REQUEST

Provide direction to the Staff regarding the drafting of ordinances amending the Municipal Code and implementing programs in General Plan 2035 relating to the regulation of Solar energy facilities (appropriate zoning districts, development regulations, definitions and review processes), Lighting for new and/or existing development to reduce nighttime light pollution, Parking lot landscape requirements for new or renovated facilities, Beekeeping on residential or non-residential properties, and 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.

The Planning Commission was asked to provide feedback on the following questions:

- 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?

- 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.
Planning Commission Recommendations

The Commissioners agreed that roof-mounted panels should be allowed without discretionary permits, but expressed concern about an allowance for panels to project up to 5 feet above a flat roof of a single-family home due to aesthetic concerns, and that design review would be warranted in such situations. They were similarly supporting of solar carport permitting, but were concerned about the loss of interior parking lot landscaping that might result, and suggested increasing perimeter landscaping to compensate. They also suggested that setback and height limits for solar carpors could be modified through design review. For ground-mounted installations, the Commissioners had concerns about such facilities located in front yard setbacks due to visual concerns from the street, and whether larger ground-mounted facilities should be allowed in residential districts. They also questioned the appropriateness of allowing large ground-mounted facilities on sites zoned Open Space.

Staff Recommendations

Staff recommendations have been modified based on Planning Commission feedback and are reflected in Attachment 1c. Staff has evaluated the practicality of locating ground-mounted solar facilities on sites in Novato zoned Open Space, Agriculture and Rural Residential. Open Space zoned properties are predominately Marin County Open Space preserves and floodplain areas controlled by the Marin County Flood Control District. Both agencies have policies that would largely preclude utility-scale solar installations, regardless of City regulations. Only the Pacheco Winery and Lieb properties are zoned Agriculture and only the Renaissance subdivision at Stonetree Golf Course is designated Rural Residential. Based on such limited opportunities, staff does not recommend allowances for utility-scale solar in these zoning districts.

It should also be noted that ground-mounted facilities would be subject to provisions of the Hillside Ordinance on properties exceeding 10% average slope, which limits improvements on slopes over 20% and near ridgelines. In addition, ground-mounted facilities would be precluded in the private conservation easements established in residential subdivisions for the past 40 years to maintain private, undeveloped open space unless individual easement documents were proposed to be modified by property owners and granted by the City Council.

Staff also recommends adoption of performance standards for ground-mounted facilities as outlined in Attachment 1c, and which are similar to those recommended by the Marin Conservation League (see Attachment 1d).

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. In addition, the Zoning Code contains a performance standard in Section 19.22.060 which precludes spillover illumination or glare from lighting fixtures beyond property lines. This performance standard is used in code enforcement efforts to address light and glare complaints. This code section also requires all “non-essential” interior and exterior lighting, including illuminated signs, to be turned off after 11:00 p.m., except for businesses which are open later. This provision has never been enforced in Novato.
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.

The Planning Commission was asked to provide feedback on the following questions:

- 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.

Planning Commission Recommendations

The Commissioners agreed that regulations on outdoor lighting should be applied to new development only, not existing development. They recommended that Dark Sky certified lighting fixtures should be required through design review approvals on new projects, and that any lighting curfew should be applied on a case-by-case basis where warranted for new development.

Design Review Commission Recommendations

The DRC supports requiring Dark Sky certified light fixtures for new development through design review, but did not believe that a lighting curfew would be enforceable and would not provide sufficient security lighting. One DRC member supported applying the requirement for Dark Sky certified fixtures to building renovations and exterior fixture replacements. The Commission also encouraged providing information on Dark Sky concepts to applicants and considering design guidelines for lower light fixture heights in parking lots to a more human-scale pole height which would reduce spill-over lighting.

Staff Recommendations

Staff concurs with the recommendations of the Planning Commission. In addition, staff recommends eliminating the current reference in Section 19.22.060 of the Zoning Code requiring that all non-essential lighting be turned off at 11:00 p.m. This provision has never been enforced, would require a significant dedication of code enforcement time during overtime hours and is not supported by the Police Chief due to security concerns.

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 the 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.
The Planning Commission was asked to provide feedback on the following questions:

▪ 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?

Planning Commission Recommendations

The Commissioners agreed that a list of acceptable parking lot tree species should be adopted and that new projects with interior parking lot trees should be required to provide certification that tree wells have proper soil preparation and compaction. The Commission did not recommend increasing the minimum tree well size from 4’x4’ to 6’x6’ due to the resulting reduction in potential parking spaces and the accompanying reduction in building size or use type.

Design Review Commission Recommendations

The DRC was supportive of all three recommendations, including increasing the size of tree wells in newly constructed parking lots. The Commission felt strongly that large, mature trees are a significant quality of life measure and are a long-term investment in the community

Staff Recommendations

Staff concurs with the Planning Commission recommendations.

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.

The Planning Commission was asked to provide feedback on the following questions:

▪ 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.

Planning Commission Recommendations

The majority of Commissioners agreed that beekeeping should be a permitted use in most zoning districts, subject to performance standards similar to Los Angeles that would establish criteria for the number of hives allowed, setbacks, water source and hive maintenance. They questioned the appropriateness/practicality of allowing hives in multi-family districts due to the lack of available space and shared common areas.

Staff Recommendations

Staff concurs with the Planning Commission recommendations.

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.

The Planning Commission was asked to provide feedback on the following questions:

- 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?

Planning Commission Recommendations

Commissioners agreed that community gardens should be allowed as a permitted use in all zoning districts, that market gardens should also be allowed, subject to a Use Permit, and that some level of retail sales could be allowed, with limitations.

Staff Recommendations

Staff concurs with the Planning Commission recommendations.

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
1d. Marin Conservation League Policy re: Solar Photo-Voltaic Facilities
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
6. Draft Planning Commission Minutes – January 22, 2018
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

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<thead>
<tr>
<th></th>
<th>Yolo County</th>
<th>Sonoma County</th>
<th>Irvine</th>
<th>Mass. DER*</th>
<th>CCPDA*</th>
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<tbody>
<tr>
<td><strong>Project size definition:</strong></td>
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<tr>
<td>Small</td>
<td>On site use, max. 2.5 acres of land area</td>
<td>Exempt: Max. 125% of on-site demand; parking lot shade structures</td>
<td>Residential: ground and roof-mounted systems</td>
<td>1,750 sf of surface area or less (~10 kW)</td>
<td>A. Tier 1: On structures or ground-mounted up to ½ acre, or</td>
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<td></td>
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<td>Commercial &amp; industrial: covered parking and roof-mounted systems</td>
<td></td>
<td>B. Tier 2: On-site use, ground-mounted</td>
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<tr>
<td>Medium</td>
<td>On and off site use, 2.5 to 30 acres of land area</td>
<td>Minor Commercial Facility: On and off site use, incidental to a primary use</td>
<td>n/a</td>
<td>1,750 to 40,000 sf of surface area (~10-250 kW)</td>
<td>On and off site use, secondary use of property</td>
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<tr>
<td>Large</td>
<td>Utility-scale, 30 to 120 acres of land</td>
<td>Commercial Facility: Primary use of land</td>
<td>n/a</td>
<td>40,000+ sf of surface area (250+ kW)</td>
<td>Primary use of land</td>
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<td><strong>Zoning Districts Allowed:</strong></td>
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<tr>
<td>Small</td>
<td>Ag, all residential, commercial, office industrial, mixed use,</td>
<td>All districts</td>
<td>Presumably all residential, commercial, office, industrial, institutional, and mixed use districts</td>
<td>All districts</td>
<td>A. All districts – permitted use</td>
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<td></td>
<td>public and open space districts</td>
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<td>B. All districts, except multi-family residential and except neighborhood commercial for facilities larger than 5 acres</td>
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<tr>
<td>Medium</td>
<td>Ag, all commercial, industrial, public and open space districts</td>
<td>Ag., open space, rural residential, all commercial &amp; industrial, public facilities</td>
<td>n/a</td>
<td>All districts</td>
<td>All districts except multi-family residential and neighborhood commercial. Facilities larger than 7 acres not allowed in rural residential.</td>
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<tr>
<td>Large</td>
<td>Ag., public, open space and industrial districts</td>
<td>Ag., open space, general commercial, industrial, public facilities</td>
<td>n/a</td>
<td>Not in single-family residential</td>
<td>Not allowed in industrial, office, neighborhood commercial or residential</td>
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<td><strong>Approval Process:</strong></td>
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<td>Small</td>
<td>Zoning Clearance; Use Permit if C.B.O. finds</td>
<td>None - exempt</td>
<td>None - ministerial</td>
<td>None - ministerial</td>
<td>A. Permitted use</td>
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<td>B. Admin. Permit (ministerial review)</td>
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<tr>
<td><strong>Small</strong></td>
<td>Pole-mounted: 5’ rear setback in residential districts</td>
<td>Setbacks for applicable district</td>
<td>Setbacks for applicable district; Solar carports can encroach into landscape setback max. 3 feet</td>
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<td>Per zoning district setbacks</td>
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<td><strong>Medium</strong></td>
<td>Ground-mounted meet setback requirements of district; in Ag. and OS districts min. 50’ from property lines</td>
<td>Front setback for applicable district</td>
<td>n/a</td>
<td></td>
<td>Per zoning district setbacks</td>
</tr>
<tr>
<td><strong>Large</strong></td>
<td>Not stated</td>
<td>Front setback for applicable district</td>
<td>n/a</td>
<td></td>
<td>30’ in ag, commercial, industrial districts, 100’ in rural residential, per zoning district in residential districts</td>
</tr>
<tr>
<td><strong>Lot Coverage:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Small</strong></td>
<td>not stated</td>
<td></td>
<td>For applicable district</td>
<td></td>
<td>B. less than 15% of parcel up to 5 acres, or up to 10 acres in some districts</td>
</tr>
</tbody>
</table>
# Summary of Solar Energy Facility Zoning Ordinances

<table>
<thead>
<tr>
<th></th>
<th>Yolo County</th>
<th>Sonoma County</th>
<th>Irvine</th>
<th>Mass. DER*</th>
<th>CCPDA*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>not stated</td>
<td>Cover less than 15% of lot, max. 5 acres, max. 50% of allowable lot coverage</td>
<td>n/a</td>
<td></td>
<td>less than 30% of parcel, or up to 7-20 acres, depending upon district and level of approval</td>
</tr>
<tr>
<td>Large</td>
<td>not stated</td>
<td>n/a</td>
<td></td>
<td></td>
<td>Between 15 and 30 acres, depending upon district and level of approval</td>
</tr>
</tbody>
</table>

## Height:

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>max. 5’ above roof or accessory building; pole-mounted up to height limit for accessory structures, 10’ max. in residential zones</td>
<td>Ht. limit for applicable district</td>
<td>Ground-mounted: Ht. limit for applicable district</td>
<td>Roof-mounted: 2’ above roof surface and height limit (4’ above in commercial &amp; industrial) Ground-mounted: 15’ (10’ in residential districts)</td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>Up to height limit of zoning district</td>
<td>Roof mounted: 2’ above height limit for district Ground-mounted: 15’ max.</td>
<td>n/a</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large</td>
<td>Not stated</td>
<td>Roof mounted: 2’ above height limit for district Ground-mounted: 15’ max.</td>
<td>n/a</td>
<td></td>
<td>Roof-mounted: 2’ above roof surface and height limit (4’ above in commercial &amp; industrial) Ground-mounted: 25’ (15’ in residential district)</td>
</tr>
</tbody>
</table>

## Other requirements/standards:

- No location over septic, in floodway, in designated habitat or scenic areas
- Performance standards re: glare, scenic resources, biotic resources, grading, underground elect.
- Ground-mounted systems screened from view at-grade from adjacent streets and properties to extent possible
- Medium & large ground-mounted:
  - Utility notification, underground utility connections, limited ground clearing, minimize visual impacts, lighting and signage
- Development standards:
  - Lighting, glare, air safety, biological, historical & cultural resources, erosion control, grading, fire protection, utility notification, security
### Summary of Solar Energy Facility Zoning Ordinances

<table>
<thead>
<tr>
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<th>Irvine</th>
<th>Mass. DER*</th>
<th>CCPDA*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>distribution lines, fire protection standards, aesthetics (large facilities), air safety, cultural resources, security fencing, decommissioning</td>
<td></td>
<td>stds., maintenance, abandonment</td>
<td>and fencing, signs, decommissioning</td>
</tr>
</tbody>
</table>

*Mass. DER = Massachusetts Department of Energy Resources model solar ordinance; CCPDA = California County Planning Directors Association model ordinance*
## Proposed Solar Permitting Regulations

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Zoning Districts</th>
<th>Permit Process</th>
<th>Regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Roof-mounted</strong></td>
<td>All districts</td>
<td>Permitted use, building permit only</td>
<td>Max. height 2’ above roof surface or parapet height and 2’ above height limit; Min. setbacks from eaves: per building code Additional height may be granted through design review.</td>
</tr>
<tr>
<td><strong>Solar carports</strong></td>
<td>All districts</td>
<td>Single family districts: Minor Design Review (staff-level), 300’ notification with ability of public to request DRC hearing Multi-family, commercial, industrial, office, community facility districts: Major Design Review (Design Review Commission), 600’ notification</td>
<td>Single family districts: Height and setbacks per Accessory Residential Structure regulations (19.34.032) Multi-family, commercial, industrial, office, community facilities districts: Max. height 18’; Min. 10’ setbacks from property lines or setback based on zoning district, whichever is greater. Reduction in setbacks may be granted through design review. Reduction in interior landscape to be addressed in parking lot landscape regulations.</td>
</tr>
<tr>
<td><strong>Ground-mounted: Small</strong> (total on-site generation up to 125% of on-site energy needs)</td>
<td>All districts</td>
<td>Permitted use, building permit only</td>
<td>Max. height 12’ in residential districts and 15’ elsewhere; Min. 10’ setbacks from property lines Not permitted in front setback in R-1 (single family) district.</td>
</tr>
<tr>
<td><strong>Ground-mounted: Medium</strong> (on- or off-site use, ancillary to a primary use)</td>
<td>All commercial, industrial, office, and community facility districts</td>
<td>ZA Use Permit, 600’ notification</td>
<td>Max. 1 acre facility coverage; Max. height 12’ in residential districts and 15’ elsewhere; Min. 10’ setbacks from property lines and 20’ from street frontages for landscape screening</td>
</tr>
<tr>
<td>Ground-mounted: Large  (on- or off-site use, may be primary use of property)</td>
<td>General commercial, industrial, and community facilities districts</td>
<td>Planning Commission Use Permit, 600’ notification</td>
<td>1+ acre facility coverage; Max. height 12’ in residential districts and 15’ elsewhere; Min. 50’ setbacks from property lines, with landscape screening from street frontages</td>
</tr>
</tbody>
</table>

**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
Solar Photo-Voltaic Facilities

MCL Policy re: Siting of Solar Photo-Voltaic Facilities, 9/17/2013 | Documents and Correspondence

INTRODUCTION: Continued reliance on fossil fuels to meet our energy needs carries myriad negative environmental impacts that threaten the future of life on our planet. Greenhouse gas emissions are accelerating global warming. Global warming is contributing to sea-level rise. Surrounded by the ocean and bays, Marin is particularly at risk due to sea-level rise. MCL recognizes the urgency of reducing greenhouse gas emissions through a wide variety of land use, building, energy efficiency, transportation, and conservation measures and through encouraging alternative forms of power generation.

Options for reducing greenhouse gas emissions fall into four general categories, all of which must be pursued in fighting climate change: energy conservation/efficiency, alternative energy generation, advanced fuel technologies, and capture and sequestration of CO2.

SOLAR POWER SYSTEMS: Among the alternative energy generation options, solar photo-voltaic (PV) systems – “solar power” - are suitable for use in Marin County. They should be encouraged, subject to limits outlined in the recommended policy.

The sun is essentially limitless in its long-term availability as a clean energy source. Solar technology is also relatively “clean” except in fabrication and disposal, and PV installations can be scaled from very small installations to the scale of a small power plant. Solar constitutes one of the fastest rising forms of alternative energy generation. PV systems can be placed on rooftops or over existing paved areas such as parking lots, or can be ground-based.

PV technology, whether installed as flat, tilted, or tracking panels on rooftops or on the ground, has environmental impacts. Among these are the use of natural resources and energy in fabrication, transportation and installation. The process for making the polysilicon currently used in solar panels also generates considerable hazardous waste. The usable life of a solar panel is estimated at up to around 40 years, but efficiency degrades over time. Using current fabrication techniques one estimate suggests that it takes about two years of operation to offset the energy used in fabrication. There also can be substantial environmental impacts of building installations at a project site.

Conversion efficiency is the measure of solar energy input to electrical energy output. Other factors, such as the angle of the sun, manufacturing quality, etc., will reduce the actual output. The conversion efficiency of solar arrays is low. The maximum conversion efficiency of polysilicon (currently the most commonly used PV material) is less than 20% under ideal conditions. The energy output of a solar array depends on the size, and the low conversion efficiency requires large-sized installations to generate significant energy. Because “utility scale” solar arrays using current PV technology must be quite large, they tend to be highly visible. A solar array generating one megawatt (MW) of power uses requires about 2 - 3 acres of land. Since solar panels themselves may include hazardous materials, disposal of the installation after it is no longer productive is also an issue of environmental concern.

The economics of PV technology have been changing rapidly, with the cost of an installation dropping continuously. Electric utility companies operating in California are under a mandate to add “green” energy, and obstacles to selling solar power to the “grid” are being removed. Sites that were not economically suitable for a solar installation a few years ago can now, or in the foreseeable future, will be able to, support a profitable solar installation.

Ground-based systems are very land-intensive and visible. They should not be installed at the expense of productive or sensitive resources, which themselves sequester carbon. PV installations can have an impact on nearby properties.

Under current zoning laws, a commercial solar installation is a permitted use of agriculturally zoned land. As a result of the changing economics and regulatory environment, the owners of agricultural lands, particularly those which are marginal or of low productivity, may find it more profitable to devote lands to large scale solar installations than to continue the current use of the land. For example, large tracts of productive agricultural land in the Central Valley are now being converted to solar power production.

Although agricultural tracts in Marin are smaller than in the Central Valley, installation of solar facilities for commercial purposes has the potential for changing the highly valued agricultural landscape in Marin. Managers of open spaces dealing with the challenges of reduced public funding may be tempted to consider installing solar facilities for commercial use.

Solar power technology is rapidly advancing. New materials that provide higher conversion efficiency and/or which are flexible (thereby providing new options for PV installations) are just two examples. This policy should be revisited periodically and revised, as necessary, to reflect advancements in technology.

SOLAR ORDINANCE: MCL has in the past recommended and continues to recommend that Marin County and Marin cities adopt ordinances for regulating solar power installations consistent with the following policy. The Marin County Board of Supervisors has indicated a desire to enact an ordinance applicable to the unincorporated areas of Marin.

MCL POLICY FOR
SITING OF SOLAR PHOTO-VOLTAIC FACILITIES
Approved by MCL Board of Directors September 17, 2013

In addition to the assumed review of proposed projects for consistency with Countywide and Community Plans and with codes, MCL recommends that the following criteria should be applicable to solar installations in Marin County:

A. Areas where proposed installations should be allowed and encouraged, subject to ministerial code requirements and consistency review:
   - Rooftops (including roofs on agricultural structures)
   - Over parking areas and structures
   - Over existing non-natural, impervious surfaces
   - Existing or mini-scale installations of the type that are widely used, such as those that power road signs for emergency communications.
   - Small ground based installations to support activities and facilities at a site, where such installations are neither visually conspicuous nor located in sensitive habitat areas.

B. Areas where ground-based solar installations should be prohibited:
   - Park lands, designated open space lands and public watershed lands along with suitable buffers around such lands, except as provided in Section A.
   - Sensitive habitat areas, including wetlands, Stream Conservation Areas, native grasslands, forest/woodlands, habitats of listed special-status species, and associated buffer areas
   - Recognized scenic areas, including on or near ridge tops
   - Historic districts

C. Areas where proposed installations should be subject to a level of environmental and design review, at a minimum an Initial Study, appropriate to the size and environmental impact of the proposed installation:
   - Visually conspicuous locations, from roadways, parks, residential communities, or significant public view points
   - On public lands not designated as open space, park or watershed
   - In designated FEMA 50-year flood zones (not including wetland conservation areas)
   - In areas that will be flooded by sea-level rise
   - Land zoned for industrial or commercial use
   - Residential non-rooftop installations
   - On agriculturally zoned lands, except installations set up principally to support activities and facilities at the site rather than the production of power for sale for off ranch uses, where such installations are neither visually conspicuous nor located in sensitive habitat areas.
   - Other locations not provided for in Sections A & B

For the purposes of this policy, ‘visually conspicuous’ does not include a small installation unless it is in a highly visible scenic location.
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’ x6’)

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.
SPECIAL
Planning Commission Meeting
Location: Novato City Hall, 901 Sherman Avenue
January 22, 2018

Present: Curtis Havel, Chair
        Justin Derby, Vice Chair
        Dan Dawson
        David Gabriel
        Peter Tiernan

Absent: Susan Wernick
        Jay Strauss

Staff Present: Bob Brown, Community Development Director
             Steve Marshall, Planning Manager
             Veronica Nebb, Senior Assistant City Attorney

CALL TO ORDER / PLEDGE OF ALLEGIANCE / ROLL CALL

APPROVAL OF FINAL AGENDA:  M/s: Tiernan/Derby to approve final agenda. Motion passed 4-0-3 (Ayes: Havel, Derby, Dawson, and Tiernan; Nays: none; Absent: Gabriel, Strauss, and Wernick).

PUBLIC COMMENT: None

CONSENT CALENDAR:

1. APPROVAL OF PC MINUTES OF AUGUST 7, 2017 (CH, DD, JD, PT, SW)
   M/s: Tiernan/Derby to approve minutes of August 7, 2017, with modifications as requested by Chair Havel. Motion passed 4-0-2-1 (Ayes: Havel, Derby, Dawson, and Tiernan; Nays: none; Absent: Strauss and Wernick; Abstain: Gabriel).

2. APPROVAL OF PC MINUTES OF DECEMBER 18, 2017 (CH, JD, DG, JS, PT, SW)
   M/s: Tiernan/Derby to approve minutes of December 18, 2017, with correction to hearing location. Motion passed 3-0-2-2 (Ayes: Havel, Derby, and Tiernan; Nays: none; Absent: Strauss and Wernick; Abstain: Gabriel and Dawson).
CONTINUED ITEMS: None

NEW ITEMS: None

GENERAL BUSINESS:

3. 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)

Community Development Director Brown reviewed the zoning concepts for solar energy facilities.

Chair Havel acknowledged the Planning Commission received copies of an email from Tracey Ruiz regarding solar carports.

The Commission asked clarifying questions of staff, including the ability to locate solar facilities on approved conservation easements.

Public Comment: None

The Commissioners provided feedback to staff and the City Council regarding potential regulations for solar energy facilities, including:

- Roof-mounted panels should not be allowed to extend up to 5 feet above the roofline of flat-roofed single-family homes, such as Eichler designs due to incompatible aesthetics, in which case design review should be required

- Small ground-mounted solar facilities should not be allowed in the front yards of zoning districts to allow for screening from the street

- Concern that installation of solar carports might result in removal of all parking lot landscaping. Design review may be necessary to incorporate perimeter landscaping.

- Setbacks and height restrictions for solar carports may modified through design review.

- Request that staff identify locations of lands zoned Open Space when the final ordinance returns for consideration so the Planning Commission and City Council can evaluate the appropriateness of allowing ground-mounted installations in OS Districts.

- Questioned whether larger ground-mounted facilities should be allowed in residential districts.

2. Lighting for new and/or existing development to reduce nighttime light pollution

Community Development Director Brown reviewed the zoning concepts to regulate residential and commercial lighting.
Chair Havel acknowledged the Planning Commission received copies of an email from Tracey Ruiz regarding lighting.

The Commission asked clarifying questions of staff.

Public Comment: None

The Commissioners provided feedback to staff and the City Council regarding potential regulations for exterior lighting, including:

- Regulations on outdoor lighting should be applied to new development only, not existing. If a lighting curfew is warranted, it should be required as a condition of approval for new development.
- Dark Sky certified light fixtures should be required through design review of new development.
- It was noted that the Downtown street lights are not Dark Sky fixtures.

3. **Parking lot landscape requirements for new or renovated facilities**

Community Development Director Brown reviewed zoning concepts to regulate landscaping for commercial parking lots.

The Commission asked clarifying questions of staff.

Public Comment: None

The Commissioners provided feedback to staff and the City Council regarding potential revised regulations for parking lot landscaping, including:

- Support for establishing a list of acceptable parking lot tree species with typical canopies of 20’+ diameter and requiring certification of interior tree installation by a project landscape architect as a condition of approval for new parking lot development to assure proper soil compaction and soil preparation.
- Lack of support for increasing the minimum tree well size due to impact on the number of parking spaces achievable, which translates into allowable building size and use types.

4. **Beekeeping on residential or non-residential properties; and**

Community Development Director Brown reviewed zoning concepts to regulate beekeeping.

The Commission asked clarifying questions of staff.

Chair Havel acknowledge the Planning Commission had received an email from Nickie Irvine supporting beekeeping.

Public Comment:

Michael Sullivan – supports beekeeping
Glenn Matsui – supports beekeeping – adopt fair regulations
Gary Huehnerfuss – supports beekeeping – take positive approach to regulation
Jim Crumpler – supports beekeeping; recommended promoting beekeeping, allowing in all zoning districts, minimum number of hives allowed should be 3 to 4 (perhaps up to 5 or 6 hives), don’t require setbacks.

Thilo Koehler – supports beekeeping – regulate minimally and don’t require a permit

Jean James – supports beekeeping

The Commissioners provided feedback to staff and the City Council regarding potential regulations for beekeeping, including:

- Agreed that beekeeping should be a permitted use in most zoning districts, but questioned the appropriateness/practicality in multi-family situations. Commission Gabriel supported requiring a Use Permit for beekeeping and suggested it be allowed in rural residential areas only.
- General support for adoption of performance standards similar to Los Angeles that would provide criteria for the number of hives allowed, setbacks, water source, hive maintenance, etc.

5. **Urban Agriculture.**

Community Development Director Brown reviewed zoning concepts to regulate urban agriculture.

The Commission asked clarifying questions of staff.

Public Comment:

Lauren Klein, Marin Food Policy Council, supports allowing urban agriculture and community gardens – allow retail sales for market gardens.

The Commissioners provided feedback to staff and the City Council regarding potential revised regulations for urban agriculture, including:

- Allowing community gardens in all zoning districts.
- Including allowances for “market gardens” is most districts, possibly requiring a Use Permit.
- Allowances for some level of retail sales for community and market gardens, with limitations. Commissioner Tiernan did not support retail sales.

**UPCOMING AGENDAS AND QUORUMS:** Planning Manager Marshall noted the next Planning Commission hearing is scheduled for February 12, 2018; the regular February 5 hearing is cancelled.

**ADJOURNMENT:** Meeting adjourned at 9:40 PM