in use for 12 consecutive months. This will help ensure that solar energy systems do not become a nuisance after they've been abandoned or are no longer working for a period of time.
- *Easements.* Language is proposed that allows property owners to be granted or buy easements to prevent certain restrictions that would diminish solar access.
- *Restrictions from Homeowner's Association.* The Commission had requested that the solar energy systems ordinance place restrictions on homeowner's associations being able to forbid the installation of solar energy systems or create design standards that effectively preclude solar energy installations. This language has been added to the proposed ordinance.
- **Solar Farms.** The draft ordinance allows solar farms as a conditional principal use in the Agricultural and Rural Residential zoning districts as well as an interim use in the Rural Development Transitional zoning district. Additionally, the following standards were added:
  - *Minimum Lot Size, Setback Standards, and Screening Requirements.* Solar farms are limited to properties at least ten acres in size, must maintain a minimum setback of fifty feet from the property line, and must be screened and fenced.
  - *Stormwater and NPDES.* Solar farms are subject to the City's and watershed district's stormwater management and erosion and sediment control provisions and NPDES permit requirements.
  - *Foundations.* A qualified engineer shall certify that the foundation and design of the solar panels, racking and support is within accepted professional standards, given local soil and climate conditions.
- **Solar Farms within Closed Landfill Restricted Zoning District.** On December 19, 2017, Council approved a Closed Landfill Restricted Zoning District. As per State Statute requirements, local governing units are to adopt a land use plan consistent with that of the Minnesota Pollution Control Agency (MPCA). The MPCA had created a Closed Landfill Use Plan back in 2013 which allowed solar farms as a conditional use, but Council had wished not to allow them as a conditional use until additional standards for solar farms were adopted for the City. Staff has added back solar farms as a conditional use within the Closed Landfill Restricted zoning district and set forth setback standards and the standard that proposed locations and plans for solar farms be approved by both the City and MPCA.

**FISCAL IMPACT:**

None.

**OPTIONS:**

The Council may:

- Recommend amendments to Ord. 08-198 and adopt Ord. 08-198 and adopt an amended Resolution 2018-010 authorizing Summary Publication of Ord. 08-198.
- Adopt Ord. 08- and Resolution 2018-010 authorizing Summary Publication of Ord. 08-198.
- Do not adopt Ord. 08- or Resolution 2018-010 authorizing Summary Publication of Ord. 08-198.
- Table the item for a future meeting.

**RECOMMENDATION:**

*“Move to adopt Ord. 08-198 approving amendments to the Solar Ordinance.”*

*“Move to adopt Resolution 2018-010 approving Summary Publication of Ord. 08-198“*

**ATTACHMENTS:**

- Ord. 08-198
- Resolution 2018-010

CITY OF LAKE ELMO  
COUNTY OF WASHINGTON  
STATE OF MINNESOTA

ORDINANCE NO. 08-198

AN ORDINANCE AMENDING THE LAKE ELMO CITY CODE OF ORDINANCES BY  
ADDING ADDITIONAL STANDARDS FOR SOLAR ENERGY SYSTEMS AND SOLAR  
FARMS

**SECTION 1.** The City Council of the City of Lake Elmo hereby amends Title XV: Land Usage; Chapter 154: Zoning Code; Article II; Section 154.012; Subd. (B) (12) by removing the current definition of Solar Equipment and adding the following to a new Subd. (B) (10): Alternative Energy:

*Solar Farm.* A commercial facility that converts sunlight into electricity, whether by photovoltaic (PV), concentrating solar thermal devices (CST), or other conversion technology, for the principal purpose of sales of generated electricity to off-site customers.

*Solar-Equipment Energy System.* ~~Any solar collector, skylight, or other solar energy device whose~~ A device or structural design feature, a primary purpose of which is to provide for the collection, storage, and distribution of solar energy for space heating, cooling, water heating, or for power generation.

**SECTION 2.** The City Council of the City of Lake Elmo hereby amends Title XV: Land Usage; Chapter 154: Zoning Code; Article II; Section 154.310 (B) (12) by moving the current standards of Solary Energy Systems to a new Section entitled Alternative Energy and to read as follows.

*Solar Energy Systems.* ~~Solar energy systems and solar structures are permitted accessory uses in all districts, provided the system or equipment is in compliance with minimum lot requirements and setback standards set forth below.~~

1. Permits. A building permit shall be obtained before the installation of solar arrays or panels on any property. All solar energy systems shall be installed and components labeled in accordance with the Minnesota State Electric Code Section 690.
2. Signage. Properties with solar energy systems shall have at least one (1) sign posted at the entrance of the property or structure on which the solar energy system is mounted, containing the following information: voltage information, manufacturer's name, emergency telephone number, and emergency shutdown procedures.
3. Rooftop or Building Integrated Solar Energy Systems.
  - a. These systems are permitted accessory uses in all districts in which buildings are permitted.
  - b. Visibility, Commercial Installations. Commercial rooftop systems shall be placed on the roof to limit visibility from the public right-of-way or to blend into the roof design, provided that minimizing visibility still allows the property owner to reasonably capture solar energy.
4. Ground-Mount Solar Energy Systems.
  - a. Ground-mount energy systems are permitted accessory uses in all districts where buildings are permitted.

- b. A solar structure Ground-mount energy systems must comply with all accessory setback, height and lot coverage restrictions unless otherwise stated herein or a variance is granted and shall not encroach on any City easement unless an easement encroachment agreement approved by the Planning Director or his/her designee after review and approval from the City Engineer or his/her designee has been executed. A certificate of zoning compliance is required for all solar energy systems unless a conditional use permit is required as stated herein.
    - i. The collector surface of a ground-mount system and any foundation, compacted soil, or other component of the solar installation that rests on the ground is considered impervious surface. Vegetated ground under the collector surface can be used to mitigate stormwater runoff.
  - c. Exemptions. Solar energy systems of a size of six square feet or less may be exempt from zoning district setback requirements.
5. Interconnection Agreement. All electric solar energy systems that are connected to the electric distribution or transmission system through the existing service of the primary use on the site shall obtain an interconnection agreement with the electric utility in whose service territory the system is located. Solar energy systems connected directly to the distribution or transmission system must obtain an interconnection agreement with the interconnecting electric utility. Systems that are not directly connected to the grid or not connected to the electric system of a building that is connected to the grid are exempt from this requirement.
  6. Glare. Glare produced from any solar energy system shall be minimized from affecting adjacent or nearby properties. Measures to minimize glare include selective placement of the system, screening of the solar array, modifying the orientation of the system, reducing use of the reflector system, or other remedies that limit glare.
    - a. Mirror Reflecting Designed Solar Energy Systems. Mirror reflecting designed solar energy systems are permitted only on properties with ten (10) acres or larger. A conditional use permit is required and more restrictive setback standards may be required upon review of the conditional use permit.
  7. Code Requirements. Electric solar energy system components that are connected to a building electric system must have an Underwriters Laboratory (UL) listing. All solar installations must comply with the Minnesota and National Electric Code. All rooftop or building integrated solar energy systems require a building permit and shall comply with the Minnesota Building Code. Solar thermal hot water systems shall comply with applicable Minnesota State Plumbing Code requirements.
  8. Decommissioning. A decommissioning plan shall be required to ensure that facilities are properly removed after their useful life. Decommissioning of solar panels must occur in the event they are not in use for 12 consecutive months. The plan shall include provisions for removal of all structures and foundations, restoration of soil and vegetation and a plan ensuring financial resources will be available to fully decommission the site. The City may require the posting of a bond, letter of credit or the establishment of an escrow to ensure proper decommissioning.
  9. Easements Allowed. Solar easements may be filed, consistent with Minnesota Stat. Chapter 500 Section 30. Any building owner can purchase an easement across neighboring properties to protect access to sunlight. The easement is purchased or granted by owners of neighboring properties and can apply to buildings, trees, or other structures that would diminish solar access.
  10. Restrictions on Solar Energy Systems Limited. No homeowners' agreement, covenant, common interest community, or other contract between multiple property owners within a subdivision shall forbid installation of solar energy systems or create design standards that effectively preclude solar energy installations.

**SECTION 3. The City Council of the City of Lake Elmo hereby amends Title XV: Land Usage; Chapter 154: Zoning Code; Article II; by adding the following Section 154.915:**

**§ 154.915 SOLAR FARMS**

1. Conditional or Interim Use Permit. A conditional or interim use permit subject to the zoning district in which the proposed solar farm is to be located.
2. Minimum Lot Size, Setbacks, and Screening Requirements. Solar farms are limited to properties at least ten acres in size. Solar farms must maintain a setback of at least 50 feet from adjacent properties and be screened and fenced as determined by the City from adjacent residential properties.
3. Stormwater and NPDES. Solar farms are subject to the City’s and watershed district’s stormwater management and erosion and sediment control provisions and NPDES permit requirements.
4. Foundations. A qualified engineer shall certify that the foundation and design of the solar panels, racking and support is within accepted professional standards, given local soil and climate conditions.

**SECTION 4. The City Council of the City of Lake Elmo hereby amends Title XV: Land Usage; Chapter 154: Zoning Code; Article XI: Rural Districts; Section 154.401: Permitted, Conditional, and Interim Uses to read as follows.**

	RT	A	RR	RS	RE	Standard
<b>Residential Uses</b>						
<b>Household Living</b>						
Single-Family Detached Dwelling	P	P	P	P	P	154.404 (A)
Secondary Dwelling	-	P	-	-	-	154.404 (D)
<b>Services</b>						
Self Service Storage Facility	I <sup>a</sup>	I <sup>a</sup>	-	-	-	154.404 (G)
<b>Recreation</b>						
Outdoor Recreation Facility	-	C	-	-	-	154.306 (C)
Parks and Open Areas	P	P	P	P	P	154.012 (B) (7)
Restricted Recreation	-	C	-	-	-	154.306 (B)
<b>Agricultural and Related Uses</b>						
Agricultural Entertainment Business	I	I	I	-	-	154.914
Agricultural Production	P	P	P	-	-	154.012 (B) (9)
Agricultural Sales Business	I	I	I	-	-	154.913
Agricultural Services	C	C	-	-	-	154.404 (J)
Forestry Operations	-	P	-	-	-	154.012 (B) (9)
Greenhouses, Non Retail	C	C	C	-	-	154.012 (B) (9)
<u>Solar Farm</u>	<u>I</u>	<u>C</u>	<u>C</u>	<u>-</u>	<u>-</u>	<u>154.915</u>
Wayside Stand	P	P	P	-	-	154.012 (B) (9)
<b>Industrial and Extractive Uses</b>						
Motor Freight and Warehousing	I <sup>a</sup>	-	-	-	-	154.404 (G)
<b>Accessory Uses</b>						
Bed and Breakfast	C	C	C	-	-	154.012 (B) (12)
Domestic Pets	P	P	P	P	P	154.012 (B) (12)

	RT	A	RR	RS	RE	Standard
Family Day Care	P	P	P	P	P	154.012 (B) (12)
Home Occupation	P	P	P	P	P	154.012 (B) (12)
Kennel, Private	C	C	C	-	-	154.012 (B) (12)
Solar Equipment <del>energy</del> Systems	P	P	P	P	P	154.310 (C)
Stable, Private	C	C	C	-	-	154.012 (B) (12)
Swimming Pools, Hot Tubs, Etc.	P	P	P	P	P	154.012 (B) (12)
Temporary Sales	P	P	P	P	P	154.012 (B) (12)
Water-Oriented Accessory Structures	P	P	P	P	P	154.800
Other Structures Typically Incidental and Clearly Subordinate to Permitted Uses	P	P	P	P	P	
Commercial Wedding Ceremony Venue	I	I	I			154.310 (D)

Notes to Rural Districts Table 9-2

- a. 1 dwelling unit per 40 acres applies to all non-farm dwellings. In addition to non-farm dwellings (1 per 40 acres), each farm is allowed one farm dwelling per farm.
- b. Nominal 40 acres: a 40-acre parcel not reduced by more than 10% due to road rights-of-way and survey variations.
- c. Nominal 10 acres: a 10-acre parcel not reduced by more than 10% and/or a 10-acre parcel located on a corner or abutting a street on 2 sides not reduced by more than 15% due to road rights-of-way and survey variations.
- d. The minimum lot size for lots served by public sanitary sewer shall be 24,000 square feet per residential unit.
- e. A minimum of 1.25 acres of land above the flood plain or free of any drainage easements is required.
- f. Lots must be configured to contain a circle with a diameter of 250 feet minimum; the ratio of lot length to width shall be a maximum of 3:1 – Flag lots are prohibited.
- g. Corner properties: The side façade of a corner building adjoining a public street shall maintain the front setback of the adjacent property fronting upon the same public street, or the required front yard setback, whichever is less. If no structure exists on the adjacent property, the setback shall be as shown in the table.
- h. Setback standards do not apply to solar farms. 154.915 should be referenced for these specific standards.

**SECTION 5. The City Council of the City of Lake Elmo hereby amends Title XV: Land Usage; Chapter 154: Zoning Code; Section 154.802 by amending the following:**

**§ 154.802 PERMITTED, CONDITIONAL, AND INTERIM USES.**

Table 18-1 lists all permitted, conditional, and interim uses allowed in the Closed Landfill Restricted zoning district. “P” indicates a permitted use, “C” a conditional use, and “I” an interim use. Uses not so indicated shall be considered prohibited. Cross-references listed in the table under “Standards” indicate the location within this Ordinance of specific development standards that apply to the listed use.

	CLR	Standard
Closed Landfill Management	P	154.012 (B) (10)
<u>Solar Farms</u>	<u>C</u>	<u>154.802, 154.803 (A), 154.915</u>

**SECTION 6. The City Council of the City of Lake Elmo hereby amends Title XV: Land Usage; Chapter 154: Zoning Code; Section 154.802 by adding the following:**

**§ 154.803 LOT DIMENSIONS AND BUILDING BULK REQUIREMENTS.**

	CLR
<b>Structure setback requirements (feet)</b>	
Front yard	50
Side yard	50
Rear yard	25

**§ 154.804 SITE DESIGN AND DEVELOPMENT STANDARDS.**

- A. *Solar Farms.* Proposed locations and plans for Solar Farms must be approved by both the City and Minnesota Pollution Control Agency (MPCA). Required buffer width may be waived through conditional use permit approval

**SECTION 6. Effective Date.** This ordinance shall become effective immediately upon adoption and publication in the official newspaper of the City of Lake Elmo.

**SECTION 7. Adoption Date.** This Ordinance 08-198 was adopted on this \_\_\_\_\_ day of \_\_\_\_ 2018 by a vote of \_\_\_ Ayes and \_\_\_ Nays.

**LAKE ELMO CITY COUNCIL**

\_\_\_\_\_  
Mike Pearson, Mayor

ATTEST:

\_\_\_\_\_



Julie Johnson, City Clerk

This Ordinance 08-198 was published on the \_\_\_\_ day of \_\_\_\_\_, 2018.

**CITY OF LAKE ELMO**

**RESOLUTION NO. 2018-010**

**RESOLUTION AUTHORIZING PUBLICATION OF  
ORDINANCE NO. 08-198 BY TITLE AND SUMMARY**

**WHEREAS**, the City Council of the city of Lake Elmo has adopted Ordinance No. 08-198, an ordinance amending the Lake Elmo City Code of Ordinances by adding additional standards for solar energy systems and solar farms; and

**WHEREAS**, the ordinance is lengthy; and

**WHEREAS**, Minnesota Statutes, section 412.191, subd. 4, allows publication by title and summary in the case of lengthy ordinances or those containing charts or maps; and

**WHEREAS**, the City Council believes that the following summary would clearly inform the public of the intent and effect of the ordinance.

**NOW, THEREFORE, BE IT RESOLVED** by the City Council of the City of Lake Elmo, that the City Administrator shall cause the following summary of Ordinance No. 08-198 to be published in the official newspaper in lieu of the entire ordinance:

**Public Notice**

The City Council of the City of Lake Elmo has adopted the following changes to Chapter 154: Zoning Code, of the City Code of the City of Lake Elmo:

- Removed the current definition of Solar Equipment from Accessory Uses Use Types and Classifications; added a new category to Use Types and Classifications entitled Alternative Energy; and added a definition of Solar Energy System and Solar Farm.
- Added standards for solar energy systems including:
  - The requirement for signage requiring information regarding voltage, manufacturer's name, emergency telephone number, and emergency shutdown procedures.

- Accessory setback, height, and lot coverage requirements are subject to those of the zoning district in which the solar energy system is located, with the exception of solar energy systems that are under six square feet in size.
- An interconnection agreement is required if connected to the electric distribution or transmission system through the existing service of the primary use on the site.
- Glare is to be minimized. The ordinance outlines ways in which this can be done.
- Solar energy systems must be applicable code requirements.
- A decommissioning plan is required, and decommissioning shall occur when facilities are not in use for 12 consecutive months.
- Property owners may be granted or buy easements to prevent certain restrictions that would diminish solar access.
- Homeowners' Associations may not place restrictions that would forbid installation of solar energy systems or create design standards that effectively preclude solar energy installations.

**BE IT FURTHER RESOLVED** by the City Council of the City of Lake Elmo that the City Administrator keep a copy of the ordinance at City Hall for public inspection and that a full copy of the ordinance be placed in a public location within the City.

Dated: February 7, 2018.

\_\_\_\_\_  
Mayor Mike Pearson

ATTEST:

\_\_\_\_\_  
Julie Johnson, City Clerk

(SEAL)

The motion for the adoption of the foregoing resolution was duly seconded by member

\_\_\_\_\_ and upon vote being taken thereon, the following voted in favor thereof:

and the following voted against same: \_\_\_\_\_

Whereupon said resolution was declared duly passed and adopted.