# Weber County Zoning Map | *Text Amendment Application*

**Application submittals will be accepted by appointment only. (801) 399-8791. 2380 Washington Blvd. Suite 240, Ogden, UT 84401**

| Date Submitted: **29 November 2018** | *Received By (Office Use)* | *Added to Map (Office Use)* |
|---|---|---|

## Property Owner Contact Information | (TEXT AMENDMENT TO A-3 ZONE – *Not parcel specific*)

| Name of Property Owner(s) | | Mailing Address of Property Owner(s) |
|---|---|---|
| **N/A** | | |
| Phone | Fax | |
| Email Address | | Preferred Method of Correspondence ☐ Email ☐ Fax ☒ Mail |

## Authorized Representative Contact Information | APPLICANT

| Name of Person Authorized to Represent Request \| Project | | Mailing Address of Authorized Person |
|---|---|---|
| Douglas Larsen \| Mathew Niesen (Strata Solar) | | Strata Solar Development LLC. |
| Phone | Fax | 285 South 400 East \| Suite 216 |
| 801.726.9048 \| 435.260.0366 | | Moab, Utah 84532 |
| Email Address | | Preferred Method of Correspondence |
| Welev8@gmail.com \| mniesen@gmail.com | | ☒ Email ☐ Fax ☐ Mail |

## Property Information

| Project Name | Current Zoning | Proposed Zoning |
|---|---|---|
| West Weber Solar Farm Text Amendment | A-3 | A-3: Text amendment to allow solar farms. |

| Approximate Address | Land Serial Number(s) |
|---|---|
| **N/A** | **N/A** |

| Total Acreage | Current Use | Proposed Use |
|---|---|---|
| 100 Acres – Recommended Minimum | Agricultural | Solar Farms |

## Project Narrative

**Describing the project vision | Text Amendment**

The current A-3 Zone in western Weber County does not allow for the development of commercial solar farms. Accordingly, we are requesting a Text Amendment to the Weber County Code of Ordinances, Land Use Code: Title 104-Chapter 8-Agricultural Zone A-3 Section 104-8-5 Conditional Uses to include (add) the following:

(35) Utility Scale Commercial Solar Farms.

Utility Scale Commercial Solar Farms for the purpose of this title shall mean: A system of solar photovoltaic panels that generate electrical energy to be sold to a utility, or a private end-user. The system size shall have a minimum peak output of ten mega-watts and the solar farm development shall have a minimum contiguous acreage not less than 100 acres.

Solar farm systems are typically comprised of solar photovoltaic panels (modules) set in an array mounted to the ground on steel or aluminum frames, substations, inverters, monitoring systems and security fencing. Lower voltage clean energy generated from the solar farm system is converted to high voltage energy and will then typically interconnect with a regional power grid (electricity distribution network) via existing or new transmission lines. As well, solar farms may also incorporate storage systems to capture surplus energy.

**Project Narrative (continued...)**

**How is the change (text amendment) in compliance with the General Plan?**

Solar farm projects align well with certain components of the West Central Weber County Vision Statement:

*Values and protects its rural character, lifestyle, and atmosphere*: Development of solar farms protect large tracts of open acreage from other forms of development such as: residential, commercial, mixed use or industrial with very little impact on environmental and community assets. Once installed (planted) solar farms will not create increased traffic, utilize culinary or secondary water, create sewer waste and do not create any measurable demand on, or need for public safety services. Solar farms across the country exist harmoniously with their rural neighbors. In addition, at the end of a solar farm projects useful life, the ground at a subject site will be returned to the conditions that existed prior to development of the solar farm – open space, often farm ground.

*Manages growth to strike a balance between preservation and development*: Solar farms can be considered almost a perfect balance between preservation and development as they perpetuate both perspectives. Solar farms inhibit typical growth within a subject site for 25 to 35 years while at the same time allowing and supporting a development project that increases the tax base substantially with minimal use and impact on public services. Furthermore, allowing development of solar farms fosters the concept of enabling property rights opportunities that can provide a feasible pathway to sustaining open-space within communities.

*Maintains a community that is safe from environmental hazard and criminal activity*: Solar farms are a renewable energy producer. The system will generate "clean" electric power with very limited, if any impact on the surrounding and regional environment.

**Why should the present zoning be changed to allow this proposal? (Why should the A-3 zone be amended to include this type of use?)**

The development of solar farms protects the integrity of open-space and will inhibit residential sub-division sprawl that is likely to occur over time in Western Weber County on large open areas of vacant land where solar farms may be developed.

The harvesting of energy from the sun via ground mounted infrastructure is by all means a process very similar to other harvesting agricultural activity wherein the land is dedicated to the development of a crop. Such crops are dependent on the sun, in addition to water and often other nutrients as well as maintenance and care of the crops – crops are then harvested with the purpose of providing some form of value.

Accordingly, the solar panel and related infrastructure can be thought of as the crop, dependent *only* on the sun and maintenance of the components – ultimately producing a product, clean (renewable) energy that provides sustainable monetary and environmental value.

In conjunction with, this request falls under the Conditional Use provisions of the Weber County Code of Ordinances wherein "the intent of providing conditional use regulations is to provide allowance for additional uses in each zone and give the land use authority flexibility in applying reasonable conditions to effectively manage unique characteristics or detrimental effects of those uses, on a case-by-case basis"

Therefore, solar farm developments should anticipate incorporating cost effective measures (conditions) within the design and development of the project in a manner that best supports and maintains the priorities of the General Plan and of great importance, the desire of the community to maintain "...a sense of quiet, country living".

**Project Narrative (continued...)**

**How is the change in the public interest?**

Together with fundamentally preserving open-space in rural western Weber County, the development of commercial solar farms will have very minimal impact on public services and infrastructure. The table below represents the impact and public costs associated with a residential development consisting of 124 single family dwellings. (124 represents the quantity of homes needed at the current average assessed value in order to generate an amount of property tax revenue to public entities equal to that of a solar farm development at a significantly depreciated value of $19M).

| Public Service \| Public Asset | Public Cost\|Impact Est. of 124 Residential Dwellings | Impact\|Use of Public Services & Assets from Solar Farm |
|---|---|---|
| **Education** (Weber School District) | | None |
| Average Cost Per Student | $ 6,500 | |
| Average Estimated Number of K-12 Students Per Household | 1.50 | |
| ***Yearly Cost to District from Residential Development*** | ***$ 1,213,840*** | |
| | | |
| **Water** (Utah Department of Natural Resources Data) | | Relatively minimal use during construction only. |
| Average Household Size | 3.00 | |
| Average Gallons Per Person Per Day | 256 | |
| Average Yearly Household Water Use | 280,320 | |
| ***Yearly Water Use (gallons) from Residential Development*** | ***34,898,826*** | |
| | | |
| **Sewer** (Central Weber Sewer Data) | | Relatively minimal use during construction only. |
| Average Gallons Per Household Per Day | 450 | |
| Average Gallons Per Household Per Year | 164,250 | |
| ***Yearly Sewer Use (gallons) from Residential Development*** | ***20,448,531*** | |
| | | |
| **Public Safety** (Weber County Sheriff Data) | | Minimal to None |
| Total Subdivision Population Estimate | 373 | |
| **Local Cost Basis:** | | |
| Unincorporated Weber County Cost per Resident - Public Safety | $ 78.00 | |
| ***Anticipated cost associated with residential development*** | ***$ 29,094*** | |
| **National Cost Basis:** | | |
| One officer per 1,000K people (373/100) | 0.37 | |
| ***Resource cost based on National Est. of $125k per officer.*** | ***$ 46,625*** | |
| | | |
| **Traffic Generation** (2012 Utah Travel Study) | | Construction traffic: 6 to 8 months. Post construction estimate @ 50 (+/-) trips annually |
| Estimated number of vehicles per household | 2 | |
| Estimated number of vehicles in subdivision | 248 | |
| Wasatch Front daily trip rates by households with 2 vehicles | 13 | |
| ***Estimated number of daily trips generated from subdivision*** | ***3,214*** | |
| ***Estimated number of weekday trips*** | ***16,070*** | |
| ***Estimated number of annual trips generated on weekdays*** | ***835,661*** | |

**Project Narrative (continued...)**

**How does this proposal promote the health, safety and welfare of the inhabitants of Weber County?**

According to the U.S. Department of Energy's National Renewable Energy Lab – While the impacts of a solar farm on neighboring property values have not been studied in-depth, numerous studies have found the impact of wind energy generation on neighboring property values to be negligible. As solar farms do not have the same impacts as wind farms (i.e., PV facilities do not cast a shadow on neighboring properties, cause light flicker, or have the same visual impact as wind farms), *the impacts on property values caused by solar farms are anticipated to be very minimal.*

Additionally, photovoltaic (PV) solar panels are coated with non-reflective materials designed to maximize light absorption and, as a result, minimize glare. According to a 2014 study, solar panels produce less glare and reflection than standard window glass. Regarding noise, a study conducted by Tech Environmental, Inc., for the Massachusetts Clean Energy Center, that investigated two utility-scale solar projects concludes: any sound from the PV array and equipment was inaudible at set back distances of 50 to 150 feet from the (project) boundary. In fact, solar is a quiet and, typically, visually appealing neighbor that can *block the path of undesirable development for decades to come.* The same study also concludes that the electrical and magnetic fields generated by solar panels and their inverters are lower than background electrical and magnetic fields created by other devices that surround our daily lives, such as computers and cell phones, and emit fields that are several hundred times less than recommended exposure limits.

Photovoltaic solar farms produce no air emissions, do not release toxic materials, and emit no radiation. Photovoltaic technology does not produce excessive heat. In fact, solar farms are frequently home to nesting birds, and with the right plant and grass mix, can attract bees, butterflies and other species.

Compared with reserves of fossil fuel, which are essentially finite, solar energy productions is a renewable resource of almost unlimited capacity and scale. As the International Energy Agency noted in a 2011 report, "Solar energy is the largest energy resource on Earth -- and is inexhaustible." The amount of solar energy received by Earth in a year exceeds the energy that has been developed from oil, natural gas, coal, and nuclear sources in the history of humankind. The amount received by the planet in an hour is greater than the earths entire yearly energy consumption. Additionally, the volatile price fluctuations typical of fossil fuels -- stemming from political tension, strife and other regional factors -- solar offers the potential for more stable energy costs, which benefits consumers as well as utilities.

From an economic development perspective, renewable energy is quickly becoming a requirement for corporate expansion and relocation decisions, particularly by tech and new generation business. Since 2010, renewable energy power purchase agreements generated over 18,000 mega-watts of clean power from wind and solar operations – tech companies alone have purchased 47% of the 18,000mw's with government and universities in second place at only 13%. Beyond environmental and sustainability objectives, the long-term fixed utility rate from renewables feeds the health of a positive bottom-line. Communities supportive of renewables will have increased opportunities for tactical commercial growth that takes place in the urban centers while inhibiting such in the rural environments where the renewable systems may be located.

Finally, solar farm systems generate significant increases in local property tax revenue to fund public service entities: The County, Weber School District, Park Districts and other special service property taxing districts within western Weber County with little to no demand on assets and services of such entities.

Source(s):
Strata Solar at https://www.stratasolar.com/g
Bloomberg Opinion, Tech Investments are Powering Up Clean Energy at https://www.bloomberg.com/opinion/articles/2018-09-29/tech-companies-are-big-spenders-on-renewable-energy
National Renewable Energy Laboratory, TOP FIVE LARGE-SCALE SOLAR MYTHS (Feb. 3, 2016), at https://www.nrel.gov/technical-assistance/blog/posts/top-five-large-scale-solar-myths.html.
Tech Environmental, Inc., STUDY OF ACOUSTIC AND EMF LEVELS FROM SOLAR PHOTOVOLTAIC PROJECTS (Dec. 2012), at http://files.masscec.com/research/StudyAcousticEMFLevelsSolarPhotovoltaicProjects.pdf
Sciencing, Positive Effects of Solar Energy (April 2017), at https://sciencing.com/positive-effects-solar-energy-6192992.html

**Authorized Representative(s):**

11.29.2018

Douglas S. Larsen

L E V8 Consulting (dba of Apple Eye LC) on behalf of Strata Solar Development LLC

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State of Utah

Weber County

This instrument was acknowledged before me on:

Date: Nov 29th 2018 By: Douglas Larsen

BECKIE L. READ
NOTARY PUBLIC • STATE of UTAH
COMMISSION NO. 694116
COMM. EXP. 04-23-2021

Beckie L Read

Notary Signature

**Weber County Corporation**
Weber County
2380 Washington Blvd
Ogden UT 84401

| Customer Receipt | |
|---|---|
| Receipt Number | 93895 |

**Receipt Date**
11/29/18

Received From:
Doug Larsen

Time: 14:28
Clerk: amorby

| Description | Comment | Amount |
|---|---|---|
| ZONING FEES | Zoning Amendment | $1,052.00 |

| Payment Type | Quantity | Ref | Amount |
|---|---|---|---|
| CREDIT CARD | | 138016 | |

| | |
|---|---|
| **AMT TENDERED:** | $1,052.00 |
| **AMT APPLIED:** | $1,052.00 |
| **CHANGE:** | $0.00 |