



## STAFF REPORT

### MEETING

DATE: January 22, 2018

TO: Planning Commission

FROM: Robert Brown, Community Development Director

SUBJECT: **Input on Potential Municipal Code Amendments Implementing Programs in General Plan 2035 relating to: Solar Energy Facilities, Dark Sky Lighting, Parking Lot Landscaping, Beekeeping and Urban Agriculture**

922 Machin Avenue  
Novato, CA 94945  
(415) 899-8900  
FAX (415) 899-8213  
[www.novato.org](http://www.novato.org)

---

### **REQUESTED ACTION**

Provide direction to the City Council regarding the drafting of ordinances amending the Municipal Code to regulate:

1. Solar energy facilities (appropriate zoning districts, development regulations, definitions and review processes),
2. Lighting for new and/or existing development to reduce nighttime light pollution,
3. Parking lot landscape requirements for new or renovated facilities,
4. Beekeeping on residential or non-residential properties, and
5. Urban agriculture.

### **SUMMARY**

Prior to preparing draft ordinances implementing certain programs contained in the draft General Plan 2035, staff would appreciate input from the Design Review Commission, Planning Commission and City Council. Staff intends to bring these implementing ordinances for approval with the new General Plan in mid-2018 and to evaluate these draft ordinances in the environmental impact report (EIR) prepared for the General Plan. As such, the Commission recommendations and Council direction are preliminary, and will be reconsidered at the time of adoption of the ordinances and certification of the General Plan EIR.

### **BACKGROUND AND ANALYSIS**

Each of the five topic areas for potential ordinances are addressed separately in attachments to this staff report, and provide possible objectives and regulatory options and a summary of regulations in other communities.

#### **Solar Facilities Ordinance**

Currently the City's Zoning Code allows Public Utility Facilities as a conditional use in residential, commercial, industrial and office districts, but these uses are not addressed or

allowed in the Mixed Use, Community Facilities, Parkland, Agriculture, Open Space and Conservation districts. Public Utility Facilities are defined as including electrical, gas or wastewater transmission, distribution or treatment facilities, including corporation yards, but do not include renewable energy generation facilities, such as solar and wind.

Government Code Section 65850.5 states the intent of the State Legislature that local governments “not adopt ordinances that create unreasonable barriers to the installation of solar energy systems, including design review for aesthetic purposes, and not unreasonably restrict the ability of homeowners and agricultural and business concerns to install solar energy systems.” Cities must administratively approve applications for small residential rooftop solar energy systems. The City Council adopted Section 4-18 of the Municipal Code in 2015 in response to this state law.

If the City is to achieve its Council-adopted goal of 100% renewable energy use by 2050, on-site, distributed generation of renewable energy will need to be a major part of the solution. To facilitate installation of both rooftop and ground-mounted solar facilities, including facilities intended to generate excess power to the grid, the City will need regulations that do not impose excessive regulation and include objective standards to address potential impacts.

Environmental Legacy Program 26a of the Draft General Plan calls for preparation of zoning regulations for siting and design of large-scale solar energy facilities, and Climate Change Action Plan Reduction Measure 8 calls for facilitating distributed renewable energy production through permit streamlining and amendments to City ordinances.

Most adopted solar ordinances that regulate larger solar installations (e.g., 1+ MW) are county ordinances or model ordinances for counties, so may be geared towards larger facilities than would be acceptable in a more suburban setting. A summary of regulatory options and of applicable ordinances from other jurisdictions are contained in Attachment 1. To help focus discussion, staff has prepared a preliminary set of conceptual regulations in Attachment 1c.

Planning Commission feedback on the following questions would be helpful in framing an ordinance:

- Should roof-mounted solar be allowed by right in all zoning districts (already the case for single-family homes and condos), with some limit on mounted height above the roof surface and height limit?
- Should solar carports be allowed in all zoning districts, subject to some level of design review (for the carport structure, not the solar panels, since aesthetic review of the solar panels is preempted), and with height and setback requirements?
- What zoning districts are suitable for smaller-scale ground-mounted facilities (sufficient for on-site electrical demand) as an ancillary utility facility to a principal use, subject to a maximum size, height and setback regulations?
- What zoning districts are suitable for larger-scale ground-mounted facilities intended for off-site generation, or where a ground-mounted facility is the primary use of the site?

Should such facilities be allowed in Open Space districts, subject to a discretionary Use Permit?

- There are a large number of possible performance standards which could be adopted as objective standards (e.g., facilities that don't meet a performance standard would be subjected to a higher level of review and discretion), several of which are listed in Attachment 1.

## **Dark Sky Lighting Ordinance**

Currently the City regulates lighting through electrical building codes and in a limited way through design review of new buildings, parking lots and signs. As a result of excessive use and poor design of night lighting, the nighttime sky in urbanized areas is polluted with “skyglow” due to light directed or reflected into the sky, limiting the visibility of stars and disrupting the environment for nocturnal animals.

Community Character Program 12b of the Draft General Plan calls for creating “standards for exterior lighting in design guidelines that support Dark Sky principles, addressing issues such as security, appearance, intensity and light spillage.”

There are very few examples of ordinances based on the model regulations recommended by the International Dark Sky Association in suburban communities in the midst of larger metropolitan areas. Most examples come from rural areas or small cities surrounded by rural land use. A summary of regulatory options and of applicable ordinances from other jurisdictions are contained in Attachment 2. The model ordinance from the International Dark Sky Association includes restrictions on the lighting levels (lumens) for fixtures based on lighting zones and land use types and also calls for a lighting curfew which requires properties turn off all non-security lighting between 10pm and 6am, including illuminated signs, parking lot lighting and lighting not required for building entry points.

Planning Commission feedback on the following questions would be helpful in framing an ordinance:

- A principal policy question is whether we desire to eliminate additional light pollution from new development or wish to reduce nighttime lighting by regulating existing development when light fixtures are replaced or through operational requirements such as a nighttime curfew on non-security commercial lighting (e.g., signs, parking lot lighting, and decorative lighting).
- The level of regulation is an important issue. The following are some options:
  - a. Some jurisdictions, such as Marin County and Corte Madera, simply require that light fixtures in new development be Dark Sky certified (meaning that they only direct light downwards and sideways, not upwards). These fixtures are commonly available and there is no price difference.
  - b. Some jurisdictions have qualitative lighting criteria/guidelines that are applied through design review applications, such as requiring shielded fixtures that do not spill light onto adjacent properties and have light sources that cannot be seen directly.

- c. Alternatively, all new development going through design review could be required to submit detailed lighting plans for review, or requirements could be placed on all new/replacement lighting fixtures through the building permit process. Both of these options would increase the level of staff review and the level of plan submittals from applicants.
  - d. Another option is to impose a lighting curfew requiring that non-security lighting be turned off at a specified time (such as illuminated signs, parking lot lighting, decorative building or landscape lighting) for non-residential properties or residential properties as well. This option would significantly increase code enforcement responsibilities.
- Restrictions could be placed on the design or height of light fixtures or the level of site illumination by use type (e.g., street lights, parking lot lighting, car dealerships, gas stations, etc.). Again, this requires additional staff review either at the design review or building permit stage.

### **Parking Lot Landscape Ordinance**

Currently the City regulates parking lot landscaping for new development through the design review process and has detailed standards in Section 19.30.070H of the Zoning Code. However, many parking lot interior trees do not thrive and reach their full size potential due to inappropriate species selection, inadequate soil volume and preparation and parking lot soil compaction. This affects the aesthetics of parking lots, provides limited shade for cars and increases pavement heat gain.

Community Character Program 17a of the Draft General Plan calls for “updating parking lot landscape standards to encourage tree growth and shading.”

Current zoning regulations for parking lot landscaping are generally very good and require a substantial amount of perimeter and interior landscaping, including a high proportion of trees (1 tree/3 parking spaces, min. 1 tree every 20’ of perimeter landscape). When these regulations were adopted in 2001, the Novato Tree Advisory Committee had recommended adopting a shade standard requiring tree planting sufficient to achieve 50% shade coverage within 15 years of installation. Such a future projection of tree size and growth in parking lots is very speculative as a zoning standard and requires a higher level of plan submittal and plan review, and staff instead recommended a numeric standard of 1 tree planted for each 3 parking spaces, which is a high ratio compared to most other jurisdictions. The challenge in achieving larger tree cover is therefore more related to species selection and soil volume/preparation.

Section 19.30.070.H.b requires that tree species in parking lots be selected from a list maintained by the Community Development Department. No such list exists.

Tree growth is largely related to the volume of soil available for water percolation and surface aeration, and the texture/structure of the soil. Trees do not thrive in soils with inadequate drainage due to high clay content or soil compaction. Parking lots are generally compacted to at least 90-95%, which is not suitable for root growth. Generally, compaction of no more than 75% is recommended for landscape areas. In terms of soil volume, a moderate-sized tree (a mature canopy radius of 20-25 feet) benefits from soil volume of about 500 cubic feet (an area 3’ deep

by 6' wide and 28' long – essentially a landscape finger that is a bit longer than a parking space and 6' wide). Very large shade trees (mature canopy radius of 30+ feet) desire soil volume of about 1,000 cubic feet (an area 3' deep by 10 feet wide and 34 feet long – typically only achievable in wider perimeter landscape strips). Current regulations require tree wells of at least 4'x4' for tree planting, which equates to only 48 cubic feet of soil volume at 3' deep.

To significantly improve opportunities for larger shade trees in parking lots, three regulatory changes would be ideal:

1. Adopt an administrative list of recommended parking lot trees with moderate to large canopies (at least 20+ foot radius at maturity) and require that applicants provide justification to use alternative species, including information about local growth habits and width at maturity,
2. Increase the minimum size of tree planting wells in the interior of parking lots from a minimum of 4' x 4' to 6' x 6', and
3. Require that the project landscape architect prepare soil amendment specifications based on soils testing and prepare soil preparation specifications per International Society of Arboriculture standards (including a limit on soil compaction), that the landscape architect be present on-site during landscape installation to assure proper soil preparation, and that the landscape architect submit a written certification that the landscape was properly installed. Consideration could also be given to requiring submittal of proof of a 1-year maintenance contract for larger parking lots.

It should be noted that increasing the size of tree wells will decrease the number of parking spaces that can be achieved, thereby increasing costs or limiting the building square footage or unit count. If applied to renovated parking lots, fewer spaces would result, which would not be permissible unless a zoning waiver was also adopted to allow reduction in the number of spaces to improve aesthetics, etc. The larger tree well size could only be applied to new parking lots. To reduce the level of impacts on smaller projects or areas such as the downtown where parking opportunities are limited, an ordinance could establish a minimum size of parking lot or exempt an area like the downtown that would be subject to the larger tree well requirements.

A summary of regulatory options is provided in Attachment 3.

Planning Commission feedback on the following questions would be helpful in framing an ordinance:

- Should interior tree wells be larger than current requirement (4'x4') to increase soil volume? Is a 6'x6' min. size reasonable/achievable? Should renovated parking lots be excluded from this change so as not to lose parking spaces? Should specific areas, such as downtown parking lots, be exempted?
- Should a list of suitable larger-canopy parking lot trees be adopted by the Community Development Director?
- Can solar carports be an acceptable alternative to interior parking lot trees to achieve desired shading?

- Should requirements be added for better soil preparation, including certification by the project landscape architect that specifications have been followed at installation?

### **Beekeeping Ordinance**

Beekeeping is currently not an allowed use in the City of Novato. Many cities, including suburban locations (including all of Los Angeles), have recently approved ordinances allowing beekeeping in residential districts, with some requirements for location and operation.

Living Well Program 10f of the Draft General Plan calls for amending the Zoning Code to provide allowances for residential and commercial beekeeping.

Several suburban cities have modified regulations to allow backyard beekeeping in residential areas over the past several years, including San Rafael, Corte Madera, Petaluma, Sonoma, Napa, Pleasanton, Los Angeles, Santa Monica, Fremont and Fairfield. These ordinances generally make beekeeping an allowed use, or one subject to a Zoning Administrator Use Permit (\$2,600 deposit for application). Some ordinances simply make beekeeping an allowed use by right, with no standards. Most ordinances include standards for maximum number of hives by site area, setbacks from property lines, physical barriers (fences/hedges) between hive entrances and property lines, hive maintenance and requirement for an on-site water source. Some jurisdictions preclude hives within a specified distance from schools, day care centers and parks, or from residents within a specified distance (e.g., 200 feet) that can demonstrate they are allergic to bee stings.

A summary of regulatory options and of applicable ordinances from other jurisdictions are contained in Attachment 4.

Planning Commission feedback on the following questions would be helpful in framing an ordinance:

- Should beekeeping be allowed in all zoning districts, or just in districts such as single-family, low density rural residential, agriculture, open space and/or community facilities?
- Should beekeeping be an allowed use by right, or should there be some standards imposed (limits on # of hives, setbacks, etc.)?
- Should there be a prohibition on hives in proximity to residents who have a demonstrated allergy to bee stings? If so, a discretionary permit with public noticing will likely be required, with the associated application fees.

### **Urban Agriculture Ordinance**

Novato's Zoning Code has fairly permissive regulations allowing for local agriculture. Crop production is a permitted use in the Agriculture, Open Space, Conservation and Rural Residential districts, and with a Use Permit in Very Low Density and Low Density (single family) districts. "Crop Production" is defined as: "Commercial agricultural field and orchard uses including production of: field crops, flowers and seeds, fruits, grains, melons, ornamental crops, tree nuts, trees and sod, and vegetables. Also includes associated crop preparation services and harvesting activities, such as mechanical soil preparation, irrigation system

construction, spraying, crop processing and retail sales in the field, including sales sheds.”

Farm produce stands are allowed with a Use Permit in the Agriculture District only (the only Ag-zoned parcels in Novato are the Pacheco Winery and the Lieb Property on Hill Road).

Community gardens are allowed in the Agriculture, Open Space, Conservation, Community Facility, Parkland, Mixed Use and Rural Residential districts, and with a Use Permit in the Very Low Density and Low Density (single family) Residential districts, but not in multi-family and commercial districts.

Living Well Program 10b of the Draft General Plan calls for amending the Zoning Code to streamline the process to create new community gardens.

The Marin Food Policy Council has called on Marin cities to streamline zoning regulations to encourage community gardens and to allow small commercial gardens in many zoning districts, including single-family districts.

A number of jurisdictions have adopted urban agriculture ordinances, most of which allow community gardens in all zoning districts by right, up to a defined size (such as 1 acre), above which a Use Permit would be required. Some ordinances prohibit any on-site produce sales, while others allow small, temporary stands (which must be removed after use) with limited hours and days per week. Some ordinances include performance standards for community gardens, such as having an operating plan addressing hours of operation, parking, site security, waste collection, chemical use, maintenance and dispute resolution, requiring storage of materials and tools out of view, requiring soil testing, etc. It should be noted that the only way to effectively verify that an operating plan has been prepared and is appropriate is through some form of review, at least a Zoning Clearance which is a ministerial staff action verifying compliance with objective standards. Such an action does not allow for denial based on neighborhood sentiment.

Most of these ordinances also include provisions for use of large vacant or underutilized parcels, including those in single-family districts, for commercial crop production (including vineyards) for sale or donation to local restaurants, stores or non-profits. These operations are differentiated from crop production typically allowed in agriculture districts by limited size and not allowing use of mechanical equipment. They are typically allowed in most zoning districts with approval of a Use Permit, which can set operational conditions.

A summary of regulatory options and of applicable ordinances from other jurisdictions are contained in Attachment 5.

Planning Commission feedback on the following questions would be helpful in framing an ordinance:

- Should community gardens be allowed in all zoning districts, including multi-family, commercial and industrial districts?
- Should a Use Permit or Zoning Clearance (a ministerial permit based on compliance with identified physical and operational standards) be required for a community garden in single-family, multi-family or commercial/industrial districts?

- Should the City consider making changes to its Crop Production regulations, which currently allow a broad range of agricultural uses, including use of mechanical equipment, in agricultural and open space districts, and with a Use Permit in single-family residential districts as either a principal use of a property or as an ancillary use. An alternative might be a new “market garden” use classification (a relatively small, commercial garden subject to standards) that could be considered as a permitted use in some or all zoning districts to eliminate costs of a discretionary Use Permit process.
- Should limited on-site produce sales be allowed in community gardens?

## **ENVIRONMENTAL ASSESSMENT**

CEQA analysis will be performed on the draft ordinances as part of the General Plan EIR prior to formal adoption of the new General Plan and implementing ordinances.

## **PUBLIC OUTREACH**

The draft ordinance concepts have been shared with the Marin Conservation League, Sustainable Novato, the Marin Food Council, Marin Clean Energy, a local solar installation firm (SolarCraft), and both the Marin and Sonoma Beekeeping Associations. Input from these organizations have been incorporated into the draft proposals.

## **ALTERNATIVES**

1. Provide feedback to staff regarding other options for each ordinance; or
2. Request that staff provide additional analysis and recommendations.

## **ATTACHMENTS**

- 1a. Solar Energy Facilities Ordinance Options
- 1b. Summary of Solar Energy Facilities Ordinances
- 1c. Proposed Solar Energy Facility Regulations
2. Dark Sky Lighting Ordinance Options and Summary of Sample Ordinances
3. Parking Lot Landscape Ordinance Options
4. Beekeeping Ordinance Options and Summary of Sample Ordinances
5. Urban Agriculture Ordinance Options and Summary of Sample Ordinances



## SOLAR ENERGY FACILITY ORDINANCE OPTIONS

### The Issue:

The City's zoning regulations currently do not include references to or allowances for solar energy facilities, either those which provide power for on-site users or those which generate surplus power for sale to the electrical grid. Solar energy facilities (typically photovoltaic panels) can be roof-mounted or ground-mounted (including solar carports) installations. State law requires cities to approve small residential solar facilities ministerially, subject to defined standards, and require fast-tracked building permitting.

If the City is to achieve the City Council's adopted goal of 100% renewable energy by 2050, local generation of renewable power will have to be a major component of this strategy. Zoning regulations should be adopted to provide clear guidance to solar developers and property owners.

### General Plan Program:

Environmental Legacy Program 26a: Zoning for Solar Facilities. Consider preparation of zoning regulations for siting and design of large-scale solar energy facilities.

### Climate Change Action Plan:

Reduction Measure 8: Community Renewable Energy Facilitation. Identify and remove barriers to small-scale, distributed renewable energy production within the community. This can be accomplished through: 1) adoption of *incentives, such as permit streamlining* and fee waivers, as feasible; 2) *amendments to development codes, design guidelines, and zoning ordinances, as necessary*; 3) *installation of solar panels on carports and other parking areas on municipal facilities, commercial projects, and new large-scale residential developments*, and; 4) implementation of Property Assessed Clean Energy (PACE) financing programs for residential and commercial. (emphasis added)

### Objectives:

- Adopt regulations to address various sizes of solar energy facilities to:
  - Reduce reliance on fossil fuels for energy needs
  - Reduce generation of greenhouse gases
  - Support green job production

### Options:

#### Regulatory:

- Ordinance, or
- Design Guidelines (non-mandatory)

#### Definition of Project Size:

- Small Facility:

- On-site use of generated power (roof-mounted or ground-mounted);
- Secondary use of property (not primary use);
- Size limit: maximum surface area of panels or by kW generation
- Medium Facility:
  - On or off-site use of generated power (roof-mounted or ground-mounted);
  - Secondary use of property (not primary use);
  - Size limit: maximum surface area of panels or by kW generation
- Large Facility:
  - Off-site use of generated power (typically ground-mounted)
  - Primary use of property
  - Size limit: maximum surface area of panels or by kW generation

Allowable Zoning Districts:

- Small: typically all zoning districts
- Medium: typically all districts (including ag, open space, conservation, community facility), but possibly not in single family (except rural residential), multi-family or neighborhood commercial
- Large: typically not residential, commercial, office or mixed use districts

Approval Process:

- Small: typically exempt (Use Permit if Building Official finds adverse impact on public health and safety for small residential systems – Muni Code 4-18)
- Medium: Zoning Clearance (ministerial review per objective standards) or Use Permit for ground-mounted (either Zoning Administrator or Planning Commission)
- Large: Use Permit (Planning Commission)

Setbacks (ground-mounted):

- Small: same setbacks as accessory structures (structures 8' or less in height can be 3' from side or rear lot line; structures over 8' must meet setbacks for primary buildings)
- Medium: same setbacks as primary buildings
- Large: same setbacks as primary buildings, minimum setback from public roadway

Height:

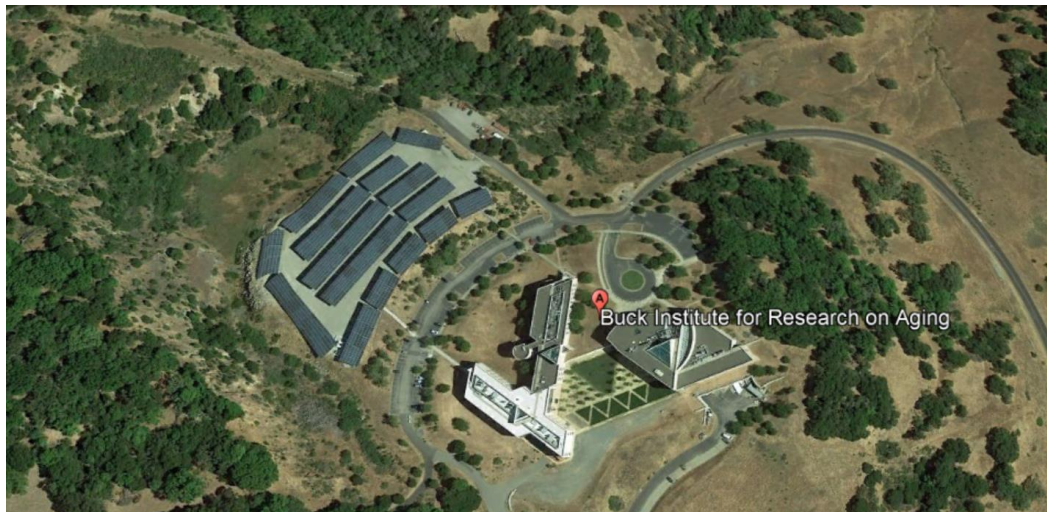
- Small, Medium and Large: Roof-mounted: typically 2' above roof surface; Ground-mounted: 12' for residential (same as currently for accessory structures) and 15' for non-residential districts

Other Regulatory Considerations/Performance Standards:

- Glare
- Screening (ground-mounted)

- Scenic resources (ground-mounted)
- Biotic resources (ground-mounted)
- Cultural resources (ground-mounted)
- Grading (ground-mounted)
- Fire protection
- Air safety
- Lighting (ground-mounted)
- Signage (ground-mounted)
- Security (ground-mounted)
- Undergrounding electrical service lines (ground-mounted)
- Decommissioning (ground-mounted)

**3-acre Buck Institute solar facility**



**5-acre Cooley Quarry solar facility**



## Summary of Solar Energy Facility Zoning Ordinances

|                                  | Yolo County  | Sonoma County  | Irvine  | Mass. DER*                                      | CCPDA*  |
|----------------------------------|--|--|---|---|---|
| <b>Project size definition:</b>  |  |  |   |   |   |
| Small                            | On site use, max. 2.5 acres of land area   | Exempt: Max. 125% of on-site demand; parking lot shade structures                  | Residential: ground and roof-mounted systems<br>Commercial & industrial: covered parking and roof-mounted systems | 1,750 sf of surface area or less (~10 kW)       | A. Tier 1: On structures or ground-mounted up to ½ acre, or<br>B. Tier 2: On-site use, ground-mounted   |
| Medium                           | On and off site use, 2.5 to 30 acres of land area  | Minor Commercial Facility: On and off site use, incidental to a primary use        | n/a   | 1,750 to 40,000 sf of surface area (~10-250 kW) | On and off site use, secondary use of property  |
| Large                            | Utility-scale, 30 to 120 acres of land   | Commercial Facility: Primary use of land   | n/a   | 40,000+ sf of surface area (250+ kW)            | Primary use of land   |
| <b>Zoning Districts Allowed:</b> |  |  |   |   |   |
| Small                            | Ag, all residential, commercial, office industrial, mixed use, public and open space districts | All districts  | Presumably all residential, commercial, office, industrial, institutional, and mixed use districts                | All districts                                   | A. All districts – permitted use<br>B. All districts, except multi-family residential and except neighborhood commercial for facilities larger than 5 acres |
| Medium                           | Ag, all commercial, industrial, public and open space districts                                | Ag., open space, rural residential, all commercial & industrial, public facilities | n/a   | All districts                                   | All districts except multi-family residential and neighborhood commercial. Facilities larger than 7 acres not allowed in rural residential.                 |
| Large                            | Ag., public, open space and industrial districts   | Ag., open space, general commercial, industrial, public facilities                 | n/a   | Not in single-family residential                | Not allowed in industrial, office, neighborhood commercial or residential   |
| <b>Approval Process:</b>         |  |  |   |   |   |
| Small                            | Zoning Clearance; Use Permit if C.B.O. finds   | None - exempt  | None - ministerial  | None - ministerial                              | A. Permitted use<br>B. Admin. Permit (ministerial review)   |

## Summary of Solar Energy Facility Zoning Ordinances

|                      | Yolo County  | Sonoma County   | Irvine  | Mass. DER*  | CCPDA*  |
|----------------------|--|---|---|---|---|
|                      | adverse impact on public health and safety   |   |   |   |   |
| Medium               | Site Plan Review (ministerial), no public hearing; Z.A. may issue Minor Use Permit to modify standards     | Use Permit (PC hearing), except Zoning Permit (ministerial) for most commercial or industrial sites | n/a   | Ground-mounted: Site Plan Review in residential districts   | Depends on facility size. Up to 7 acres Admin. Permit except ZA Use Permit in residential districts, larger facilities by ZA or PC Use Permit |
| Large                | Major Use Permit – Planning Commission then BOS  | Use Permit (PC hearing)   | n/a   | Ground-mounted: Use Permit in Rural Residential, Site Plan Review in other districts (not allowed in single-family) | Depends on facility size and district. Some Admin. Permits, Some ZA or PC Use Permits   |
| <b>Setbacks:</b>     |  |   |   |   |   |
| Small                | Pole-mounted: 5' rear setback in residential districts   | Setbacks for applicable district  | Setbacks for applicable district;<br>Solar carports can encroach into landscape setback max. 3 feet |   | Per zoning district setbacks  |
| Medium               | Ground-mounted meet setback requirements of district; in Ag. and OS districts min. 50' from property lines | Front setback for applicable district   | n/a   |   | Per zoning district setbacks  |
| Large                | Not stated   | Front setback for applicable district   | n/a   |   | 30' in ag, commercial, industrial districts, 100' in rural residential, per zoning district in residential districts                          |
| <b>Lot Coverage:</b> |  |   |   |   |   |
| Small                | not stated   |   | For applicable district   |   | B. less than 15% of parcel up to 5 acres, or up to 10 acres in some districts   |



## Summary of Solar Energy Facility Zoning Ordinances

|                                      | Yolo County   | Sonoma County   | Irvine   | Mass. DER*   | CCPDA*   |
|--------------------------------------|---|---|--|--|--|
| Medium                               | not stated  | Cover less than 15% of lot, max. 5 acres, max. 50% of allowable lot coverage  | n/a  |  | less than 30% of parcel, or up to 7-20 acres, depending upon district and level of approval  |
| Large                                | not stated  |   | n/a  |  | Between 15 and 30 acres, depending upon district and level of approval   |
| <b>Height:</b>                       |   |   |  |  |  |
| Small                                | max. 5' above roof or accessory building; pole-mounted up to height limit for accessory structures, 10' max. in residential zones | Ht. limit for applicable district   | Ground-mounted: Ht. limit for applicable district<br>Roof-mounted: 2' above roof; within max. height limit for district                                      |  | Roof-mounted: 2' above roof surface and height limit (4' above in commercial & industrial)<br>Ground-mounted: 15' (10' in residential districts)   |
| Medium                               | Up to height limit of zoning district   | Roof mounted: 2' above height limit for district<br>Ground-mounted: 15' max.  | n/a  |  | Roof-mounted: 2' above roof surface and height limit (4' above in commercial & industrial)<br>Ground-mounted: 15' (10' in residential district)  |
| Large                                | Not stated  | Roof mounted: 2' above height limit for district<br>Ground-mounted: 15' max.  | n/a  |  | Roof-mounted: 2' above roof surface and height limit (4' above in commercial & industrial)<br>Ground-mounted: 25' (15' in residential district)  |
| <b>Other requirements/standards:</b> |   |   |  |  |  |
|                                      |   | <ul style="list-style-type: none"> <li>No location over septic, in floodway, in designated habitat or scenic areas</li> <li>Performance standards re: glare, scenic resources, biotic resources, grading, underground elect.</li> </ul> | <ul style="list-style-type: none"> <li>Ground-mounted systems screened from view at-grade from adjacent streets and properties to extent possible</li> </ul> | Medium & large ground-mounted: <ul style="list-style-type: none"> <li>Utility notification, underground utility connections, limited ground clearing, minimize visual impacts, lighting and signage</li> </ul> | Development standards: <ul style="list-style-type: none"> <li>Lighting, glare, air safety, biological, historical &amp; cultural resources, erosion control, grading, fire protection, utility notification, security</li> </ul> |

Summary of Solar Energy Facility Zoning Ordinances

|  | Yolo County | Sonoma County   | Irvine | Mass. DER*  | CCPDA*                              |
|--|-------------|---|--------|---|-------------------------------------|
|  |             | distribution lines, fire protection standards, aesthetics (large facilities), air safety, cultural resources, security fencing, decommissioning |        | stds., maintenance, abandonment<br>▪ Roof-mounted: distance from eave | and fencing, signs, decommissioning |

\* Mass. DER = Massachusetts Department of Energy Resources model solar ordinance; CCPDA = California County Planning Directors Association model ordinance



## Proposed Solar Permitting Regulations

| Facility Type   | Zoning Districts   | Permit Process   | Regulations  |
|---|--|--|--|
| <b>Roof-mounted</b>   | All districts  | Permitted use, building permit only  | Sloping Roof: Max. height 2' above roof surface and 2' above height limit;<br>Min. setbacks from eaves: per building code<br><br>Flat Roof: Max. height 5' above roof surface and 5' above height limit (design review for height above 5'); Min. setback setbacks from eaves: per building code                         |
| <b>Solar carports</b>   | All districts  | Single family districts: Minor Design Review (staff-level), 300' notification with ability of public to request DRC hearing<br><br>Multi-family, commercial, industrial, office, community facility districts: Major Design Review (Design Review Commission), 600' notification | Single family districts: Height and setbacks per Accessory Residential Structure regulations (19.34.032)<br><br>Multi-family, commercial, industrial, office, community facilities districts:<br><br>Max. height 18';<br>Min. 10' setbacks from property lines or setback based on zoning district, whichever is greater |
| <b>Ground-mounted: Small</b><br>(total on-site generation up to 125% of on-site energy needs) | All districts  | Permitted use, building permit only  | Max. height 12' in residential districts and 15' elsewhere;<br>Min. 10' setbacks from property lines   |
| <b>Ground-mounted: Medium</b><br>(on- or off-site use, ancillary to a primary use)            | Ag., rural residential, all commercial, industrial, office, community facility districts | ZA Use Permit, 600' notification   | Max. 1 acre facility coverage; Max. height 12' in residential districts and 15' elsewhere;<br>Min. 10' setbacks from property lines and 20' from street frontages for landscape screening  |
| <b>Ground-mounted: Large</b><br>(on- or off-site use, may be primary use of property)         | Ag., open space, general commercial, industrial, community facilities districts          | Planning Commission Use Permit, 600' notification  | 1+ acre facility coverage;<br>Max. height 12' in residential districts and 15' elsewhere;  |

|  |  |  |  |
|--|--|--|--|
|  |  |  | Min. 50' setbacks from property lines, with<br>landscape screening from street frontages |
|--|--|--|--|

**Proposed Performance Standards:**

- No location over septic, in floodway, or in designated habitat area
- No location within 100 vertical feet of scenic ridgelines per General Plan Map EL-6
- No removal of heritage trees
- Lighting, glare, air safety, biological, historical & cultural resources, erosion control, grading, fire protection, utility notification, security and fencing, signs, decommissioning
- Ground-mounted systems screened from view at-grade from adjacent streets and properties to extent possible

## DARK SKY LIGHTING ORDINANCE OPTIONS

### The Issue:

Light pollution in urbanized areas from excessive and inappropriately designed night lighting has diminished visibility of the night sky and can affect nocturnal animals. The City currently has very limited review of lighting aspects of new development and no specific lighting regulations.

### General Plan Program:

Community Character 12b: Lighting Design Guidelines. Include standards for exterior lighting in design guidelines that support Dark Sky principles, addressing issues such as security, appearance, intensity and light spillage.

### Objectives:

- Reduce light pollution to:
  - Improve visibility of the night sky
  - Reduce impacts on nocturnal wildlife
  - Reduce energy use

### Options:

#### Regulatory:

- Ordinance
- Design Guidelines (non-mandatory)

#### Applicability:

- All new outdoor lighting (via planning review and building permits or just larger projects requiring design review), and/or
- Replacement lighting fixtures through building permit plan check.
- Operational requirements, such as a nighttime lighting curfew, could be imposed on existing development.
- Limits on lumens or color temperature of street lighting.
- Possible exemption: Single-family residences
- Possible exemption: Low-intensity landscape lighting
- Possible exemption: Minimal security lighting near building entries

#### Lighting Fixtures:

- All fixtures shielded (no upward light)
- All fixtures cut-off near property lines (no off-site light spillage)
- No visible light source
- Recessed fixtures for gas station canopies
- Maximum fixture height (parking lot lighting, building wall height)

- Maximum lumens and Kelvin (color intensity) for streetlights

Lighting Levels:

- Minimum lighting levels by land use
- Maximum lighting levels or fixture lumens by land use or lighting zone

Curfew:

- All non-essential lighting off after dark or 10pm (exceptions: building entries, min. security lighting, ATMs)
- All commercial parking lot lighting (including car dealerships) and business signs off after business hours when dark
- 50% of parking lot lighting (including car dealerships) off after business hours when dark
- All exterior lights with automatic switching to turn off after dark

Possible Exemptions:

- Downtown from lighting curfew hours
- Governmental agencies and utilities
- Temporary and seasonal lighting
- Low intensity landscape lighting

**Application Submittal Requirements (if intent is to regulate more strictly):**

- Plan showing type and location of all exterior fixtures (except low-intensity landscape lighting)
- Mfg. cut sheets for all fixtures
- Lumen calculations for all exterior lighting
- Photometric data for fixtures or photometric lighting plan diagram

**Staffing Implications:**

- Detailed plan review for compliance with maximum site illumination and detailed review of proposed fixtures would require a substantial increase in staff time
- Enforcement of after-hours lighting curfew would require overtime for officers

## **SUMMARY OF DARK SKY ORDINANCES**

### **W. Hollywood**

Outdoor lighting criteria including:

- Directed away from adj.
- Shielded, cut-off fixtures
- Parking lot wattages less than 250/fixture
- Use timers and motion-sensing controls
- Recommended light levels for diff. purposes/land uses

### **San Diego**

- Shielding (exempts landscape lights, ballfields, outdoor signs)
- No light spill/visible source
- Max. 4000 Kelvin color temp. bulbs & flat lenses
- All outdoor lighting off from 11pm to 6am (exempts bus. open later, min. security lighting, rec. facilities and teller machines, US flag)
- Exempts downtown from curfew, color limits
- Temporary, seasonal lighting exempted
- Exempts all govt. agencies, including City (no restrictions on street lights)

### **International Dark Sky Association (Flagstaff)**

- Maximum lumen levels for all fixtures based on lighting zones and land use types
- All outdoor lighting must have automated switching to turn off when dark

### **Wildomar**

- Intensity limits by land use type
- Detailed submittal requirements (plan submittal for type and location of all fixtures, mfg. cut sheets, lumen calculations and photometric data)
- Shielding
- Curfew for lights and signs

### **Twentynine Palms**

- Maximum and minimum illumination standards by land use
- 50% of parking lot fixtures, including auto dealerships, turned off 10pm to sunrise

**Davis**

- Shielding
- Single family exempted

**San Luis Obispo**

- Require detailed photometric plans
- Shielding
- Spillage
- Maximum illumination by land use
- Curfew after business hours
- Maximum fixture heights: parking lot fixtures 21', building lighting 15'

## PARKING LOT LANDSCAPE ORDINANCE OPTIONS

### The Issue:

Many parking lot trees do not thrive and reach their full size potential due to inappropriate tree selection, inadequate soil volume and preparation and parking lot soil compaction. This affects the aesthetics of parking lots, provides limited shade for cars and increases pavement heat gain. Generally, Novato's existing parking lot landscape requirements are very good, particularly a high proportion of trees required per parking space.

### General Plan Program:

Community Character 17a: Parking Lot Landscaping. Update parking lot landscape standards to encourage tree growth and shading.

### Objectives:

- Revise parking lot landscape requirements to encourage larger shade trees to:
  - Improve parking lot aesthetics,
  - Reduce heat gain and reduce cooling needs for adjacent buildings,
  - Reduce parking lot maintenance costs due to sun damage to asphalt, and
  - Sequester carbon in larger trees and landscape.

### Current zoning regulations (Section 19.30.070 H):

#### Perimeter Landscaping

##### Adjacent to Street:

- 10' min. width (2' allowable vehicle overhang)
- 1 tree/20 linear feet
- Screening landscape to 36" height

##### Adjacent to Side/Rear Property Lines:

- 5' min. width
- 1 tree/20 linear feet

##### Adjacent to Residential:

- 10' min. width
- 1 tree/20 linear feet

#### Interior Landscaping

- Area: Min. 5% of parking area
- Trees: 1 tree/3 parking spaces in a row
- Tree species from list of parking lot shade trees approved by CDD (no such list exists)

- Landscape finger at least every 8 spaces

**Options for Ordinance Modifications:**

Regulatory:

- Ordinance (existing or enhanced regulations), or
- Design Guidelines (non-mandatory)

Applicability:

- All new parking lots over X spaces or size
- All renovated parking lots over X spaces or size (renovation = removing/replacing paving material and curbing)

Interior Landscaping Requirement:

- Retain requirement for X number of trees/space spaces (currently 3 trees/space), or
- Change to a requirement based on achieving X% shade at midday at maturity (based on submitted plan showing tree driplines at X years old) – former Novato Tree Advisory Task Force recommended 50% shade
- Requirement for X number of finger islands per X spaces in a row (currently 1 island/8 spaces)

Tree Well Sizes:

- Retain existing interior tree well minimum sizes (currently 4' x 4'), or
- Increase minimum tree well dimension (such as 6' x 6')

Tree Distribution:

- Retain existing requirement to distribute trees distributed between interior islands and perimeter landscape areas, or
- Allow clustering of trees on southerly or westerly parking lot boundaries for solar shading benefit

Tree Species:

- Adopt list of recommended large canopy trees (min. 20' diameter at maturity)

Soil Preparation:

- Require min. 3 ft. excavation and soil amendment per soil analysis and ISA standards
- Maximum 75% soil compaction within 12" of tree well curb or sidewalk
- Verification of soil prep. by licensed landscape architect

Landscape Maintenance:

- Add a requirement to maintain landscape and replace plants as needed
- Add requirement on parking lots over X spaces for owner to obtain 1-year maintenance contract



Possible Exemptions:

- Public downtown parking lots (to maximize spaces)
- May achieve 50% shading requirement with solar carports instead of landscaping
- Parking structures: Achieve 50% shading on top deck with shade structures/solar carports and use high-albedo paving material
- Single family/duplex residential parking areas (except retain streetscape width, screening and tree spacing requirements)

Additional Requirements:

- For new/renovated parking lots over X spaces require installation of EV charging conduit
- Could also require high albedo (light colored) pavement material to further reduce heat gain (may be an aesthetic issue. Could limit applicability to top floor of any open-air parking structure)
- Could require permeable pavement to improve stormwater recharge and to improve irrigation and soil oxygen for trees, although permeable pavement requires frequent maintenance to retain functionality

**Staffing Implications:**

- Some increased detail for plan checking, and requirement to verify landscape architect certification of tree installation during construction phase

## BEEKEEPING ORDINANCE OPTIONS

### The Issue:

Beekeeping is currently not an allowed use in the City of Novato. Many cities, including suburban locations, have recently approved ordinances allowing beekeeping in residential districts, with some requirements for location and operation.

### General Plan Program:

Living Well Program 10f: Beekeeping. Consider amending the Zoning Ordinance to provide allowances for residential and commercial beekeeping.

### Objectives:

- Counteract the decline in the general bee population
- Improve pollination
- Promote suburban agriculture

### Options:

#### Regulatory:

- Permitted use (subject to restrictions), or
- Administrative Permit issued by Zoning Administrator (courtesy notice to properties w/in 100' and opportunity to request a public hearing).
- Register with county Ag. Commissioner

#### Zoning:

- Allowable in all districts, or
- Only in single-family, agricultural and open space districts

#### Number of Hives:

- Max. number per parcel or by square footage (e.g., 2 per sf lot, 10 per ag/os parcel; 1/2500 sf lot area)

#### Yards:

- Not in front or side yards

#### Setbacks (examples):

- Min. 5' or 10' from side or rear lot lines, and
- Min. 20' from public ROW or private street.
- Min. 200' from dwelling of person allergic to bee stings

Barriers:

- Min. 6' barrier (fence or hedge) between hive entrance and adj. property line(s)

Hive Orientation:

- Entrance facing away from adjacent property line

Maintenance:

- Maintain water supply on premises
- Clean and sanitary hive boxes
- Constructed to prevent rats, rodents

**Application Submittal Requirements:**

- Plan showing location of hive(s), property lines, on-site and adjacent structures, water source, barriers

**Staffing Implications:**

- Some increase in permit issuance or review, but expected to be very minimal.

## SUMMARY OF BEEKEEPING ORDINANCES

### Los Angeles

- Allowed in any zone
- # Hives: 1 hive/2,500 sq ft of lot area
- Yards: Not in the front yard
- Setbacks: min. 5' from side and rear property lines; min. 20' from public right-of-way or private street
- Barrier: min. 6' fence or hedge barrier between hive entrance and adj. property line
- Hive entrance facing away from or parallel to nearest lot line

### San Rafael

- Beekeeping is allowed in all zones by right, with no restrictions

### Petaluma

- Up to 2 hives are allowed per residence by right
- Hives required to be framed and moveable, kept a safe distance from pedestrianways and not create a nuisance

### Corte Madera

- Use Permit required in all zoning districts
- # hives: 2/site less than ½ acre; 4/site over ½ acre
- Setbacks: 20' from adjacent dwellings, streets and trails
- Flyway barrier min. 6' tall between hive and adjacent residential property

### Fremont

- Allowed in all zones
- Permit required from Animal Services Supervisor
- # Hives: 6,000+sf lot: 1 hive; 8,000+sf lot: 2 hives; 10,000+sf lot: 5 hives

### Pleasanton

- Allowed in single family or ag zones
- Zoning Administrator permit required – courtesy notice w/in 100', may request a public hearing
- Residency: Property owner must reside on site on single-family sites
- # Hives: max. 2 in single-family; 10 in ag.
- Setback: min. 5' from side or rear property lines
- Barrier: min. 6' fence or hedge on property line

- Water source within 10' of hive

**Sonoma**

- Allowed in Single Family and Ag lots only
- # Hives: 2/lot of 10,000 sf or less; max. 4 on larger lots
- Yards: Rear yard only
- Barrier: Behind min. 6' fence or hedge
- Orientation: Hive entrance directed away from neighboring properties
- Maintenance: Maintain bees in a condition to prevent swarming; adequate water; clean, sanitary hive boxes; constructed to prevent rats/rodents

**Napa**

- Allowed in all zones
- # Hives: Suggested limits in Ag. BMPs
- Yards: Not in front
- Setbacks: None
- Barrier: Hive entrance behind min. 6' fence or hedge
- Registry: Encourage voluntary registration with Co. Ag. Commissioner

**Fairfield**

- Admin. Permit from CDD
- # Hives: 2/parcel
- Registry: Co. Ag. Commissioner
- Yards: Not in front or side
- Setback: min. 10' from side and rear lot lines & min. 200' from dwelling of person allergic to bee strings
- Barrier: min. 6' fence or hedge w/in 30' of hive
- Water supply on premises maintained

## URBAN AGRICULTURE ORDINANCE OPTIONS

### The Issue:

The City's zoning regulations currently allow Community Gardens as permitted uses in the Agriculture, Open Space, Conservation, Community Facility, Parkland, Mixed Use, Rural Residential and in conjunction with multi-family development on sites with the Affordable Housing Overlay District. Community Gardens are allowed with approval of a Use Permit in the Very Low Density Residential and Low Density Residential (single-family) districts, but not in multi-family and commercial districts. Community Gardens are defined in the Zoning Code as, "A site used for growing plants for food, fiber, herbs, flowers, which is shared and maintained by nearby residents."

Crop Production is currently an allowed use in the Agriculture, Open Space, Conservation and Rural Residential zoning districts, and with a Use Permit in the Very Low Density Residential and Low Density Residential districts. Crop Production is defined as, "Commercial agricultural field and orchard uses including production of: field crops, flowers and seeds, fruits, grains, melons, ornamental crops, tree nuts, trees and sod, and vegetables. Also includes associated crop preparation services and harvesting activities, such as mechanical soil preparation, irrigation system construction, spraying, crop processing and retail sales in the field, including sales sheds."

Farm Produce Stands are allowed only in the Agriculture District with issuance of a Use Permit.

The Marin Food Policy Council has requested that cities modify zoning regulations to streamline permitting for community gardens and to allow for small commercial gardens in residential zoning districts to increase local food production opportunities.

### General Plan Program:

Living Well Program 10b: Community Garden Regulations. Consider amending the Zoning Code to streamline the process to create new community gardens.

### Objectives:

- Expand allowances for community gardens to increase local food production to:
  - Increase consumption of fruits and vegetables
  - Reduce greenhouse gases associated with transporting farm products long distances to market
  - Improve local food access and security in the event of disruptions in transportation of food products to market
  - Support a sense of community
  - Provide training and education opportunities around food production

### Options:

Regulatory:

- Ordinance, or
- Guidelines (non-mandatory)

Definition of Project Type/Size:

- Community Gardens:
  - Defined as site used for cultivation of fruits, vegetables, plants or herbs, excluding production of animals or controlled substances
  - Often allowed as a principal use of vacant property
  - Common size limitations of 1 acre or less
  - On-site sales may be precluded, or limited in timeframe (seasonal only or maximum number of days/week), size (often 120-200 square feet for produce stand) and may require temporary facility only (e.g., physical structure/table must be removed when sales are not occurring).
- Market Garden:
  - Defined as site used by production of fruits, vegetables, plants or herbs, excluding production of animals or controlled substances, for sale or donation to consumers, restaurants, markets, retailers, non-profits or cooperatives.
  - May be allowed as a principal use of vacant property
  - Common size limitations of 1 acre or less in residential districts, larger in non-residential
  - On-site sales may be allowed, subject to restrictions and/or a Use Permit approval.

Allowable Zoning Districts:

- Community Garden: typically all zoning districts by right, subject to performance standards. Possibly preclude in industrial districts due to concerns over contamination.
- Market Garden: typically all districts by right, or potentially by Use Permit in residential districts, subject to performance standards. Possibly preclude in industrial districts due to concerns over contamination.

Approval Process:

- Community Garden: Typically by right, or Zoning Clearance (ministerial review to assure conformance to performance standards)
- Market Garden: May be by right, or Zoning Clearance (ministerial review per objective standards) or Use Permit in residential districts

Other Regulatory Considerations/Performance Standards:

- Hours of operation
- Prohibition on use of mechanical farm equipment
- Requirement for soil testing and preparation of Phase 1 Environmental Site Assessment if warranted

- Preparation of a garden operating plan, addressing hours of operation, site security, waste collection, chemical use, maintenance and dispute resolution
- Storage of tools and supplies in a secure manner, screened from view
- Prohibition of drainage onto adjacent properties
- Fencing requirements
- For Market Gardens: regulations for on-site sales

## **SUMMARY OF URBAN AGRICULTURE ORDINANCES**

### **Marin County**

- Community Gardens, excluding on-site sales, allowed in all zoning districts
- Community Garden, Market, allowing commercial sale of produce including on-site sales, are allowed with a Use Permit in all zoning districts

### **Sacramento**

- Community Gardens and Market Gardens, allowing commercial sale of produce, allowed in all zoning districts, max. size of 1 acre in residential, 3 acres in commercial/industrial districts by right, and with a Use Permit for larger gardens. Produce stands up to 120 sq. ft. allowed by right, over 120 sq. ft. by Use Permit.
- Development standards include maintenance, allowable equipment, produce stand operations and sediment control

### **Oakland**

- Community Gardens allowed in all zoning districts, precluding on-site sales except seasonal sales.
- Limited Agriculture allowed in all zoning districts, allowed 1-acre max. commercial food production and on-site sales area of max. 200 sq. ft. and max. 2 times/week by right, and for larger garden/sales area by Use Permit.