APPENDIX A

Zoning Code Amendments

This is the third draft of this ordinance. The first draft was released on October 3, 2013 and the second draft was released in April, 2014. This third draft includes some revisions based on the feedback received on the second draft. Revisions from the second draft are shown in track changes with strikethrough for deleted items and underline for added items. This draft ordinance is intended to provide baseline standards for solar and wind energy projects. Where a discretionary permit is required, project conditions and/or mitigation measures will be required to address site specific needs.

Please send your questions and comments regarding this draft ordinance via email or postal mail to:

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Comments on this draft are due _____.

ORDINANCE NO. _____

An ordinance amending Title 22 – Planning and Zoning – of the Los Angeles County Code related to the establishment of regulations for small-scale solar energy systems, small-scale wind energy systems, utility-scale solar energy facilities, utility-scale wind energy facilities, and temporary meteorological towers; and other related amendments.

SECTION 1. Section 22.08.040 D is hereby amended to read as follows:

22.08.040 D

…

-- "Decommissioning" means the discontinuance of a permitted use and removal of all structures, equipment, footings, and fencing associated therewith from a property, which includes safe storage, dismantling, disposal, and/or recycling; and site restoration.

…

SECTION 2. Section 22.08.070 G is hereby amended to read as follows:

22.08.070 G

…

-- "Guy wires" means wires or cables used to support a wind tower as defined by Section 22.08.230, or other structures that require the use of such wires or cables for support.

SECTION 3. Section 22.08.130 M is hereby amended to read as follows:

22.08.070 M

…

-- "Meteorological tower, temporary (Temp Met Tower)" means a facility consisting of a tower and related wind-measuring devices, which is used ~~solely~~ to measure winds preliminary to construction of a ~~non-commercial~~small-scale wind energy ~~conversion~~ system or utility-scale wind energy facility.

…

SECTION 4. Section 22.08.190 S, is hereby amended to read as follows:

22.08.190 S

…

-- "Small-scale solar energy system" means a system where solar energy is used to generate direct electrical or thermal energy primarily for on-site use. Such system may be affixed either to the ground or to a structure other than the system's mechanical support structure, such as a building or carport. . Any energy generated by such system that exceeds the on-site energy demand may be used off-site.

-- "Small-scale wind energy system" means a system where wind energy is used to generate direct electrical energy primarily for on-site use. Such system may be affixed to either the ground or to a structure other than the system's mechanical support structure, such as a building or carport. Such system has a rated capacity of 50 kilowatts or fewer. Any energy generated by such system that exceeds the on-site energy demand may be used off-site.

-- "Solar array" means the mechanically integrated assembly of modules or panels with a support structure and foundation, tracker, and other components, as required to generate direct electrical or thermal energy using solar energy. Solar arrays

do not include concentrated solar thermal devices, which use lenses or mirrors to focus or reflect a large area of sunlight onto a small area.

…

SECTION 5. Section 22.08.210 U is hereby amended to read as follows:

22.08.210 U

…

-- Utility-scale solar energy facility, ground-mounted. "Ground-mounted utility-scale solar energy facility" means a facility affixed to the ground where solar energy is used to generate direct electrical or thermal energy primarily for off-site use. This definition includes all on-site and off-site equipment and accessory structures related to the facility, including but not limited to solar arrays, mounting posts, substations, electrical infrastructure, transmission lines, operations and maintenance buildings, and other accessory structures.

-- Utility-scale solar energy facility, structure-mounted. "Structure-mounted utility-scale solar energy facility" means a facility affixed to a structure that is separate from the facility's mechanical support structure, such as a building or carport, where solar energy is used to generate direct electrical or thermal energy primarily for off-site use. This definition includes all on-site and off-site equipment and accessory structures related to the facility, including but not limited to solar arrays, mounting posts, substations, electrical infrastructure, transmission lines, operations and maintenance buildings, and other accessory structures.

-- Utility-scale wind energy facility, ground-mounted. "Ground-mounted utility-scale wind energy facility" means a facility affixed to the ground where wind

energy is used to generate direct electrical energy primarily for off-site use. This definition includes all on-site and off-site equipment and accessory structures related to the facility, including but not limited to wind towers, mounting posts, substations, electrical infrastructure, transmission lines, operations and maintenance buildings, and other accessory structures.

-- Utility-scale wind energy facility, structure-mounted. "Structure-mounted utility-scale wind energy facility" means a facility affixed to a structure that is separate from the facility's mechanical support structure, such as a building or carport, where wind energy is used to generate direct electrical energy primarily for off-site use. This definition includes all on-site and off-site equipment and accessory structures related to the facility, including but not limited to wind towers, mounting posts, substations, electrical infrastructure, transmission lines, operations and maintenance buildings, and other accessory structures.

…

SECTION 6. Section 22.08.230 W is hereby amended to read as follows:

22.08.230 W

…

~~-- "Wind energy conversion system, non-commercial (WECS-N)" means a facility consisting of a tower, wind turbine generator with blades, guy wires and anchors, and associated control and conversion electronic equipment to convert wind movement into electricity, with a rated capacity of not more than 50 kW; and that is incidental and subordinate to another use on the same parcel. A facility shall be considered a WECS-N only if it supplies electrical power solely for on-site use, except that when a parcel on~~

~~which a WECS-N is installed also received electrical power supplied by a utility company, excess electrical power generated by the WECS-N and not presently needed for on-site use may be used by the utility company in exchange for a reduction in the cost of electrical power supplied by that company to the parcel for on-site use, as long as no net revenue is produced by such excess electrical power.~~

-- "Wind tower" means the vertical component, including blades if any, of a small-scale wind energy system, a utility-scale wind energy facility, or a temporary meteorological tower that elevates the wind turbine generator and attached blades above the ground.

…

SECTION 7. Section 22.20.080 is hereby amended to read as follows:

22.20.080 Accessory Uses.

Property in Zone R-1 may be used for the following accessory uses:

…

-- Signs as provided in Part 10 of Chapter 22.52.

-- Small-scale solar energy system, in accordance with Part 15 of Chapter 22.52.

SECTION 8. Section 22.20.100 is hereby amended to read as follows:

22.20.100 Uses Subject to Permits.

Property in Zone R-1 may be used for:

A. The following uses, provided a conditional use permit has first been obtained, as provided in Part 1 of Chapter 22.56, and while such permit is in full force and effect in conformity with the conditions of such permit for:

…

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale wind energy system, in accordance with Part 15 of Chapter 22.52.

…

-- Subdivision directional signs subject to the limitations and conditions of Part 8 of Chapter 22.56.

-- Meteorological tower, temporary, in accordance with Part 15 of Chapter 22.52.

-- Townhouses, subject to the conditions of Section 22.56.255.

-- Utility-scale solar energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

-- Water reservoirs, dams, treatment plants, gaging stations, pump stations, wells and tanks, except those wells and tanks related to a shared water well, and any other use normal and appurtenant to the storage and distribution of water.

~~-- Wind energy conversion systems, non-commercial, in conformance with the standards and requirements specified in Part 15 of Chapter 22.52.~~

…

SECTION 9. Section 22.20.170 is hereby amended to read as follows:

22.20.170 Permitted Uses.

Property in Zone R-2 may be used for:

…

-- Small family homes, children.

-- Utility-scale solar energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

SECTION 10. Section 22.20.180 is hereby amended to read as follows:

22.20.180 Accessory Uses.

Property in Zone R-2 may be used for:

…

C. Small-scale solar energy system, in accordance with Part 15 of Chapter 22.52.

SECTION 11. Section 22.20.200 is hereby amended to read as follows:

22.20.200 Uses Subject to Permits.

Property in Zone R-2 may be used for:

A. The following uses, provided a conditional use permit has first been obtained, as provided in Part 1 of Chapter 22.56, and while such permit is in full force and effect in conformity with the conditions of such permit for:

…

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale wind energy system, in accordance with Part 15 of Chapter 22.52.

…

-- Telephone repeater stations.

-- Temporary meteorological tower, in accordance with Part 15 of Chapter 22.52.

-- Townhouses, subject to the conditions of Section 22.56.255.

-- Utility-scale wind energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

-- Water reservoirs, dams, treatment plants, gaging stations, pump stations, wells and tanks, except those wells and tanks related to a shared water well, and any other use normal and appurtenant to the storage and distribution of water.

~~-- Wind energy conversion systems, non-commercial, in conformance with the standards and requirements specified in Part 15 of Chapter 22.52.~~

…

SECTION 12. Section 22.20.260 is hereby amended to read as follows:

22.20.260 Permitted Uses.

Property in Zone R-3-( )U may be used for:

…

-- Townhouses.

-- Utility-scale solar energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

SECTION 13. Section 22.20.270 is hereby amended to read as follows:

22.20.270 Accessory Uses.

…

C. Small-scale solar energy system, in accordance with Part 15 of Chapter 22.52.

SECTION 14. Section 22.20.290 is hereby amended to read as follows:

22.20.290 Uses Subject to Permits.

Property in Zone R-3-( )U may be used for:

A. The following uses, provided a conditional use permit has first been obtained, as provided in Part 1 of Chapter 22.56, and while such permit is in full force and effect in conformity with the conditions of such permit for:

…

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale wind energy system, in accordance with Part 15 of Chapter 22.52.

…

-- Telephone repeater stations.

-- Temporary meteorological tower, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

-- Water reservoirs, dams, treatment plants, gaging stations, pump stations, wells and tanks, except those wells and tanks related to a shared water well, and any other use normal and appurtenant to the storage and distribution of water.

~~-- Wind energy conversion systems, non-commercial, in conformance with the standards and requirements specified in Part 15 of Chapter 22.52.~~

…

SECTION 15. Section 22.20.340 is hereby amended to read as follows:

22.20.340 Permitted Uses.

Property in Zone R-4-( )U may be used for:

…

-- Townhouses.

-- Utility-scale solar energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

SECTION 16. Section 22.20.350 is hereby amended to read as follows:

22.20.350 Accessory Uses.

…

C. Small-scale solar energy system, in accordance with Part 15 of Chapter 22.52.

SECTION 17. Section 22.20.370 is hereby amended to read as follows:

22.20.370 Uses Subject to Permits.

Property in Zone R-4-( )U may be used for:

A. The following uses, provided a conditional use permit has first been obtained, as provided in Part 1 of Chapter 22.56, and while such permit is in full force and effect in conformity with the conditions of such permit for:

…

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale wind energy system, in accordance with Part 15 of Chapter 22.52.

…

-- Telephone repeater stations.

-- Temporary meteorological tower, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

-- Water reservoirs, dams, treatment plants, gaging stations, pump stations, wells and tanks, except those wells and tanks related to a shared water well, and any other use normal and appurtenant to the storage and distribution of water.

~~-- Wind energy conversion systems, non-commercial, in conformance with the standards and requirements specified in Part 15 of Chapter 22.52.~~

…

SECTION 18. Section 22.20.410 is hereby amended to read as follows:

22.20.410 Permitted Uses.

Property in Zone R-A may be used for:

…

-- Small family homes, children.

-- Utility-scale solar energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

SECTION 19. Section 22.20.420 is hereby amended to read as follows:

22.20.420 Accessory Uses.

…

C. Small-scale solar energy system, in accordance with Part 15 of Chapter 22.52.

SECTION 20. Section 22.20.440 is hereby amended to read as follows:

22.20.440 Uses Subject to Permits.

Property in Zone R-A may be used for:

A. The following uses, provided a conditional use permit has first been obtained, as provided in Part 1 of Chapter 22.56, and while such permit is in full force and effect in conformity with the conditions of such permit for:

…

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale wind energy system, in accordance with Part 15 of Chapter 22.52.

…

-- Telephone repeater stations.

-- Temporary meteorological tower, in accordance with Part 15 of Chapter 22.52.

-- Townhouses, subject to the conditions of Section 22.56.255.

-- Utility-scale wind energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

-- Water reservoirs, dams, treatment plants, gaging stations, pump stations, wells and tanks, except those wells and tanks related to a shared water well, and any other use normal and appurtenant to the storage and distribution of water.

~~-- Wind energy conversion systems, non-commercial, in conformance with the standards and requirements specified in Part 15 of Chapter 22.52.~~

…

SECTION 21. Section 22.24.070 is hereby amended to read as follows:

22.24.070 Permitted Uses.

Premises in Zone A-1 may be used for:

A. The following uses:

…

-- Small family homes, children.

-- Utility-scale solar energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 22. Section 22.24.080 is hereby amended to read as follows:

22.24.080 Accessory Uses.

Property in Zone A-1 may be used for:

…

D. Small-scale solar energy system, in accordance with Part 15 of Chapter 22.52.

SECTION 23. Section 22.24.100 is hereby amended to read as follows:

22.24.100 Uses Subject to Permits.

Property in Zone A-1 may be used for:

A. The following uses, provided a conditional use permit has first been obtained, as provided in Part 1 of Chapter 22.56, and while such permit is in full force and effect in conformity with the conditions of such permit for:

…

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale wind energy system, in accordance with Part 15 of Chapter 22.52.

…

-- Telephone repeater stations.

-- Temporary meteorological tower, in accordance with Part 15 of Chapter 22.52.

…

-- Townhouses, subject to the conditions of Section 22.56.255.

-- Utility-scale wind energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

B. The following uses, provided the specified permit has first been obtained, and while such permit is in full force and effect in conformity with the conditions of such permit for:

…

~~-- Wind energy conversion systems, non-commercial, in conformance with the standards and requirements specified in Part 15 of Chapter 22.52.~~

SECTION 24. Section 22.24.120 is hereby amended to read as follows:

22.24.120 Permitted Uses.

Premises in Zone A-2 may be used for:

…

D. The following additional uses:

…

-- Parks, playgrounds and beaches, with all appurtenant facilities customarily found in conjunction therewith.

-- Utility-scale solar energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 25. Section 22.24.130 is hereby amended to read as follows:

22.24.130 Accessory Uses.

Property in Zone A-2 may be used for:

…

D. Small-scale solar energy system, in accordance with Part 15 of Chapter 22.52.

SECTION 26. Section 22.24.150 is hereby amended to read as follows:

22.24.150 Uses Subject to Permits.

Property in Zone A-2 may be used for:

A. The following uses, provided a conditional use permit has first been obtained, as provided in Part 1 of Chapter 22.56, and while such permit is in full force and effect in conformity with the conditions of such permit for:

…

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale wind energy system, in accordance with Part 15 of Chapter 22.52.

…

-- Telephone repeater stations.

-- Temporary meteorological tower, in accordance with Part 15 of Chapter 22.52.

…

-- Townhouses, subject to the conditions of Section 22.56.255.

-- Utility-scale solar energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

B. The following uses, provided the specified permit has first been obtained, and while such permit is in full force and effect in conformity with the conditions of such permit for:

…

~~-- Wind energy conversion systems, non-commercial, in conformance with the standards and requirements specified in Part 15 of Chapter 22.52.~~

SECTION 27. Section 22.28.030 is hereby amended to read as follows:

22.28.030 Permitted Uses.

Premises in Zone C-H may be used for the following:

A. Services.

…

-- Stations – Bus, railroad, and taxi.

-- Utility-scale solar energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 28. Section 22.28.040 is hereby amended to read as follows:

22.28.040 Accessory Uses.

Premises in Zone C-H may be used for:

…

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale solar energy system, in accordance with Part 15 of Chapter 22.52.

SECTION 29. Section 22.28.060 is hereby amended to read as follows:

22.28.060 Uses Subject to Permits.

Premises in Zone C-H may be used for:

A. The following uses, provided a conditional use permit has first been obtained, as provided in Part 1 of Chapter 22.56, and while such permit is in full force and effect in conformity with the conditions of such permit for:

…

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale wind energy system, in accordance with Part 15 of Chapter 22.52.

…

-- Telephone repeater stations.

-- Temporary meteorological tower, in accordance with Part 15 of Chapter 22.52.

…

-- Travel trailer parks as provided in Part 6 of Chapter 22.52.

-- Utility-scale solar energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 30. Section 22.28.080 is hereby amended to read as follows:

22.28.080 Permitted Uses.

Premises in Zone C-1 may be used for:

A. The following commercial uses, provided all sales are retail and all goods sold except genuine antiques are new:

…

2. Services.

…

-- Union halls.

-- Utility-scale solar energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 31. Section 22.28.090 is hereby amended to read as follows:

22.28.090 Accessory Uses.

Premises in Zone C-1 may be used for:

…

B. The following additional accessory uses:

…

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale solar energy system, in accordance with Part 15 of Chapter 22.52.

…

SECTION 32. Section 22.28.110 is hereby amended to read as follows:

22.28.110 Uses Subject to Permits.

Premises in Zone C-1 may be used for:

A. The following uses, provided a conditional use permit has first been obtained, as provided in Part 1 of Chapter 22.56, and while such permit is in full force and effect in conformity with the conditions of such permit for:

…

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale wind energy system, in accordance with Part 15 of Chapter 22.52.

…

-- Tasting rooms, remote, subject to the applicable provisions of Part 23 of Chapter 22.52.

-- Temporary meteorological tower, in accordance with Part 15 of Chapter 22.52.

…

-- Travel trailer parks as provided in Part 6 of Chapter 22.52.

-- Utility-scale solar energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 33. Section 22.28.130 is hereby amended to read as follows:

22.28.130 Permitted Uses.

Premises in Zone C-2 may be used for:

A. The following commercial uses, provided all sales are retail and all goods sold except genuine antiques are new:

…

2. Services.

…

-- Union halls.

-- Utility-scale solar energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 34. Section 22.28.140 is hereby amended to read as follows:

22.28.140 Accessory Uses.

Premises in Zone C-2 may be used for:

…

C. The following additional accessory uses:

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale solar energy system, in accordance with Part 15 of Chapter 22.52.

SECTION 35. Section 22.28.160 is hereby amended to read as follows:

22.28.160 Uses Subject to Permits.

Premises in Zone C-2 may be used for:

A. The following uses, provided a conditional use permit has first been obtained, as provided in Part 1 of Chapter 22.56, and while such permit is in full force and effect in conformity with the conditions of such permit for:

…

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale wind energy system, in accordance with Part 15 of Chapter 22.52.

…

-- Tasting rooms, remote, subject to the applicable provisions of Part 23 of Chapter 22.52.

-- Temporary meteorological tower, in accordance with Part 15 of Chapter 22.52.

…

-- Travel trailer parks as provided in Part 6 of Chapter 22.52.

-- Utility-scale solar energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 36. Section 22.28.180 is hereby amended to read as follows:

22.28.180 Permitted Uses.

Premises in Zone C-3 may be used for:

A. The following commercial uses, provided a commercial appearance is maintained by office or window display:

…

2. Services.

…

-- Union halls.

-- Utility-scale solar energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 37. Section 22.28.190 is hereby amended to read as follows:

22.28.190 Accessory Uses.

Premises in Zone C-3 may be used for:

…

C. The following additional accessory uses:

…

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale solar energy system, in accordance with Part 15 of Chapter 22.52.

SECTION 38. Section 22.28.210 is hereby amended to read as follows:

22.28.210 Uses Subject to Permits.

Premises in Zone C-3 may be used for:

A. The following uses, provided a conditional use permit has first been obtained, as provided in Part 1 of Chapter 22.56, and while such permit is in full force and effect in conformity with the conditions of such permit for:

…

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale wind energy system, in accordance with Part 15 of Chapter 22.52.

…

-- Tattoo parlor.

-- Temporary meteorological tower, in accordance with Part 15 of Chapter 22.52.

…

-- Travel trailer parks as provided in Part 6 of Chapter 22.52.

-- Utility-scale solar energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 39. Section 22.28.230 is hereby amended to read as follows:

22.28.230 Permitted Uses.

Premises in Zone C-M may be used for:

A. The following commercial uses:

…

2. Services.

…

-- Union halls.

-- Utility-scale solar energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 40. Section 22.28.090 is hereby amended to read as follows:

22.28.240 Accessory Uses.

Premises in Zone C-M may be used for:

…

C. The following additional accessory uses:

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale solar energy system, in accordance with Part 15 of Chapter 22.52.

SECTION 41. Section 22.28.260 is hereby amended to read as follows:

22.28.260 Uses Subject to Permits.

Premises in Zone C-M may be used for:

A. The following uses, provided a conditional use permit has first been obtained, as provided in Part 1 of Chapter 22.56, and while such permit is in full force and effect in conformity with the conditions of such permit for:

…

-- Skating rinks, ice or roller.

-- Small-scale wind energy system, in accordance with Part 15 of Chapter 22.52.

…

-- Tattoo parlor.

-- Temporary meteorological tower, in accordance with Part 15 of Chapter 22.52.

…

-- Travel trailer parks as provided in Part 6 of Chapter 22.52.

-- Utility-scale solar energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 42. Section 22.28.290 is hereby amended to read as follows:

22.28.290 Permitted Uses.

A. Premises in Zone C-R may be used for:

1. Services.

…

-- Tourist information centers.

-- Utility-scale solar energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 43. Section 22.28.300 is hereby amended to read as follows:

22.28.300 Accessory Uses.

Premises in Zone C-R may be used for:

…

C. Small-scale solar energy system, in accordance with Part 15 of Chapter 22.52.

SECTION 44. Section 22.28.320 is hereby amended to read as follows:

22.28.320 Uses Subject to Permits.

Premises in Zone C-R may be used for:

A. The following uses, provided a conditional use permit has first been obtained, as provided in Part 1 of Chapter 22.56, and while such permit is in full force and effect in conformity with the conditions of such permit for:

…

-- Ski lifts, tows, runs, and warming huts.

-- Small-scale wind energy system, in accordance with Part 15 of Chapter 22.52.

…

-- Telephone repeater stations.

-- Temporary meteorological tower, in accordance with Part 15 of Chapter 22.52.

-- Theaters, drive-in.

-- Utility-scale solar energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 45. Section 22.32.110 is hereby amended to read as follows:

22.32.110 Accessory Uses.

Premises in Zone M-1 1/2 may be used for the following accessory uses:

…

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale solar energy system, in accordance with Part 15 of Chapter 22.52.

SECTION 46. Section 22.32.130 is hereby amended to read as follows:

22.32.130 Uses Subject to Permits.

Premises in Zone M-1 1/2 may be used for:

A. The following uses, provided a conditional use permit has first been obtained as provided in Part 1 of Chapter 22.56, and while such permit is in full force and effect in conformity with the conditions of such permit:

...

-- Signs, outdoor advertising, subject to the provisions of Part 10 of Chapter 22.52.

-- Small-scale wind energy system, in accordance with Part 15 of Chapter 22.52.

…

-- Tattoo parlor.

-- Temporary meteorological tower, in accordance with Part 15 of Chapter 22.52.

-- Theaters and other auditoriums having a seating capacity exceeding 3,000 seats.

-- Utility-scale solar energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 47. Section 22.32.170 is hereby amended to read as follows:

22.32.170 Accessory Uses.

Premises in Zone M-2 or Zone M-4 may be used for the following accessory uses:

…

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale solar energy system, in accordance with Part 15 of Chapter 22.52.

SECTION 48. Section 22.32.190 is hereby amended to read as follows:

22.32.190 Uses Subject to Permits.

A. The following uses, provided that a conditional use permit has first been obtained as provided in Part 1 of Chapter 22.56, and while such permit is in full force and effect in conformity with the conditions of such permit, except that in Zone M-4 a conditional use permit is required for uses in subdivisions 1, 2, and 3 of this subsection A only where the use listed is located within 300 feet of a public school, public park or a residential or A-1 Zone:

…

6. Uses.

-- Small-scale wind energy system, in accordance with Part 15 of Chapter 22.52.

-- Temporary meteorological tower, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale solar energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 49. Section 22.32.280 is hereby amended to read as follows:

22.32.280 Accessory Uses.

Premises in Zone M-2 1/2 may be used for the following accessory uses:

…

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale solar energy system, in accordance with Part 15 of Chapter 22.52.

SECTION 50. Section 22.40.190 is hereby amended to read as follows:

22.40.190 Permitted Uses.

Premises in Zone R-R may be used for:

A. The following commercial uses:

...

2. Services.

…

-- Tourist information centers.

-- Utility-scale solar energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 51. Section 22.40.200 is hereby amended to read as follows:

22.40.200 Accessory Uses.

Premises in Zone R-R may be used for:

A. The following accessory uses:

...

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale solar energy system, in accordance with Part 15 of Chapter 22.52.

…

SECTION 52. Section 22.40.220 is hereby amended to read as follows:

22.40.220 Uses Subject to Permits.

Premises in Zone R-R may be used for:

A. The following uses, provided a conditional use permit has first been obtained as provided in Part 1 of Chapter 22.56, and while such permit is in full force and effect in conformity with the conditions of such permit:

...

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale wind energy system, in accordance with Part 15 of Chapter 22.52.

…

-- Telephone repeater stations.

-- Temporary meteorological tower, in accordance with Part 15 of Chapter 22.52.

-- Townhouses, subject to the conditions of Section 22.56.255.

-- Utility-scale solar energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, ground-mounted, in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, structure-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 53. Section 22.40.260 is hereby amended to read as follows:

22.40.260 Accessory Uses.

Premises in Zone W may be used for the following accessory uses:

…

-- Signs, as provided in Part 10 of Chapter 22.52.

-- Small-scale solar energy system, structure-mounted, in accordance with Part 15 of Chapter 22.52.

SECTION 54. Section 22.40.280 is hereby amended to read as follows:

22.40.280 Uses Subject to Permits.

Premise in Zone W may be used for:

A. The following uses, provided a conditional use permit has first been obtained as provided in Part 1 of Chapter 22.56, and while such permit is in full force and effect in conformity with the conditions of such permit:

…

-- Restaurants and other eating establishments, including food take-out.

-- Small-scale solar energy system, ground-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 55. Section 22.40.410 is hereby amended to read as follows:

22.40.410 Permitted Uses.

…

C. Permitted uses in Zone O-S, accessory to a principal use listed under Subsection B of this section, Section 22.40.420.B, Section 22.40.430.A, and Section 22.40.430.B: Small-scale solar energy system, structure-mounted, in accordance with Part 15 of Chapter 22.52.

SECTION 56. Section 22.40.430 is hereby amended to read as follows:

22.40.430 Uses Subject to Permits.

A. The following uses, provided a conditional use permit has first been obtained as provided in Part 1 of Chapter 22.56, and while such permit is in full force and effect in conformity with the conditions of such permit:

…

-- Energy generating or storage devices, including but not limited to geothermal devices.

…

-- Ski lifts, tows, runs, and warming huts on a lot or parcel of land having as a condition of use an area of not less than five acres.

-- Small-scale solar energy system, ground-mounted, in accordance with Part 15 of Chapter 22.52.

…

SECTION 57. Section 22.44.113 is hereby amended to read as follows:

22.44.113 Agua Dulce Community Standards District.

…

D. Community-wide Development Standards.

…

8. Significant Ridgeline Protection. For purposes of this section, ridgelines are defined as the line formed by meeting the tops of sloping surfaces of land, and significant ridgelines are defined as ridgelines which are highly visible and dominate the landscape. The locations of the significant ridgelines within this CSD are shown on the map following this section and the criteria used for their designation are provided in the appendix following this section.

a. The highest point of any structure, excluding chimneys, rooftop antennas, amateur radio antennas, roof-mounted solar panels, and small-scale wind energy ~~conversion~~ systems, shall be located at least 50 vertical feet and 50 horizontal feet from a significant ridgeline; and

…

SECTION 58. Section 22.44.113 is hereby amended to read as follows:

22.44.113 Altadena Community Standards District.

…

C. Community-wide Development Standards.

…

2. Hillside Management.

…

d. Significant Ridgeline Protection. Ridgelines are defined as the line formed by the meeting of the tops of sloping surfaces of land. Significant Ridgelines are highly visible ridgelines that dominate the landscape. The locations of the significant ridgelines within the CSD are shown on the map following this Section.

i. The highest point of any structure shall be located at least 50 vertical feet and 50 horizontal feet from a significant ridgeline, excluding chimneys, rooftop antennas, amateur radio antennas, roof-mounted solar panels, and small-scale wind energy ~~conversion~~ systems.

…

SECTION 59. Section 22.44.133 is hereby amended to read as follows:

22.44.133 Santa Monica Mountains North Area Community Standards District.

…

D. Community-wide Development Standards.

…

5. Significant Ridgeline Protection.

…

b. The highest point of a structure that requires any permit shall be located at least 50 vertical feet and 50 horizontal feet from a significant ridgeline, excluding chimneys, rooftop antennas, small-scale wind energy ~~conversion~~ systems, and amateur radio antennas.

…

SECTION 60. Section 22.44.143 is hereby amended to read as follows:

22.44.143 Elizabeth Lake and Lake Hughes Community Standards District.

…

D. Community-Wide Development Standards.

…

4. Utilities.

…

b. Utility Devices.

i. Small-Scale Solar Energy Systems~~Utility Devices~~.

(A) Ground-~~-~~mounted small-scale solar energy systems shall be placed at least five (5) feet from the nearest property line; and

(B) Ground-~~-~~mounted small-scale solar energy systems less than ten (10) feet in height shall be set back an additional three (3) feet from the nearest property line for every one foot less than ten (10) feet in height.

…

10. Significant Ridgeline Protection.

…

b. The highest point of a structure shall be located at least one hundred-fifty (150) vertical feet and one hundred-fifty (150) horizontal feet in a southerly direction from a significant ridgeline, excluding chimneys, rooftop antennas, amateur radios, and small-scale wind energy ~~conversation~~ systems.

c. No portion of any structure shall be located less than fifty (50) horizontal feet in a northerly direction from a significant ridgeline, excluding amateur radio antennas, chimneys, rooftop antennas, and small-scale wind energy ~~conversion~~ systems.

…

SECTION 61. Section 22.44.144 is hereby amended to read as follows:

22.44.144 San Francisquito Canyon Community Standards District.

…

D. Community-wide Development Standards.

…

10. Significant Ridgeline Protection.

…

b. The highest point of a structure shall be located at fifty (50) vertical feet and fifty (50) horizontal feet from a significant ridgeline, excluding chimneys, rooftop antennas, amateur radio antennas, and small-scale wind energy ~~conversion~~ systems.

c. Any modification to subsection D.10.b. shall require a minor conditional use permit, as provided in Section 22.56.085. In approving such permit, the ~~Director,~~ Hearing Officer, or Commission shall make the following findings in addition to those required by Section 22.56.090:

…

SECTION 62. Part 15 of Chapter 22.52 is hereby repealed in its entirety.

SECTION 63. Part 15 of Chapter 22.52 is hereby added to read as follows:

PART 15

RENEWABLE ENERGY

SECTIONS:

22.52.1600 Purpose.

22.52.1605 Applicability.

22.52.1610 Application Materials.

22.52.1615 Standards for Small-Scale Solar Energy Systems.

22.52.1620 Standards for Utility-Scale Solar Energy Facilities.

22.52.1625 Standards for Temporary Meteorological Towers.

22.52.1630 Standards for Small-Scale Wind Energy Systems.

22.52.1635 Standards for Utility-Scale Wind Energy Facilities.

22.52.1640 Modifications.

22.52.1645 Uses Subject to Permits – Aviation Review.

22.52.1650 Uses Subject to Permits – Findings.

22.52.1655 Uses Subject to Permits – Conditions of Approval.

22.52.1660 Enforcement Procedures.

22.52.1600 Purpose.

This Part 15 establishes regulations and permit requirements that support and facilitate the development of small-scale solar energy systems, small-scale wind energy systems, utility-scale solar energy facilities, utility-scale wind energy facilities, and temporary meteorological towers in a manner that protects public health, safety, and welfare and minimizes significant impacts to the environment.

22.52.1605 Applicability.

A. Applicability of this Part 15. The provisions of this Part 15 shall apply to the development of any small-scale solar energy system, small-scale wind energy system, utility-scale solar energy facility, utility-scale wind energy facility, or temporary meteorological tower.

B. Applicability of zone and supplemental district regulations. All provisions of the zone and any supplemental district in which a small-scale solar energy system, small-scale wind energy system, utility-scale solar energy facility, utility-scale wind energy facility, or temporary meteorological tower is located shall also apply. Where a provision of the zone or supplemental district regulates the same matter as this Part 15, the provision of this Part 15 shall apply.

C. Exemption. The provisions of this Part 15 shall not apply to any small-scale solar energy system, small-scale wind energy system, utility-scale solar energy facility, utility-scale wind energy facility, or temporary meteorological tower approved prior to the effective date of the ordinance establishing this Part 15.

D. Prohibition. Ground-mounted utility-scale solar energy facilities and ground-mounted utility-scale wind energy facilities shall be prohibited within adopted Significant Ecological Areas designated in the General Plan, and Economic Opportunity Areas designated in the Antelope Valley Area Plan.

E. Subsequent application. The provisions of this Part 15 shall apply to:

1. Any modification(s) that would increase the physical size, height, or footprint of a previously approved small-scale solar energy system, small-scale wind

energy system, utility-scale solar energy facility, utility-scale wind energy facility, or temporary meteorological tower; and

2. Any modification(s) that would change the type of equipment used by the previously approved small-scale solar energy system, small-scale wind energy system, utility-scale solar energy facility, utility-scale wind energy facility, or temporary meteorological tower, except for replacement of equipment for maintenance purposes.

22.52.1610 Application Materials.

A. If a site plan review is required, the applicant shall submit the following:

1. All materials and information required by Section 22.56.1680;

2. A site plan that in addition to the features required by subsection F of Section 22.56.1680 depicts:

a. Solar array footprint and height,

b. Solar array setbacks from the perimeter of a roof for solar arrays that are mounted to the roof of a building;

3. A minimum of six different color photographs of the project area with a photo-key map.

B. If a Minor Conditional Use Permit or Conditional Use Permit is required, the applicant shall submit the following: 1. All materials and information required by Section 22.56.030 and a Burden of Proof statement that substantiates the findings required by Section 22.52.1650;

2. A minimum of six different color photographs of the project area with a photo-key map;

3. Color photo simulations of the project area before construction of the project and after construction of the project;

4. Utility-scale solar energy facilities. The following additional materials shall be required for ground-mounted utility-scale solar energy facilities:

a. A site plan that in addition to the features required by subsection A.7 of Section 22.56.030 depicts:

i. Solar array footprint and height,

ii. Solar array setbacks from all property lines,

iii. Area and amount of grading and site disturbance,

iv. Topography of the property,

v. Watercourses on the property, if any

vi. Access roads,

vii. Required fencing,

viii. Required signage,

viii. Lighting,

ix. Transmission lines,

x. Significant ridgelines on the property, if any

b. Detailed landscaping plan that depicts:

i. Required perimeter fencing, if any

ii. Proposed plant species palette, including number and size,

iii. Proposed water usage to plant and maintain proposed landscaping,

iv. Proposed timing and phasing of proposed landscaping,

c. Draft decommissioning plan,

d. Hydrology study,

e. Conceptual dust control plan,

f. Glare study,

g. Description of amount and source of water necessary for the construction and operation of the project;

5. Temporary meteorological towers. The following additional materials shall be required for temporary meteorological towers:

a. A site plan that in addition to the features required by subsection A.7 of Section 22.56.030 depicts:

i. FAA-required safety lights, if any,

ii. Required aviation-related paint markings and high visibility sleeves for ground-mounted temporary meteorological towers,

iii. For ground-mounted temporary meteorological towers, guy wires and climbing apparatus, if any;

b. An elevation that depicts wind tower height;

6. Small-scale wind energy systems. In addition to the materials required by subsection B.5 of this Section, a site plan that depicts:

a. Manual and automatic wind tower blade overspeed controls,

b. For ground-mounted small-scale wind energy systems, blade clearance from the finished grade and required signage, if any;

7. Utility-scale wind energy facilities. The following additional materials shall be required for utility-scale wind energy facilities:

a. FAA-required safety lights, if any,

b. Manual and automatic wind tower blade overspeed controls;

c. An elevation that depicts wind tower height;

d. For structure-mounted utility-scale wind energy facilities with wind towers that are mounted to the roof of a building, a site plan that in addition to the features required by subsection A.7 of Section 22.56.030 depicts wind tower setbacks from the perimeter of a roof;

b. For ground-mounted utility-scale wind energy facilities, in addition to the materials required by subsection B.4 of this Section, a site plan that depicts:

i. Climbing apparatus, if any,

ii. Required aviation-related paint markings and high visibility sleeves for ground-mounted temporary meteorological towers,

iii. Runway Protection Zones on the property, if any,

iv. Airport Influence Areas on the property, if any;

8. Additional Materials. The Director may request additional materials at the time of application submission or during review by the Department if the Director determines such materials are necessary for adequate evaluation.

22.52.1615 Standards for Small-Scale Solar Energy Systems.

A. Conformance with State requirements. A small-scale solar energy system shall be in conformance with the California Solar Rights Act (California Civil Code Section 714 et seq.).

B. Ground-mounted.

1. Height. The height of the solar array shall not exceed 15 feet.

2. Maximum lot coverage. The maximum lot coverage for solar arrays and any renewable energy accessory structures, shall be 25 percent of the lot or parcel of land or 2.5 acres, whichever is lesser.

C. Structure-mounted. The combined height of a structure and structure-mounted small-scale solar energy system shall not exceed the height limit of the zone by more than five feet.

22.52.1620 Standards for Utility-Scale Solar Energy Facilities.

A. Accessory structures. Accessory structures constructed for the purposes of operating and maintaining the utility-scale solar energy facility must meet all applicable development standards of the zone.

B. Structure-mounted. Structure-mounted utility-scale solar energy facilities shall be subject to the following standards:

1. Height. The combined height of a structure and structure-mounted utility-scale solar energy facility shall not exceed the height limit of the zone by more than five feet.

2. Setbacks. Setbacks from the perimeter of the roof shall be:

a. Three feet on residential buildings; or

b. Four feet on non-residential or mixed use buildings.

C. Ground-mounted. Ground-mounted utility-scale solar energy facilities shall be subject to the following standards:

1. Fencing. Fencing shall be required around the perimeter of the project. In addition to the California Public Utilities Commission and United States Occupational Safety and Health Administration fencing guidelines for substations, all fencing shall comply with the following, except as otherwise required by Public Works to maintain minimum corner sight distance:

a. Non-opaque fences may be permitted.

b. Fencing up to eight feet in height may be permitted regardless of any other fencing standards.

c. Fencing shall not be located within 15 feet of a public right-of-way but may be located within the required setback area.

d. Project perimeter fencing shall incorporate small animal-permeable design, unless otherwise modified by the Hearing Officer.

2. Height. Height of the solar array shall not exceed 25 feet.

3. Lighting. In addition to Part 9 of Chapter 22.44, outdoor lighting within the Rural Outdoor Lighting District, which is limited to that required for safety and security, shall be shielded and directed downward to avoid light trespass, and shall consist of:

a. Motion sensors for entry-lighting to the on-site equipment structures and buildings; and

b. Light-sensor or motion-sensor lighting for the main facility access gate, operations and maintenance building doorways, and any parking areas of facilities with operation and maintenance buildings.

4. Setbacks. Setbacks from the property line shall be:

a. A minimum of 30 feet in agricultural zones; or

b. As provided in the base zone for all non-agricultural zones.

5. Signs. One ground-mounted or pole-mounted project identification sign shall be located at each temporary and permanent ingress and egress point. Signs shall include owner information and emergency contact. No other signs shall be installed for the facility other than safety, directional, and required warning signs as outlined in Part 10 of Section 22.52.

6. Significant ridgelines The highest point of a utility-scale solar energy facility shall be located at least 50 vertical feet and 50 horizontal feet from a significant ridgeline identified in the General Plan, in an applicable Area or Community Plan, or in an applicable Community Standards District;

7. Coastal Zone. Within the Coastal Zone, the placement of any utility-scale solar energy facility shall not obstruct public views of the ocean from a Scenic or Visual Resource (e.g., Significant Ridgeline, Scenic Route, Scenic Element, and Scenic Viewshed) identified in the applicable Local Coastal Plan unless specific provisions for such siting are provided for in the applicable Cocal Coastal Plan and Coastal Development Permit or long-range development plan.

22.52.1625 Standards for Temporary Meteorological Towers.

A. All temporary meteorological towers shall be subject to the following standards:

1. Aviation safety. All safety lights required by the Federal Aviation Administration for any wind tower, shall comply with applicable Federal Aviation Administration standards. Any aviation-related agency or the Department may impose additional requirements as deemed necessary. No other lights shall be placed on the wind tower.

2. Maximum separation. Wind towers must be separated from each other by the safe industry practice depicted in Figure 22.52.1625-A, below.

FIGURE 22.52.1625-A – SEPARATION STANDARDS FOR TEMPORARY METEOROLOGICAL TOWERS

FIGURE 22.52.1625-A
HERE

B. Structure-mounted. The combined height of a structure and structure-mounted wind tower shall not exceed the height limit of the zone by more than five feet.

C. Ground-mounted. Ground-mounted temporary meteorological towers shall be subject to the following standards:

1. Aviation Safety. Wind towers of less than 200 feet in height, measured from finished grade shall be marked with alternating bands of aviation orange and white paint. High visibility sleeves shall be installed on the outer guy wires with high spherical marker balls of aviation orange color.

2. Climbing apparatus. All climbing apparatus shall be located at least 12 feet above the finished grade, and all wind towers shall be designed to prevent

climbing within the first 12 feet of the wind tower height, as measured from finished grade.

3. Location. The minimum setback for a wind tower shall be as depicted in Table 22.52.1625-A. The required distance shall also comply with any applicable fire setback requirements pursuant to California Public Resources Code Section 4290.

TABLE 22.52.1625-A – SETBACK REQUIREMENTS FOR TEMPORARY METEOROLOGICAL TOWERS	
SETBACK FROM	MINIMUM DISTANCE
On-site or Off-site Residence or Habitable Structure	1.5 x tallest wind tower height
Public Road or Highway	As required by Public Works to meet sight distance and minimum setback requirements from traveled lanes
Above Ground Transmission Line, Public Access Easement, or Public Trail	1.25 x tallest wind tower height
Property Line	1.25 x tallest wind tower height
On-site or Off-site Buildings Other Than a Residential Structure	1 x tallest wind tower height
Trees	As required by the Fire Department
Scenic Drives, Scenic Highways and Scenic Routes as identified in the General Plan or applicable Area or Community Plan	1,000 feet

4. Maximum number. More than one wind tower may be located on the same property if all of the location requirements and standards of this Part 15 are met for each wind tower. A maximum of two wind towers are permitted for each five gross acres of land.

5. Maximum wind tower height. The maximum wind tower height shall not exceed the height limit as depicted in Figure 22.52.1625-B below:

a. A total of 35 feet measured from the finished grade to the top of the blade in the vertical position for parcels of less than one gross acre in size;

b. A total of 65 feet measured from the finished grade to the top of the blade in the vertical position for parcels from one gross acre to less than two gross acres in size; and

c. A total of 85 feet measured from the finished grade to the top of the blade in the vertical position for parcels of two gross acres or greater in size.

FIGURE 22.52.1625-B – HEIGHT STANDARDS FOR TEMPORARY METEOROLOGICAL TOWERS

FIGURE 22.52.1625-B
HERE

22.52.1630 Standards for Small-Scale Wind Energy Systems.

A. In addition to the standards required under subsection A of Section 22.52.1625, the following standards shall also apply to all small-scale wind energy systems:

1. Automatic overspeed controls. A small-scale wind energy system shall be equipped with manual and automatic overspeed controls to limit the blade rotation speed to within the design limits of such system.

2. Significant ridgelines. The highest point of a small-scale wind energy system shall be located at least 50 vertical feet and 50 horizontal feet from a

significant ridgeline identified in the General Plan, in an applicable Area or Community Plan, or within an applicable Community Standards District.

3. Coastal Zone. Within the Coastal Zone, the placement of any small-scale wind energy system shall not obstruct public views of the ocean from a Scenic or Visual Resource (e.g., Significant Ridgeline, Scenic Route, Scenic Element, and Scenic Viewshed) identified in the applicable Local Coastal Program, unless specific provisions for such siting are provided for in the applicable Local Coastal Program and Coastal Development Permit or long-range development plan.

B. Structure-mounted. The combined height of a structure and structure-mounted wind tower shall not exceed the height limit of the zone by more than five feet.

C. Ground-mounted. In addition to the standards required under subsection C of Section 22.52.1625, the following standards shall also apply to ground-mounted small-scale wind energy systems:

1. Blade clearance. No portion of a blade shall extend within 20 feet of the finished grade.

2. Impacts to birds and bats.

a. Design. Use of trellis-style towers is prohibited.

b. Guy wires. Safety wires shall be installed on the turnbuckles of guy wires. Anchor points for any guy wires shall be located within the same property as the system, and located in such a manner so as not to be on or across any above-ground electric transmission or distribution lines.

c. Setbacks. The following setback requirements shall apply to reduce impacts to birds and bats:

i. No part of the small-scale wind energy system shall be closer than 300 feet or five times the tallest wind tower height, whichever is greater, from the following:

(A) Bat roosting sites;

(B) Recorded open space easements and publicly designated preserve areas; and

(C) Riparian areas and wetlands.

ii. No part of the small-scale wind energy system shall be closer than one mile from a known golden eagle nest site.

3. Signs. One sign, limited to 18 inches in length and 12 inches in height, shall be posted at the base of each wind tower. The sign shall include a note of no trespassing, a warning of high voltage, and the phone number of the property owner to call in the event of an emergency.

22.52.1635 Standards for Utility-Scale Wind Energy Facilities.

A. In addition to the standards required under subsection A of Section 22.52.1625 and subsection A of Section 22.52.1630, the following standards shall also apply to all utility-scale wind energy facilities:

1. Accessory structures. Accessory structures constructed for the purposes of operating and maintaining the utility-scale wind energy facility must meet all applicable development standards of the zone.

2. Aviation safety.

a. A utility-scale wind energy facility shall not be located within the Runway Protection Zone of any airport, as depicted in the County's airport land use compatibility plans.

b. A utility-scale wind energy facility shall not penetrate the imaginary surfaces (primary, approach, transitional, horizontal, and conical surfaces) as defined by the Federal Aviation Administration Federal Aviation Regulations Part 77 to protect the use of navigable airspace.

3. Lighting. In addition to Part 9 of Chapter 22.44, outdoor lighting within the Rural Outdoor Lighting District, which is limited to that required for safety and security, shall be shielded and directed downward to avoid light trespass, and shall consist of motion sensors for entry-lighting to the on-site equipment structures and buildings.

B. Structure-mounted. Structure-mounted utility-scale wind energy facilities shall be subject to the following standards:

1. Height. The combined height of a structure and structure-mounted utility-scale wind energy facility shall not exceed the height limit of the zone by more than five feet.

2. Setbacks. Setbacks from the perimeter of the roof shall be:

a. Three feet on residential buildings; or

b. Four feet on non-residential or mixed use buildings.

C. Ground-mounted. Ground-mounted utility-scale wind energy facilities shall be subject to the following standards:

1. Aviation safety. Wind towers of less than 200 feet in height, measured from finished grade shall be marked with alternating bands of aviation orange and white paint. High visibility sleeves shall be installed on the outer guy wires with high spherical marker balls of aviation orange color.

2. Blade clearance. No portion of a utility-scale wind energy facility blade shall extend within 30 feet from the finished grade.

3. Climbing apparatus. All climbing apparatus shall be located at least 12 feet above the finished grade, and all wind towers shall be designed to prevent climbing within the first 12 feet of the wind tower height, measured from finished grade.

4. Fencing. In addition to the California Public Utilities Commission and United States Occupational Safety and Health Administration fencing guidelines for substations, all fencing shall comply with the following, except as otherwise required by Public Works to maintain minimum corner sight distance:

a. Non-opaque fences may be permitted.

b. Fencing up to eight feet in height may be permitted regardless of any other fencing standards.

c. Fencing shall not be located within 15 feet of a public right-of-way but may be located within the required setback area.

d. Project perimeter fencing shall incorporate small animal-permeable design.

5. Impacts to birds and bats.

a. Design. Use of trellis-style towers is prohibited.

b. Guy wires. The use of guy wires shall be prohibited for all utility-scale wind energy facilities.

c. Setbacks. The following setback requirements shall apply to reduce impacts to birds and bats:

i. No part of a ground-mounted utility-scale wind energy facility shall be closer than 0.25 miles from the following:

(A) Adopted Significant Ecological Areas;

(B) Recorded open space easements and publicly designated preserve areas; and

(C) Riparian areas and wetlands.

ii. No part of a ground-mounted utility-scale wind energy facility shall be closer than 0.5 miles from bat roosting sites.

iii. No part of a ground-mounted utility-scale wind energy facility shall be closer than one mile from a known golden eagle nest site.

6. Lighting. Light-sensor or motion-sensor lighting is required for the main facility access gate, operations and maintenance building doorways, and any parking areas of facilities with operation and maintenance buildings for projects within the Rural Outdoor Lighting District.

7. Location. The minimum distance and safe clearances for a utility-scale wind energy facility shall be as depicted in Table 22.52.1635-A. The required distance shall also comply with any applicable fire setback requirements pursuant to the California Public Resources Code Section 4290.

TABLE 22.52.1635-A – SETBACK REQUIREMENTS FOR GROUND-MOUNTED UTILITY-SCALE WIND ENERGY FACILITY

Setback from	Minimum Distance
On-site or Off-site Residence or Habitable Structure	2 x tallest wind tower height
Public Road or Highway	As required by Public Works to meet sight distance and minimum setback requirements from traveled lanes.
Above Ground Transmission Line, Public Access Easement, or Public Trail	2 x tallest wind tower height
Property Line	2 x tallest wind tower height
On-site or Off-site Buildings Other Than a Residential Structure	1 x tallest wind tower height
Trees	As required by the Fire Department
Scenic Drives and Scenic Routes as identified in the General Plan or in an applicable Area or Community Plan	2 x tallest wind tower height
Railway	2 x tallest wind tower height

8. Maximum height. Wind tower height shall not exceed 500 feet above finished grade.

9. Signs. One ground-mounted or pole-mounted project identification sign shall be located at each temporary and permanent ingress and egress point. Signs shall include owner information and emergency contact. No other signs shall be installed for the facility other than safety, directional, and required warning signs as outlined in Part 10 of Section 22.52.

22.52.1640 Modifications.

A. When a site plan review is required, a Conditional Use Permit in compliance with Part 1 of Chapter 22.56, is required for any modification to the applicable standards in this Part 15, except as otherwise provided herein. In addition to

those required by Section 22.52.1650, the applicant for such Conditional Use Permit shall substantiate the following findings:

1. Due to topographic or physical features of the site, strict compliance with all of the required standards would substantially and unreasonably interfere with the establishment of the proposed development on the subject property; and

2. The requested modification(s) would not be contrary to the purpose of this Part 15.

B. When a Minor Conditional Use Permit or Conditional Use Permit is required, any modification of the applicable standards in this Part 15 may be requested as part of said permit, except as otherwise provided herein. The applicant shall substantiate the findings provided in subsection A above in addition to those required by Section 22.52.1650 and Part 1 of Chapter 22.56.

C. A small-scale solar energy system that exceeds the maximum lot coverage required under subsection B.2 of Section 22.56.1615, requires approval of a Minor Conditional Use Permit pursuant to Part 1 of Chapter 22.56 and is subject to the development standards specified in subsections A and B.1 of Section 22.52.1615 and A.2 and C.5 of Section 22.52.1620 and conditions specified in subsections A.2.d and A.2.g of Section 22.52.1655.

D. A wind tower greater than 500 feet in height requires approval of a variance pursuant to Part 2 of Chapter 22.56.

22.52.1645 Uses Subject to Permits – Aviation Review.

For any use subject to a Minor Conditional Use Permit or Conditional Use Permit and located within a Military Installations and Operations Area (MIOA) or Airport Influence Areas (AIAs) as identified by the General Plan or applicable Airport Land Use Compatibility Plan(s), the following provisions apply:

A. Consultation. Aviation-related agencies shall be consulted for review of the proposed project for any potential impacts to ensure the safety of residents and continued viability of military training and testing operations. The Department shall distribute copies of the proposed site plan, elevation plan, and location map to the aviation-related agencies and shall request comments within a minimum 30-day period. Applicable aviation-related agencies to be consulted include, but are not limited to, the Federal Aviation Administration, United States Navy, Edwards Air Force Base, Air Force Plant 42, United States Forest Service, California Department of Transportation Division of Aeronautics, Public Works – Aviation Division, Department of Regional Planning Airport Land Use Commission, County Forester and Fire Warden, and County Sheriff. The consultation review shall request consideration of the following:

1. Uses that produce electromagnetic and frequency spectrum interference, which could impact military operations;

2. Uses that release into the air any substances that may impair visibility such as steam, dust, or smoke;

3. Uses that produce light emissions that could interfere with pilot vision or be mistaken for airfield lighting such as glare or distracting lights; and

4. Uses that physically obstruct any portion of the MIOA due to relative height above ground level.

B. Any comments received through consultation shall be considered by the Department and provided to the Hearing Officer.

22.52.1650 Uses Subject to Permits – Findings.

In addition to the findings required under Part 1 of Chapter 22.56, the Hearing Officer shall approve a Minor Conditional Use Permit or Conditional Use Permit if he or she finds that:

A. The proposed development is sited and designed and will be constructed in such a way to minimize significant impacts to the environment including impacts to birds and bats, through appropriate measures including minimizing proximity to perch sites such as transmission lines and towers;

B. The proposed development is sited in such a way to minimize site disturbance (i.e., grading, brush clearance, and other forms of earthwork);

C. For ground-mounted utility-scale solar energy facilities and utility-scale wind energy facilities, the proposed vegetation along project perimeter fencing will:

1. Sufficiently provide buffer from adjacent residential and agricultural uses through variable placement and muting of frontage or other sensitive viewsheds so as to provide a natural visual transition between the project and its surroundings,

2. Sufficiently provide ground cover to the satisfaction of the staff biologist, and

3. Provide such buffer and ground cover in a timely manner to the satisfaction of the staff biologist; and

D. If the proposed development penetrates the lower floor elevation of any MIOA, the military operator of that MIOA has determined that the proposed

development is not detrimental to the function of that MIOA and would not pose a health or safety hazard to military personnel or the public.

22.52.1655 Uses Subject to Permits – Conditions of Approval.

If a Minor Conditional Use Permit or Conditional Use Permit is required, the following conditions of approval shall apply:

A. Utility-scale solar energy facilities.

1. Glare. All utility-scale solar energy facilities shall be designed and located in such a way to minimize reflective glare toward any habitable structure on adjacent properties as well as adjacent street rights-of-way.

2. Ground-mounted.

a. Access roads. All temporary and permanent ingress and egress points to the ground-mounted utility-scale solar energy facility shall be designed and sited to the satisfaction of Public Works and the Fire Department, and shall consider adequate spacing from intersections and maintain adequate sight distances. Dirt access roads shall be treated with a suitable non-toxic long-term soil binder, or application of similarly effective material to control dust such as use of gravel.

b. Decommissioning.

i. The draft decommissioning plan shall be prepared to the satisfaction of the Director and the Director of Public Works.

ii. Prior to any ground disturbance or the issuance of any grading or building permit, performance and financial guarantees in an amount sufficient to ensure the performance of the decommissioning plan shall be determined to the satisfaction of the Director and the Director of Public Works, and incorporated into

a final decommissioning plan. The amount shall be posted prior to any ground disturbance or the issuance of any grading or building permit.

iii. Prior to any ground disturbance or the issuance of any grading or building permit, the permittee shall record an easement granting access to the County for activities related to decommissioning. A draft easement document shall be submitted prior to easement recordation, for review and approval by the Director and the Director of Public Works.

iv. In the event that any portion of a ground-mounted utility-scale solar energy facility is not in operational condition for a consecutive period of six months, ceased operation, or the permit for the use has expired, operations for that use shall be deemed to have been discontinued. Upon written notice from the Department to the permittee advising of the discontinued use, the use shall be renewed or removed from the site within the time period specified below:

(A) Within six months after the written notice of discontinued use is sent to the permittee, decommissioning of the use shall commence in accordance with the decommissioning plan.

(B) Within the six month period specified by subsection d.i above, the permittee may provide the Department with a written request and justification for an extension to resume operations of the system, facility, or portions thereof.

c. Landscaped buffer. The following conditions shall apply:

i. A landscaped area at least 10 feet in depth shall be maintained along any project perimeter fencing, between such fencing and any public right-of-way or adjacent property with an existing residential or agricultural use.

ii. Existing non-invasive, drought-tolerant vegetation approved by the staff biologist shall be retained, and/or new non-invasive, drought-tolerant vegetation approved by the staff biologist shall be planted within the landscaped area.

iii. The landscaped area shall incorporate a variety of design elements appropriate for the surrounding area, including but not limited to hardscape, such as decorative rocks, boulders, berms, and fencing; and softscape, such as trees, shrubs, vines, and succulents. In no way shall the hardscape or softscape features adversely affect drainage patterns.

iv. The landscaped area shall be established in such manner that adequate corner sight distance is maintained from all access roads to the public right of way to the satisfaction of the Director of Public Works.

v. The landscaped area shall be planted and temporary irrigation system installed prior to final permit inspection of the project or project phase to the satisfaction of the Director. Establishment of the plantings shall be verified at the time of regular inspections according to inspection time frames in the project conditions.

vi. The landscaped area shall be maintained throughout the life of the project.

d. Site disturbance. The measures found in this subsection shall in no way be construed as a substitute for compliance with State requirements imposed by the applicable Air Quality Management District.

i. Soil erosion. To ensure dust control and minimal soil erosion, existing vegetation may be mowed, but removal of existing vegetation root systems shall be prohibited, except where necessary for construction of access roads, substations and related underground transmission lines, tanks, basins, inverter pads, or other areas required by the County.

ii. Hydrology. The facility shall be designed to minimize erosion, sedimentation, or other impacts to the natural hydrology and drainage patterns of the site. Existing topography and watercourses shall be retained or restored to pre-development conditions following construction and during operations, except for drainage features specifically designed to mitigate drainage impacts. Prior to any discretionary approval, a hydrology study shall be prepared in compliance with the most recent County standards for addressing drainage impacts to the satisfaction of Public Works.

iii. Grading. To control fugitive dust and preserve the natural topography, the facility shall be designed in such a way that the ground disturbance or grading is limited to only the access roads, substations and related underground transmission lines, tanks, basins, inverter pads, or other areas required by the County. A site plan shall depict the extent of grading and ground disturbance, and the facility shall comply with all applicable grading standards.

iv. Fugitive dust control plan. A fugitive dust control plan including a dust plume response plan shall be prepared for review and approval by applicable agencies prior to any earthwork activities.

v. Construction practices.

(A) Fugitive dust. Fugitive dust emission shall be controlled by phased earthwork, site watering, use of clean gravel not to exceed a depth of six inches where applicable, application of non-toxic soil stabilizers, limiting public access on unpaved areas, posting private roadways with reduced speeds, and/or re-vegetation. Use of other fugitive dust mitigation measures may be implemented if determined by the Department and Department of Public Works to be suitable methods to adequately control dust during construction, operations, and removal and restoration activities.

(B) Vegetation. Work within the existing vegetation where the facility components are being proposed shall be conducted with minimal disturbance, and the operator shall take all necessary precautions to not use vehicles or machinery for grading or alter the existing grade in these areas. When vehicles or machinery are deemed necessary for utility scale solar energy installation work, appropriate ground-protection practices (such as construction mats, stabilizers, or established vegetation) shall be utilized for both dust suppression and to ensure that the use of vehicles or machinery is compatible with continued and future vegetation growth. The facility shall retain a biologist to confirm that construction practices are compatible with continued and future vegetation growth. Any grading, disking, scraping, or other ground disturbance proposed as part of the project shall be permanently stabilized with

an earth-stabilizing product or other measure that is acceptable to the Departments of Public Works, Regional Planning, and Public Health to prevent fugitive dust.

e. Transmission lines. On-site and off-site transmission lines shall be placed underground to the satisfaction of the Department and Department of Public Works, except where above-ground crossings are otherwise required (such as over the California Aqueduct). A franchise agreement shall be required for distribution/transmission facilities within the public right of way. Disturbed areas shall comply with subsection B.8 of this Section to ensure dust control and minimal soil erosion.

f. Visual impact. Any utility-scale solar energy facility that is placed within the viewshed of a Scenic Drive, Scenic Highway or Scenic Route identified in the General Plan or in an applicable Area Plan or Community Plan shall be analyzed for its visual impacts. Appropriate conditions relating to siting, buffering, height, and design of the facility may be imposed to minimize significant effects on the viewshed; and

g. Water quality protection. Measures to protect groundwater and surface water from waste discharge shall be incorporated into the project design, as appropriate, and shall meet the requirements of the Regional Water Quality Control Board

h. Water use.

i. The project shall use the minimum amount of water required during the construction period. The project shall be limited to the maximum

use of water as established by the Hearing Officer for the duration of the construction period.

ii. The project shall use the minimum amount of water required during the operation of the project. The project shall be limited to the maximum use of water as established by the Hearing Officer for the operation of the project for the duration of this grant.

iii. The project shall use piped recycled water if it is available from the public right-of-way within one mile from the project site at fair market value and suitable for use. If such piped recycled water does not meet the water demand, the project shall use piped potable water if it is available from the public right-of-way within one mile from the project site at fair market value and suitable for use.

iv. The permittee shall maintain a daily log, which shall include the number of gallons and acre feet of water used on the project site used for the following, which includes, but is not limited to: construction, operation, maintenance, landscaping, irrigation, and maintenance. The permittee shall record monthly water usage by source within five working days following the conclusion of each month. The log shall be made available to the Department upon demand.

B. Temporary meteorological towers.

1. Colors. Except as otherwise required in this Section, the colors used in the construction materials or finished surface shall be muted and visually compatible with the surrounding development or environment.

2. Maintenance. All equipment and wind towers shall be maintained in an operational condition that poses no potential safety hazards. Maintenance shall

include, but not be limited to, painting, regularly scheduled cleaning, routine mechanical and/or electrical repairs, structural repairs, and security measures.

3. Ground-mounted. All temporary and permanent ingress and egress points to the wind tower shall be designed, sited and maintained to the satisfaction of the Public Works and the Fire Department, and shall consider adequate spacing from intersections and maintain adequate sight distances. Dirt access roads shall be treated with a suitable non-toxic long-term soil binder, or application of similarly effective material to control dust such as use of gravel.

C. Small-scale wind energy systems. In addition to the conditions of approval required under subsection B of this Section, the following conditions of approval shall also apply to small-scale wind energy systems:

1. Noise. Noise from a small-scale wind energy system shall not exceed 60 dBA SEL (single event noise level), as measured at the closest neighboring inhabited dwelling.

2. Visual Impact. Any small-scale wind energy system placed within the viewshed of a Scenic Drive, Scenic Highway or Scenic Route identified in the General Plan or in an applicable Area or Community Plan shall be assessed for its visual impacts, and appropriate conditions shall be applied relating to siting, buffers, and design of the system.

3. Ground-mounted. The vegetation within the entire area within 10 feet of the base of a wind tower shall be mowed, but removal of existing vegetation root systems shall be prohibited.

D. Utility-scale wind energy facilities. The conditions of approval required under subsections B and C of this section shall also apply to utility-scale wind energy facilities and subsection A.2 of this Section shall also apply to ground-mounted utility-scale wind energy facilities.

22.52.1660 Enforcement Procedures.

A. Pursuant to subsection A of Section 22.60.390, the Director or designee is authorized to issue a Final Zoning Enforcement Order, without prior issuance of a Notice of Violation, to any permittee operating a small-scale solar energy system, small-scale wind energy system, utility-scale solar energy facility, utility-scale wind energy facility, or temporary meteorological tower not in compliance with the provisions of this Part 15. The Final Zoning Enforcement Order shall subject the non-compliant operator to enforcement actions pursuant to Section 22.60.390, and to any civil and criminal remedies.

B. Nothing in this Section shall preclude the Director or designee from issuing a warning, field notice of violation, Notice of Violation, or citation prior to issuing a Final Zoning Enforcement Order for a non-compliant small-scale solar energy system, small-scale wind energy system, utility-scale solar energy facility, utility-scale wind energy facility or temporary meteorological tower.

SECTION 64. Section 22.52.2430 is hereby amended to read as follows:

22.52.2430 Wineries–Permit requirements.

…

C. Conditions of approval. In addition to any other condition imposed by the ~~Director~~Hearing Officer or the Commission, the development standards and operating regulations set forth in Sections 22.52.2410 and 22.52.2420 of this Part 23 shall be made conditions of approval for any winery CUP, except where modified by the Hearing Officer or the Commission.

…

SECTION 65. Section 22.52.2460 is hereby amended to read as follows:

22.52.2460 Tasting rooms–Permit requirements.

…

B. Conditions of approval. In addition to any other condition imposed by the ~~Director~~Hearing Officer or the Commission, the development standards and operating regulations set forth in Sections 22.52.2440 and 22.52.2450 of this Part 23 shall be made conditions of approval for any tasting room CUP, except where modified by the Hearing Officer or the Commission.

…

SECTION 66. Section 22.52.2490 is hereby amended to read as follows:

22.52.2490 Remote tasting rooms–Permit requirements.

...

B. Conditions of approval. In addition to any other condition imposed by the ~~Director~~Hearing Officer or the Commission, the development standards and operating regulations set forth in Sections 22.52.2470 and 22.52.2480 of this Part 23 shall be made conditions of approval for any remote tasting room CUP, except where modified by the Hearing Officer or the Commission.

…

SECTION 67. Section 22.56.070 is hereby amended to read as follows:

22.56.030 Application–Information Required.

A. An application for a conditional use permit shall contain the following information:

…

10. With each application, the applicant shall also file:

a. Maps in the number prescribed, and drawn to a scale specified by the director, showing the location of all property included in the request, the location of all highways, streets, alleys and the location and dimensions of all lots or parcels of land within a distance of 500 feet from the exterior boundaries of the subject parcel of land. If the application is for a minor conditional use permit in accordance with Section 22.56.085, a distance of 300 feet from the exterior boundaries of the subject parcel of land shall be provided in lieu of 500 feet,

b. One copy of said map shall indicate the uses established on every lot and parcel of land shown within said 500-foot radius or within said 300-foot radius if the application is for a minor conditional use permit in accordance with Section 22.56.085,

c. A list, certified to be correct by affidavit or by a statement under penalty of perjury pursuant to Section 2015.5 of the Code of Civil Procedure, of the names and addresses of all persons who are shown on the latest available assessment roll of the county of Los Angeles as owners of the subject parcel of land and as owning property within a distance of 500 feet from the exterior boundaries of the parcel of land to be occupied by the use. If the application is for a minor conditional use permit in accordance with Section 22.56.085, a distance of 300 feet from the exterior boundaries of the parcel of land to be occupied by the use shall be provided in lieu of 500 feet. One copy of said map shall indicate where such ownerships are located,

d. Proof satisfactory to the director that water will be available in quantities and pressures required by the Water Ordinance, set out at Division 1 of Title 20 of this code, or by a variance granted pursuant to said Division 1. The director may accept as such proof a certificate from the person who is to supply water that he can supply water as required by said Division 1 of Title 20, also stating the amount and pressure, which certificate also shall be signed by the forester and fire warden, or a certificate from the county engineer that such water will be available;

…

SECTION 68. Section 22.56.070 is hereby amended to read as follows:

22.56.070 Application–Public Hearing Required–~~Exception~~

In all cases where an application for a conditional use permit is filed, ~~except where the Director grants the permit pursuant to section 22.56.085,~~ the public hearing shall be held pursuant to the procedure provided in Part 4 of Chapter 22.60, except where an

application for a minor conditional use permit is filed. A public hearing for a minor conditional use permit shall not be subject to the provisions of Section 22.60.175.

SECTION 69. Section 22.56.085 is hereby amended to read as follows:

22.56.085 ~~Grant or Denial of~~ Minor Conditional Use Permit.

A. ~~Any person filing a~~An application for a minor conditional use permit may ~~request the Director to consider the application in accordance with the section~~be filed for the following uses:

…

-- Modification of significant ridgeline protection provisions as provided in Sections 22.44.143.D.10.b., 22.44.143.D.10.c. or 22.44.144.D.10.b.

-- Small-scale solar energy system, ground-mounted, in the Open Space and Watershed zones, in accordance with Part 15 of Chapter 22.52.

-- Small-scale wind energy system in accordance with Part 15 of Chapter 22.52.

…

-- Tasting rooms, remote, subject to the applicable provisions of Part 23 of Chapter 22.52.

-- Temporary meteorological towers in accordance with Part 15 of Chapter 22.52.

-- Utility-scale wind energy facility, structure-mounted, in all zones except the Single-Family Residence zone, in accordance with Part 15 of Chapter 22.52.

~~-- Wind energy conversion systems, non-commercial (WECS-N).~~

…

B. The purpose of this section is to authorize the ~~director's ex parte~~ consideration of minor conditional use permit applications that by their nature are limited in scope and impacts.

~~C. The director shall cause notice of the application to be mailed by first-class mail, postage pre-paid, to all those addresses on the list required by subsection A.10.c of Section 22.56.030 that are within a distance of 300 feet from the exterior boundaries of the parcel of land to be occupied by the requested use, and to such other persons whose property or interests might, in the director's judgment, be affected by the request. The notice shall describe the project and also indicate that any individual may request a public hearing on the application by filing a written request with the director within 14 calendar days following the date on the notice.~~

~~D~~C. ~~Unless at least two requests for a public hearing have been filed with the director as provided in subsection C of this section, the director~~The Hearing Officer may grant such permit ~~without a public hearing~~ if ~~the director~~ he or she finds that the use requested, subject to such conditions deemed necessary, will comply with the findings required by Section 22.56.090 and with any applicable requirements of Chapter 22.52, and if he or she further finds that the impacts of the use requested on safety, facilities and services, and natural resources are minor in nature.

~~E~~D. ~~The director shall notify the applicant and any persons who filed a timely request for a hearing of his decision. Any appeal from the director's decision shall be filed with the hearing officer within 14 days following the date on the notice of director's decision.~~ The decision of the Hearing Officer may be appealed to the commission. All appeals shall be filed within the time period set forth in, and shall be subject to all of the

other provisions of Part 5 of Chapter 22.60 except that the decision of the commission shall be final and effective on the date of the decision and shall not be subject to further administrative appeal, unless the permit was considered by the commission concurrently with a decision on a general plan or specific plan amendment, zone change, development agreement or other legislative action.

SECTION 70. Section 22.60.176 is hereby amended to read as follows:

22.60.176 Conduct of Hearings-Hearing Officer duty.

When a verified application is filed for a permit or variance and a hearing is required by Title 21 or this Title 22, the hearing officer shall hold such hearing unless the hearing examiner and/or commission conduct hearings pursuant to Section 22.60.171. The hearing officer shall hold a hearing for a minor conditional use permit application unless the minor conditional use permit is filed concurrently with an application for a general plan or specific plan amendment, zone change, development agreement or other legislative action.

APPENDIX B

Notice of Preparation and Initial Study

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT AND NOTICE OF PUBLIC SCOPING MEETING

To: State Clearinghouse, Responsible and Trustee Agencies, and Interested Individuals
Date: April 30, 2014
Subject: Notice of Preparation of a Draft Environmental Impact Report and Notice of Public Scoping Meeting
Project: Los Angeles County Renewable Energy Ordinance
Lead Agency: Los Angeles County

NOTICE IS HEREBY GIVEN that County of Los Angeles ("County"), through the Department of Regional Planning ("Department"), will be the Lead Agency for the preparation of an Environmental Impact Report (EIR) in accordance with the California Environmental Quality Act ("CEQA") for the project described below.

PROJECT INFORMATION: The project is an ordinance amending Title 22 of the County Code to establish regulations, which include definitions and development standards, for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary meteorological (MET) towers. The proposed Renewable Energy Ordinance ("Project") would apply to unincorporated portions of the County over which the County has land use jurisdiction; see Figure 1, Regional Location Map.

NOTICE OF PREPARATION: A Notice of Preparation (NOP) for the EIR, which describes the project and outlines the potential environmental impacts, has been prepared. The NOP will be available for review from **May 5, 2014** to **June 4, 2014** on the Department's website at http://planning.lacounty.gov/energy. Hardcopies will be available at the following locations:

Los Angeles County Regional Planning - 320 W. Temple St., Los Angeles, CA 90012, (213) 974-6476
Regional Planning Field Office – 335A East Avenue K-6, Lancaster, CA 93535, (661) 723-4475
Regional Planning Field Office – 26600 Agoura Rd., Calabasas, CA 91302, (818) 880-3799
Regional Planning Field Office – 4801 E. Third St., Los Angeles, CA 90022, (323) 881-7057
Regional Planning Field Office – 16005 E. Central Ave., La Puente, CA 91744, (213) 974-6411
Regional Planning Field Office – 125 S. Baldwin Ave., Arcadia, CA 91007, (213) 974-6411
Regional Planning Field Office – 23757 Valencia Blvd., Valencia, CA 91355, (661) 222-2570
Regional Planning Field Office – 13523 Telegraph Rd., Whittier, CA 90605, (213) 974-6411
Regional Planning Field Office – 1320 W. Imperial Hwy., Los Angeles, CA 90044, (213) 974-6411
Acton Agua Dulce Library – 33792 Crown Valley Rd., Acton, CA 93510, (661) 269-7101
Agoura Hills Library – 29901 Ladyface Court, Agoura Hills, CA 91301, (818) 889-2278
Avalon Library – 215 Sumner Ave., Avalon, CA 90704, (310) 510-1050
Florence Library – 1610 E. Florence Ave., Los Angeles, CA 90001, (323) 581-8028
La Crescenta Library – 2809 Foothill Blvd., La Crescenta, CA 91214, (818) 248-5313
Lancaster Regional Library - 601 W. Lancaster Blvd., Lancaster, CA 93534, (661) 948-5029
Lennox Library – 4359 Lennox Blvd., Lennox, CA 90304, (310) 674-0385
Littlerock Library – 35119 80th Street East, Littlerock, CA 93543, (661) 944-4138

Quartz Hill Library – 42018 N. 50th St. West, Quartz Hill, CA 93536, (661) 943-2454
Rowland Heights Library – 1850 Nogales St., Rowland Heights, CA 91748, (626) 912-5348
South Whittier Library – 14433 Leffingwell Rd., Whittier, CA 90604, (562) 946-4415
Temple City Library – 5939 Golden West Ave., Temple City, CA 91780, (626) 285-2136
Valencia Library – 23743 W. Valencia Blvd., Santa Clarita, CA 91355, (661) 259-8942
View Park Library – 3854 W. 54th St., Los Angeles, CA 90043, (323) 293-5371

The Department is seeking input from both agencies and members of the public on the scope and content of the environmental information and analysis to be contained in the EIR. Due to the time limits mandated by State law, written comments must be sent via mail, e-mail, or fax no later than 5:00 PM on **Wednesday, June 4, 2014**. Please send your comments at the earliest possible date to:

Los Angeles County Department of Regional Planning
Attn: Thuy Hua
320 W. Temple Street, 13th Floor
Los Angeles, CA 90012
Email: thua@planning.lacounty.gov
Fax: (213) 626-0434

PUBLIC SCOPING MEETING: Pursuant to the California Public Resources Code Section 21803.9, Los Angeles County will conduct two public scoping meetings. These meetings will provide a public forum for information dissemination and dialogue regarding the components of the proposed project, the overall process, and the draft EIR. While staff will summarize the issues raised at these meetings, anyone wishing to make formal comments on the NOP must do so in writing. The public scoping meetings will be held at the times and locations listed below:

Date: **Tuesday - May 20, 2014**
Time: **5:00 p.m. to 6:00 p.m.**
Location: **Antelope Valley Transit Authority – Board Room**
42210 6th Street West
Lancaster, CA 93534

Date: **Thursday - May 22, 2014**
Time: **12:00 p.m. to 1:00 p.m.**
Location: **Los Angeles County**
Department of Regional Planning
320 W. Temple Street, Room 150 – Commission Hearing Room
Los Angeles, CA 90012

Attachments: Figure 1, Regional Location Map
Initial Study

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FIGURE 1

Regional Location Map

RENEWABLE ENERGY ORDINANCE IS/NOP

Environmental Checklist Form (Initial Study)

County of Los Angeles, Department of Regional Planning

Project title: Renewable Energy Ordinance / Project No. R2014-01160 (1-5) / Case No(s). Advanced Planning No. 2014-00004, Environmental Assessment No. 2014-0096

Lead agency name and address: Los Angeles County Department of Regional Planning: 320 West Temple Street, Los Angeles, California 90012

Contact Person and phone number: Thuy Hua, (213) 974-6476

Project sponsor's name and address: Los Angeles County, 320 W Temple Street, Los Angeles, CA 90012

Project location: The proposed Renewable Energy Ordinance (project) would apply to the unincorporated portions of the County of Los Angeles (County) over which the County has land use jurisdiction.

Gross Acreage: Countywide; approximately 2,583 square miles (1,653,056 acres)

General plan designation: Variable

Community/Area wide Plan designation: All Area Plan and Community Plan designations

Zoning: Variable

Description of project: The project proposes an ordinance amending the Los Angeles County (County) Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary meteorological (MET) towers.

Surrounding land uses and setting: The County stretches along 75 miles of the Pacific Coast of Southern California and is bordered to the east by Orange County and San Bernardino County, to the north by Kern County, and to the west by Ventura County. Los Angeles County also includes two offshore islands, Santa Catalina Island, and San Clemente Island.

The unincorporated areas in the northern portion of the County are covered by large amounts of sparsely populated land and include the Angeles National Forest, part of the Los Padres National Forest, and the Mojave Desert. The unincorporated areas in the southern portion of the County consist of noncontiguous land areas, which are often referred to as the County's unincorporated urban islands. The Antelope Valley Planning Area covers approximately 1,800 square miles and includes over two dozen communities. The Antelope Valley Planning Area is bounded by Kern County to the north, Ventura County to the west, the Angeles National Forest (inclusive) to the south, and San Bernardino County to the east. It excludes the Cities of Lancaster and Palmdale.

Other public agencies whose approval may be required: None

Major projects in the area:

Project/Case No.

General Plan Update
Antelope Valley Area Plan Update
East Los Angeles 3rd Street Specific Plan
Florence-Firestone Community Plan
Santa Monica Mountains Local Coastal Program
Willowbrook TOD Specific Plan
Centennial Specific Plan

Reviewing Agencies:

Responsible Agencies

- ☐ None
- Regional Water Quality Control Board:
  - ☒ Los Angeles Region
  - ☒ Lahontan Region
- ☐ Coastal Commission
- ☒ Army Corps of Engineers

Special Reviewing Agencies

- ☒ Santa Monica Mountains Conservancy
- ☐ National Parks
- ☒ National Forest
- ☒ Edwards Air Force Base
- ☐ Resource Conservation District of Santa Monica Mountains Area
- ☒ City of Lancaster
- ☒ City of Palmdale
- ☒ Kern County
- ☒ San Bernardino County
- ☒ Antelope Valley Resource Conservation District
- ☒ State Department of Fish and Wildlife
- ☒ Antelope Valley Air Quality Management Board
- ☒ Southcoast Air Quality Management Board

Regional Significance

- ☐ None
- ☐ SCAG Criteria
- ☒ Air Quality
- ☐ Water Resources
- ☐ Santa Monica Mtns. Area

Trustee Agencies

- ☐ None
- ☒ State Dept. of Fish and Wildlife
- ☐ State Dept. of Parks and Recreation
- ☒ State Dept. Conservation
- ☒ Caltrans
- ☐ State Lands Commission
- ☐ University of California (Natural Land and Water Reserves System)

County Reviewing Agencies

- ☒ DPW:
  - Land Development Division (Grading & Drainage)
  - Geotechnical & Materials Engineering Division
  - Watershed Management Division (NPDES)
  - Traffic and Lighting Division
  - Environmental Programs Division
  - Waterworks Division
  - Sewer Maintenance Division
- ☒ Fire Department
  - Forestry, Environmental Division
  - Planning Division
  - Land Development Unit
  - Health Hazmat
- ☒ Sanitation District
- ☒ Public Health/Environmental Health Division: Land Use Program (OWTS), Drinking Water Program (Private Wells), Toxics Epidemiology Program (Noise)
- ☒ Sheriff Department
- ☒ Parks and Recreation
- ☐ Subdivision Committee

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project.

☒ Aesthetics	☒ Greenhouse Gas Emissions	☐ Population/Housing
☒ Agriculture/Forest	☒ Hazards/Hazardous Materials	☒ Public Services
☒ Air Quality	☒ Hydrology/Water Quality	☒ Recreation
☒ Biological Resources	☒ Land Use/Planning	☒ Transportation/Traffic
☒ Cultural Resources	☒ Mineral Resources	☒ Utilities/Services
☐ Energy	☒ Noise	☒ Mandatory Findings of Significance
☒ Geology/Soils		

DETERMINATION: (To be completed by the Lead Department.)
On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ _____
Signature (Prepared by) Date

_____ _____
Signature (Approved by) Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources the Lead Department cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the Lead Department has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level. (Mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced.)

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA processes, an effect has been adequately analyzed in an earlier EIR or negative declaration. (State CEQA Guidelines § 15063(c)(3)(D).) In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of, and adequately analyzed in, an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

7) The explanation of each issue should identify: the significance threshold, if any, used to evaluate each question, and; mitigation measures identified, if any, to reduce the impact to less than significance. Sources of thresholds include the County General Plan, other County planning documents, and County ordinances. Some thresholds are unique to geographical locations.

8) Climate Change Impacts: When determining whether a project's impacts are significant, the analysis should consider, when relevant, the effects of future climate change on: 1) worsening hazardous conditions that pose risks to the project's inhabitants and structures (e.g., floods and wildfires), and 2) worsening the project's impacts on the environment (e.g., impacts on special status species and public health).

1. AESTHETICS

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Have a substantial adverse effect on a scenic vista?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance is Countywide and therefore would allow these uses to be located near or within the viewshed of a scenic vista. Determining the level of impact to a scenic vista requires analyzing the changes to the vista as a whole and also to individual visual resources. A scenic viewshed provides a scenic vista from a given location, such as a highway, a park, a hiking trail, river/waterway, or even from a particular neighborhood. The boundaries of a viewshed are defined by the field of view to the nearest ridgeline. Scenic viewsheds vary by location and community and can include ridgelines, unique rock outcroppings, buttes, ocean views, or various other unusual or scenic landforms.

The County recognizes that the coastline, mountain vistas, and other scenic features of the region are significant resources for the County. The Hillside Management Areas within the County are designated to protect some of the dramatic views and scenic resources and vistas. The Hillside Management Areas are mountainous or foothill terrain with a natural slope of 25% or greater. Wind energy systems, as allowed under the ordinance, require open space in order to harness high wind resource potential. Therefore, they are generally located near ridgelines or hillside areas, or in open areas that tend to be visible. However, the proposed ordinance includes measures to minimize visual impacts to scenic vistas. For example, the top of a small-scale wind energy system must be located at least 50 vertical feet and 50 horizontal feet from any designated significant ridgelines. Also, any transmission lines for utility-scale renewable energy systems must be placed underground unless aboveground right-of-way crossings are required. The ordinance also includes height restrictions, lighting restrictions, color requirements to blend with surroundings, setbacks, and special conditions to minimize visual impacts to scenic drives, scenic routes, and public ocean views in the coastal zone. It is also important to note that the Hillside Management Areas Ordinance protects these scenic resources by requiring almost all development on properties with either the urban or non-urban designation to obtain a conditional use permit (CUP) with the intent of preserving the remaining natural topography.

Even though future projects will be required to implement the measures in the proposed ordinance and the Hillside Management Ordinance, renewable energy systems and temporary MET towers could introduce new vertical elements within the viewshed of a scenic vista and therefore may result in a substantial adverse impact on a scenic vista. The proposed ordinance's potential to result in a substantial adverse impact on a scenic vista will be further addressed in the program environmental impact report (PEIR).

b) Be visible from or obstruct views from a regional riding or hiking trail? ☒ ☐ ☐ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance is Countywide and therefore would allow these uses to be located near a regional riding or hiking trail. The County offers unique trail use opportunities that showcase its diverse scenery and provide connectivity to parks, open spaces, cultural resources, and wilderness areas. The County's regional trails are largely concentrated in the Santa Monica Mountains as well as in unincorporated areas surrounding the Angeles National Forest and throughout the Antelope Valley and Santa Clarita Valley.

The ordinance includes measures that would minimize visual impacts to regional riding or hiking trails. For example, transmission lines for utility-scale renewable energy systems must be placed underground unless aboveground right-of-way crossings are required. The ordinance also includes height restrictions, lighting restrictions, color requirements to blend with surroundings, and setbacks. Even though future projects will be required to implement these measures in the ordinance, renewable energy systems and temporary MET towers could result in potentially significant adverse impacts to regional trails since they could introduce new vertical elements within the viewshed of a regional trail and would potentially degrade the scenic character in and around the trail. The proposed ordinance's potential to result in a substantial adverse impact on regional riding or hiking trails will be further addressed in the PEIR.

c) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? ☒ ☐ ☐ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance is Countywide and therefore would allow these uses to be located near a state scenic highway. State scenic highways refer to those highways that are officially designated by the California Department of Transportation (Caltrans) as scenic (Caltrans California Scenic Highway Program (http://www.dot.ca.gov/hq/LandArch/scenic highways/scenic hwy.htm). Generally, the area defined within a state scenic highway is the land adjacent to and visible from the vehicular right-of-way. The dimension of a scenic highway is usually identified using a motorist's line of vision, but a reasonable boundary is selected when the view extends to the distant horizon. The scenic highway corridor extends to the visual limits of the landscape abutting the scenic highway.

The ordinance includes specific measures to minimize visual impacts to a scenic drive or scenic route. The ordinance requires any small-scale wind energy system or utility-scale ground-mounted renewable energy system placed within the viewshed of a scenic drive to be analyzed for visual impacts and apply appropriate conditions such as siting, buffering, height, and design to minimize significant effects. Other measures that would generally minimize visual impacts, such as those to trees, rock outcroppings, and historic buildings within a scenic highway, include undergrounding transmission lines, height restrictions, lighting restrictions, color requirements to blend with surroundings, and setbacks. Even though future projects will be required to implement the measures in the ordinance, renewable energy systems and temporary MET towers could result in potentially significant adverse impacts to scenic resources within a scenic highway since they could introduce new vertical elements within the viewshed of a scenic highway. The proposed ordinance's

potential to result in a substantial adverse impact on scenic resources within a state scenic highway will be further addressed in the PEIR.

d) Substantially degrade the existing visual character or quality of the site and its surroundings because of height, bulk, pattern, scale, character, or other features?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance would allow these uses that may substantially degrade the existing visual character or quality of a site and its surroundings because of height, bulk, pattern, scale, character, or other features. Visual character is the objective composition of the visible landscape within a viewshed. Visual character is based on the organization of the pattern elements line, form, color, and texture. Visual character is commonly discussed in terms of dominance, scale, diversity, and continuity. Visual quality is the viewer's perception of the visual environment and varies based on exposure, sensitivity, and expectation of the viewers.

The ordinance includes design measures to help future projects integrate with surrounding visual character and to minimize visual impacts. Such measures include undergrounding transmission lines, height restrictions, lighting restrictions, color requirements to blend with surroundings, and setbacks. Additionally, the ordinance requires special conditions to minimize visual impacts to scenic drives, scenic routes, and public ocean views in the coastal zone. Even though future projects will be required to implement the measures in the ordinance, renewable energy systems and temporary MET towers could result in potentially significant adverse impacts to visual character since they could introduce new facilities with height, bulk, and scale that may differ from existing surrounding uses. For example, a utility-scale wind energy system is a type of renewable energy system that requires open space to harness higher wind resource potential; therefore, these systems are generally located near ridgelines or in open areas that tend to be visible. The proposed ordinance's potential to result in a substantial adverse impact to visual character will be further addressed in the PEIR.

e) Create a new source of substantial shadows, light, or glare which would adversely affect day or nighttime views in the area?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance would allow these uses that could generate shadows, light, or glare.

Shadows

Solar energy systems are typically not tall enough to generate substantial shadows that would affect nearby sensitive receptors. Future wind energy systems and temporary MET towers allowed under the ordinance may generate shadows due to their height. However, the massing of wind turbines is broken up, which creates passages through which light may pass, thereby minimizing impacts to nearby sensitive receptors.

Light

The ordinance prohibits lighting on temporary MET towers and ground-mounted utility-scale renewable energy system towers except for safety lighting to meet Federal Aviation Administration (FAA) standards or to meet other aviation agency requirements. Night-lighting for safe and secure access to entryways and operation and maintenance buildings for all future projects under the ordinance, as applicable, shall be shielded and directed downward and shall include motion sensors. Additionally, future projects located within the rural outdoor lighting district shall comply with the County's Rural Outdoor Lighting District Ordinance. The County's Rural Outdoor Lighting District Ordinance was developed to effectively address and minimize the impact of new source light pollution on nighttime views. Compliance with the County's Rural Outdoor Lighting District Ordinance is required prior to issuance of any building permit for any project located within the rural outdoor lighting district. Mandatory compliance for all new building permits ensures that future projects under the proposed ordinance, in combination with all past, present, and future projects, will not contribute to a cumulatively considerable impact. Therefore, compliance with the County's Rural Outdoor Lighting District Ordinance and lighting requirements of the proposed ordinance ensures that the project will not create a significant new source of substantial light that would adversely affect daytime or nighttime views in the area, on a project or cumulative level.

Glare

The ordinance requires all renewable energy facilities to use non-reflective colors and materials. However, solar projects would still have the potential to generate glare, primarily produced from the solar panels, which reflect a small portion of the sun's image back to the viewer. It is important to understand that glare intensity is directly related to the angle of incidence of the sun striking the panel, and may account for a wide range of results depending on whether the solar panels are static or moving throughout the day. The level of impact from glare exposure depends on the location of sensitive receptors. Sensitive receptors may include residents, recreationists, and motorists. Glare from solar panels may also result in potential hazards to flight operations; this issue is addressed in Section 9, Hazards and Hazardous Materials. Temporary MET towers and wind energy systems are less likely to result in glare impacts, although lighting associated with these facilities may result in glare. The proposed ordinance's potential to result in a substantial adverse visual impact due to glare will be further addressed in the PEIR. It should also be noted that for discretionary solar projects, the County typically includes the following mitigation measure: "glass used to cover the flat-plate photovoltaic (PV) panels shall be high-transmission, low-iron tempered glass and have a reflectance value of 8 percent or less."

Shadow Flicker

Future wind energy systems may result in shadow flicker, which is commonly defined as alternating changes in light intensity at a given stationary location. In order for shadow flicker to occur, three conditions must be met:

- The sun must be shining with no clouds obscuring the sun
- The rotor blades must be spinning and be located between the receptor and the sun
- The receptor must be sufficiently close to the turbine to be able to distinguish a shadow created by the turbine.

Concerns are occasionally raised about adverse health effects caused by shadow flicker such as annoyance, stress, and/or seizures in persons with photosensitive epilepsy. Concerns are also sometimes raised about shadow flicker on roadways distracting drivers and causing accidents. Utility-scale wind energy systems may result in significant shadow flicker effects if sensitive receptors are within 2,000 meters (6,562 feet) of the proposed turbines. Beyond 2,000 meters, the human eye cannot discern a shadow cast from a wind turbine. The proposed ordinance's potential to result in a substantial adverse impact related to shadow flicker will be further addressed in the PEIR.

2. AGRICULTURE / FOREST

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance is Countywide and would allow these uses to be located on land designated as Prime Farmland, Unique Farmland, and Farmland of Statewide or Local Importance according to the State Farmland Mapping and Monitoring Program. The proposed ordinance may have a potentially significant impact due to conversion of these farmland types to a non-agricultural use. The proposed ordinance's potential to convert Important Farmland to a non-agricultural use will be addressed in the PEIR.

b) Conflict with existing zoning for agricultural use, with a designated Agricultural Opportunity Area, or with a Williamson Act contract?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance is Countywide and therefore would allow these uses to be located on land zoned for agriculture, the County-designated Agricultural Opportunity Areas, or Williamson Act contract lands. The only Williamson Act contract lands in the County are located on Catalina Island and held by the Catalina Island Conservancy as set asides for open space and recreational purposes.

Per County Code Title 22, electric generating plants are a conditionally allowed use in the Heavy Agricultural (A-2) zones upon obtaining a CUP, which indicates they are generally compatible uses in agricultural zones. The future uses allowed pursuant to the ordinance could be found on land under a Williamson Act contract or in a County-designated Agricultural Opportunity Area. The Williamson Act contract may need to be reviewed or removed from the property; however, this would be determined on a case-by-case basis. The proposed ordinance's potential to conflict with agricultural zoning, a County-designated Agricultural Opportunity Area, or a Williamson Act contract will be addressed in the PEIR.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code § 12220 (g)), timberland (as defined in Public Resources Code § 4526), or timberland zoned Timberland Production (as defined in Government Code § 51104(g))?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Within the unincorporated areas of the County, the Angeles National Forest and a small portion of the Los Padres National Forest encompass nearly 650,000 acres of land. Nearly 40,000 acres of the national forests are privately owned. The U.S. Forest Service is responsible for managing public forest lands. For the privately owned forest land parcels, commonly referred to as inholdings, the County retains responsibility for land use regulation.

Per County Code Title 22, forest lands within the County are zoned Open Space (OS) and Watershed (W) zones. Per County Code Title 22, electric generating plants are not permitted within the OS zone; however, they are permitted within the W zone with a CUP. Forest lands would not serve as an ideal location for future renewable energy facilities. Impacts resulting from implementation of the proposed ordinance would be less than significant.

d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☐

General Discussion

See Response 2(c).

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County and therefore facilities developed pursuant to the proposed ordinance may be located adjacent to or near agricultural or forest land. Therefore, implementation of the proposed ordinance could have an impact on existing agricultural land, existing agricultural uses, and forest and timberland. This potential impact will be addressed in the PEIR.

3. AIR QUALITY

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Conflict with or obstruct implementation of applicable air quality plans of either the South Coast AQMD (SCAQMD) or the Antelope Valley AQMD (AVAQMD)?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project is Countywide and therefore is located within two air basins. The boundaries of the two air basins reflect two distinct geographical areas called the Los Angeles Basin and Antelope Valley. The Los Angeles Basin is part of the South Coast Air Basin (SCAB), while the Antelope Valley is part of the Mojave Desert Air Basin (MDAB).

The air pollutants that are regulated by the federal and California Clean Air Acts fall under three categories, each of which is monitored and regulated:

- Criteria air pollutants
- Toxic air contaminants
- Global warming and ozone-depleting gases.

In 1970, the U.S. Environmental Protection Agency (EPA) identified six criteria air pollutants they found to be the most harmful to human health and welfare. These include:

- Ozone (O_3)
- Particulate matter (PM_{10} and $PM_{2.5}$)
- Carbon monoxide (CO)
- Nitrogen dioxide (NO_2)
- Sulfur dioxide (SO_2)
- Lead (Pb).

The entire SCAB is designated as a nonattainment area for both federal and state O_3 standards. The EPA has classified the SCAB as an "extreme nonattainment" area and has mandated that it achieve attainment no later than June 15, 2024. The federal NO_2 standard was revised in 2010, and all areas of California have been designated unclassifiable/nonattainment, and the SCAB is also designated as a nonattainment area for the state NO_2 standards. The SCAB is designated as an attainment area for federal and state CO and SO_2 standards, as an attainment area for the federal PM_{10} standard, and as a nonattainment area for the state PM_{10} standards. The SCAB is designated as a nonattainment area for both federal and state $PM_{2.5}$ standards. The MDAB is designated as a nonattainment area for both federal and state O_3 standards. The MDAB is also designated as a nonattainment area for state PM_{10} standards.

In response to the region's poor air quality, the South Coast Air Quality Management District (SCAQMD) and the Antelope Valley Air Quality Management District (AVAQMD) were created. The SCAQMD and the AVAQMD are responsible for monitoring air quality as well as planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards in the region.

The SCAQMD implements a wide range of programs and regulations, most notably, the Air Quality Management Plan (AQMP). The SCAQMD jurisdiction covers approximately 10,743 square miles and includes all of Los Angeles County except for the Antelope Valley, which is covered by the AVAQMD. According to the SCAQMD, if a project does not conform to a general plan, then it is not within the Southern California Association of Governments' (SCAG's) population and vehicle miles traveled projections, which form the foundation of the AQMP. The proposed ordinance would not generate growth, increase population, or require the alteration of an existing land use designation through amendments to the general plan or changes to zoning. Therefore, the level of development as a result of implementing the proposed ordinance would not exceed what was considered in the AQMP and would not conflict with or obstruct implementation of an air quality plan. The AVAQMD has adopted many of the same rules and regulations as those that are enforced by the SCAQMD. Rules include measures to reduce fugitive dust by requiring implementation of best available control measures for all fugitive dust sources and by prohibiting all forms of visible particulate matter from crossing any property line. The rule pertaining to fugitive dust, which would apply to projects in both AQMD jurisdictions, is intended to reduce particulate matter emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. Compliance with this rule would help alleviate fugitive dust generated by utility-scale renewable energy facilities. Discretionary review by the air quality management district in which a proposed renewable energy facility is located would be required to demonstrate compliance with that district's programs and regulations. Impacts are anticipated to be less than significant.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project is Countywide and therefore is located within two air basins, the SCAB and the MDAB.

Construction and grading activities associated with development of renewable energy facilities may result in emissions of PM_{10}, oxides of nitrogen (NO_x), and volatile organic compounds (VOCs). Construction emissions would be generated from two principal sources: (1) engine exhaust of construction equipment and vehicles, and (2) particulate emissions from soil disturbance due to grading, earthmoving, and vehicle activity on unpaved roads and work areas. Particulate pollutants of concern are diesel particulate matter from construction equipment and particulates in dust raised by earthmoving and grading; diesel particulate matter contributes to $PM_{2.5}$ air quality emission levels. Additional emissions would be generated by any workers commuting to future project sites and vehicle travel on unpaved roadways during construction and operation.. Additionally, future projects allowed by the ordinance would contribute to lowering polluting emissions from large power plants supplying power to the County. Therefore, impacts would be considered less than significant.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project is Countywide and therefore is located within two air basins, the SCAB and the MDAB.
As discussed in Response 3b, future projects allowed by the proposed ordinance are not anticipated to exceed screening levels of criteria pollutants. However, future projects, when combined with cumulative projects, may potentially result in new sources of particulate matter from construction activities and/or vehicle trips that may result in a significant increase in criteria pollutant emissions for which the SCAB or the MDAB are in nonattainment. The proposed ordinance's potential to result in an impact related to the violation of air quality standards will be addressed in the PEIR.

d) Expose sensitive receptors to substantial pollutant concentrations? ☐ ☐ ☒ ☐

General Discussion

Air quality regulators typically define sensitive receptors as schools (preschool through 12th grade), hospitals, resident care facilities, daycare centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. Residences are also considered sensitive receptors since they may house children and the elderly.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project is Countywide and therefore sensitive receptors could be identified within a quarter mile (the radius determined by the SCAQMD in which the dilution of pollutants is typically significant) of a future proposed renewable energy facility or temporary MET tower. However, a renewable energy system or temporary MET tower does not propose uses or activities that would result in exposure of sensitive receptors to significant pollutant concentrations and will not place sensitive receptors near CO hotspots. Additionally, future projects allowed under the ordinance would contribute to lowering polluting emissions from large power plants supplying power to the County. As such, implementation of the proposed ordinance would not expose sensitive populations to excessive levels of air pollutants and impacts would be less than significant.

e) Create objectionable odors affecting a substantial number of people? ☐ ☐ ☒ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. A future project developed under the ordinance could produce objectionable odors, which would result from VOCs, ammonia (NH_3), carbon dioxide (CO_2), hydrogen sulfide (H_2S), methane (CH_4), alcohols, aldehydes, amines, carbonyls, esters, disulfides, dust, and endotoxins from the construction and operational phases. However, these substances, if present at all, would only be in trace amounts (less than 1 microgram per cubic meter). Subsequently, no significant air quality / odor impacts are expected to affect surrounding receptors. Moreover, the effects of objectionable odors would be localized to the immediate surrounding area and would not contribute to a cumulatively considerable odor. Impacts are expected to be less than significant.

4. BIOLOGICAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS)?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Some future renewable energy systems will be located on developed lots or already cleared areas and will not have an impact on any candidate, sensitive, or special-status species. Some future renewable energy systems may be built on land that contains native habitat and possibly even candidate, sensitive, or special-status species.

Special-status biological resources include declining habitats and species that have been accorded special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, rare, or otherwise of concern. Databases of such resources are maintained by the CDFW, USFWS, and special groups such as the California Native Plant Society. Within the County, areas that are designated as Significant Ecological Areas (SEAs) or Sensitive Environmental Resource Areas (SERAs) in the coast zone are considered sensitive biological resources and may contain candidate, sensitive, or special-status species.

All future renewable energy systems built pursuant to the proposed ordinance would be required to comply with all existing state and federal regulations that ensure the protection of candidate, sensitive, or special-status species, including the federal Endangered Species Act and the California Endangered Species Act. Furthermore, future renewable energy systems developed pursuant to the proposed ordinance that are located within a SEA, even if only in part, are subject to review by the Significant Ecological Area Technical Advisory Committee (SEATAC) and those in a SERA are subject to review by the Environmental Review Board (ERB). SEA buffers are also mapped and treated the same as the SEAs or SERAs around which they are located. The SEATAC and ERB will recommend mitigation measures, such as minimizing development footprint, reducing project height, and avoidance of certain natural resources, to reduce potential impacts to biological resources, as necessary. Future renewable energy systems located in urbanized areas outside an SEA are not likely to contain candidate, sensitive, or special-status species. The proposed ordinance's potential to impact candidate, sensitive, or special-status species through habitat modification will be addressed in the PEIR.

b) Have a substantial adverse effect on any sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) identified in local or regional plans, policies, regulations or by CDFW or USFWS? ☒ ☐ ☐ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Some future temporary MET towers and renewable energy systems will be located on developed lots or already-cleared areas and will not have an impact on any sensitive natural communities. Some future renewable energy systems may be built on land that contains riparian habitat or other sensitive natural communities as defined by the Natural Community Conservation Plan (NCCP), the California Fish and Game Code, the Endangered Species Acts, the Clean Water Act (CWA), or other local or regional plans, policies, or regulations. Sensitive habitats and vegetation communities are those that are considered rare in the region, support special-status plant or animal species, or receive regulatory protection, including those that are of special concern to resource agencies or are afforded specific consideration through the California Environmental Quality Act (CEQA), Section 1602 of the California Fish and Game Code, Section 404 of the federal CWA, and the state's Porter-Cologne Water Quality Control Act. In addition, sensitive natural communities within the County include County-designated SEAs, SERAs in the Santa Monica Mountains Coastal Zone, and vegetation habitats recognized as sensitive by the state. SERAs include Environmentally Sensitive Habitat Areas, oak woodlands and savannas, significant watersheds, migration corridors, and special resource management areas. State-recognized sensitive vegetation habitats include those indicated as such by the CDFW on their Natural Communities List (http://www.dfg.ca.gov/biogeodata/vegcamp/natural_communities.asp), oak woodland, and any other habitats listed in a California Natural Diversity Database 9-quad analysis.

Future renewable energy systems built pursuant to this proposed ordinance would be required to comply with all existing state and federal regulations that ensure the protection of riparian and sensitive habitat communities, including the federal Endangered Species Act, the California Endangered Species Act, the federal CWA, and the California Streambed Alteration Agreement. Furthermore, future renewable energy systems developed pursuant to the proposed ordinance that are located within a SEA, even if only in part, are subject to review by the SEATAC and those in a SERA are subject to review by the ERB. SEA Buffers are also mapped are treated the same as the SEA or SERA around which it is located. The SEATAC and ERB will recommend mitigation measures, such as minimizing development footprint, reducing project height, and avoidance of certain natural resources, to reduce potential impacts to biological resources, as necessary. Future renewable energy systems located in urbanized areas outside an SEA are not likely to contain sensitive natural communities. The proposed ordinance's potential to impact any sensitive natural communities identified in local or regional plans, policies, or regulations or by the CDFW or USFWS will be addressed in the PEIR.

c) Have a substantial adverse effect on federally or state protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, and drainages) or waters of the United States, as defined by § 404 of the federal Clean Water Act or California Fish & Game Code § 1600, et seq. through direct removal, filling, hydrological interruption, or other means? ☐ ☐ ☒ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Any future renewable energy system built pursuant to the proposed ordinance would be required to comply with all federal regulations that ensure the protection of wetlands as defined by Section 404 of the CWA, including, but not limited to, marsh, vernal pool, and coastal. The U.S. Army Corps of Engineers (ACOE) issues Section 404 permits under the CWA, and generally takes jurisdiction over navigable waters or tributaries thereof within streams and rivers to the ordinary high water mark, as defined by erosional cues, sedimentation, and changes in vegetation. The Regional Water Quality Control Board (RWQCB) issues Section 401 Water Quality Certifications and regulates the discharge of waste within any region that could affect waters of the state, under authority of the provisions of the Porter-Cologne Water Quality Control Act. Prior to the issuance of a CWA Section 404 permit by the ACOE, a Section 401 Certification must be obtained from the RWQCB. No discharging into, directly removing, or hydrologically interrupting any federally protected wetlands will be permitted without appropriate authorization from the ACOE and RWQCB. At the state level, the Lake and Streambed Alteration Program requires written notification to the CDFW prior to altering a riparian area (a type of wetland) supported by a lake, river, or stream, including federally protected wetlands. Therefore, impacts would be less than significant.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? ☒ ☐ ☐ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers and renewable energy systems may be built on land that contains native habitat and possibly on land that provides wildlife corridors or native wildlife nursery sites. Wildlife corridors are linear landscape features that connect large patches of natural open space and provide avenues for animals to migrate between these natural areas. To function effectively, a wildlife corridor must link two or more patches of habitat for which connectivity is desired, and it must be suitable for the focal target species to achieve the desired demographic and genetic exchange between populations. Identified wildlife movement corridors within the County are mapped as SERAs in the Santa Monica Mountains Coastal Zone. Outside of the Santa Monica Mountains Coastal Zone, wildlife corridors and habitat linkages are being mapped as part of the SEA update program. These corridors and linkages are being identified as areas where wildlife is able to move from one open space area or SEA to another. While the current mapping of wildlife corridors in the County is extensive, the reality of wildlife movement corridors and linkages is more complex and exists in more locations that are not easily mapped (bird and bat migration corridors and most linear natural features such as mountain ranges and watercourses, for example). Where no specific corridor or linkage has been

mapped, the preparer should be aware of any natural drainage courses, streams, or ridgelines in the area, as these can be important wildlife and plant linkage areas.

Future renewable energy systems developed pursuant to the proposed ordinance may introduce new structures or vertical elements or may result in ground disturbance that could interfere with wildlife movement or impede the use of nursery sites. The proposed ordinance would allow for wind energy systems that may have the potential to impact birds that travel within the County. The Pacific Flyway is a major north–south migration route for birds that travel between North and South America. In Southern California, birds typically use the coastal and inland areas. The Pacific Coast route is used by gulls, ducks, and other water birds. Pursuant to the proposed ordinance, all utility-scale wind energy facilities shall be designed, constructed, and operated pursuant to the California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development published by the California Energy Commission[1] and conditions of approval may be imposed by the Regional Planning Commission, consistent with these guidelines, to reduce significant impacts to birds and bats.

Indirect effects may also occur from increased noise levels or nighttime lighting, which would potentially discourage movement within corridors and linkages. The proposed ordinance's potential to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites, will be addressed in the PEIR.

e) Convert oak woodlands (as defined by the state, oak woodlands are oak stands with greater than 10% canopy cover with oaks at least 5 inch in diameter measured at 4.5 feet above mean natural grade) or otherwise contain oak or other unique native trees (junipers, Joshuas, southern California black walnut, etc.)?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, some future temporary MET towers and renewable energy systems may be built on land that contains oak woodlands or other unique native trees. The presence of oak trees (*Quercus* spp.) or oak woodlands has been documented within the SERAs in the Santa Monica Mountains Coastal Zone and in the SEAs. In addition to oaks and oak woodlands, other unique species of trees in the County include juniper (*Juniperus* spp.), Joshua (*Yucca brevifolia*), Northern and Southern California black walnut (*Juglans hindsii*, *J. californica*), and California sycamore (*Platanus racemosa*). All of these species have been identified by the County as unique native trees, with the juniper and Joshua having also been identified by the state, under the Desert Plant Conservation Act, as unique species in California and in need of preservation. Future renewable energy projects would need to identify whether any unique species of trees are present within the site. Impacts to these unique species of trees may result from clearing or grading activities and from planting ornamental plants in close

[1] California Energy Commission. 2007. *California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development*. Commissioner Final Report, CEC-700-2007-008-CMF. Produced by the California Energy Commission with the assistance of the California Department of Fish and Wildlife. October 2007. http://www.energy.ca.gov/windguidelines/.

proximity. Any impact to oak trees requires an Oak Tree Permit, and under the adopted CEQA Guidelines[2] may result in a potentially significant impact if two or more trees are impacted. The proposed ordinance's potential to impact oak woodlands or other unique native trees will be addressed in the PEIR.

f) Conflict with any local policies or ordinances protecting biological resources, including Wildflower Reserve Areas (L.A. County Code, Title 12, Ch. 12.36), the Los Angeles County Oak Tree Ordinance (L.A. County Code, Title 22, Ch. 22.56, Part 16), the Significant Ecological Areas (SEAs) (L.A. County Code, Title 22, § 22.56.215), and Sensitive Environmental Resource Areas (SERAs) (L.A. County Code, Title 22, Ch. 22.44, Part 6)? ☒ ☐ ☐ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. The project area includes ten wildflower reserve areas, which are designated in Title 12, Ch. 12.36 of the L.A. County Code. Future renewable energy projects would not be developed within these wildflower reserve areas, with the exception of rooftop solar facilities, which would be permitted on buildings within a wildflower reserve area. The presence of oak trees or oak woodlands has been documented within the SERAs in the Santa Monica Mountains Coastal Zone and the SEAs. Future renewable energy projects would need to be consistent with the County's Oak Tree Ordinance and identify if any unique species of trees are present within the site. Impacts to these unique species of trees may result from clearing or grading activities, and planting ornamental plants in close proximity. Any impact to oak trees requires an Oak Tree Permit, and under the adopted CEQA Guidelines may result in a potentially significant impact if two or more trees are impacted. Future renewable energy facilities located in or around SERAs would require review by the ERB and may require mitigation measures, such as minimizing development footprint, reducing project height, and avoidance of certain natural resources, to reduce any potential impacts to biological resources. The proposed ordinance's potential to conflict with any local policies or ordinances protecting biological resources will be addressed in the PEIR.

g) Conflict with the provisions of an adopted state, regional, or local habitat conservation plan? ☒ ☐ ☐ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County.

At the state level, the CDFW has created several regional NCCPs. These plans are intended to be broader in scope than localized conservation plans and have the intent of preserving the integrity of large ecosystems, which sometimes stretch over multiple cities and counties. Currently, there are no NCCPs within the County.

[2] 14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

At the federal level, the Endangered Species Act requires a project seeking an incidental take permit for one or more federally listed species to develop an HCP, which must be approved by the USFWS. The only active HCP in the County is the Newhall Farm Seasonal Crossings HCP, which addresses temporary vehicle crossings and water diversions along the portion of the Santa Clara River west of Valencia to the Ventura County line.

Future temporary MET towers or renewable energy systems may be located in proximity to or within a local coastal program, one or more SEAs, an NCCP, or a federal Endangered Species Act HCP. The proposed ordinance's potential to conflict with the provisions of these plans will be addressed in the PEIR.

5. CULTURAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines § 15064.5?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located on a site that has a national or state-designated historical resource as defined under Section 15064.5(a) of the CEQA Guidelines. Future temporary MET towers or renewable energy systems may adversely affect historical sites or resources through the introduction of visual, auditory, or atmospheric effects that are out of character with the historical resources or alter the setting of the resource when the setting contributes to the resources' significance. The proposed ordinance's potential to impact historical resources will be addressed in the PEIR.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines § 15064.5?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located on a site that contains an archeological resource as defined by Section 15064.5 of the CEQA Guidelines. Future MET towers or renewable energy systems could negatively impact archeological resources if they result in ground-disturbing activities without proper regulation and monitoring. Ground-disturbing activities, such as excavation and grading, have the potential to damage or destroy archaeological resources that may be present on or below the ground surface, particularly in areas that have not previously been developed. Any future project developed pursuant to the proposed ordinance that is located in an area that has not been previously developed would require

notification to the South Central Coastal Information Center to determine the potential existence of archaeological resources on or near the project site. The proposed ordinance's potential to impact archeological resources will be addressed in the PEIR.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or contain rock formations indicating potential paleontological resources?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located on a site that contains a unique paleontological resource or site or a unique geologic feature. Future MET towers or renewable energy systems could negatively impact paleontological resources if they result in ground-disturbing activities without proper regulation and monitoring. Ground-disturbing activities, such as excavation and grading, have the potential to damage or destroy paleontological resources that may be present on or below the ground surface, particularly in areas that have not previously been developed. Any future project developed pursuant to the proposed ordinance that is located in an area that has not been previously developed would require notification to the County's Natural History Museum (NHM) to determine the potential existence of paleontological resources on or near the project site. If the NHM notifies the preparer that there are no known paleontological resources on or near the site, then the project will result in no impact to paleontological resources. However, the NHM may note that the project site is located near a known paleontological resource site and that buildout could affect paleontological resources at the nearby site. Under this scenario, the NHM may tell the preparer to order a Phase I archaeological survey to verify the existence of any paleontological resources. If it is determined that paleontological resources may exist on the future project site, the future project would incorporate mitigation measures as provided by the NHM or the Phase I archaeological survey. If the NHM does not provide a response, it is unlikely that they know of any resources in the vicinity of the project site and no impacts would occur. Under certain circumstances, County staff may prompt the applicant to order a Phase I archaeological survey. These circumstances include the presence of a unique geological feature on or near the future project site or known paleontological resources near the future project site due to another project located nearby. The County does not currently maintain any known map of identified paleontological resource areas. The potential for the implementation of the proposed ordinance to impact paleontological resources will be addressed in the PEIR.

d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located in an area known to contain human remains. As outlined in the CEQA Guidelines, Section 15064.5, in the event that human remains are discovered during grading or construction of a project, the County will work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in the California Public Resources Code, Section 5097.98, to ensure that all human remains will be appropriately treated or disposed of with

appropriate dignity and that any items associated with Native American burials will be provided to the appropriate Native Americans, as identified by the Native American Heritage Commission. As such, potential impacts associated with implementation of the proposed ordinance would be less than significant.

6. ENERGY

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Conflict with Los Angeles County Green Building Ordinance (L.A. County Code Title 22, Ch. 22.52, Part 20 and Title 21, § 21.24.440) or Drought Tolerant Landscaping Ordinance (L.A. County Code, Title 21, § 21.24.430 and Title 22, Ch. 22.52, Part 21)?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance includes a measure requiring existing drought-tolerant native or non-native vegetation approved by County staff biologist to be retained or new such vegetation to be placed along any fencing. The proposed ordinance would not conflict with the Los Angeles County Green Building Ordinance or Drought-Tolerant Landscaping Ordinance. Impacts would be less than significant.

b) Involve the inefficient use of energy resources (see Appendix F of the CEQA Guidelines)?	☐	☐	☐	☒

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Therefore, future projects allowed by the ordinance would contribute to lowering polluting emissions from large power plants supplying power to the County. The proposed ordinance would not involve the inefficient use of energy resources; therefore, no impact would occur.

7. GEOLOGY AND SOILS

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as	☐	☐	☒	☐

delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known active fault trace? Refer to Division of Mines and Geology Special Publication 42.

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located in a fault-rupture hazard zone as identified by the Alquist-Priolo Earthquake Fault Zoning Act, Special Publication 42, Revised 1997, Fault-Rupture Hazards Zones in California, or within an area with substantial evidence of a known fault. However, structures that will be built pursuant the proposed ordinance will be required to comply with the County Building Code requirements. Included in the County Building Code are requirements that address seismic events through engineering requirements prior to the issuance of a building permit. Additionally, if a future temporary MET tower or renewable energy system is located in close proximity to any known fault trace or designated fault zone, the County's Department of Public Works (DPW) will likely require a geology or geotechnical report. A geology report describes the geology of the project site, whereas a geotechnical report is a geology report with an additional analysis providing construction standards to be incorporated into the future project to address any on-site seismic conditions. The seismic impact will be based on the findings of that report. Therefore, due to these requirements, the proposed ordinance does not have the potential to expose people or structures to substantial adverse effects. Impacts from the exposure of people or structures to a known fault rupture hazard zone as a result of the proposed ordinance would be less than significant.

ii) Strong seismic ground shaking?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located near a near a known activefault zone as defined within the International Conference of Building Officials Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada (for use with the 1997 Uniform Building Code). To ensure the structural integrity of all buildings and structures, a project must conform to the Seismic Requirements, Chapter 16, Section 162, Earthquake Design, as outlined within the California Building Code. Additionally, as described in Response 7(a)(i), a geology report may be required for future projects located near a known fault zone. The geology report would recommend construction standards to be incorporated into future projects to address any on-site seismic conditions. Therefore, compliance with the building codes and preparation of a geology report, if required, would reduce potential impacts from the exposure of people or structures to potential adverse effects from strong seismic ground shaking to less than significant.

iii) Seismic-related ground failure, including liquefaction and lateral spreading?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located on soils subject to liquefaction. To ensure the structural integrity of all buildings and structures, any future structures located in these areas must conform to the Seismic Requirements, Chapter 16, Section 162, Earthquake Design, as outlined within the California Building Code. Section 162 requires a soils compaction report with proposed foundation recommendations to be approved by a County structural engineer before the issuance of a building or grading permit. Additionally, as described in Response 7(a)(i), a geology report may be required for future projects located near a known fault zone. The geology report would recommend construction standards to be incorporated into future projects to address potential liquefaction or lateral spreading issues. Therefore, exposure of people or structures to potential adverse effects from seismic-related ground failure, including liquefaction and lateral spreading, as a result of implementing the proposed ordinance would be reduced to less than significant.

iv) Landslides? ☐ ☐ ☒ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located on landslide risk areas.

A landslide is the movement or flow of soil, rocks, earth, water, or debris down a slope. Seismic activity can trigger landslides, especially on steep slopes or those with slide planes that will move easily. The California Geological Survey maps potential landslide areas throughout California. These maps are updated periodically and usually in response to some geological event. If a future project developed pursuant to the proposed ordinance is not located within a designated landslide area, then no impact would occur. If the proposed project is located within a designated landslide area, the DPW will likely want to review the proposed project and may require the preparation of a geology or geotechnical report to address any concerns related to potential landslides. The geology report would recommend construction standards to be incorporated into future projects to address possible landslide issues. Therefore, the potential for adverse effects from landslides as a result of the proposed ordinance would be less than significant.

b) Result in substantial soil erosion or the loss of topsoil? ☒ ☐ ☐ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located in an area identified as having the potential for substantial soil erosion or the loss of topsoil. Utility-scale solar and wind energy systems often require large areas of land and may require a large amount of grading or other land disturbance.

For all grading permits, the County DPW requires compliance with their grading best practices manual, which includes best management practices (BMPs) for erosion control. In addition, the County's Low Impact Development (LID) Ordinance provides requirements for the management of storm runoff, which will lessen potential amounts of erosion activity resulting from stormwater. As part of the grading plan review and approval process, measures will be required to mitigate the erosion of the site per Los Angeles County Grading Code. The DPW may recommend additional measures. The proposed ordinance's potential

to result in substantial erosion or loss of topsoil will be addressed in the PEIR.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐

General Discussion

See Responses 7(a)(i)–7(a)(iii).

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located in an area identified as having the potential for expansive soil. Utility-scale solar and wind energy systems often require large areas of land and may require a large amount of grading or other land disturbance.

Expansive soils are those that change their volume depending on the presence and extent of water saturated in the soil. For all new construction, the County is required to comply with the improvement requirements identified in the 1997 Uniform Building Code, Division III, Design Standard for Design of Slab-On- Ground Foundations to Resist the Effects of Expansive Soils and Compressible Soils, which ensure suitable structure safety in areas with expansive soils. In addition, future projects developed pursuant to the proposed ordinance would be subject to the design requirements in the County Building Code, such as specific foundation design requirements. As described in Response 7(a)(i), a geology or geotechnical report may also be required. A geotechnical report would recommend construction standards to be incorporated into the future project to address any expansive soil issues. Therefore, the potential for projects implemented under the proposed ordinance to be located on expansive soil that would create substantial risks to life or property would be less than significant.

e) Have soils incapable of adequately supporting the use of onsite wastewater treatment systems where sewers are not available for the disposal of wastewater?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Wastewater generated from these facilities, if any, would be minimal, depending on whether operation and maintenance buildings are proposed. Some facilities may rely on public water and sewer for the disposal of wastewater. If public sewers are located within 200 feet of a project site, the proposed project must use the public sewer system. In this case, no on-site wastewater treatment systems (OWTS), also known as septic tanks, or alternative wastewater disposal systems would be proposed.

A future renewable energy system project could propose to discharge domestic waste to an OWTS. If an

OWTS is proposed, discharged wastewater must conform to the RWQCB's applicable standards, including the regional basin plan and the California Water Code. California Water Code, Section 13282, allows RWQCBs to authorize a local public agency to issue permits for OWTS "to ensure that systems are adequately designed, located, sized, spaced, constructed, and maintained." The County's Department of Public Health will require testing, which includes a geotechnical report and percolation testing. Therefore, future projects will have to demonstrate the presence of soils capable of adequately supporting the use of OWTS or alternative wastewater disposal systems as determined by the authorized local public agency.

Therefore, potential impacts related to soils being incapable of adequately supporting the use of OWTS or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater would be less than significant.

f) Conflict with the Hillside Management Area Ordinance (L.A. County Code, Title 22, § 22.56.215) or hillside design standards in the County General Plan Conservation and Open Space Element?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located in a designated Hillside Management Area. The proposed ordinance requires the top of a wind energy system to be located at least 50 vertical feet and 50 horizontal feet from a significant ridgeline identified in the general plan, in an applicable area or community plan, or in an applicable community standards district. Projects developed pursuant to the proposed ordinance would be required to comply with this requirement, as well as the design standards of the Hillside Management Area Ordinance and County General Plan Conservation and Open Space Element. Therefore, the proposed ordinance would not conflict with the Hillside Management Area Ordinance or the County General Plan Conservation and Open Space Element, and impacts would be less than significant.

8. GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Generate greenhouse gas (GHGs) emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐

General Discussion

GHG emissions are said to result in an increase in the Earth's average surface temperature, commonly referred to as global warming. This rise in global temperature is associated with long-term changes in precipitation, temperature, wind patterns, and other elements of the Earth's climate system, known as climate change. These changes are now broadly attributed to GHG emissions, particularly those emissions that result from the human production and use of fossil fuels. GHGs include carbon dioxide (CO_2),

methane (CH_4), halocarbons, and nitrous oxide (N_2O), among others. Human-induced GHG emissions are a result of energy production and consumption and personal vehicle use, among other sources.

Climate changes resulting from GHG emissions could produce an array of adverse environmental impacts, including water supply shortages, severe drought, increased flooding, sea-level rise, air pollution from increased formation of ground-level ozone (O_3) and particulate matter ($PM_{2.5}$, PM_{10}), ecosystem changes, increased wildfire risk, agricultural impacts, and ocean and terrestrial species impacts, among other adverse effects.

The County is currently preparing a community climate action plan (CCAP) to evaluate, track, and reduce GHG emissions in the unincorporated areas of the County. In January 2014, the County released the public review draft of the Unincorporated Los Angeles County Community Climate Action Plan 2020.[3] The final version of this document will become a component of the Air Quality Element of the Los Angeles County General Plan 2035. To reduce the impacts of climate change, the County has set a target to reduce GHG emissions from community activities in the unincorporated areas of the County by at least 11% below 2010 levels by 2020. The CCAP describes the County's plan for achieving this goal, includes specific strategy areas for each of the major emissions sectors, and provides details on the 2010 and projected 2020 emissions in the unincorporated areas (County of Los Angeles 2014, p. ES-1). Public agencies and private developers will be able to use the CCAP to comply with project-level review requirements pursuant to CEQA. It should be noted that an individual project's GHG emissions will generally not result in direct impacts under CEQA, as the climate change issue is global in nature; however, an individual project could be found to contribute to a potentially significant cumulative impact. CEQA Guidelines Section 15130(f) states that an environmental impact report (EIR) shall analyze GHG emissions resulting from a proposed project when the incremental contribution of those emissions may be cumulatively considerable.

Although the proposed ordinance would facilitate the development of renewable energy sources in place of a typical fossil-fuel-based electrical generation, resulting in long-term air quality benefits, future renewable energy systems and MET tower development would have the potential to result in emissions related to vehicle trips. Due to the brief construction period associated with the installation of small-scale renewable energy facilities and MET towers, and because traffic generated by the construction of these facilities would be relatively minor, GHG impacts as a result of construction emissions would be less than significant. Utility-scale renewable energy systems would require longer construction schedules and more construction equipment, off-site trucks hauling construction material, and worker trips. GHG emissions from these types of projects allowed pursuant to the proposed ordinance will be addressed in the PEIR.

b) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? ☐ ☐ ☐ ☐

General Discussion

In 2006, the state passed the Global Warming Solutions Act of 2006, commonly referred to as Assembly Bill (AB) 32, which set the GHG emissions reduction goal for the State of California into law. The law requires that by 2020, state emissions must be reduced to 1990 levels by reducing GHG emissions from significant sources via regulation, market mechanisms, and other actions.

Senate Bill (SB) 375, passed in 2008, links transportation and land use planning with global warming. It

[3] County of Los Angeles. 2014. *Unincorporated Los Angeles County Community Climate Action Plan 2020*. Public Draft. January. Prepared with assistance from ICF International (ICF 027920.0.011) for the County of Los Angeles Department of Regional Planning. Accessed March 17, 2014. http://planning.lacounty.gov/ccap/draft.

requires the California Air Resources Board to set regional targets for the purpose of reducing GHG emissions from passenger vehicles. Under this law, if regions develop integrated land use, housing, and transportation plans that meet SB 375 targets, new projects in these regions can be relieved of certain review requirements under CEQA.

As described in Response 8(a), the County is currently preparing a CCAP to evaluate, track, and reduce GHG emissions in the unincorporated areas of the County. In January 2014, the County released the public review draft of the CCAP.

The County's plans and regulations support that development of renewable energy. The proposed ordinance would help facilitate the development of renewable energy within the County and assist the County to meet the goals of AB 32 and the CCAP. Impacts would therefore be less than significant. Additionally, renewable energy projects would be required to comply with the CCAP programs, once the final CCAP has been adopted..

9. HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, storage, production, use, or disposal of hazardous materials?	☐	☐	☒	☐

General Discussion

Hazardous materials are classified at the federal (Resources Conservation and Recovery Act (RCRA) wastes or state level (non-RCRA wastes). California defines hazardous materials as any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or future hazard to human health and safety or to the environment if released (Health and Safety Code, Section 25501(p)).

In California, the Department of Toxic Substances Control is responsible for classifying hazardous materials. Hazardous materials are commonly stored and used by a variety of businesses and residences, and are commonly encountered during construction activities. Hazardous materials are routinely used, stored, and transported in conjunction with the construction and operation of industrial and some commercial/ retail businesses, educational facilities, and hospitals. In industrial and commercial uses, hazardous materials may include petroleum products and polychlorinated biphenyls (PCBs), and in residential uses, hazardous materials may include landscaping chemicals and cleaning solvents. Hazardous materials may be stored in small quantities in buildings and structures, in aboveground storage tanks, underground storage tanks (USTs), drums, and other types of containers. Typically, USTs are used by businesses such as gasoline stations and auto mechanics. Processing, transportation, and transfer operations are other activities that have the potential to pose a risk to human health and the environment from the accidental release of hazardous materials. Regulations such as the Hazardous Materials Business Plan requirements of the Health and Safety Code, Fire Code storage and containment requirements, or other applicable regulatory requirements are intended to prevent accidental releases of hazardous substances and to minimize risks should an accident or spill occur.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Hazardous materials used during construction of temporary MET towers or renewable energy systems may include gasoline, diesel fuel, oils, lubricants, solvents, detergents, degreasers, paints, and other supplies. All hazardous materials would be transported, stored, and properly disposed of in compliance with all applicable laws and regulations. The accidental release of hazardous materials or wastes during construction activities is possible. The accidental release of hazardous materials or wastes would be promptly contained and abated in accordance with all applicable laws and regulatory requirements, and therefore would not be expected to result in a significant impact.

During the operation of future temporary MET towers or renewable energy systems, limited quantities of hazardous materials would be stored on site. Materials may include fire suppressant and transformer insulating oil. Future projects would be required to develop and implement a hazardous materials and hazardous waste management program for both construction and operational phases. Therefore, implementation of the proposed ordinance would result in less than significant impacts relative to the routine transport, storage, production, use, or disposal of hazardous materials.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment?	☐	☐	☒	☐

General Discussion

See Response 9(a). Additionally, if lead-based paint is found during construction, the applicant would comply with County requirements and provide the Department of Public Works Building and Safety Division and the County Fire Department Health and Hazardous Materials Division with a copy of the qualifications/license of the lead-based paint abatement contractor who will perform the abatement or removal of lead-based paint. If required by the County, the applicant would prepare and submit a hazardous building materials demolition assessment and management plan to the DPW and Fire Department for review and approval to ensure compliance with all applicable federal, state, and local laws and regulations. Occupational Safety and Health Administration regulations are in place to assure that these materials are safely removed prior to or during demolition and renovation activities. Therefore, through compliance with regulations, projects developed pursuant to the proposed ordinance would result in a less than significant impact related to the release of hazardous materials, such as asbestos and lead.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of sensitive land uses?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located within one-quarter mile of an existing or proposed school and could propose the storage and handling of hazardous substances. Future project sites could include facilities listed in the EPA's Resource Conservation and Recovery Information System as a hazardous materials handler However, the proposed ordinance will not result in significant impacts to the

public or environment because all storage, handling, transport, emission, and disposal of hazardous substances will be in full compliance with local, state, and federal regulations (see Response 9(a)).

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located on a site listed in the State of California Hazardous Waste and Substances Sites List compiled pursuant to Government Code Section 65962.5.

However, the proposed ordinance will not create a significant hazard to the public or the environment because if a property is on the list, the County will not issue a building permit until any significant hazard has been reported and remediated to the satisfaction of the Department of Public Health – Environmental Health Division. Because remediation of the site will occur prior to issuance of a building permit, future projects developed pursuant to the proposed ordinance will not create a significant hazard to the public or the environment and impacts would be less than significant.

e) For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located on a site within an adopted airport land use plan or within 2 miles of a public or private airport. However, such projects would not result in hazards to airport safety or surrounding land uses because they would be evaluated by the Airport Land Use Commission. Also, if a renewable energy facility or temporary MET tower is located within the FAA Height Notification Surface due to its proximity to an airport, notice will be filed with the FAA. The applicant would complete FAA Form 7460-1 Notice of Proposed Construction or Alteration and submit the form to the FAA for review. The FAA would review the project and identify whether the project is an airspace obstruction or hazard. If not, the project would comply with the FAA Regulations, Part 77, Objects Affecting Navigable Airspace.

Lastly, the proposed ordinance includes several measures for aviation safety, as follows:

1. A utility-scale renewable energy facility shall not be located within the Runway Protection Zone of any airport, as depicted in the County's airport land use plans.
2. A utility-scale renewable energy facility shall not penetrate the imaginary surfaces (primary,

approach, transitional, horizontal, and conical surfaces) defined by the FAA Federal Aviation Regulations Part 77 to protect the use of navigable airspace.

3. A safety light that meets FAA standards shall be required for all wind towers that exceed a height of 200 feet. A safety light may be required on shorter wind towers when deemed necessary by any of the aviation-related agencies. No other lights shall be placed on such wind towers.

Therefore, projects developed pursuant to the proposed ordinance would not result in hazards to airport safety. Impacts would be less than significant.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐

See Response 9(e) regarding FAA notification and aviation safety measures of the proposed ordinance.

g) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐

General Discussion

The Office of Emergency Management (OEM) is responsible for organizing and directing the preparedness efforts of the Emergency Management Organization of Los Angeles County. The OEM is the day-to-day Los Angeles County Operational Area coordinator for the County. The emergency response plan for the unincorporated areas of the county is the Operational Area Emergency Response Plan, which is prepared by the OEM. The Operational Area Emergency Response Plan strengthens short- and long-term emergency response and recovery capability, and identifies emergency procedures and emergency management routes in the County. The County has also prepared a Local All Hazards Mitigation Plan to comply with federal law and to be eligible for disaster funding. Figure 9.7 of the Safety Element of the Draft General Plan depicts the County's fire disaster routes and Figure 9.9 depicts the County's designated disaster routes. These figures identify the routes that emergency responders are likely to take when responding to an emergency scenario, the routes that residents will be funneled toward to exit an area affected by a disaster, and the field facilities that will be used by emergency responders to coordinate their activities.

The project proposes an ordinance amending the County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located along an identified disaster route. However, such projects would not bring a substantial amount of additional people to the vicinity served by the routes or facilities. Nor would such projects block existing access routes.

Some utility-scale facilities may require fulltime employees to operate the Operation and Maintenance (O&M) buildings. Employees may include a facilities manager, engineers, technicians, mechanics, and security staff. If deemed necessary by the County a project-specific emergency response plan would be prepared and would coordinate with any existing designated disaster routes in the area and impacts would be less than significant.

h) Expose people or structures to a significant risk of loss, injury or death involving fires, because the project is located:				
i) within a Very High Fire Hazard Severity Zone (Zone 4)?	☒	☐	☐	☐
ii) within a high fire hazard area with inadequate access?	☒	☐	☐	☐
iii) within an area with inadequate water and pressure to meet fire flow standards?	☒	☐	☐	☐
iv) within proximity to land uses that have the potential for dangerous fire hazard?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located in a Very High Fire Hazard Severity Zone. Additionally, such projects may require use or storage of combustible materials, such as transformers for wind energy systems, that may be located in areas with little water supply. Impacts related to fire risk resulting from implementation of the proposed ordinance will be addressed in the PEIR.

i) Does the proposed use constitute a potentially dangerous fire hazard?	☒	☐	☐	☐

General Discussion

As indicated in Response 9(h), future projects developed pursuant to the proposed ordinance may require use or storage of combustible materials, such as transformers for wind energy systems. Impacts related to fire risk resulting from implementation of the proposed ordinance will be addressed in the PEIR.

10. HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐

General Discussion

The County is split between two water quality regions: the Los Angeles Region and the Lahontan Region. Each regional board prepares and maintains a basin plan that identifies water quality objectives to protect all beneficial uses of the waters of that region. The objectives detailed in the basin plans range from controlling the amount of

oxidized ammonia in inland surface water to regulating the mineral quality of groundwater. The basin plans achieve the identified water quality objectives through implementation of Waste Discharge Requirements (WDRs). These water quality objectives are achieved by employing three strategies for addressing water quality issues: control of point-source pollutants, control of nonpoint-source pollutants, and remediation of existing contamination.

Point sources of pollutants are well-defined locations at which pollutants flow into water bodies (discharges from wastewater treatment plants and industrial sources, for example). These sources are controlled through regulatory systems including permitting under California's WDRs and the National Pollutant Discharge Elimination System (NPDES) program; permits are issued by the appropriate Regional Water Quality Control Board (RWQCB) and may set discharge limitations or other discharge provisions.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area includes the entire unincorporated County. Any project developed pursuant to the proposed ordinance that would connect to a municipal wastewater system would not include any point-source discharges itself but would need to comply with all applicable wastewater treatment standards maintained by the RWQCB as part of obtaining the applicable WDR or NPDES permit. Therefore, projects developed pursuant to the proposed ordinance that connect to a municipal wastewater treatment system would not violate any water quality standards or discharge requirements related to point sources, and impacts would be less than significant.

As indicated in Response 7(e), future renewable energy systems could propose to dispose of wastewater on site through an OWTS. Such projects would include point-source discharges and would not be subject to NPDES requirements in most cases. However, these projects would be required to comply with WDRs of the State of California (Title 23 of the California Code of Regulations) and WDRs issued by the local RWQCB. Such projects would have to demonstrate compliance with these requirements in order to receive construction permits. Therefore, these projects would have no impact upon wastewater treatment requirements.

Non-point sources of pollutants are typically derived from project site runoff caused by rain or irrigation and have been classified by the EPA into the following categories: agriculture, urban runoff, construction, hydromodification, resource extraction, silviculture (forestry cultivation), and land disposal, according to the basin plan for the Los Angeles RWQCB. This type of pollution is not addressed by the same regulatory mechanisms used to control point sources. Instead, California's Nonpoint Source Management Plan describes a three-tiered approach including the voluntary use of BMPs, the regulatory enforcement of the use of BMPs, and effluent limitations. Generally speaking, each RWQCB implements the least restrictive tier until more stringent enforcement is necessary.

Projects developed pursuant to the proposed ordinance would be required to comply with the requirements of the LID Ordinance, as well as the requirements of the County's standard urban stormwater management plan (SUSMP) in order to control and minimize potentially polluted runoff. Because all projects are required to comply with these requirements in order to obtain construction permits, they would not impact any nonpoint-source requirements.

Remediation of existing pollutants emanating from the project site and accumulating in the local groundwater or nearby water bodies is conducted by the RWQCBs through a number of programs. These programs include monitoring the following:

- USTs
- Wells
- Spills

- Leaks
- Aboveground petroleum storage tanks
- U.S. Department of Defense and U.S. Department of Energy sites
- Toxic pits.

If any of these exist on any of the future project sites pursuant to the proposed ordinance, then remediation will be required before a proposed project can obtain building permits. Again, because future projects would be required to remediate any contamination emanating from the project site prior to project development, projects developed under the proposed ordinance will be compliant with the applicable remediation requirements and impacts would be less than significant.

While the water quality standards and prescriptive actions in Los Angeles Region and the Lahontan Region may differ, future projects developed pursuant to the proposed ordinance would be required to comply with all wastewater discharge requirements identified by the applicable basin plan as well as additional wastewater discharge requirements adopted by the County. Therefore, such projects would not violate any water quality requirements or WDRs as the projects would be required to comply with these standards and those of the NPDES in order to obtain construction permits. Impacts related to implementation of the proposed ordinance would be less than significant.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Temporary MET towers and small-scale renewable energy systems are not expected to use groundwater for any purposes, including irrigation, domestic, or commercial demands. Utility-scale renewable energy facilities may use groundwater for cleaning of the equipment on the site, such as wind energy system rotor blades or solar panels. The purpose of cleaning is to eliminate dust and insect buildup, which could otherwise degrade performance. Also, as indicated in the proposed ordinance, future project sites shall be watered during construction activities such as grading in order to control fugitive dust. Groundwater supply impacts as a result of implementation of the proposed ordinance will be addressed in the PEIR.

An impact to groundwater recharge would occur if implementation of the proposed ordinance would result in an increase in the amount of impervious surfaces on the project site relative to current on-site conditions, thus preventing water from infiltrating into the groundwater table over a larger area. The PEIR will address whether future projects developed pursuant to the proposed ordinance would result in a substantial increase in the amount of impervious surfaces, thus resulting in an impact to groundwater recharge.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area includes the entire unincorporated County. Future projects developed pursuant to the proposed ordinance that involve ground disturbance would be required to minimize erosion, sedimentation, and other impacts to the natural hydrology and drainage patterns of the site. Such projects would be required to submit a drainage plan showing the extent of drainage impacts that complies with all requirements to the satisfaction of the DPW. Projects would also be required to comply with the most recent County standards for addressing drainage impacts and to obtain all agency approvals.

As indicated in Response 10(a), projects would be required to comply with the requirements of the LID Ordinance and the County's SUSMP, which require site design measures, source control and/or treatment control BMPs. These measures will control erosion and sedimentation. The Los Angeles RWQCB addresses on-site drainage through its construction, industrial, and municipal permit programs. These permits require measures to minimize or prevent erosion and reduce the volume of sediments and pollutants in a project's runoff and discharges based upon the size of the project site. The specific permit(s) and measures applicable to future projects development pursuant to the proposed ordinance will be determined in consultation with the DPW. The drainage plan and required permits would ensure future projects developed pursuant to the proposed ordinance would not result in impacts related to substantial erosion or siltation on or off site.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area includes the entire unincorporated County. Future projects developed pursuant to the proposed ordinance that involve ground disturbance would be required to minimize erosion, sedimentation, or other impacts to the natural hydrology and drainage patterns of the site. Such projects would be required to submit a drainage plan showing the extent of drainage impacts that complies with all requirements to the satisfaction of the DPW. The projects would also be required to comply with the most recent County standards for addressing drainage impacts and to obtain all agency approvals.

As indicated in Response 10(a), projects would be required to comply with the requirements of the LID Ordinance and the County's SUSMP, which require site design measures, source control BMPs, and/or treatment control BMPs. These measures will help mitigate drainage impacts. The Los Angeles RWQCB addresses on-site drainage through its construction, industrial, and municipal permit programs. The specific permit(s) and measures applicable to future project development pursuant to the proposed ordinance will be determined in consultation with the DPW. The drainage plan and required permits would ensure that future projects developed pursuant to the proposed ordinance would not result in significant impacts related to substantial erosion or siltation on or off site.

e) Add water features or create conditions in which standing water can accumulate that could increase	☐	☐	☐	☒

habitat for mosquitoes and other vectors that transmit diseases such as the West Nile virus and result in increased pesticide use?

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Future renewable energy projects developed pursuant to the proposed ordinance would not include water features or create conditions in which standing water can accumulate. Therefore, implementation of the proposed ordinance would not increase habitat for mosquitoes and other vectors that transmit diseases and would not result in increased pesticide use; no impact would occur.

f) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? ☐ ☐ ☒ ☐

General Discussion

Construction of impervious surfaces such as roads and driveways reduces the amount of rainfall that can infiltrate the ground surface and move to the subsurface. As a result, the volume of surface water runoff increases within a watershed; subsequently, artificial conveyances such as gutters, storm pipes, and natural channel improvements to accommodate additional volume accelerate the rate of flow of water in the watershed. This higher volume of faster-moving surface water runoff within a watershed results in a higher probability and increased severity of flooding within a watershed, if facilities are not adequately maintained or constructed to carry peak flow capacity.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Future renewable energy projects developed pursuant to the proposed ordinance may result in the development of impervious surfaces, such as access roads, that could contribute to runoff water. However, as indicated in Response 10(a), projects would be required to comply with the requirements of the LID Ordinance and the County's SUSMP, which require site design measures, source control BMPs, and/or treatment control BMPs. These measures will help mitigate drainage impacts and control runoff. Stormwater runoff is also regulated by the NPDES permit and the County's Stormwater Ordinance. The drainage plan and required permits would ensure that future projects developed pursuant to the proposed ordinance would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant.

g) Generate construction or post-construction runoff that would violate applicable stormwater NPDES permits or otherwise significantly affect surface water or groundwater quality? ☐ ☐ ☒ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. For any

future renewable energy projects developed pursuant to the proposed ordinance that are subject to the NPDES Construction General Permit, the applicant must file permit registration documents including a notice of intent and a stormwater pollution prevention plan. Because such projects must comply with the requirements of the NPDES program related to construction runoff, impacts would be less than significant.

h) Conflict with the Los Angeles County Low Impact Development Ordinance (L.A. County Code, Title 12, Ch. 12.84 and Title 22, Ch. 22.52)?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Future renewable energy projects developed pursuant to the proposed ordinance are required to comply with the requirements of the County's LID Ordinance. Therefore, implementation of the proposed ordinance would not conflict with the County's LID Ordinance and impacts would be less than significant.

i) Result in point or nonpoint source pollutant discharges into State Water Resources Control Board-designated Areas of Special Biological Significance?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project does not involve the development of an industrial facility that would discharge its waste directly into the waters of or near an Area of Special Biological Significance or into a watercourse or water body that ultimately empties into said waters, which would result in significant impacts. Nor would the project generate a significant volume of nonpoint-source pollutants, such as if the entire project site were developed with impervious surfaces and all runoff was allowed to leave the site and eventually reach the Area of Special Biological Significance. Since future projects developed pursuant to the proposed ordinance would adhere to the County's LID Ordinance and would not result in a substantial amount of nonpoint sources of pollutants, impacts would be less than significant.

j) Use onsite wastewater treatment systems in areas with known geological limitations (e.g. high groundwater) or in close proximity to surface water (including, but not limited to, streams, lakes, and drainage course)?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. As indicated in Response 7(e), wastewater generated from these facilities, if any, would be minimal, depending on whether operation and maintenance buildings are proposed. If a future renewable energy system project proposes to discharge domestic waste to an OWTS, then the DPW and the Department of Public Health would determine whether or not the site is capable of supporting such a system from a geotechnical and public health perspective. The location of nearby water bodies, watercourses, and drainage courses would be identified and if any wastewater released on the project site may emerge in these waters of the United States the project would be subject to an NPDES permit.

Additionally, any discharged wastewater must conform to the RWQCB's applicable standards, including the regional basin plan and the California Water Code. California Water Code, Section 13282, allows RWQCBs to authorize a local public agency to issue permits for OWTS "to ensure that systems are adequately designed, located, sized, spaced, constructed, and maintained." Therefore, impacts would be less than significant.

k) Otherwise substantially degrade water quality?	☐	☐	☒	☐

General Discussion

Refer to Responses 10(a), 10(f), and 10(i).

l) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, or within a floodway or floodplain?	☐	☐	☐	☒

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project does not involve housing and therefore will have no impact.

m) Place structures, which would impede or redirect flood flows, within a 100-year flood hazard area, floodway, or floodplain?	☐	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area includes the entire unincorporated County. Therefore, facilities developed pursuant to the proposed ordinance may be located in areas identified as being 100-year flood hazard areas. However, these facilities would not place structures, access roads, or other improvements that would impede or redirect flood flows because, pursuant to the proposed ordinance, existing topography and watercourses shall be retained or restored to preexisting conditions following construction and during operations except for drainage features specifically designed to mitigate drainage impacts. All projects that involve ground-mounted components or ground disturbance would be required to submit a drainage plan that complies with all requirements to the satisfaction of the DPW showing the extent of drainage impacts, comply with the most recent County standards for addressing drainage impacts, and obtain all agency approvals. Therefore, impacts would be less than significant.

n) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area includes the entire unincorporated County. Therefore, facilities developed

pursuant to the proposed ordinance may be located in a dam inundation area as mapped in accordance with California Government Code Section 8589.5. However, these facilities would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam. Potential impacts will be addressed in the PEIR.

o) Place structures in areas subject to inundation by seiche, tsunami, or mudflow?	☒	☐	☐	☐

General Discussion

A seiche is the sudden oscillation of water that occurs in an enclosed, landlocked body of water due to wind, earthquake, or other factors. A tsunami is an unusually large wave or set of waves that is triggered in most cases by a seaquake or an underwater volcanic eruption. A mudflow is flow consisting predominantly of earthen materials/soil and water.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area includes the entire unincorporated County. Therefore, facilities developed pursuant to the proposed ordinance may be located in a dam inundation area, potential tsunami inundation zone, or landslide zone. Potential impacts will be addressed in the PEIR.

11. LAND USE AND PLANNING

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Physically divide an established community?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The temporary influx of construction personnel, equipment, and vehicles; increased construction activity, including vegetation removal and grading; and the generation of dust during construction of renewable energy facilities would potentially cause disruptions in communities, if not carefully managed. Additionally, utility-scale renewable energy facilities may include access roads and utility lines that would potentially physically divide any established community. These potential impacts will be addressed in the PEIR.

b) Be inconsistent with the applicable County plans for the subject property including, but not limited to, the General Plan, specific plans, local coastal plans, area plans, and community/neighborhood plans?	☐	☐	☐	☒

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The

project is consistent with the applicable goals and policies of the General Plan (1980). Such policies include:

> Policy No. 2 of the Conservation and Open Space Element, "Support the conservation of energy and encourage the development and utilization of new energy sources including geothermal, thermal waste, solar, wind and ocean-related sources" (General Plan, Pg. II-26).
> Policy No. 3 of the Conservation and Open Space Element, " Promote the use of solar energy to the maximum extent possible" (General Plan, Pg. II-26).
>
> Policy No. II-15 of the Conservation and Open Space Element Recommended Action Plan, "Support stronger tax and cost-saving incentives to encourage greater use of alternative energy sources such as solar energy and wind power " (General Plan, Pg. VIII-39).

All other supporting plans must be consistent with the General Plan and where renewable energy development is mentioned in such plans, they too are supportive of renewable energy development. Therefore, no impact would occur.

c) Be inconsistent with the County zoning ordinance as applicable to the subject property?	☐	☐	☐	☒

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Any facilities developed pursuant to the proposed ordinance must comply with the underlying zoning. If a future project incorporates a zone change, then the project would be consistent with the zoning after the change, if approved; therefore, no impact would occur.

d) Conflict with Hillside Management criteria, Significant Ecological Areas conformance criteria, or other applicable land use criteria?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Any facilities developed pursuant to the proposed ordinance must comply with the Hillside Management criteria, SEA criteria, and other applicable land use criteria. Additionally, as indicated in Response 7(f), the proposed ordinance requires the top of a wind energy system to be located at least 50 vertical feet and 50 horizontal feet from a significant ridgeline identified in the general plan, in an applicable area or community plan, or in an applicable community standards district. Therefore, the proposed ordinance would not conflict with the Hillside Management Area Ordinance, SEA conformance criteria, or other applicable land use criteria, and impacts would be less than significant.

12. MINERAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☒	☐	☐	☐

General Discussion

Mineral resources are commercially viable aggregate or mineral deposits, such as sand, gravel, oil, and other valuable minerals. The County depends on the State of California's Geological Survey (State Department of Conservation, Division of Mines and Geology) to identify deposits of regionally significant aggregate resources. These clusters or belts of mineral deposits are designated as Mineral Resources Zones (MRZ-2s). Presently, there are four major MRZ-2 zones designated in the County: the Little Rock Creek Fan, Soledad Production Area, Sun Valley Production Area, and Irwindale Production Area.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located on land designated as MRZ-2. Potential impacts will be addressed in the PEIR.

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☒	☐	☐	☐

General Discussion

See Response 12(a).

13. NOISE

Would the project result in:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Exposure of persons to, or generation of, noise levels in excess of standards established in the County General Plan or noise ordinance (Los Angeles County Code, Title 12, Chapter 12.08), or applicable standards of other agencies?	☒	☐	☐	☐

General Discussion

Noise levels are regulated by the County's Noise Control Ordinance. The ordinance defines terms, identifies noise zones, and provides standards for interior and exterior noise and hours for noise regulation. County Code Section 12.12 provides additional regulation of construction noise. The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Development of these facilities may impact the existing noise levels within the vicinity of the project. The PEIR will analyze the potential noise impacts from both construction and operation phases of future renewable energy systems that could be implemented under the proposed ordinance.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐

General Discussion

See Response 13(a). The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Development of these facilities may impact the existing noise levels within the vicinity of the projects and may result in the generation of excessive ground-borne vibration or ground-borne noise levels. The PEIR will analyze the potential noise impacts from both construction and operation phases of future renewable energy systems that could be implemented under the proposed ordinance.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from parking areas?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Development of these facilities may impact the existing noise levels within the vicinity of the projects and may lead to a substantial permanent increase in ambient noise. As indicated in Response 13(a), the PEIR will analyze the potential noise impacts that may result from both construction and operation phases of future renewable energy systems that could be implemented under the proposed ordinance.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from amplified sound systems?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The operation of these facilities would not involve any uses that may create substantial temporary or periodic increase in ambient noise levels, including but not limited to extractive industry; outdoor commercial or industrial uses that involve crushing, cutting, drilling, grinding, or blasting or raw materials; truck depots, transfer stations, or delivery areas; or outdoor sound systems. However, construction noise may create temporary increases in

ambient noise levels. A further assessment of these potential impacts will be addressed in the PEIR.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located on a site within an adopted airport land use plan or within 2 miles of a public or private airport. The PEIR will analyze the potential noise impacts that may result from both construction and operation phases of future renewable energy systems that could be implemented under the proposed ordinance.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located within the vicinity of a private airstrip. The PEIR will analyze the potential noise impacts that may result from both construction and operation phases of future renewable energy systems that could be implemented under the proposed ordinance.

14. POPULATION AND HOUSING

Would the project:	***Potentially Significant Impact***	***Less Than Significant Impact with Mitigation Incorporated***	***Less Than Significant Impact***	***No Impact***
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance would not induce substantial population growth in an area because it does not propose any physical or regulatory change that would remove a restriction or encourage

population growth in an area, including but not limited to the following: new or extended infrastructure or public facilities; new commercial or industrial facilities; large-scale residential development; or accelerated conversion of homes to commercial or multiple-family use. The proposed ordinance also does not propose regulatory changes including general plan amendments, specific plan amendments, zone reclassifications, or sewer or water annexations; or Local Agency Formation Commission annexation actions. Additionally, these amendments do not increase density or intensity of land use that is inconsistent with the general plan. Impacts as a result of implementation of the proposed ordinance would be less than significant.

b) Displace substantial numbers of existing housing, especially affordable housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance would allow renewable energy systems and temporary MET towers in various zones subject to standards and limitations. These facilities are often accessory to residential uses. For example, small-scale roof-mounted renewable energy systems may provide energy to homes. Implementation of the proposed ordinance would not displace or cause the demolition of existing housing; impacts would be less than significant.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

General Discussion

See Response 14(b). Facilities that would be developed pursuant to the proposed ordinance are unlikely to displace housing and therefore would not displace a substantial number of people or necessitate the construction of replacement housing elsewhere. Additionally, construction of these facilities would not cause the relocation of people. Impacts from implementation of the proposed ordinance would be less than significant.

d) Cumulatively exceed official regional or local population projections?	☐	☐	☒	☐

General Discussion

The Los Angeles County General Plan and Housing Element uses population, household, and employment projections from a growth forecast that is developed from the Southern California Association of Governments (SCAG) 2008 Regional Transportation Plan. The population projections and household projections for unincorporated County are organized by the eight SCAG subregions. SCAG has established the County's Regional Housing Needs Assessment allocation at 57,176 units.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. As indicated in Response 14(a), the proposed ordinance would not induce substantial population growth in any area. Additionally, with such high population projections, it is unlikely that the proposed ordinance combined with the growth from other projects would induce substantial population growth that would exceed the County's population projections. Impacts would be less than significant.

15. PUBLIC SERVICES

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Would the project create capacity or service level problems, or result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. As facilities are developed pursuant to the proposed ordinance, a direct increase in demand for fire protection services may occur during construction because of increased activity, higher amounts of fuel on the sites, and a greater number of ignition sources on the sites. Similarly, an increase in the risk of wildland fire would occur during decommissioning of any facilities, when there is increased activity and additional ignition sources on the sites. For example, potential ignition sources during construction and decommissioning of utility-scale renewable energy facilities include chainsaws, wood chippers, grinders, torches, earthmoving equipment, and other vehicles that could create sparks, be a source of heat, or leak flammable materials, as well as dynamite and blasting materials, compost piles, and human activities and waste that would increase the possibility of fire. Construction- and decommissioning-related accidents could result in the need for fire protection services.

During operation and maintenance, sources of ignition at renewable energy facility sites are expected to decrease considerably from existing and construction conditions due to the reduced fuels on the site. Equipment that presents ignition sources during operation may include transformers, capacitors, electric transmission lines, the operations and maintenance building, the substation, vehicles, and small gas- or electric-powered hand tools. All this equipment represents a risk of sparking or igniting nearby fuels when combined with vegetation, wildlife, vandals, and/or high wind conditions. Inverters, solar panels, and trackers represent potential ignition sources that are considered to have a low likelihood of causing fires.

An indirect increase in demand for fire protection services could occur where a project causes an increase in population, which could then result in increases in fire emergency service calls. Of the employees required during construction and decommissioning, few, if any, are expected to temporarily relocate to the area. During operation, utility-scale projects may require small numbers of employees at the sites to control operations and maintenance activities. The permanent addition of employees (and their families) to the area is not expected to result in a long-term, indirect increase in emergency services calls such that an increase in fire protection services or facilities would be needed.

The PEIR will further address potential impacts to fire protection services or facilities as a result of implementation of the proposed ordinance.

Sheriff protection? ☐ ☐ ☒ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The development of small-scale renewable energy systems and temporary MET facilities would not result in an increase in permanent residents that would require additional sheriff protection. Utility-scale renewable energy systems may require small numbers of employees, who may relocate to the area with their families. This slight increase of residents in the area is not expected to substantially increase the number of sheriff protection service calls such that new or expanded sheriff facilities or staff would be required to maintain acceptable service ratios and response times. Impacts would be less than significant.

Schools? ☐ ☐ ☒ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project does not include housing and therefore would not directly cause an increase in population that would require new or expanded schools. The development of small-scale renewable energy systems and temporary MET facilities would not result in an increase in permanent residents that would indirectly impact school service levels. Utility-scale renewable energy systems may require small numbers of employees, who may relocate to the area with their families. This slight increase of residents in the area is not expected to substantially increase the number of students such that new or expanded schools would be required. Impacts resulting from implementation of the proposed ordinance would be less than significant.

Parks? ☐ ☐ ☒ ☐

General Discussion

Parks within the County are operated and maintained by the Department of Parks and Recreation. As of 2010, there were approximately 153 recreational facilities managed by the Department of Parks and Recreation, totaling approximately 65,528 acres of recreation and open space. The County General Plan, Regional Recreation Areas Plan, provides the standard for the allocation of parkland in the unincorporated county. This standard is 4 acres of local parkland per 1,000 residents, and 6 acres of regional parkland per 1,000 residents.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project does not include housing and therefore would not directly cause an increase in population that would require new or expanded parks. The development of small-scale renewable energy systems and temporary MET facilities would not result in an increase in permanent residents that would indirectly impact parks. Utility-scale renewable energy systems may require small numbers of employees, who may relocate to the area with their families. This slight increase of employees or residents in the area is not expected to substantially increase the use of existing park facilities; impacts would be less than significant.

Libraries?	☐	☐	☒	☐

General Discussion

Library services are provided by the County of Los Angeles Public Library. There are approximately 84 libraries operated by the County, with roughly 7.5 million volumes in their book collections. The County of Los Angeles Public Library is a special district and is primarily funded by property taxes, but other funding mechanisms include a Mello-Roos Community Facilities District, developer impact fees, developer agreements, and a voter-approved special tax.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project does not include housing and therefore would not directly cause an increase in population that would require new or expanded libraries. The development of small-scale renewable energy systems and temporary MET facilities would not result in an increase in permanent residents that would indirectly impact libraries. Utility-scale renewable energy systems may require small numbers of employees, who may relocate to the area with their families. This slight increase of employees or residents in the area is not expected to substantially increase the use of existing libraries; therefore, impacts would be less than significant.

Other public facilities?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Because the project does not include housing and would result in a minimal increase in employees, and therefore possibly permanent residents, in an area, no other public facilities would be impacted. Impacts would be less than significant.

16. RECREATION

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐

General Discussion

See Response 15(a). The project does not include housing and therefore would not directly cause an increase in population that would increase the use of parks or other recreational facilities. The development of small-scale renewable energy systems and temporary MET facilities would not result in an increase in permanent residents that would indirectly impact parks or recreational facilities. Utility-scale renewable energy systems may require small numbers of employees, who may relocate to the area with their families. This slight increase of employees or residents in the area is not expected to substantially increase the use of existing parks or other recreational facilities.

b) Does the project include neighborhood and regional parks or other recreational facilities or require the construction or expansion of such facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance does not include the construction or expansion of parks or other recreational facilities; therefore, no impact would occur.

c) Would the project interfere with regional open space connectivity?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance would allow renewable energy systems and temporary MET towers in various zones subject to standards and limitations. With the exception of structure-mounted, small-scale solar systems for buildings such as visitor centers or restrooms, these facilities are not allowed within areas zoned for open space. However, it should be noted that wind energy systems, as allowed under the proposed ordinance, require open space to harness high wind resource potential. Therefore, they are generally located near ridgelines or hillside areas, or in open areas. This potential impact will be further addressed in the PEIR.

17. TRANSPORTATION/TRAFFIC

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Small-scale renewable energy systems and temporary MET towers are expected to result in less than 1 average daily traffic (ADT) for a typical project. Utility-scale renewable energy facilities may result in a significant increase in traffic during construction. While associated traffic is not expected to conflict with an applicable plan, ordinance, or policy

measuring the effectiveness of the County's circulation system, the PEIR will address this potential conflict in further detail.

b) Conflict with an applicable congestion management program (CMP), including, but not limited to, level of service standards and travel demand measures, or other standards established by the CMP for designated roads or highways?	☒	☐	☐	☐

General Discussion

The County's Metropolitan Transportation Authority administers the County's CMP. The CMP is a tool used to link land use decisions with their impact to the regional transportation system. For the purposes of the CMP, 160 intersections in the County have been identified for monitoring along with 81 key freeway segments. Furthermore, 133 bus routes and Metro Rail and Metrolink corridors are also monitored by the CMP.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, facilities developed pursuant to the proposed ordinance may be located near an intersection or road segment monitored by the CMP. Small-scale renewable energy systems and temporary MET towers are expected to result in less than 1 ADT for a typical project and would not result in conflicts with the CMP. Utility-scale renewable energy facilities may result in significant increases in traffic during construction. While construction-associated traffic is not expected to conflict with the CMP, the PEIR will address this potential conflict in further detail.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The main compatibility concerns related to the protection of airport traffic patterns are related to airspace obstructions (e.g., building height, antennas) and hazards to flight (e.g., wildlife attractants, distracting lighting, or glare). The project area consists of the entire unincorporated County; therefore, projects may be located within an Airport Influence Area or within 2 miles of a public airport. The proposed ordinance would allow for the development of wind energy systems that may be located within the safety zone for an airport. The ordinance includes specific measures for aviation safety, such as safety lighting to meet FAA standards for towers over 200 feet, and alternating bands of aviation orange and white paint required for wind towers less than 200 feet. Additionally, the proposed ordinance would prohibit utility-scale renewable energy facilities within the Runway Protection Zone of any airport, and would prohibit such facilities from penetrating the imaginary surfaces defined by the FAA to protect the use of navigable airspace. Because the proposed ordinance includes these specific aviation safety measures and because future projects developed pursuant to the proposed ordinance that may impact air traffic would be routed to the FAA for consultation (refer to Response 9(e)), impacts would be less than significant.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project would not alter traffic patterns or roadway design; place incompatible uses (e.g., farm equipment) on existing roadways; or create or place curves, slopes, or walls that impede adequate sight distance on roads. If necessary, all road improvements would be constructed according to County standards and would require consultation with the County's DPW. Impacts from implementation of the proposed ordinance would be less than significant.

e) Result in inadequate emergency access?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Any facilities developed pursuant to the ordinance that may result in inadequate emergency access—for example, by causing emergency vehicles to detour during construction activities—would require review by the County's Fire Department. Necessary measures to ensure adequate emergency access would be required by the County's Fire Department; therefore, impacts would be less than significant.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County; therefore, facilities developed pursuant to the proposed ordinance may be located within a designated Transit Oriented District or along a corridor designated for bicycle infrastructure improvements. However, all projects are required to consult with the DPW, if necessary, and are required to comply with all policies, plans, and programs regarding public transit, bicycle, or pedestrian facilities. Therefore, no impact would occur.

18. UTILITIES AND SERVICE SYSTEMS

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impac t*
a) Exceed wastewater treatment requirements of either the Los Angeles or Lahontan Regional Water Quality Control Boards?	☐	☐	☒	☐

General Discussion

See Response 10(a). Future projects developed pursuant to the proposed ordinance would be required to comply with all wastewater discharge requirements identified by the applicable basin plan as well as additional wastewater discharge requirements adopted by Los Angeles County. Therefore, such projects would not violate any water quality or WDRs as the projects would be required to comply with these standards and those of the NPDES in order to obtain construction permits. Impacts would be less than significant.

b) Create water or wastewater system capacity problems, or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒

General Discussion

See Response 10(a) and (b). Facilities developed pursuant to the proposed ordinance would not require construction of a water or wastewater treatment facility. Utility-scale renewable energy systems may require an OWTS, which would result in no impact because any wastewater generated by the facility would not be routed through a municipal wastewater treatment system.

c) Create drainage system capacity problems, or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

General Discussion

See Response 10(f).

d) Have sufficient reliable water supplies available to serve the project demands from existing entitlements and resources, considering existing and projected water demands from other land uses?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Temporary MET towers and small-scale renewable energy systems are not expected to use water for any purpose, including irrigation, domestic, or commercial demands. Utility-scale renewable energy facilities may use water for cleaning of the equipment on the site, such as wind energy system rotor blades or solar panels. The purpose of cleaning is to eliminate dust and insect buildup, which could otherwise degrade performance. Also, as indicated in the proposed ordinance, future project sites shall be watered during construction activities such as grading in order to control fugitive dust. Potential water supply impacts as a result of implementation of the proposed ordinance will be addressed in the PEIR.

e) Create energy utility (electricity, natural gas, propane) system capacity problems, or result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. These facilities, particularly utility-scale renewable energy systems, may require transmission infrastructure upgrades and/or expansions to infrastructure that could cause significant environmental effects. These potential impacts will be addressed in the PEIR.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Small-scale renewable energy systems and temporary MET towers would not generate solid waste. Utility-scale renewable energy systems may generate minimal solid waste during operation and maintenance activities. The amount would not place a burden on the existing permitted capacity of any landfill within the County; therefore, impacts would be less than significant.

g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

General Discussion

See Response 18(f). The Los Angeles County Integrated Waste Management Plan, which is compiled by the interagency Integrated Waste Management Task Force and updated annually, has identified landfills with sufficient disposal capacity for the next 15 years, assuming current growth and development patterns remain the same. In addition to the projections of the Integrated Waste Management Plan, all projects must comply with other documents required by the California Integrated Waste Management Act of 1989 (AB 939). The proposed ordinance would comply with federal, state, and local statutes and regulations related to solid waste; therefore, impacts would be less than significant.

19. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐

General Discussion

Pursuant to the instructions for evaluating environmental impacts in this Initial Study, the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory was considered in the response to each question in Sections 4 and 5 of this form. As discussed in the responses in Sections 4 and 5, the project may impact biological and cultural resources, respectively. A PEIR is being prepared to analyze the potential impacts to both biological and cultural resources. Should significant impacts be identified, mitigation measures will be provided.

b) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	☒	☐	☐	☐

General Discussion

As indicated in this Initial Study, the proposed ordinance would help facilitate the development of renewable energy within the County and assist the County to meet the long-term goals of AB 32 and the CCAP. However, the development of projects pursuant to the proposed ordinance may potentially impact long-term goals, including but not limited to, the preservation of biological resources, scenic resources, and cultural resources. This issue will be further addressed in the PEIR. .

c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☒	☐	☐	☐

General Discussion

Pursuant to the instructions for evaluating environmental impacts in this Initial Study, the potential for adverse cumulative effects was considered in the response to each question in Sections 1 through 18 of this form. The cumulative effect of the proposed ordinance will be analyzed in the PEIR. Preliminarily, cumulative impacts from aesthetics, agriculture and forest, air quality, biological resources, cultural resources, hazards and hazardous materials, noise, and utilities and service systems may result. Cumulative impacts will be discussed in the Cumulative Impacts section of the PEIR.

d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

General Discussion

In the evaluation of environmental impacts in this Initial Study, the potential for adverse direct or indirect impacts to human beings was considered in the response to certain questions in Sections 1, Aesthetics; 3, Air Quality; 7, Geology and Soils; 9, Hazards and Hazardous Materials; 10, Hydrology and Water Quality; 13, Noise; 14, Population and Housing; and 17, Transportation and Traffic. Potential impacts to human beings will be evaluated in the PEIR.

APPENDIX C

Notice of Preparation
Public Review Comment Letters

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 412TH TEST WING (AFMC)
EDWARDS AIR FORCE BASE, CALIFORNIA

4 June 14

MEMORANDUM FOR LA COUNTY DEPARTMENT OF REGIONAL PLANNING

FROM: 412 TW OL AFP 42/DD

SUBJECT: AF Plant 42 Review of LA County Renewable Energy Ordinance, April 2014 Draft

1. Thank you for contacting our office to review the latest draft of the subject Ordinance and it's Draft EIR Notice of Preparation (collectively, the "Ordinance").

2. In general, this Ordinance appears very compatible with the industrial nature of AF Plant 42. However, with the proximity to AF Plant 42 comes certain comments and concerns that we would like to convey to your office for further review and/or action.

a. California Assembly Bill 45 of 2009 utilizes specific definitions for system height and tower height. However, the Ordinance seems ambiguous in comparison, leaving system height and tower height unclear. Recommend clarifying to match AB 45.

b. The Ordinance makes references to airport Runway Protection Zones, as depicted in the County's Airport Land Use Plans. However, AF Plant 42 is a military airport, not a public aiport, and is likely not addressed in the land use plans to Department of Defense (DoD) standards, if addressed at all. Military airports tend to see higher risk operations than a public airport. Therefore, DoD has additional safety guidelines for adjacent land use and airspace control, beyond those FAA requirements around public airports. Recommend reviewing AF Plant 42 AICUZ and Unified Facilities Critera (UFC) 3-260-01 for further guidance.

c. Based on DoD criteria, we recommend that no utilities be located with AF Plant 42 Runway Clear Zones or Accident Potential Zones 1 (reference AF Plant 42 AICUZ and UFC 3-260-01).

3. We appreciate the opportunity to review and look forward to future review opportunities as those become available.

4. If you have any questions, please contact me at (661) 272-6759.

TIMOTHY W. HUGHES, GS-14, DAFC
Deputy Director

cc:
AFP 42 Encroachment Management Team

Antelope Valley Air Quality Management District
43301 Division St., Suite 206
Lancaster, CA 93535-4649

661.723.8070
Fax 661.723.3450

Eldon Heaston, Executive Director
In reply, please refer to AV0614/056

June 2, 2014

Thuy Hua
Los Angeles County
Department of Regional Planning
320 West Temple Street, 13th Floor
Los Angeles, CA 90012

RE: RENWABLE ENERGY ORDINANCE – DRAFT APRIL 2014

Ms. Hua:

The Antelope Valley Air Quality Management District (District) has reviewed the RENWABLE ENERGY ORDINANCE – DRAFT APRIL 2014. The District has comment on (C)(1) and (C)(4) in Section 22.52.1660 Standards for Ground-Mounted Utility-Scale Renewable Energy Facilities.

(C)(1) Non-opaque fences may be permitted. The District recommends that wind fencing (opaque fencing) is required for project perimeters to reduce wind speed through the project site. Reduction in wind speeds will assist in limiting fugitive dust generation across the site.

(C)(4) Existing drought-tolerant native or non-native vegetation approved by the staff biologist shall be retained, or new such vegetation shall be planted along fencing, unless determined infeasible or inappropriate by the Hearing Officer. Using drought tolerate native and *drought tolerant* non-native vegetation as a requirement reduces the amount of irrigation to establish and maintain vegetation. Project sites without irrigation systems would be required to haul greater amounts of water for non-drought tolerant vegetation causing an increase in associated vehicular emissions throughout the duration of the project.

Thank you for the opportunity to provide comment on this planning document. If you have any questions regarding our comments, please contact Vickie Rausch at (661) 723-8070 x 4 or vrausch@avaqmd.ca.gov.

Sincerely,

Bret Banks
Operations Manager

Printed on recycled paper

Clean Cities
Antelope Valley

Antelope Valley Resource
Conservation District

Claudette Beck, President
Cyndy May, Vice President
Vickie Rausch, Treasurer
Keith Deagon, Director
Kathleen Burr, Director
Debra Gillis-Bradley, Executive Director

We assist the communities we serve to manage and enhance their natural resources through education, leadership, and expertise in science-based conservation.

June 3, 2014

VIA EMAIL: thua@planning.lacounty.gov

Thuy Hua
LA County Department of Regional Planning
320 W Temple St 13th Flr
Los Angeles CA 90012

RE: COMMENTS ON THE RENEWABLE ENERGY ORDINANCE - DRAFT 2

Dear Thuy:

We respectfully submit the comments listed below on the Los Angeles County Renewable Energy Ordinance – Draft 2.

22.52.1660 Standards for Ground-Mounted Utility-Scale Renewable Energy Facilities

Section C. Fencing, Item 4

Such vegetation should be from plants grown and seed collected within a 30 mile radius of the project site.

Seed collected from plants on site and within a 30 mile radius help increase viability rates as these plants are already in the area and are thriving. Plant propagation should occur within a 30 mile radius of the project site as well as these plants will be adapted to the extreme conditions experienced on site with high temperatures in the summer, low to freezing temperatures in the winter, little water on site, as well as high winds.

Section G. Site Disturbance, Item 4

"Use of other fugitive dust mitigation measures may be implemented if determined by Regional Planning and Public Works to be suitable methods to adequately control dust during construction, operations, and removal and restoration activities."

44811 N. Date Avenue, Suite G, Lancaster, CA 93534
661-945-2604 ext. 107, 661-942-5503 fax
www.avrcd.org

Plan and other suitable methods should also be reviewed by the Resource Conservation District for efficacy and reasonableness prior to approval. The Resource Conservation District has studied and implemented effective dust mitigation methods for over 20 years in the Antelope Valley and surrounding areas. Their expertise and knowledge will help ensure the most appropriate and effective methods are implemented on site.

Respectfully,

Debra Gillis-Bradley
Executive Director
661-305-3405
debragillis@sbcglobal.net

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
South Coast Region
3883 Ruffin Road
San Diego, CA 92123
(858) 467-4201
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

June 2, 2014

Ms. Thuy Hua
Los Angeles County of Regional Planning
320 W. Temple Street
Los Angeles, CA 90012
thua@planing.lacounty.gov

Subject: Comments on the Notice of Preparation of a Draft Environmental Impact Report for the proposed Renewable Energy Ordinance, Los Angeles County (SCH# 2014051016).

Dear Ms. Hua:

The California Department of Fish and Wildlife (Department) has reviewed the above-referenced Notice of Preparation (NOP) for the proposed Renewable Energy Ordinance (Ordinance) which would amend Title 22 of the County Code. The following statements and comments have been prepared pursuant to the Department's authority as Trustee Agency with jurisdiction over natural resources affected by the Project (California Environmental Quality Act, [CEQA] Guidelines § 15386) and pursuant to our authority as a Responsible Agency under CEQA Guidelines section 15381 over those aspects of the proposed Project that come under the purview of the California Endangered Species Act (Fish and Game Code § 2050 *et seq.*) and Fish and Game Code section 1600 *et seq.* The Department also administers the Natural Community Conservation Planning (NCCP) program.

The Ordinance applies to the unincorporated portions of the County of Los Angeles (Lead Agency), over which the Lead Agency has land use jurisdiction. The Ordinance would create a Renewable Energy Ordinance, amending Title 22 of the County Code to establish regulations and development standards for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary meteorological (MET) towers.

The Department acknowledges the difficulty anticipating all potential impacts associated with future projects developed under the Ordinance. The Department recommends the Lead Agency develop effective standards that are measurable and enforceable to be incorporated into the Ordinance.

The Department offers the following comments and recommendations to assist the Lead Agency to avoid, minimize, and/or mitigate potential project related impacts on biological resources.

Specific Comments

Zoning

1. According to the Zoning and Approval Process hosted on the County website under "Current Regulations," a renewable energy project proponent may not be specifically required to file for CEQA review if located within the following zoning classifications:

M-1.5 (Restricted Heavy Manufacturing), M-2 (Heavy Manufacturing Zone), M-3 (Unclassified Zone) or M-4 (Unlimited Manufacturing Zone).

Generally speaking, renewable energy projects have a wide-ranging scope of potential impacts to biological resources which include, but is not limited to; direct collisions, navigational disruptions, habitat changes or conversions, predator subsidies, disorientation, light polarization and glare, solar flux, and restrictions to wildlife movement. Many of the impacts associated with the renewable energy projects can occur in any zone or location, and warrant an analysis specific to any one project. Given the complex interactions of utility-scale renewable energy projects with wildlife resources, the Department recommends the Ordinance require a biological evaluation of any utility-scale renewable energy project regardless of the zoning.

2. *Renewable Energy Permit Requirements (Table 22.52.1620-A)*. The Ordinance establishes a ministerial zoning conformance review process for the development of structure and ground mounted small-scale renewable energy systems and a site plan review process for structure-mounted, utility-scale renewable energy projects. While the Department encourages the development of renewable energy systems within the least impactful locations, flat reflective surfaces (i.e., solar panels), without regard to size, polarize light may have significant impacts. Early accounts indicate that avifauna, including bird and bat species (Grief et. al), may mistake these reflective structures for bodies of water, a phenomenon referred to as the lake effect. Lake effect may result in direct collision, increased predation, or may serve as a biological trap (Hovarth et. al). For these reasons, the Department recommends that all projects be evaluated for their potential impacts to avifauna and consider the use of emerging technologies (e.g., anti-reflective film overlays) to reduce the potential impacts associated with solar panels of all sizes and configurations.

3. *Wind energy projects (Table 22.52.1620-A)*. Renewable Energy Permit Requirements in the Ordinance also administratively cover small-scale and structure-mounted utility-scale wind development projects. The Department recommends the Lead Agency consider retaining discretionary approval over wind energy projects, and/or limit the number of turbines which may be installed.

   Absent discretionary approval over small-scale energy systems and structure-mounted utility-scale wind energy facilities, the Lead Agency will not retain the ability to develop mitigation measures or influence the project design to avoid potential biological impacts unique to future projects and their locations.

4. *Small-scale solar thresholds*. Small-scale solar energy systems are defined by the Ordinance as producing no more than 150% of the on-site energy demand. The Department recommends that the Lead Agency consider developing an enforceable standard whereby the Lead Agency may intervene, as appropriate, should this threshold be exceeded.

Applicability

5. According to the Ordinance "The provisions serve as the basis for development standards applicable to other renewable energy technologies, including but not limited to biomass, geothermal, hydrogen, hydropower, ocean, and any future viable energy technology." The Department appreciates the Lead Agencies' proactive approach to addressing future technologies. The Department recommends the Lead Agency consider providing a mechanism to amend or augment the Ordinance's requirements to address new technologies that may have different environmental effects.

Access Roads

6. Access roads should be designed to utilize existing roadways when feasible.. Additionally, the Department recommends that access roads be prohibited from impacting sensitive biological resource areas (e.g., County designated Significant Environmental Areas) or lands designated or conserved as natural open space.

Lighting and Aviation Safety

7. Birds that migrate at night are the most common fatalities at wind energy facilities. To minimize bird collisions during nighttime migration, continuous lighting and light colors of any kind except red should be avoided. If aviation or other lighting is required, then the Department recommends red flashing lights with a long dark interval and short flash-on time to minimize bird strikes.

   The Ordinance should be evaluated to consider the following conditions to minimize bird strikes:

   The published scientific literature demonstrates a significant rate of mortality of migratory and resident species from guy wire collisions caused by tower lighting during foggy or wet conditions. Non-strobe tower lighting is thought to pose a higher danger of bird collisions with guy wires. To the extent practical, the Department recommends that all lighting be restricted to the minimum necessary to meet FAA standards, and consideration be given to lowering tower heights to avoid the need for lighting. The Department recommends the Lead Agency consider the following standard be added to the Ordinance to state substantially similar to the following: "All tower-lighting shall be designed to strobe, and constant-tower lights shall be avoided to the extent feasible by FAA regulation."

Avoid Guy Wires

8. Guy wires supporting communications and meteorological towers can kill birds at high rates, including birds protected by Fish and Game Code (Kerlinger et al. 2008, Longcore et al. 2008). Both the CEC-DFG Guidelines (2007) and the US Fish and Wildlife Service (2000) recommend using freestanding tower designs due to the known avian mortality impacts from guy wires. The Department recommends the Lead Agency require the use of mono-pole structures (when feasible), or otherwise utilize other technologies that do not use guy wires.

Setbacks

9. The Department recommends the Lead Agency consider a requirement for setbacks for all wind energy facilities and meteorological towers from significant ridgelines and Significant Environmental Areas at a minimum of twice the height of the prosed facility to reduce the potential impacts to migratory birds and other avifauna.

Fencing

10. The Department recommends the Lead Agency consider a requirement for wildlife-permeable fencing for target species when appropriate, including but not limited to; kit fox, desert tortoise, small mammals, and reptiles. Wildlife-permeable fencing should be tied to the specie's life history and physical requirements.

Collector Lines and Transmission Lines

11. The Department recommends the Lead Agency consider a requirement that all collector lines and transmission lines associated with new renewable energy project be appropriately routed through a protective conduit, when feasible. The Department makes this recommendation following observations of fossorial animal burrows near or through self-shielded collector lines, posing both a safety hazard to animals and a system reliability issue for the utility itself.

General Comments

1. *Wetlands*. The Department has responsibility for wetland and riparian habitats. It is the policy of the Department to strongly discourage development in wetlands or conversion of wetlands to uplands. We discourage development or conversion which would result in a reduction of wetland acreage or wetland habitat values, unless, at a minimum, project mitigation assures there will be "no net loss" of either wetland habitat values or acreage. Development and conversion include but are not limited to conversion to subsurface drains, placement of fill or building of structures within the wetland, and channelization or removal of materials from the streambed. All wetlands and watercourses, whether ephemeral, intermittent, or perennial, should be retained and provided with substantial setbacks which preserve the riparian and aquatic values and maintain their value to on-site and off-site wildlife populations. Mitigation measures to compensate for impacts to riparian corridors must be included in the DEIR and must compensate for the loss of function and value of a wildlife corridor resultant of future projects developed under the Renewable Energy Ordinance.

   a) The Project area supports aquatic, riparian, ephemeral and wetland habitats; therefore, a jurisdictional delineation of the creeks and their associated habitats should be a requirement of the Renewable Energy Ordinance for future projects. The delineation should be conducted pursuant to the U. S. Fish and Wildlife Service wetland definition adopted by the Department (Cowardin). Please note that some wetland and riparian habitats subject to the Department's authority may extend beyond the jurisdictional limits of the U.S. Army Corps of Engineers.

b) The Department also has regulatory authority over activities in streams and/or lakes that will divert or obstruct the natural flow, or change the bed, channel, or bank (which may include associated riparian resources) of a river or stream, or use material from a streambed. For any such activities, the project applicant (or "entity") must provide written notification to the Department pursuant to section 1600 et seq. of the Fish and Game Code. Based on this notification and other information, the Department determines whether a Lake and Streambed Alteration Agreement (LSA) with the applicant is required prior to conducting the proposed activities. The Department's issuance of a LSA for a project that is subject to CEQA will require CEQA compliance actions by the Department as a Responsible Agency. The Department as a Responsible Agency under CEQA may consider the local jurisdiction's (lead agency) Negative Declaration or Environmental Impact Report for the project. To minimize additional requirements by the Department pursuant to section 1600 *et seq.* and/or under CEQA, the document should fully identify the potential impacts to the stream or riparian resources and provide adequate avoidance, mitigation, monitoring and reporting commitments for issuance of the LSA.

2. *CESA-listed Species*. The Department considers adverse impacts to a species protected by the California Endangered Species Act (CESA), for the purposes of CEQA, to be significant without mitigation. As to CESA, take of any endangered, threatened, or candidate species that results from the project is prohibited, except as authorized by state law (Fish and Game Code, §§ 2080, 2085). Consequently, if the Renewable Energy Ordinance, subsequent project construction, or any subsequent project-related activity during the life of the project will result in take of a species designated as endangered or threatened, or a candidate for listing under CESA, the Department recommends that the subsequent project proponent seek appropriate take authorization under CESA prior to implementing the project. Appropriate authorization from the Department may include an incidental take permit (ITP) or a consistency determination in certain circumstances, among other options (Fish and Game Code §§ 2080.1, 2081, subds. (b),(c)). Early consultation is encouraged, as significant modification to a project and mitigation measures may be required in order to obtain a CESA Permit. Revisions to the Fish and Game Code, effective January 1998, may require that the Department issue a separate CEQA document for the issuance of an ITP unless the project CEQA document addresses all project impacts to CESA-listed species and specifies a mitigation monitoring and reporting program that will meet the requirements of an ITP. For these reasons, the Department recommends that the Renewable Energy Ordinance require biological mitigation monitoring and reporting proposals of sufficient detail and resolution to satisfy the requirements for a CESA ITP for future projects which may have the potential for take of any endangered, threatened or candidate species.

3. To enable the Department to adequately review and comment on the proposed Project from the standpoint of the protection of plants, fish and wildlife, we recommend the following information be included in the DEIR.

a) An inventory and map (directly within the Renewable Energy Ordinance or by reference) of known sensitive biological areas (e.g. Significant Environmental Areas) to be explicitly avoided, and areas for which specific species-focused surveys will be required. The Renewable Energy Ordinance should also identify a regular interval to update the inventory and mapping of known sensitive biological areas.

b) An enforceable standard requiring future projects to provide a complete discussion of the purpose and need for, and description of, the proposed project, and temporary MET tower locations including all staging areas and access routes to the construction and staging areas.

c) An enforceable standard requiring future projects to provide a range of feasible alternatives to ensure that alternatives to the proposed project are fully considered and evaluated; the alternatives should avoid or otherwise minimize impacts to sensitive biological resources. Specific alternative locations should be evaluated in areas with lower resource sensitivity where appropriate.

Biological Resources within the Project's Area of Potential Effect

4. The Ordinance should include an enforceable measure to require future projects to provide a complete assessment of the flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened, sensitive, and locally unique species and sensitive habitats. The DEIR should include enforceable measures that require the following information to be addressed by future projects.

a) Per CEQA Guidelines, section 15125(c), information on the regional setting that is critical to an assessment of environmental impacts, with special emphasis should be placed on resources that are rare or unique to the region.

b) A thorough, recent floristic-based assessment of special status plants and natural communities, following the Department's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (see http://www.dfg.ca.gov/habcon/plant/). The Department recommends that floristic, alliance- and/or association-based mapping and vegetation impact assessments be conducted at the project site and neighboring vicinity. The Manual of California Vegetation, second edition, should also be used to inform this mapping and assessment (Sawyer et al. 2008). Adjoining habitat areas should be included in this assessment where site activities could lead to direct or indirect impacts offsite. Habitat mapping at the alliance level will help establish baseline vegetation conditions.

c) A current inventory of the biological resources associated with each habitat type on site and within the area of potential effect. The Department's California Natural Diversity Data Base in Sacramento should be contacted at www.wildlife.ca.gov/biogeodata/ to obtain current information on any previously reported sensitive species and habitat, including Significant Natural Areas identified under Chapter 12 of the Fish and Game Code.

d) An inventory of rare, threatened, and endangered, and other sensitive species on site and within the area of potential effect. Species to be addressed should include all those which meet the CEQA definition (see CEQA Guidelines, § 15380). This should include sensitive fish, wildlife, reptile, and amphibian species. Seasonal variations in use of the project area should also be addressed. Focused species-specific surveys, conducted at the appropriate time of year and time of day when the sensitive species are active or otherwise identifiable, are required. Acceptable species-specific survey procedures should be developed in consultation with the Department and the U.S. Fish and Wildlife Service.

5. To provide a thorough discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts, the following should be required of future projects through enforceable measures addressed in the DEIR.

   a) A discussion of potential adverse impacts from lighting, noise, human activity, exotic species, and drainage should also be included. The latter subject should address: project-related changes on drainage patterns on and downstream of the project site; the volume, velocity, and frequency of existing and post-project surface flows; polluted runoff; soil erosion and/or sedimentation in streams and water bodies; and post-project fate of runoff from the project site. The discussions should also address the proximity of the extraction activities to the water table, whether dewatering would be necessary, and the potential resulting impacts on the habitat, if any, supported by the groundwater. Mitigation measures proposed to alleviate such impacts should be included.

   b) Discussions regarding indirect project impacts on biological resources, including resources in nearby public lands, open space, adjacent natural habitats, Significant Ecological Areas, riparian ecosystems, and any designated and/or proposed or existing reserve lands (e.g., preserve lands associated with a NCCP/DRECP). Impacts on, and maintenance of, wildlife corridor/movement areas, including access to undisturbed habitats in adjacent areas, should be fully evaluated by future projects.

   c) The zoning of areas for development projects or other uses that are nearby or adjacent to natural areas may inadvertently contribute to wildlife-human interactions. A discussion of possible conflicts and mitigation measures to reduce these conflicts should be included in the environmental document.

   d) A cumulative effects analysis should be developed as described under CEQA Guidelines, section 15130. General and specific plans, as well as past, present, and anticipated future projects, should be analyzed relative to their impacts on similar plant communities and wildlife habitats.

<u>Mitigation for the Project-related Biological Impacts</u>

6. The DEIR should include mitigation measures for adverse Project-related impacts to sensitive plants, animals, and habitats. Mitigation measures should emphasize avoidance and reduction of future project impacts. For unavoidable impacts, on-site habitat restoration or enhancement should be discussed in detail. If on-site mitigation is not feasible or would not be biologically viable and therefore not adequately mitigate the loss of biological functions and values, off-site mitigation through habitat creation and/or acquisition and preservation in perpetuity should be addressed.

7. For proposed preservation and/or restoration, the DEIR should include measures to perpetually protect the targeted habitat values from direct and indirect negative impacts. The objective should be to offset the project-induced qualitative and quantitative losses of wildlife habitat values. Issues that should be addressed include restrictions on access, proposed land dedications, monitoring and management programs, control of illegal dumping, water pollution, increased human intrusion, etc.

8. The Department recommends that measures be taken to avoid project impacts to nesting birds. Migratory nongame native bird species are protected by international treaty under the Federal Migratory Bird Treaty Act (MBTA) of 1918 (Title 50, § 10.13, Code of Federal Regulations). Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibit take of all birds and their active nests including raptors and other migratory nongame birds (as listed under the Federal MBTA). Proposed project activities (including, but not limited to, staging and disturbances to native and nonnative vegetation, structures, and substrates) should occur outside of the avian breeding season which generally runs from February 1- September 1 (as early as January 1 for some raptors) to avoid take of birds or their eggs. If avoidance of the avian breeding season is not feasible, the Department recommends surveys by a qualified biologist with experience in conducting breeding bird surveys to detect protected native birds occurring in suitable nesting habitat that is to be disturbed and (as access to adjacent areas allows) any other such habitat within 300 feet of the disturbance area (within 500 feet for raptors). Project personnel, including all contractors working on site, should be instructed on the sensitivity of the area. Reductions in the nest buffer distance may be appropriate depending on the avian species involved, ambient levels of human activity, screening vegetation, or possibly other factors.

9. The Department generally does not support the use of relocation, salvage, and/or transplantation as mitigation for impacts to rare, threatened, or endangered species. Studies have shown that these efforts are experimental in nature and largely unsuccessful.

10. Plans for restoration and revegetation should be prepared by persons with expertise in southern California ecosystems and native plant revegetation techniques. Each plan should include, at a minimum: (a) the location of the mitigation site; (b) the plant species to be used, container sizes, and seeding rates; (c) a schematic depicting the mitigation area; (d) planting schedule; (e) a description of the irrigation methodology; (f) measures to control exotic vegetation on site; (g) specific success criteria; (h) a detailed monitoring program; (i) contingency measures should the success criteria not be met; and (j) identification of the party responsible for meeting the success criteria and providing for conservation of the mitigation site in perpetuity.

We appreciate the opportunity to comment on the referenced NOP. Questions regarding this letter and further coordination on these issues should be directed to Eric Weiss at (858) 467-4289 or eric.weiss@wildlife.ca.gov.

Sincerely,

Betty J. Courtney

Betty J. Courtney
Environmental Program Manager I
South Coast Region

ec: Erinn Wilson, CDFW, Los Alamitos
Eric Weiss, CDFW, San Diego
Scott Morgan, State Clearinghouse, Sacramento

References:

CEC and DFG, 2007. California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development. Commission Final Report. California Energy Commission, Renewables Committee, and Energy Siting Division, and California Department of Fish and Game, Resources Management and Policy Division. CEC-700-2007-008-CMF.

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CENTER *for* BIOLOGICAL DIVERSITY *Because life is good.*

protecting and restoring natural ecosystems and imperiled species through science, education, policy, and environmental law

submitted via email

6/4/2014

LA County Department of Regional Planning
Attn: Thuy Hua
320 W Temple St 13th Floor
Los Angeles CA 90012
thua@planning.lacounty.gov

RE: Comments on the DRAFT --- Renewable Energy Ordinance – April 2014

Dear Thuy Hua,

On behalf of the Center for Biological Diversity's 775,000 staff, members and on-line activists in California and throughout the United States, we submit these comments regarding Los Angeles County's proposed Draft Renewable Energy Ordinance dated April 2014.

The development of renewable energy is a critical component of efforts to reduce greenhouse gas emissions, avoid the worst consequences of global warming, and to assist California in meeting emission reductions targets. The Center for Biological Diversity strongly supports the development of renewable energy production. However, like any project, renewable energy projects should be thoughtfully planned to minimize impacts to the environment.

We offer the following comments on the April 2014 version of the ordinance with the understanding that environmental review for the proposed ordinance will be forthcoming at a later date. Our comments fall into two categories: general comments and ordinance specific comments as follows:

General Comments

In order to safeguard the biodiversity and uniqueness of Los Angeles County's wildlife and plants, we believe the following issues need to be addressed in the ordinance.

- Migratory pathways for avian and terrestrial species – While it is well documented that wind energy projects can impact migratory routes for birds and bats, recent reports also document the impacts that industrial-scale solar projects have on avian species.[1] Wind and solar projects can also fragment the landscape and impact key movement corridors for terrestrial species. Therefore, the ordinance should recognize migratory pathways and movement corridors and minimize construction of renewable energy projects in these areas.

1 Kagan et al. 2014.

Ileene Anderson, Senior Scientist
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- Central to northern Los Angeles County is also home to the critically endangered California condor, which is only now making a comeback from the brink of extinction. Development in general and certain types of renewable energy development specifically, including wind turbines and/or solar power towers, have potential to injure or kill condors. Because the condor is a "fully protected" species under California law, the ordinance needs to incorporate special safeguards for the condor and other vulnerable species. Recent changes in state law allow for "take" of "fully protected" species through the mechanism of a Natural Communities Conservation Plan (NCCP), which the County may need to consider undertaking especially for industrial scale developments. Golden eagles are another "fully protected" species under California law and also would benefit from special safeguards put in place for their protection from potentially injurious renewable energy development. While Los Angeles County's participation in the Desert Renewable Energy Conservation Plan (DRECP), which is an NCCP, could provide the necessary safeguards for these species in the desert regions of Los Angeles County, these species are also found in other areas of Los Angeles County outside of the DRECP boundaries, and similar safeguards are needed there too.
- Because of the emergent issues of bird mortality at industrial scale renewable energy projects (both solar[2] and wind), the ordinance needs to include parameters for mortality monitoring and adaptive management including curtailment for these types of facilities.
- Because renewable energy facilities, transmission towers and other associated facilities can attract perching opportunities for predators, buffers of at least a half-mile should be provided from any designated conservation areas, national forests, state and local parks, and areas that provide mitigation for other development in the County.

Document Specific Comments:

1) **Pg 9, B (1). and Pg. 14, B (3) Safety Lights**. Regarding lighting for structures including wind turbines, additional language should be included to minimize attraction to birds. Current research indicates that solid or pulsating (beacon) red lights attract night-migrating birds at a much higher rate than white strobe lights. Unless otherwise required by the FAA, only white (preferable) or red strobe lights should be used at night, and these should be the minimum number, minimum intensity, and minimum number of flashes per minute (longest duration between flashes) allowable by the FAA. The use of solid red or pulsating red warning lights at night should be prohibited. In addition, the ordinance should allow for the use other safety methods such as radar detection which triggers lighting when needed,[3] where appropriate. Lights on wind projects attract birds, invertebrates and other wildlife to their detriment, and can also significantly impair night skies and disturb local residents.

2) **Pg 10 D Colors**. Long et al. 2011[4] found wind turbine color affected the number of insects attracted to the turbine. The turbines attracting more insects also attracted more birds, putting them in harm's way. Indeed some of the most popular turbine colors attracted the most insects,

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2 IBID

3 *See, e.g.,* Lavars, Nick, *Sensor system lights up wind turbines only when aircraft approaches* (February 11, 2014), http://www.gizmag.com/sensor-lights-wind-turbine/30785/

4 http://peer.ccsd.cnrs.fr/docs/00/62/51/48/PDF/10344_2010_432_ReferencePDF.pdf

and concomitant birds. The ordinance needs to craft color prescriptions for wind turbines in particular that do not attract insects and therefore birds and that are also not visually disruptive.

Thank you for the opportunity to submit these comments. Please feel free to contact me with any questions.

Respectfully submitted,

Ileene Anderson
Senior Scientist
Center for Biological Diversity

Attachment:
Kagan, R.A., T C Viner, P.W. Trail, and E.O. Espinoza 2014. Avian Mortality at Solar Energy Facilities in Southern California: A Preliminary Analysis. National Fish and Wildlife Forensic Lab. Pgs. 28.

Avian Mortality at Solar Energy Facilities in Southern California: A Preliminary Analysis

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Executive Summary

This report summarizes data on bird mortality at three solar energy facilities in southern California: Desert Sunlight, Genesis, and Ivanpah. These facilities use different solar technologies, but avian mortality was documented at each site. Desert Sunlight is a photovoltaic facility, Genesis employs a trough system with parabolic mirrors, and Ivanpah uses a power tower as a focal point for solar flux.

FINDINGS

Trauma was the leading cause of death documented for remains at the Desert Sunlight and Genesis sites. Trauma and solar flux injury were both major causes of mortality at the Ivanpah site. Exposure to solar flux caused singeing of feathers, which resulted in mortality in several ways. Severe singeing of flight feathers caused catastrophic loss of flying ability, leading to death by impact with the ground or other objects. Less severe singeing led to impairment of flight capability, reducing ability to forage and evade predators, leading to starvation or predation. Our examinations did not find evidence for significant tissue burns or eye damage caused by exposure to solar flux.

Cause of Death	Ivanpah	Genesis	Desert Sunlight	Total
Solar Flux	47	0	0	47
Impact trauma	24	6	19	49
Predation trauma	5	2	15	22
Trauma of undetermined cause	14	0	0	14
Electrocution	1	0	0	1
Emaciation	1	0	0	1
Undetermined (remains in poor condition)	46	17	22	85
No evident cause of death	3	6	5	14
Total	141	31	61	233

These solar facilities appear to represent “equal-opportunity” hazards for the bird species that encounter them. The remains of 71 species were identified, representing a broad range of ecological types. In body size, these ranged from hummingbirds to pelicans; in ecological type from strictly aerial feeders

(swallows) to strictly aquatic feeders (grebes) to ground feeders (roadrunners) to raptors (hawks and owls). The species identified were equally divided among resident and non-resident species, and nocturnal as well as diurnal species were represented. Although not analyzed in detail, there was also significant bat and insect mortality at the Ivanpah site, including monarch butterflies. It appears that Ivanpah may act as a **"mega-trap,"** attracting insects which in turn attract insect-eating birds, which are incapacitated by solar flux injury, thus attracting predators and creating an entire food chain vulnerable to injury and death.

			Foraging Zone			**Residency Status**	
SITE	No. Remains	Identifiable Remains	Air	Terr	Water	Resident	Migrant
Ivanpah	141	127	28	85	14	63	64
Genesis	31	30	12	12	6	20	10
Desert Sun	61	56	7	22	27	18	38
TOTALS	233	213	47	119	47	101	112

CONCLUSIONS AND RECOMMENDATIONS

In summary, three main causes of avian mortality were identified at these facilities: impact trauma, solar flux, and predation. Birds at all three types of solar plants were susceptible to impact trauma and predators. Predation was documented mostly at the photovoltaic site, and in many cases appeared to be associated with stranding or nonfatal impact trauma with the panels, leaving birds vulnerable to resident predators. Solar flux injury, resulting from exposures to up to 800º F, was unique to the power tower facility. Our findings demonstrate that a broad ecological variety of birds are vulnerable to morbidity and mortality at solar facilities, though some differential mortality trends were evident, such as waterbirds at Desert Sunlight, where open water sources were present; and insectivores at Ivanpah, where insects are attracted to the solar tower.

Specific hazards were identified, including vertically-oriented mirrors or other smooth reflective panels; water-like reflective or polarizing panels; actively fluxing towers; open bodies of water; aggregations of insects that attracted insectivorous birds; and resident predators. Making towers, ponds and panels less attractive or accessible to birds may mitigate deaths. Specific actions should include:

Monitoring/detection measures:

1) Install video cameras sufficient to provide 360 degree coverage around each tower to record birds (and bats) entering and exiting the flux

2) For at least two years (and in addition to planned monitoring protocol), conduct daily surveys for birds (at all three facilities), as well as insects and bats (in the condenser building at Ivanpah) around each tower at the base of and immediately adjacent to the towers in the area cleared of vegetation. Timing of daily surveys can be adjusted to minimize scavenger removal of carcasses as recommended by the TAC. Surveys in the late afternoon might be optimal for bird carcasses, and first light for bat carcasses.

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3) Use dogs for monitoring surveys to detect dead and injured birds that have hidden themselves in the brush, both inside and outside the perimeter of the facility

4) To decrease removal of carcasses, implement appropriate raven deterrent actions

Bird Mortality Avoidance Measures*:*

1) Increase cleared area around tower at Ivanpah to decrease attractive habitat; at least out to fence

2) Retrofit visual cues to existing panels at all three facilities and incorporate into new panel design. These cues should include UV-reflective or solid, contrasting bands spaced no further than 28 cm from each other

3) Suspend power tower operation during peak migration times for indicated species

4) Avoid vertical orientation of mirrors whenever possible, for example tilt mirrors during washing

5) Properly net or otherwise cover ponds

6) Place perch deterrent devices where indicated, eg. on tower railings near the flux field

7) Employ exclusionary measures to prevent bats from roosting in and around the condenser facility at Ivanpah.

It must be emphasized that we currently have a very incomplete knowledge of the scope of avian mortality at these solar facilities. Challenges to data collection include: large facilities which are difficult to efficiently search for carcasses; vegetation and panels obscuring ground visibility; carcass loss due to scavenging; rapid degradation of carcass quality hindering cause of death and species determination; and inconsistent documentation of carcass history.

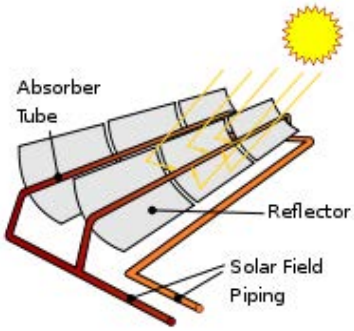
To rectify this problem, video cameras should be added to the solar towers to record bird mortality and daily surveys of the area at the base of and immediately adjacent to the towers should be conducted. At all the facilities, a protocol for systematic, statistically-rigorous searches for avian remains should be developed, emphasizing those areas where avian mortality is most likely to occur. Investigation into bat and insect mortalities at the power tower site should also be pursued.

Finally, there are presently little data available on how solar flux affects birds and insects. Studies of the temperatures experienced by objects in the flux; of the effects of high temperatures on feather structure and function; and of the behavior of insects and birds in response to the flux and related phenomena (e.g. “light clouds”) are all essential if we are to understand the scope of solar facility effects on wildlife.

Introduction

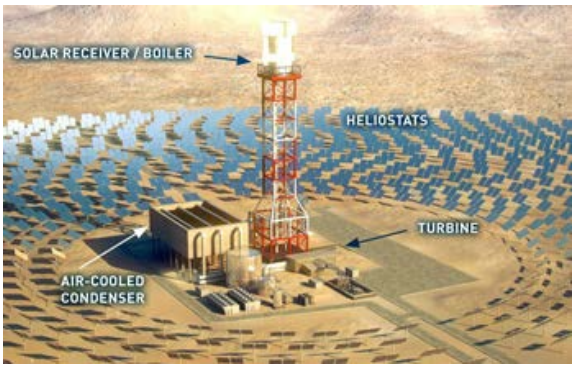
The National Fish and Wildlife Forensics Laboratory was requested to determine cause of death for birds found at facilities that generate electricity from solar energy. Solar generating facilities can be classified into three major types: photovoltaic sites, trough systems and solar power towers. There is much written about these systems so this report will not include any technical details, but simply mention the differences and their potential impact on birds.

1) **Photovoltaic systems** directly convert the sun's light into electricity. The perceived threat to birds is associated with the presence of water ponds which attract birds and from traumatic impact with the photovoltaic cells. An example of this type of solar power plant is Desert Sunlight Solar Farm (AKA First Solar).



2) **Trough systems** are composed of parabolic mirrors which focus and reflect the sun to a tube that converts the heat from the sun into electricity. The perceived threat to birds is associated with the presence of water ponds which attract birds and from traumatic impact with the trough structures. An example of this type of solar power plant is Genesis Solar Energy Project.

3) **Solar power tower**s use thousands of mirrors to reflect the solar energy to a tower, where water in a boiler is converted to steam, generating the electricity. The perceived threat to birds is associated traumatic impact with the mirrors and the danger associated with the heat produced by the mirrors. An example of this type of solar power plant is Ivanpah Solar Electric Generating System.



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Methods

Carcasses were collected at the different solar power plant sites by either US Fish and Wildlife Service employees or by energy company staff. The collection of the carcasses was opportunistic; that is, not according to a pre-determined sampling schedule or protocol. There was no attempt to quantify the number of carcasses that scavengers or predators removed from the solar facilities' grounds, or to compare the distribution of carcasses inside and outside the boundaries of the solar facility sites.

Additionally, three USFWS/-OLE staff, including two Forensics Lab staff (EOE and RAK), visited the Ivanpah Solar plant from October 21 – 24, 2013. Their on-site observations are included in this report.

A total of 233 birds collected from three different facilities were examined; 141 from a solar thermal power tower site (Ivanpah, Bright Source Inc.), 31 from a parabolic trough site (Genesis, NextEra Energy Inc.) and 61 from a photovoltaic (PV) panel site (Desert Sunlight, First Solar Inc.). Nine of the Ivanpah birds were received fresh; 7 of those were necropsied during a site visit by a Forensics Laboratory pathologist (RAK). The rest of the birds were received frozen and allowed to thaw at room temperature prior to species identification and necropsy. Species determination was made by the Forensics Laboratory ornithologist (PWT) for all birds either prior to necropsy or, for those necropsied on-site, from photos and the formalin-fixed head. All data on carcass history (location of the carcass, date of collection and any additional observations) were transcribed, although these were not available for all carcasses.

As part of the gross pathological examination, whole carcasses were radiographed to help evaluate limb fractures and identify any metal foreign bodies. Alternate light source examination using an Omnichrome Spectrum 9000+ at 570 nm with a red filter helped rule in or out feather burns by highlighting subtle areas of feather charring (Viner et al., 2014). All birds or bird parts from Ivanpah without obvious burns were examined with the alternate light source, as well as any bird reportedly found near a power line and a random sub-sample of the remaining birds from Genesis and Desert Sunlight (Viner, T. C., R. A. Kagan, and J. L. Johnson, 2014, Using an alternate light source to detect electrically singed feathers and hair in a forensic setting. Forensic Science International, v. 234, p. e25-e29).

Carcass quality varied markedly. If carcasses were in good post mortem condition, representative sections of heart, lung, kidney, liver, brain and gastrointestinal tract as well as any tissues with gross lesions were collected and fixed in 10% buffered formalin. Full tissue sets were collected from the fresh specimens. Formalin-fixed tissues were routinely processed for histopathology, paraffin-embedded, cut at 4 µm and stained with hematoxylin and eosin. Tissues from 63 birds were examined microscopically: 41 from Ivanpah, 1 from Genesis and 21 from Desert Sunlight.

Birds with feather burns were graded based on the extent of the lesions. Grade 1 birds had curling of less than 50% of the flight feathers. Grade 2 birds had curling of 50% or more of the flight feathers. Grade 3 birds had curling and visible charring of contour feathers (Figure 1).

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Figure 1: Three grades of flux injury based on extent and severity of burning. Grade 1 (top); Yellow-rumped Warbler with less than 50% of the flight feathers affected (note sparing of the yellow rump feathers). Grade 2 (middle); Northern Rough-winged Swallow initially found alive but unable to fly, with greater than 50% of the flight feathers affected. Grade 3 (bottom); MacGillivray's Warbler with charring of feathers around the head, neck, wings and tail.

Bird Species Recovered at Solar Power Facilities

Tables 1-4 and Appendix 1 summarize 211 identifiable bird remains recovered from the three solar facilities included in this study. These birds constitute a taxonomically diverse assemblage of 71 species, representing a broad range of ecological types. In body size, these species ranged from hummingbirds to pelicans; in ecological type from strictly aerial feeders (e.g. swifts and swallows) to strictly aquatic feeders (pelicans and cormorants) to ground feeders (roadrunners) to raptors (hawks and owls). The species identified were equally divided among resident and non-resident species. Nocturnal as well as diurnal species were represented.

In Tables 1-4 and Appendix 1, bird species are categorized into very general ecological types by foraging zone and residency status. Foraging Zones were "air" (a significant portion of foraging activity performed in the air), "terrestrial" (including foraging both in vegetation and on the ground), and "water" (foraging associated with water, including waders as well as aquatic birds). Residency Status was "resident" (for breeding or year-round residents) and "migrant" (for both passage migrants and non-breeding-season residents). For a number of species, the appropriate classification for residency status was uncertain, due to a lack of detailed knowledge of the sites. The present classification is based on published range maps, and is subject to revision as more information becomes available.

This dataset is not suitable for statistical analysis, due to the opportunistic and unstandardized collection of avian remains at the facilities, and the lack of baseline data on bird diversity and abundance at each site. Nevertheless, a few conclusions can be noted. First, these data do not support the idea that these solar facilities are attracting particular species. Of the 71 bird species identified in remains, only five species were recovered from all three sites. These five were American Coot, Mourning Dove, Lesser Nighthawk, Tree Swallow, and Brown-headed Cowbird, again emphasizing the ecological variety of birds vulnerable to mortality at the solar facilities. Over two-thirds (67%) of the species were found at only a single site

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(Appendix 1). That being said, the Desert Sunlight facility had particularly high mortality among waterbirds, suggesting a need to render the ponds at that site inaccessible or unattractive to these species.

The diversity of birds dying at these solar facilities, and the differences among sites, suggest that there is no simple "fix" to reduce avian mortality. These sites appear to represent "equal-opportunity" mortality hazards for the bird species that encounter them. Actions to reduce or mitigate avian mortality at solar facilities will need to be designed on a site-specific basis, and will require much more data on the bird communities at each site, and on how mortality is occurring. Carefully-designed mortality studies might reveal significant patterns of vulnerability that are not evident in these data.

Table 1. Summary data on avian mortality at the three solar sites included in this study. See summary for discussion of Foraging Zone and Residency Status categories.

				Foraging Zone			Residency Status	
SITE	**No. Species**	**No. Remains**	**Identifiable Remains**	**Air**	**Terr**	**Water**	**Resident**	**Migrant**
Ivanpah	49	141	127	26	85	14	63	64
Genesis	15	31	30	12	12	6	20	10
Desert Sun	33	61	56	7	22	27	18	38
TOTALS	71	233	213	47	119	47	101	112

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Table 2. Species identified from avian remains at the Desert Sunlight photovoltaic solar facility. MNI = minimum number of individuals of each species represented by the identifiable remains. In some cases (e.g. Cinnamon/Blue-winged Teal), closely related species could not be distinguished based on the available remains, but the Foraging Zone and Residency Status could still be coded, due to the ecological similarities of the species involved. Total identified birds = 56.

DESERT SUNLIGHT		Zone	Residency	MNI
Pied-billed Grebe	*Podilymbus podiceps*	water	migrant	1
Eared Grebe	*Podiceps nigricollis*	water	migrant	3
Sora	*Porzana carolina*	water	migrant	1
American Avocet	*Recurvirostra americana*	water	migrant	1
Cinnamon/Blue-winged Teal	*Anas discors/clypeata*	water	migrant	1
Western Grebe	*Aechmophorus occidentalis*	water	migrant	9
Brown Pelican	*Pelecanus occidentalis*	water	migrant	2
Double-crested Cormorant	*Phalacrocorax auritus*	water	migrant	2
Black-crowned Night-Heron	*Nycticorax nycticorax*	water	migrant	1
Yuma Clapper Rail	*Rallus longirostris*	water	resident	1
American Coot	*Fulica americana*	water	migrant	5
Mourning Dove	*Zenaida macroura*	terr	resident	3
White-winged Dove	*Zenaida asiatica*	terr	resident	1
Lesser Nighthawk	*Chordeiles acutipennis*	air	resident	2
Common Poorwill	*Phalaenoptilus nuttallii*	air	resident	1
Costa's Hummingbird	*Calypte costae*	air	resident	1
Ash-throated Flycatcher	*Myiarchus cinerascens*	air	resident	1
Black-throated/Sage Sparrow	*Amphispiza sp.*	terr	resident	1
Black Phoebe	*Sayornis nigricollis*	air	resident	1
Loggerhead Shrike	*Lanius ludovicianus*	terr	resident	2
Common Raven	*Corvus corax*	terr	resident	1
Horned Lark	*Eremophila alpestris*	terr	migrant	1
Tree Swallow	*Tachycineta bicolor*	air	migrant	1
Townsend's Warbler	*Setophaga townsendi*	terr	migrant	2
Common Yellowthroat	*Geothlypis trichas*	terr	migrant	1
Savannah Sparrow	*Passerculus sandwichensis*	terr	migrant	1
Yellow-headed Blackbird	*Xanthocephalus xanthocephalus*	terr	migrant	1
Wilson's Warbler	*Cardellina pusilla*	terr	migrant	2
Western Tanager	*Piranga ludoviciana*	terr	migrant	2
Black-headed Grosbeak	*Pheucticus melanocephalus*	terr	migrant	1
Great-tailed Grackle	*Quiscalus mexicanus*	terr	resident	2
Brown-headed Cowbird	*Molothrus ater*	terr	resident	1

Table 3. Species identified from avian remains at the Genesis trough system solar facility. Total identified birds = 30.

GENESIS		Zone	Residency	MNI
Eared Grebe	*Podiceps nigricollis*	water	migrant	2
Great Blue Heron	*Ardea herodias*	water	migrant	1
American Kestrel	*Falco sparverius*	air	resident	1
Ring-billed Gull	*Larus delawarensis*	water	migrant	2
California Gull	*Larus californianus*	water	resident	1
White-winged Dove	*Zenaida asiatica*	terr	resident	1
Lesser Nighthawk	*Chordeiles acutipennis*	air	resident	2
Say's Phoebe	*Sayornis saya*	air	resident	2
Tree Swallow	*Tachycineta bicolor*	air	migrant	2
Cliff Swallow	*Petrochelidon pyrrhonota*	air	resident	5
Hermit Warbler	*Setophaga occidentalis*	terr	migrant	1
Black-headed Grosbeak	*Pheucticus melanocephalus*	terr	migrant	1
Chipping Sparrow	*Spizella passerina*	terr	resident	1
Bullock's Oriole	*Icterus bullockii*	terr	resident	2
Brown-headed Cowbird	*Molothrus ater*	terr	resident	6

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Table 4. Species identified from avian remains at the Ivanpah power tower solar facility. Total identified birds = 127

IVANPAH		Zone	Residency	MNI
Cinnamon Teal	*Anas cyanoptera*	water	migrant	4
Cooper's Hawk	*Accipiter cooperii*	air	migrant	1
Red-shouldered Hawk	*Buteo lineatus*	terr	migrant	1
American Kestrel	*Falco sparverius*	air	resident	1
Peregrine Falcon	*Falco peregrinus*	air	resident	1
American Coot	*Fulica americana*	water	migrant	7
Sora	*Porzana carolina*	water	migrant	1
Spotted Sandpiper	*Actitis maculatus*	water	migrant	2
Greater Roadrunner	*Geococcyx californianus*	terr	resident	5
Yellow-billed Cuckoo	*Coccyzus americanus*	terr	migrant	1
Mourning Dove	*Zenaida macroura*	terr	resident	11
Barn Owl	*Tyto alba*	terr	resident	1
Lesser Nighthawk	*Chordeiles acutipennis*	air	resident	3
Common Poorwill	*Phalaenoptilus nuttallii*	air	resident	1
White-throated Swift	*Aeronautes saxatalis*	air	resident	1
Allen's/Rufous Hummingbird	*Selasphorus sp.*	air	migrant	1
Northern Flicker	*Colaptes auratus*	terr	resident	1
Ash-throated Flycatcher	*Myiarchus cinerascens*	air	resident	1
Loggerhead Shrike	*Lanius ludovicianus*	terr	resident	3
Warbling Vireo	*Vireo gilvus*	terr	migrant	1
Common Raven	*Corvus corax*	terr	resident	2
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*	air	migrant	2
Tree Swallow	*Tachycineta bicolor*	air	migrant	2
Verdin	*Auriparus flaviceps*	terr	resident	3
Blue-gray Gnatcatcher	*Polioptila caerulea*	terr	resident	1
Northern Mockingbird	*Mimus polyglottos*	terr	resident	1
American Pipit	*Anthus rubescens*	terr	migrant	4
Orange-crowned Warbler	*Oreothlypis celata*	terr	migrant	1
Lucy's Warbler	*Oreothlypis luciae*	terr	resident	1
Black-throated Gray Warbler	*Setophaga nigrescens*	terr	migrant	1
Yellow-rumped Warbler	*Setophaga coronata*	air	migrant	14
Townsend's Warbler	*Setophaga townsendi*	terr	migrant	2
Yellow Warbler	*Setophaga petechia*	terr	migrant	1
Black-and-white Warbler	*Mniotilta varia*	terr	migrant	1
Wilson's Warbler	*Cardellina pusilla*	terr	migrant	2
MacGillivray's Warbler	*Oporornis tolmei*	terr	migrant	1
Western Tanager	*Piranga ludoviciana*	terr	migrant	2
Lazuli Bunting	*Passerina amoena*	terr	migrant	1
Blue Grosbeak	*Passerina caerulea*	terr	resident	1
Green-tailed Towhee	*Pipilo chlorurus*	terr	migrant	1
Brewer's Sparrow	*Spizella breweri*	terr	resident	3
Chipping Sparrow	*Spizella passerina*	terr	resident	3
Black-throated Sparrow	*Amphispiza bilineata*	terr	resident	3
Savannah Sparrow	*Passerculus sandwichensis*	terr	migrant	2
White-crowned Sparrow	*Zonotrichia leucophrys*	terr	migrant	6

IVANPAH		Zone	Residency	MNI
Pine Siskin	*Spinus pinus*	terr	migrant	1
House Finch	*Carpodacus mexicanus*	terr	resident	13
Brown-headed Cowbird	*Molothrus ater*	terr	resident	1
Great-tailed Grackle	*Quiscalus mexicanus*	terr	resident	3

Cause of Death of Birds Found at the Solar Power Plants

Photovoltaic facility (Desert Sunlight):

Sixty-one birds from 33 separate species were represented from Desert Sunlight. Due to desiccation and scavenging, a definitive cause of death could not be established for 22 of the 61 birds (see Table 5). Feathers could be examined in all cases, however, and none of the 61 bird remains submitted from the PV facility had visible evidence of feather singeing, a clear contrast with birds found at Ivanpah.

Blunt force impact trauma was determined to have been the cause of death for 19 Desert Sunlight birds including two Western Grebes (*Aechmophorus occidentalis*) and one each of 16 other species. Impact (blunt force) trauma is diagnosed by the presence of fractures and internal and/or external contusions. In particular, bruising around the legs, wings and chest are consistent with crash-landings while fractures of the head and/or neck are consistent with high-velocity, frontal impact (such as may result from impacting a mirror).

Predation was the immediate cause of death for 15 birds. Lesions supporting the finding of predation included decapitation or missing parts of the body with associated hemorrhage (9/15), and lacerations of the skin and pectoral muscles. Eight of the predated birds from Desert Sunlight were

Figure 2: Predation trauma (top) resulting in traumatic amputation of the head and neck (American Avocet) and impact trauma (bottom) causing bruising of the keel ridge of the sternum (Brown Pelican).

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grebes, which are unable to easily take off from land. This suggests a link between predation and stranding and/or impact resulting from confusion of the solar panels with water (see Discussion).

Parabolic trough facility (Genesis):

Thirty-one birds were collected from this site. There were 15 species represented. Those found in the greatest numbers were Brown-headed Cowbirds and Cliff Swallows, though no more than 6 individuals from any given species were recovered. Overall, carcass quality was poor and precluded definitive cause of death determination in 17/31 birds (Table 5). Identifiable causes of death consisted of impact trauma (6/31) and predation trauma (2/31). Necropsy findings were similar to those at Desert Sunlight with fractures and hemorrhage noted grossly. Predation trauma was diagnosed in two birds, a Cliff Swallow and a Ring-billed Gull.

Power tower facility (Ivanpah):

Ivanpah is the only facility in this study that produces solar flux, which is intense radiant energy focused by the mirror array on the power-generating tower. Objects that pass through this flux, including insects and birds, encounter extreme heat, although the extent of heating depends on many variables, including the duration of exposure and the precise location in the flux beam.

From Ivanpah, 141 birds were collected and examined. Collection dates spanned a period of one year and five months (July 2012 to December 2013) and included at least seven months of construction during which time the towers were not actively fluxing (2013). There were 49 species represented (Table 4). Those found in the greatest numbers were Yellow-rumped Warblers (*Setophaga coronata;* 14), House Finches (*Carpodacus mexicanus*; 13), Mourning Doves (*Zenaida macroura*; 11) and American Coots (*Fulica americana*; 7). Yellow-rumped Warblers and House Finches were found exclusively at the power tower site.

Solar flux injury was identified as the cause of death in 47/141 birds. Solar flux burns manifested as feather curling, charring, melting and/or breakage and loss. Flight feathers of the tail and/or wings were invariably affected. Burns also tended to occur in one or more of the following areas; the sides of the body (axillae to pelvis), the dorsal coverts, the tops and/sides of the head and neck and the dorsal body wall (the back). Overlapping portions of feathers and light-colored feathers were often spared (Figures 3 and 4).

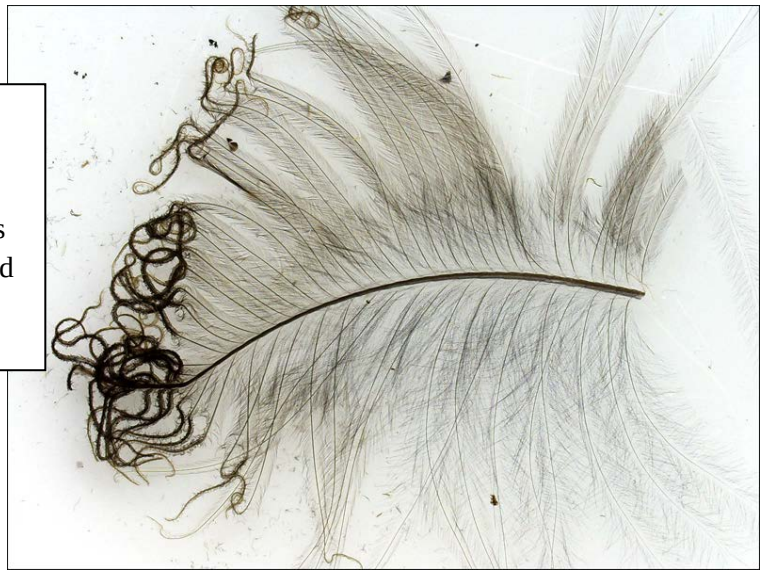

Figure 3: contour feather from the back of a House Finch with Grade 3 solar flux injury. The feather has curling and charring limited to the exposed tip.

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Figure 4: Feather from a Peregrine Falcon with Grade 2 solar flux injury. Note burning of dark feather bands with relative sparing of light bands.

The yellow and red rumps of Yellow-rumped Warblers and House Finches respectively remained strikingly unaffected (See Figure 1). Charring of head feathers, in contrast, was generally diffuse across all color patterns. A pattern of spiraling bands of curled feathers across or around the body and wings was often apparent.

Table 5. Cause of death (COD) data

Cause of Death	Ivanpah	Genesis	Desert Sunlight	Total
Solar Flux	47	0	0	47
Impact trauma	24	6	19	49
Predation trauma	5	2	15	22
Trauma of undetermined cause	14	0	0	14
Electrocution	1	0	0	1
Emaciation	1	0	0	1
Undetermined (remains in poor condition)	46	17	22	85
No evident cause of death	3	6	5	14
Total	141	31	61	233

Eight birds were assigned a feather damage Grade of 1 with curling of less than 50% of the flight feathers. Six of these had other evidence of acute trauma (75%). Five birds were Grade 2, including three birds that were found alive and died shortly afterwards. Of these birds, 2 (the birds found dead) also had evidence of acute trauma. Twenty-eight birds were Grade 3; with charring of body feathers. Of these birds, 21/28

(28%) had other evidence of acute trauma. Remaining carcasses (6) were incomplete and a grade could not be assigned.

Twenty-nine birds with solar flux burns also had evidence of impact trauma. Trauma consisted of skull fractures or indentations (8), sternum fractures (4), one or more rib fractures (4), vertebral fractures (1), leg fracture (3), wing fracture (1) and/or mandible fracture (1). Other signs of trauma included acute macroscopic and/or microscopic internal hemorrhage. Location found was reported for 39 of these birds; most of the intact carcasses were found near or in a tower. One was found in the inner heliostat ring and one was found (alive) on a road between tower sites. The date of carcass collection was provided for 42/47. None were found prior to the reported first flux (2013).

Figure 5: The dorsal aspect of the wing from a Peregrine Falcon (the same bird as shown in Figure 4) with Grade 2 lesions. Note extensive curling of feathers without visible charring. This bird was found alive, unable to fly, emaciated and died shortly thereafter. These findings demonstrate fatal loss of function due to solar flux exposure in the absence of skin or other soft tissue burns.

Among the solar flux cases, a variety of bird species were affected though all but one (a raptor) was a passerine (Appendix 2). House Finches and yellow-rumped Warblers were most often represented (10/47 and 12/47 respectively). For the birds in which species could be determined (41/47), insects were a major

dietary component in all but two species. These were an unidentified hummingbird (*Selasphorus*) species (known to include insects in the diet) and a Peregrine Falcon (a species that feeds on small birds).

Four birds were reportedly found alive and taken to a wildlife rehabilitation center where they died one to a few days later (exact dates were not consistently provided). Three had Grade 2 feather burns and one had Grade 3 feather burns. None had other evidence of trauma. Body condition was reduced in all of the birds (two considered thin and two emaciated) based on a paucity of fat stores and depletion of skeletal muscling. The four birds were of four different species and consisted of three passerines and one raptor.

The second most commonly diagnosed cause of death at the Ivanpah facility was impact (or blunt force) trauma (24/141 birds). Necropsy findings were as previously described at the Desert Sunlight facility. Impact marks were reported on heliostat mirrors adjacent to the carcasses in 5 cases and mirrors were described as being vertically-oriented in 5 cases. Specific carcass locations were reported for 18 of the birds. Those birds were found in a variety of areas; below heliostats (8/18), in or near tower and powerblock buildings (4/18), on roads (2/18), below power lines (2/18), in the open (1/18) and by a desert tortoise pen (1/18).

Predation was determined to be the cause of death for five of the birds. A coot and a Mourning Dove were found with extensive trauma and hemorrhage to the head and upper body consisting of lacerations, crush trauma and/or decapitation. One of the birds (an American Coot) was found near a kit fox shelter site. One bird (Northern Mockingbird) was found near the fence line and the third (a Mourning Dove) in an alley way. Two more birds (an unidentified sparrow and an American Pipit) were observed being eaten by one of the resident Common Ravens.

Discussion of Cause of Death of Birds Found at the Solar Power Plants

Impact trauma:

Sheet glass used in commercial and residential buildings has been well-established as a hazard for birds, especially passerines (Klem 1990, 2004, 2006; Loss et al. 2014). A recent comprehensive review estimated that between 365-988 million birds die annually by impacting glass panels in the United States alone (median estimate 599 million; Loss et al. 2014). Conditions that precipitate window strike events include the positioning of vegetation on either side of the glass and the reflective properties of the window. Glass panels that reflect trees and other attractive habitat are involved in a higher number of bird collisions.

The mirrors and photovoltaic panels used at all three facilities are movable and generally directed upwardly, reflecting the sky. At the Ivanpah facility, when heliostats are oriented vertically (typically for washing or installation, personal communication, RAK) they appear to pose a greater risk for birds. Of the eight birds reported found under a heliostat, heliostats were vertically-oriented in at least 5 cases. (D Klem Jr., DC Keck, KL Marty, AJ Miller Ball, EE Niciu, and CT Platt. 2004. Effects of window angling, feeder placement, and scavengers on avian mortality at plate glass. Wilson Bulletin, 116(1):69-73; D Klem Jr. 2006. Glass: A deadly conservation issue for birds. Bird Observer 34(2):73-81; D Klem Jr. 1990.

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Collisions between birds and windows: mortality and prevention. Journal of Field Ornithology 61:120–128; Loss, S.R., T. Will, S.S.Loss, and P.P. Marra. 2014. Bird-building collisions in the United States: Estimates of annual mortality and species vulnerability. Condor 116: 8-23). Studies with aquatic insects have found that vertically-oriented black glass surfaces (similar to solar panels) produced highly polarized reflected light, making them highly attractive (Kriska, G., P. Makik, I. Szivak, and G. Horvath. 2008. Glass buildings on river banks as "polarized light traps" for mass-swarming polarotactic caddis flies. Naturwissenschaften 95: 461-467).

A desert environment punctuated by a large expanse of reflective, blue panels may be reminiscent of a large body of water. Birds for which the primary habitat is water, including coots, grebes, and cormorants, were over-represented in mortalities at the Desert Sunlight facility (44%) compared to Genesis (19%) and Ivanpah (10%). Several factors may inform these observations. First, the size and continuity of the panels differs between facilities. Mirrors at Ivanpah are individual, 4 x 8' panels that appear from above as stippling in a desert background (Figure 6). Photovoltaic panels at Desert Sunlight are long banks of adjacent 27.72 x 47.25" panels (70 x 120 cm), providing a more continuous, sky/water appearance. Similarly, troughs at Genesis are banks of 5 x 5.5' panels that are up to 49-65 meters long.

Figure 6: The Ivanpah Solar Electric Generating System as seen via satellite. The mirrored panels are 5 x 8 feet.

There is growing concern about "polarized light pollution" as a source of mortality for wildlife, with evidence that photovoltaic panels may be particularly effective sources of polarized light in the environment (see Horvath et al. 2010. Reducing the maladaptive attractiveness of solar panels to polarotactic insects. Conservation Biology 24: 1644-1653, and ParkScience, Vol. 27, Number 1, 2010; available online at: http://www.nature.nps.gov/parkscience/index.cfm?ArticleID=386&ArticleTypeID=5; as well as discussion of this issue in the Desert Sunlight Final Environmental Impact Statement, Chapter 4, pp. 14-15).

Variables that may affect the illusory characteristics of solar panels are structural elements or markings that may break up the reflection. Visual markers spaced at a distance of 28 cm or less have been shown to reduce the number of window strike events on large commercial buildings (City of Toronto Green Development Standard; Bird-friendly development guidelines. March 2007). Mirrors at the Ivanpah facility are unobscured by structures or markings and present a diffuse, reflective surface. Photovoltaic panels at Desert Sunlight are arranged as large banks of small units that are 60 x 90 cm. The visually uninterrupted expanse of both these types of heliostat is larger than that which provides a solid structure visual cue to passerines. Parabolic troughs at Genesis have large, diffusely reflective surfaces between seams that periodically transect the bank of panels at 5.5' intervals. Structures within the near field, including the linear concentrator and support arms, and their reflection in the panels and may provide a visual cue to differentiate the panel as a solid structure.

The paper by Horvath et al cited above provides experimental evidence that placing a white outline and/or white grid lines on solar panels significantly reduced the attractiveness of these panels to aquatic insects, with a loss of only 1.8% in energy-producing surface area (p. 1651). While similar detailed studies have yet to be carried out with birds, this work, combined with the window strike results, suggest that significant reductions in avian mortality at solar facilities could be achieved by relatively minor modifications of panel and mirror design. This should be a priority for further research.

Finally, ponds are present on the property of the Desert Sunlight and Genesis facilities. The pond at Genesis is netted, reducing access by migratory birds, while the pond at Desert Sunlight is open to flighted wildlife. Thus, birds are both attracted to the water feature at Desert Sunlight and habituated to the presence of an accessible aquatic environment in the area. This may translate into the misinterpretation of a diffusely reflected sky or horizonal polarized light source as a body of water.

Stranding and Predation:

Predation is likely linked to panel-related impact trauma and stranding. Water birds were heavily over-represented in predation mortalities at Desert Sunlight. Of the 15 birds that died due to predation, 14 make their primary habitat on water (coots, grebes, a cormorant, and an avocet). A single White-winged Dove was the only terrestrial-based predation mortality in the submitted specimens. This is in contrast to blunt trauma mortalities at Desert Sunlight in which 8 of the 19 birds determined to have died of impact trauma were water species.

Locations of the birds when found dead were noted on several submissions. Of the birds that died of predation for which locations were known, none were located near ponds. The physiology of several of

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these water birds is such that locomotion on land is difficult or impossible. Grebes in particular have very limited mobility on land and require a run across water in order to take off (Jehl, J. R., 1996. Mass mortality events of Eared Grebes in North America. Journal of Field Ornithology 67: 471-476). Thus, these birds likely did not reach their final location intentionally. Ponds at the PV and trough sites are fenced, prohibiting terrestrial access by predators. Birds on the water or banks of the pond are inaccessible to resident predators. Therefore, it is unlikely that the birds were captured at the pond and transported by a predator into the area of the panels. Attempts to land or feed on the panels because of their deceptive appearance may have injured the birds to the point that they could not escape to safety, or inadvertently stranded the birds on a substrate from which they could not take flight. We believe that an inability to quickly flee after striking the panels and stranding on the ground left these birds vulnerable to opportunistic predators. At least two types of predators, kit foxes and ravens, have been observed in residence at the power tower and PV facilities and ravens have been reported at the trough site (personal communication and observation, RAK). Additionally, histories for multiple birds found at the tower site document carcasses found near kit fox shelters or being eaten or carried by a raven.

Solar Flux:

Avian mortality due to exposure to solar flux has been previously explored and documented (McCrary, M. D., McKernan, R. L., Schreiber, R. W., Wagner, W. D., and Sciarrotta, T. C. Avian mortality at a solar energy power plant. Journal of Field Ornithology, 57(2): 135-141). Solar flux injury to the birds of this report, as expected, occurred only at the power tower facility. Flux injury grossly differed from other sources of heat injury, such as electrocution or fire. Electrocution injury requires the bridging of two contact points and is, therefore, seen almost exclusively in larger birds such as raptors. Contact points tend to be on the feet, carpi and/or head and burns are often found in these areas. Electrocution causes deep tissue damage as opposed to the surface damage of fire or solar flux. Other sequelae include amputation of limbs with burn marks on bone, blood vessel tears and pericardial hemorrhage. Burns from fires cause widespread charring and melting of feathers and soft tissues and histopathologic findings of soot inhalation or heat damage to the respiratory mucosa. None of these were characteristics of flux injury. In the flux cases small birds were over-represented, had burns generally limited to the feathers and internal injuries attributable to impact. Flux injury inconsistently resulted in charring, tended to affect feathers along the dorsal aspects of the wings and tail, and formed band-like patterns across the body (Divincenti, F. C., J. A. Moncrief, and B. A. Pruitt. 1969. Electrical injuries: a review of 65 cases. The Journal of Trauma 9: 497-507).

Proposed mechanisms of solar flux-related death follow one or a combination of the following pathways:

- impact trauma following direct heat damage to feathers and subsequent loss of flight ability
- starvation and/or thermoregulatory dysfunction following direct heat damage to feathers
- shock
- soft tissue damage following whole-body exposure to high heat
- ocular damage following exposure to bright light.

Necropsy findings from this study are most supportive of the first three mechanisms.

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Loss of feather integrity has effects on a bird's ability to take off, land, sustain flight and maneuver. Tail feathers are needed for lift production and maneuverability, remiges are needed for thrust and lift and feathers along the propatagium and coverts confer smoothness to the avian airfoil. Shortening of primary flight feathers by as little as 1.6 cm with loss of secondary and tertiary remiges has been shown to eliminate take-off ability in house sparrows further demonstrating the importance of these feathers (Brown, R. E., and A. C. Cogley, 1996. Contributions of the propatagium to avian flight: Journal of Experimental Zoology 276: 112-124). Loss of relatively few flight feathers can, therefore, render a bird unable or poorly-able to fly. Birds encountering the flux field at Ivanpah may fall as far as 400 feet after feather singeing. Signs of impact trauma were often observed in birds with feather burns and are supportive of sudden loss of function (Beaufrere, H., 2009. A review of biomechanic and aerodynamic considerations of the avian thoracic limb. Journal of Avian Medicine and Surgery 23: 173-185).

Birds appear to be able to survive flux burns in the short term, as evidenced by the collection of several live birds with singed feathers. Additionally, Forensic Lab staff observed a falcon or falcon-like bird with a plume of smoke arising from the tail as it passed through the flux field. Immediately after encountering the flux, the bird exhibited a controlled loss of stability and altitude but was able to cross the perimeter fence before landing. The bird could not be further located following a brief search (personal observation, RAK and EOE). Birds that initially survive the flux exposure and are able to glide to the ground or a perch may be disabled to the point that they cannot efficiently acquire food, escape predators or thermoregulate. Observations of emaciation in association with feather burns in birds found alive is supportive of debilitation subsequent to flux exposure. More observational studies and follow-up are required to understand how many birds survive flux exposure and whether survival is always merely short-term. As demonstrated by the falcon, injured birds (particulary larger birds), may be ambulatory enough to glide or walk over the property line indicating a need to include adjacent land in carcass searches.

There was evidence of acute skin burns on the heads of some of the Grade 3 birds that were found dead. But interestingly, tissue burn effects could not be demonstrated in birds known to have survived short periods after being burned. Hyperthermia causing instantaneous death manifests as rapid burning of tissue, but when death occurs a day or later there will be signs of tissue loss, inflammation, proteinic exudate and/or cellular death leading to multisystemic organ failure. The beginnings of an inflammatory response to injury can be microscopically observed within one to a few hours after the insult and would have been expected in any of the four birds found alive. Signs of heat stroke or inhalation of hot air should have been observable a day or more after the incident. Rather, in these cases extensive feather burns on the body largely appeared to be limited to the tips of the feathers with the overlapping portions insulating the body as designed. This, in conjunction with what is likely only a few seconds or less spent in the flux, suggests that skin or internal organ damage from exposure to high temperatures in solar flux may not be a major cause of the observed mortality.

Ocular damage following light exposure was also considered but could not be demonstrated in the submitted birds. In the four birds that initially survived, there were no signs of retinal damage, inflammation or other ocular trauma. Given the small sample size, this does not preclude sight impairment as a possible sequela but clinical monitoring of survivors would be needed to draw more definitive conclusions.

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Other/Undetermined:

Powerline electrocution was the cause of death for one bird (a juvenile Common Raven) at the Ivanpah facility. Electrocution at these solar facilities is a potential hazard but, thus far, appears to be an uncommon cause of death.

Smashed birds (13/233) were found at all three locations. Detailed carcass collection information was provided for 6; all were found on roads. Though poor carcass quality in all cases precluded definitive cause death determination, circumstances and carcass condition suggest vehicle trauma as the cause of deaths. The relatively low numbers of vehicle collisions may be attributed to slow on-site vehicle speeds and light traffic. Vehicle collisions, therefore, do not appear to be a major source of mortality and would be expected to decrease as construction ends.

There was a large number of birds (85/233) for which a cause of death could not be determined due to poor carcass condition. The arid, hot environment at these facilities leads to rapid carcass degradation which greatly hinders pathology examination. Results were especially poor for birds from the Genesis facility, where the cause of death(s) for 23/31 (74%) could not be determined. These results underscore the need for carcasses to be collected soon after death. More frequent, concerted carcass sweeps are advised.

Insect mortality and solar facilities as "mega-traps"

An ecological trap is a situation that results in an animal selecting a habitat that reduces its fitness relative to other available habitats (Robertson, B.A. and R.L. Hutto. 2006. A framework for understanding ecological traps and an evaluation of existing evidence. Ecology 87: 1075-1085; Robertson, B.A., J.S. Rehage, and Sih, A. 2013. Ecological novelty and the emergence of evolutionary traps. Trends in Ecology and Evolution 28: 552-560).

A wide variety of circumstances may create ecological traps, ranging from subtle (songbirds attracted to food resources in city parks, where they are vulnerable to unnaturally high populations of predators) to direct (birds are attracted to oil-filled ponds, believing it to be water, and become trapped). It appears that solar flux facilities may act as "**mega-traps,"** which we define as artificial features that attract and kill species of multiple trophic layers. The strong light emitted by these facilities attract insects, which in turn attract insect-eating birds, which are incapacitated by solar flux injury, thus attracting predators and creating an entire food chain vulnerable to injury and death.

OLE staff observed large numbers of insect carcasses throughout the Ivanpah site during their visit. In some places there were hundreds upon hundreds of butterflies (including monarchs, *Danaus plexippus*) and dragonfly carcasses. Some showed singeing, and many appeared to have just fallen from the sky. Careful observation with binoculars showed the insects were active in the bright area around the boiler at the top of the tower. It was deduced that the solar flux creates such a bright light that it is brighter than the surrounding daylight. Insects were attracted to the light and could be seen actively flying the height of the tower. Birds were also observed feeding on the insects. At times birds flew into the solar flux and ignited. Bird carcasses recovered from the site showed the typical singed feathers. The large populations of insects

may also attract indigenous bat species, which were seen roosting in structures at the base of the power tower.

Monarch butterflies in North America – both east and west of the Rocky Mountains – have been documented to be in decline (see the North American Monarch Conservation Plan, available at: http://www.mlmp.org/Resources/pdf/5431_Monarch_en.pdf). Proposed causes include general habitat loss and specific loss of milkweed, upon which the butterflies feed and reproduce. Considering the numerous monarch butterfly carcasses seen at the Ivanpah facility, it appears that solar power towers could have a significant impact on monarch populations in the desert southwest. Analysis of the insect mortality at Ivanpah, and systematic observations of bird/insect interactions around the power tower, is clearly needed.

Bird species affected by solar flux include both insectivores (e.g. swallows, swifts, flycatchers, and warblers) and raptors that prey on insect-feeding birds. Based on observations of the tower in flux and the finding of large numbers of butterflies, dragonflies and other insects at the base of the tower and in adjacent buildings it is suspected that the bright light generated by solar flux attracts insects, which in turn attracts insectivores and predators of insectivores. Waterbirds and other birds that feed on vegetation were not found to have solar flux burns. Birds were observed perching and feeding on railings at the top of the tower, apparently in response to the insect aggregations there.

Further, dead bats found at the Ivanpah site could be attracted to the large numbers of insects in the area. Nineteen bats from the condenser area of the power tower facility have been submitted to NFWFL for further evaluation. These bats belong to the Vespertilionidae and Molossidae families, which contain species considered by the Bureau of Land Management to be sensitive species in California. Preliminary evaluation revealed no apparent singing of the hair, and analysis is ongoing.

Solar flux and heat associated with solar power tower facilities

Despite repeated requests, we have been unsuccessful in obtaining technical data relating to the temperature associated with solar flux at the Ivanpah facility. The following summarizes the information we have gathered from other sources.

Figure 7 Ivanpah solar power facilities
http://ivanpahsolar.com/about

The Ivanpah solar energy generating facility consists of mirrors that reflect sunlight to a tower. In the tower sits a boiler that generates steam which then powers a turbine.

At the top of a 459 foot tall tower sits a boiler (solar receiver) that is heated by the sun rays reflected by 300,000 mirrors, called solar heliostats. When the concentrated sunlight strikes the boiler tubes, it heats the water to create superheated steam. The high temperature steam is then piped from the boiler to a turbine where electricity is generated (http://ivanpahsolar.com/about visited on 01/20/2014).

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If all the solar heliostats are focused on the solar tower the beams multiply the strength of sunlight by 5000 times, and this generates temperatures at the solar tower in excess of 3600° Fahrenheit (> 1982° Celsius). Since steel melts at 2750° Fahrenheit (1510° Celsius), only a percentage of heliostats are focused on the solar receiver so that) the optimal temperature at the tower is approximately 900° Fahrenheit (~482° Celsius) ("How do they do it" Wag TV for Discovery Channel, Season 3, Episode 15, "Design Airplane Parachutes, Create Solar Power, Make Sunglasses" Aired August 25, 2009).

Figure 8: Seville solar power facility (http://inhabitat.com/sevilles-solar-power-tower)

A solar steam plant in Coalinga that also uses heliostat technology for extracting oil is on record stating that the steam generator is set to about 500° Celsius. (http://abclocal.go.com/kDSn/story?section=news%2Fbusiness&id=8377469 Viewed Jan 21, 2013)

Temperatures measured by the authors at the edge of the solar complex on the surface of a heliostat were approximately 200° Fahrenheit (~93° Celsius). Therefore, there is a gradient of temperature from the edge of the solar field to the tower that ranges from 200° to 900° Fahrenheit.

There is a phenomenon that occurs when the heliostats are focused on the tower and electricity is being generated. The phenomenon can be described as either a circle of clouds around the tower or, at times, a cloud formed on the side that is receiving the solar reflection. It appears as though the tower is creating clouds. Currently we propose two hypotheses of why this "cloud" is formed. The first hypothesis is simply the presumption that the high heat associated with towers is condensing the air, and forming the

Figure 9: Tower 1 (bright white) is shown under power. Tower 2 (black) is not operating.

clouds. The second hypothesis is that this phenomenon does not represent clouds at all rather it is a place in space where the heliostats that are not being used to generate heat are focused. Under this scenario, it is a place where the mirrors focus the excess energy not being used to generate electricity.

Ivanpah employees and OLE staff noticed that close to the periphery of the tower and within the reflected solar field area, streams of smoke rise when an object crosses the solar flux fields aimed at the tower. Ivanpah employees used the term “streamers” to characterize this occurrence.

When OLE staff visited the Ivanpah Solar plant, we observed many streamer events. It is claimed that these events represent the combustion of loose debris, or insects. Although some of the events are likely that, there were instances in which the amount of smoke produced by the ignition could only be explained by a larger flammable biomass such as a bird. Indeed OLE staff observed birds entering the solar flux and igniting, consequently becoming a streamer.

OLE staff observed an average of one streamer event every two minutes. It appeared that the streamer events occurred more frequently within the “cloud” area adjacent to the tower. Therefore we hypothesize that the “cloud” has a very high temperature that is igniting all material that traverses its field.
One possible explanation of this this phenomenon is that the “cloud” is a convergent location where heliostats are “parked” when not in use. Conversely it undermines the condensation hypothesis, given that birds flying through condensation clouds will not spontaneously ignite.

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Temperatures required to burn feathers

Many of the carcasses recovered from the Ivanpah Solar plant after the plant became operational showed singing of feathers as shown in Figure 10.

Figure 10: Singed feathers from a Northern Rough-winged Swallow

In order to investigate at what temperature feathers burn/singe, we exposed feathers to different air temperatures. Each feather was exposed to a stream of helium and air for 30 seconds. The results indicate that at 400° Celsius (752° Fahrenheit) after 30 seconds the feather begins to degrade. But at 450° and

Figure 11: Results of exposing feathers to different temperatures (in degrees Celsius)

500° Celsius (842° and 932° Fahrenheit respectively) the feathers singed as soon as they made contact with the superheated air (Figure 11). Therefore, when singed birds are found, it can be inferred that the temperatures in the solar flux at the time a bird flew through it was at least 400° Celsius (752° Fahrenheit). This inference is consistent with the desired operating temperature of a power tower solar boiler (482° Celsius).

The fact that a bird will catch on fire as it flies through the solar flux has been confirmed by a Chevron engineer who works at the Coalinga Chevron Steam plant, a joint venture of Chevron and BrightSource Solar. (http://abclocal.go.com/kDSn/story?section=news%2Fbusiness&id=8377469 Viewed Jan 21, 2013)

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Conclusions and Recommendations

In summary, three main causes of avian mortality were identified at these facilities; impact trauma, predation and solar flux. Birds at all three types of solar plants were susceptible to impact trauma and predators. Solar flux injury was unique to the power tower facility. Solar facilities, in general, do not appear to attract particular species, rather an ecological variety of birds are vulnerable. That said, certain mortality and species trends were evident, such as waterbirds at Desert Sunlight, where open water sources were present.

Specific hazards were identified, including vertically-oriented mirrors or other smooth reflective panels; water-like reflective or polarizing panels; actively fluxing towers; open bodies of water; aggregations of insects that attracted insectivorous birds; and resident predators. Making towers, ponds and panels less attractive or accessible to birds may mitigate deaths. Specific actions include placing perch-guards on power tower railings near the flux field, properly netting or otherwise covering ponds, tilting heliostat mirrors during washing and suspending power tower operation at peak migration times.

Visual cues should be retrofitted to existing panels and incorporated into new panel design. These cues may include UV-reflective or solid, contrasting bands spaced no further than 28 cm from each other. This arrangement has been shown to significantly reduce the number of passerines hitting expanses of windows on commercial buildings. Spacing of 10 cm eliminates window strikes altogether. Further exploration of panel design and orientation should be undertaken with researchers experienced in the field (Daneil Klem Jr. of Muhlenberg College) to determine causes for the high rate of impact trauma, and designs optimized to reduce these mortalities.

Challenges to data collection included rapid degradation of carcass quality hindering cause of death and species determination; large facilities which are difficult to efficiently search for carcasses; vegetation and panels obscuring ground visibility; carcass loss due to scavenging; and inconsistent documentation of carcass history. Searcher efficiency has been shown to have varying influences on carcass recovery with anywhere from 30% to 90% detection of small birds achieved in studies done at wind plants (Erickson et al., 2005). Scavengers may also remove substantial numbers of carcasses. In studies done on agricultural fields, up to 90% of small bird carcasses were lost within 24 hours (Balcomb, 1986; Wobeser and Wobeser, 1992). OLE staff observed apparently resident ravens at the Ivanpah power tower. Ravens are efficient scavengers, and could remove large numbers of small bird carcasses from the tower vicinity. (Erickson, W. P., G. D. Johnson, and D. P. Young, Jr., 2005, A summary and comparison of bird mortality from anthropogenic causes with an emphasis on collisions: U S Forest Service General Technical Report PSW, v. 191, p. 1029-1042; Balcomb, R., 1986, Songbird carcasses disappear rapidly from agricultural fields: Auk, v. 103, p. 817-820; Wobeser, G., and A. G. Wobeser, 1992, Carcass disappearance and estimation of mortality in a simulated die-off of small birds: Journal of Wildlife Diseases, v. 28, p. 548-554.)

Given these variables it is difficult to know the true scope of avian mortality at these facilities. The numbers of dead birds are likely underrepresented, perhaps vastly so. Observational and statistical studies to account for carcass loss may help us to gain a better sense of how many birds are being killed. Complete histories would help us to identify factors (such as vertical placement of mirrors) leading to mortalities. Continued monitoring is also advised as these facilities transition from construction to full operation. Of especial concern is the Ivanpah facility which was not fully-functioning at the time of the latest carcass submissions. In fact, all but 7 of the carcasses with solar flux injury and reported dates of collection were found at or prior to the USFWS site visit (October 21-24, 2013) and, therefore, represent flux mortality from a facility operating at only 33% capacity. Investigation into bat and insect mortalities at the power tower site should also be pursued.

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Appendix 1. List of all 71 species recovered from the three solar energy sites. In this table, remains of closely related taxa that could not be definitively identified (e.g. Cinnamon/Blue-winged Teal and Black-throated/Sage Sparrow) are assigned to the biogeographically more likely taxon. In all such cases, the possible taxa are ecologically similar. All of these species are MBTA-listed.

SPECIES		Zone	Residency	Sites	MNI
Cinnamon Teal	*Anas cyanoptera*	water	migrant	DS,IV	5
Pied-billed Grebe	*Podilymbus podiceps*	water	migrant	DS	1
Western Grebe	*Aechmorphorus occidentalis*	water	migrant	DS	9
Eared Grebe	*Podiceps nigricollis*	water	migrant	DS,GN	5
Brown Pelican	*Pelecanus occidentalis*	water	migrant	DS	2
Double-crested Cormorant	*Phalacrocorax auritus*	water	migrant	DS	2
Great Blue Heron	*Ardea herodias*	water	migrant	GN	1
Black-crowned Night-Heron	*Nycticorax nycticorax*	water	migrant	DS	1
Cooper's Hawk	*Accipiter cooperii*	air	migrant	IV	1
Red-shouldered Hawk	*Buteo lineatus*	terr	migrant	IV	1
American Kestrel	*Falco sparverius*	air	resident	GN,IV	2
Peregrine Falcon	*Falco peregrinus*	air	resident	IV	1
American Coot	*Fulica americana*	water	migrant	DS, IV	12
Yuma Clapper Rail	*Rallus longirostris yumanensis*	water	resident	DS	1
Sora	*Porzana carolina*	water	migrant	DS,IV	2
American Avocet	*Recurvirostra americana*	water	migrant	DS	1
Spotted Sandpiper	*Actitis maculatus*	water	migrant	IV	2
Ring-billed Gull	*Larus delawarensis*	water	migrant	GN	2
California Gull	*Larus californianus*	water	resident	GN	1
Greater Roadrunner	*Geococcyx californianus*	terr	resident	IV	5
Yellow-billed Cuckoo	*Coccyzus americanus*	terr	migrant	IV	1
Mourning Dove	*Zenaida macroura*	terr	resident	DS, IV	14
White-winged Dove	*Zenaida asiatica*	terr	resident	DS,GN	2
Barn Owl	*Tyto alba*	terr	resident	IV	1
Lesser nighthawk	*Chordeiles acutipennis*	air	resident	DS,GN,IV	7
Common Poorwill	*Phalaenoptilus nuttallii*	air	resident	DS,IV	2
White-throated Swift	*Aeronautes saxatalis*	air	resident	IV	1
Costa's Hummingbird	*Calypte costae*	air	resident	DS	1
Allen's/Rufous Hummingbird	*Selasphorus sp.*	air	migrant	IV	1
Northern Flicker	*Colaptes auratus*	terr	resident	IV	1
Ash-throated Flycatcher	*Myiarchus cinerascens*	air	resident	DS,IV	2
Say's Phoebe	*Sayornis saya*	air	resident	GN	2
Black Phoebe	*Sayornis nigricollis*	air	resident	DS	1
Loggerhead shrike	*Lanius ludovicianus*	terr	resident	DS,IV	5
Warbling Vireo	*Vireo gilvus*	terr	migrant	IV	1
Common Raven	*Corvus corax*	terr	resident	DS,IV	3
Horned Lark	*Eremophila alpestris*	terr	migrant	DS	1
Tree Swallow	*Tachycineta bicolor*	air	migrant	DS,GN,IV	5

SPECIES		Zone	Residency	Sites	MNI
Cliff Swallow	*Petrochelidon pyrrhonota*	air	resident	GN	5
No. Rough-winged Swallow	*Stelgidopteryx serripennis*	air	migrant	IV	2
Verdin	*Auriparus flaviceps*	terr	resident	IV	3
Blue-gray Gnatcatcher	*Polioptila caerulea*	terr	resident	IV	1
Northern Mockingbird	*Mimus polyglottos*	terr	resident	IV	1
American Pipit	*Anthus rubescens*	terr	migrant	IV	4
Orange-crowned Warbler	*Oreothlypis celata*	terr	migrant	IV	1
Lucy's Warbler	*Oreothlypis luciae*	terr	resident	IV	1
Yellow-rumped Warbler	*Setophaga coronata*	air	migrant	IV	14
Black-throated Gray Warbler	*Setophaga nigrescens*	terr	migrant	IV	1
Hermit Warbler	*Setophaga occidentalis*	terr	migrant	GN	1
Townsend's warbler	*Setophaga townsendi*	terr	migrant	DS,IV	4
Yellow Warbler	*Setophaga petechia*	terr	migrant	IV	1
Black-and-white Warbler	*Mniotilta varia*	terr	migrant	IV	1
MacGillivray's Warbler	*Oporornis tolmei*	terr	migrant	IV	1
Wilson's Warbler	*Cardellina pusilla*	terr	migrant	DS,IV	4
Common Yellowthroat	*Geothlypis trichas*	terr	migrant	DS	1
Western Tanager	*Piranga ludoviciana*	terr	migrant	DS,IV	4
Black-headed Grosbeak	*Pheucticus melanocephalus*	terr	migrant	DS,GN	2
Lazuli Bunting	*Passerina caerulea*	terr	migrant	IV	1
Blue Grosbeak	*Passerina caerulea*	terr	resident	IV	1
Green-tailed Towhee	*Pipilo chlorurus*	terr	migrant	IV	1
Brewer's Sparrow	*Spizella breweri*	terr	resident	IV	3
Chipping Sparrow	*Spizella passerina*	terr	resident	GN,IV	4
Black-throated Sparrow	*Amphispiza bilineata*	terr	resident	DS,IV	4
Savannah Sparrow	*Passerculus sandwichensis*	terr	migrant	DS,IV	3
White-crowned Sparrow	*Zonotrichia leucophrys*	terr	migrant	IV	6
Pine Siskin	*Spinus pinus*	terr	migrant	IV	1
House Finch	*Carpodacus mexicanus*	terr	resident	IV	13
Great-tailed Grackle	*Quiscalus mexicanus*	terr	resident	DS,IV	5
Brown-headed Cowbird	*Molothrus ater*	terr	resident	DS,GN,IV	8
Yellow-headed Blackbird	*Xanthocephalus xanthocephalus*	terr	migrant	DS	1
Bullock's Oriole	*Icterus bullockii*	terr	resident	GN	2

Species recovered from one site: 47
two sites: 18
three sites: 5

CONFIDENTIAL

Appendix 2. Species with solar flux burns

Common Name	Scientific name	
Yellow-rumped warbler	*Setophaga coronata*	12
House finch	*Carpodacus mexicanus*	10
Chipping sparrow	*Spizella passerina*	2
Unidentified warbler	*Parulidae*	2
Verdin	*Auriparus flaviceps*	2
Great-tailed grackle	*Quiscalus mexicanus*	2
Lucy's warbler	*Oreothlypis luciae*	1
Wilson's warbler	*Cardellina pusilla*	1
MacGillivray's warbler	*Oporornis tolmei*	1
Black-throated gray warbler	*Setophaga nigrescens*	1
Townsend's warbler	*Setophaga townsendi*	1
Orange-crowned warbler	*Oreothlypis celata*	1
Blue-gray gnatcatcher	*Polioptila caerulea*	1
Unidentified swallow	*Hirundinidae*	1
Northern rough-winged swallow	*Stelgidopteryx serripennis*	1
Warbling vireo	*Vireo gilvus*	1
Unidentified hummingbird	*Selasphorus sp.*	1
Unidentified passerine	Passeriformes	1
Unidentified finch	*Carpodacus sp.*	1
Lazuli bunting	*Passerina caerulea*	1
Unidentified sparrow	*Spizella species*	1
Unidentified blackbird	*Icteridae*	1
Peregrine falcon	*Falco peregrinus*	1

CONFIDENTIAL

From: Chris Ball
To: Thuy Hua
Subject: RE: Renewable Energy Ordinance
Date: Thursday, May 01, 2014 3:14:19 PM

Thanks,

I may be the only one asking, but why aren't the MCUP project conditions being disclosed along with the draft ordinance?

I'd like to offer these comments:

> **Residual chemicals in photovoltaic (PV) panels have heavy metals that are more harmful to the environment than are found in wind-generated equipment, but I don't believe there is a requirement for a decommissioning surety bond for PV panels. County is requiring a decommissioning surety bond for wind-generated, but for individual property owners for small systems, how are applicants supposed to find a surety who will write the bonds? Does County have list of sureties who are willing to engage in this business? If County doesn't have such a list, and if no sureties are available to post the bonds, then isn't the new County ordinance that appears to allow small wind-generated system really a sham ordinance with hidden MCUP conditions that are impossible to meet? Alternatively, what is wrong with recording a Covenant that would permit County to remove abandoned systems and charge to cost to the property owners tax bill just like any other nuisance abatement?**

I'd welcome your personal response this, and I'll modify my comments if you provide information that I have not considered.

Chris Ball

Ball CM, Inc.
16612 Sierra Hwy
Canyon Country, CA 91351

Off: 661-621-9490 x202
Fax: 661-299-5946
Cell: 661-310-8115

From: Thuy Hua [mailto:thua@planning.lacounty.gov]
Sent: Thursday, May 01, 2014 2:43 PM
To: Chris Ball
Subject: Re: Renewable Energy Ordinance

Hi Chris,

The surety bond will still be a requirement for decommissioning but will be included as project conditions rather than as a development standard here in the ordinance.

-Thuy

Sent from my iPhone

On May 1, 2014, at 2:24 PM, "Chris Ball" <chris@ballcm.com> wrote:

> I just received and read the revised ordinance and have just one question:
>
> It looks like you've dropped the requirement for a surety bond to cover the decommissioning for small scale wind turbines. Correct?
>
> Thanks,
>
> Chris Ball
>
> Ball CM, Inc.
> 16612 Sierra Hwy
> Canyon Country, CA 91351
>
> Off: 661-621-9490 x202
> Fax: 661-299-5946
> Cell: 661-310-8115

PALMDALE

a place to call home

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Councilmember

38300 Sierra Highway

Palmdale, CA 93550-4798

Tel: 661/267-5100

Fax: 661/267-5122

TDD: 661/267-5167

June 4, 2014

Ms. Thuy Hua, AICP
Senior Regional Planner
County of Los Angeles
Department of Regional Planning
330 West Temple Street
Los Angeles, CA 90012

RE: Notice of Preparation of Draft EIR and Notice of Public Scoping Meeting for the Los Angeles county Renewable Energy Ordinance

Dear Ms. Hua:

Thank you for providing the City of Palmdale with the opportunity to comment on the above-mentioned Initial Study for the proposed renewable energy systems within the Los Angeles County unincorporated areas. The City of Palmdale provides the following comment on the proposed renewable energy systems:

The City appreciates the recognition and attention placed on the existence of regional riding and hiking trails, and acknowledgment of the visual character that exists within the Antelope Valley. While it is mentioned in the initial study that an adverse impact on the scenic vistas will be further addressed in the Program Environmental Impact Report, the City of Palmdale is very concerned over potential impacts to the ridgelines of the Sierra Pelona, Ritter and Portal Ridge that form the City of Palmdale's skyline views and are all considered a scenic backdrop within the Environmental Resources Element of the City's General Plan.

Once again, the City of Palmdale appreciates the opportunity to comment on the initial study and looks forward to review and provide comments on the Program Environmental Initial Study. Should you have any questions please contact Juan Carrillo or me at (661) 267-5200.

Sincerely,

Susan Koleda

Susan Koleda, AICP
Acting Planning Manager

Auxiliary aids provided for communication accessibility upon 72 hours notice and request.

CALIFORNIA MUNICIPAL UTILITIES ASSOCIATION

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June 4, 2014

Thuy Hua
LA County Department of Regional Planning
320 W Temple St 13th Floor
Los Angeles CA 90012

RE: Notice of Preparation of a Draft Environmental Impact Report and Notice of Public Scoping Meeting, Renewable Energy Ordinance

Dear Ms. Hua:

The California Municipal Utilities Association ("CMUA") respectfully submits these comments on the proposed Renewable Energy Ordinance to "establish regulations, which include definitions and development standards, for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary meteorological towers." CMUA is concerned that the proposed ordinance, as set forth in the April 30, 2014 *Notice of Preparation of a Draft Environmental Impact Report and Notice of Public Scoping Meeting* may have potentially unintended consequences on statewide energy policy, including the ability to meet climate change goals. Further, the proposals may increase the cost to provide electric service to California consumers. CMUA urges the County to initiate formal consultation with state agencies and other relevant policy-makers responsible for electric grid operation to assess cost and other implications of the proposals.

Formed in 1932, CMUA is a statewide organization of local public agencies that provide water, gas, and electricity service to California consumers. CMUA membership includes cities, irrigation districts, public utility districts, municipal utility districts and joint powers agencies. These agencies provide water, wastewater, and retail electric and gas service to millions of Californians. Certain of CMUA members provide wholesale water conveyance, storage, electric generation and transmission services for the benefit of their public agencies' consumers. With respect to retail electric services, CMUA members serve approximately one-quarter of total electric demand statewide.

The proposed ordinance must be considered in a larger context. Collectively, California is in the midst of a dramatic change in how

the electricity needs of its citizens are met, reducing dependence on fossil fuels while increasing procurement of renewable resources such as wind and solar energy. Current state mandates require load serving entities like CMUA's members to procure at least 33% of all customer needs from eligible renewable sources by 2020. (Cal. Pub. Util. Code § 399.30(b)). Further, California is in the midst of considering more aggressive Greenhouse Gas Emission reduction goals as set forth in the First Update to the Amended Scoping Plan approved by the California Air Resources Board ("ARB") on May 22, 2014. It is very possible that aggressive climate policies will require renewable resource penetration beyond the current 33% mandate.

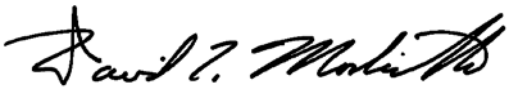
The proposed ordinance contains many elements. CMUA is most concerned about the treatment of electric transmission facilities, specifically the proposal that transmission lines must be undergrounded in most circumstances. Undergrounding high voltage transmission lines is technically challenging, and includes safety considerations. Further, the cost of undergrounding high voltage transmission lines is extraordinary. As observed recently at the California Public Utilities Commission ("CPUC") in its consideration of portions of the Tehachapi Renewable Transmission Project, even conservative estimates of undergrounding a small portion of this high-voltage transmission line were *50 times* in excess of estimates over using overhead lines for that portion.

Under the California Environmental Quality Act ("CEQA") Guidelines, the decision-making agency must balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project. (Cal. Code Regs. tit. 14 § 15093). If the specific economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable." (*Id.*).

In order to properly assess these balancing factors, the County should reach out and coordinate with several agencies and other policymakers to assess its effect on achievement of state energy policy goals. State agencies such as the California Energy Commission, CPUC, and ARB, must be consulted to ensure consistency of the proposed ordinance with overall state policy objectives. Further, the California Independent System Operator Corporation, which is the public benefit corporation that operates much of the state electric grid, should be formally consulted to inform and ensure a complete record of decision on which to base any action on the proposed ordinance.

Thank you for the opportunity to provide these comments.

Sincerely,



David L. Modisette
Executive Director

COUNTY OF LOS ANGELES
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May 27, 2014

TO: Susan Tae
Supervising Regional Planner
Department of Regional Planning

FROM: Michelle Tsiebos, REHS (M.T)
Environmental Health Division
Department of Public Health

SUBJECT: Draft Renewable Energy Ordinance (REO) – April 2014 Ordinance Consultation

The Department of Public Health-Environmental Health Division has reviewed the 2nd Draft of the Renewable Energy Ordinance (REO). We have no objection to the document as proposed.

If you should have any questions, please contact me at (626) 430-5382 or mtsiebos@ph.lacounty.gov.

From: Ramon Guevara
To: Thuy Hua
Subject: Comments for 2nd Draft of the Renewable Energy Ordinance
Date: Monday, June 02, 2014 7:19:59 PM
Attachments: RenewEnergyOrdinance2_REGcomments.docx

Dear Thuy Hua,

I have attached a document with my questions and comments regarding the 2nd Draft of the Renewable Energy Ordinance, due June 4, 2014. I look forward to a response from Regional Planning.

Sincerely,

Ramon E. Guevara, Ph.D., M.P.H.
Epidemiologist
Emergency Preparedness and Response Program
County of Los Angeles Department of Public Health
(213) 637-3607

Comments for 2nd Draft of Renewable Energy Ordinance **June 2, 2014**

Comment 1

On pp. 8-9 of 21, (22.52.1620), the last paragraph of p. 8, states "the military officer of the MIOA has determined that the requested use is not detrimental to the function of the MOIA and would not pose health or safety hazard to military personnel or the public."

Pertaining to the underlined part of the quotation above, how is this assessment made? How is the public involved, informed, and allowed to provide information regarding their own safety for this assessment? A standard procedure to ensure such involvement of the local residents should be referenced or established for accountability.

Comment 2

P. 15 of 21, C.4. "Existing drought-tolerant native or non-native vegetation approved by the staff biologist shall be retained, or new such vegetation shall be planted along fencing unless determined infeasible or inappropriate by the Hearing Officer."

Who is the staff biologist? What are the credentials that qualify this person to be an expert on the local vegetation and environmental preservation? Is the staff biologist employed by the developer, local government, or a third party? How is the community assured that vegetation will be preserved, replaced, or added in a sufficient manner to reduce migrant dust related to the project development? There are no standards of criteria here for what is acceptable in terms of amount and duration of resultant dust, measurements of dusts, and rules for feasibility and appropriateness of vegetation preservation, planting, and maintenance. These should be put forth with processes to involve the surrounding communities.

Comment 3

pp. 16-17. G4. "Fugitive dust emmisions shall be controlled by phased earthwork, site watering, use of clean gravel or composted wood chips not to exceed a depth of six inches where applicable, application of non-toxic soil stabilizers, limiting public access or unpaved areas, posting private roadways with reduced speeds, and/or re-vegetation. Use of other fugitive dust mitigation measures may be implemented if determined by Regional Planning and Public Works to be suitable methods to adequately control dust during construction, operations, and removal and restoration activities."

"Windbreaks" should be included on the list of controllers above to protect residential communities and paved roads. In community councils in surrounding areas of the projects, residents have mentioned various controllers and have pictures of them, including windbreaks made of vegetation that catch dust against prevailing winds. Other controlling measures include furrowing the soil and making berms.

This list of dust control measures should be followed by standard methods of evaluation to determine their effectiveness. The evaluation process should include and involve the residents of the local communities. Elected representatives or volunteers among the resident populations should be allowed to form a steering committee or panel of stakeholders to collaborate with the project developer and other stakeholders (e.g., Air Quality Management Division, Regional Planning, Public Works, Environmental Health, and Public Health) in ensuring satisfactory planning, operation, and outcome of dust mitigation activities.

Residents have been complaining about project developers not performing dust mitigations efforts as proposed and about local government agencies not acting on such breaches of trust. In addition to an evaluation process, a development control process should be established to stop development until new or altered dust mitigation activities meet desired outcomes. This control process should include and involve the surrounding residential communities affected by migrant dust resulting from the project. The migrant dust problem has been severe, particularly around solar projects as residents have been providing photographs of low visibility across large areas of land and giving testimony of the vast amount of dirt entering their homes despite closed windows and doors. The control process is necessary to protect the health of residents and travelers because the migrant dust can carry the fungus which causes Valley Fever. Antelope Valley is endemic for the Valley Fever-causing fungus. The incidence rate of Valley Fever in Los Angeles County has been substantially increasing, with the 2003-2007 housing boom construction in Antelope Valley strongly correlated with the increase across the entire County. Valley Fever can lead to prolonged illness, life-long complications, and death.

June 4, 2014

TO: Mark Child
Advanced Planning Division
Department of Regional Planning

Attention Susie Tae

FROM: Anthony Nyivih
Land Development Division
Department of Public Works

RENEWABLE ENERGY ORDINANCE-APRIL 2014 DRAFT

Thank you for the opportunity to review the April 2014 draft of the Renewable Energy Ordinance (REO) that was sent to us on May 13, 2014. The intent of this ordinance is to provide baseline standards for renewable energy projects. Where a discretionary permit is deemed necessary, project conditions and/or mitigation measures will be required to address site specific needs.

It is our understanding that the REO is an all-encompassing combination of previous draft ordinances that were reviewed separately under differing names. As such, for record keeping purposes, the following is a brief outline documenting the evolution of the REO:

- Public Works was asked to review three separate ordinances (Chapter 22.98–Accessory Solar and Wind Facilities, Chapter 22.100–Utility-Scale Solar and Wind Renewable Energy Facilities, and Chapter 22-102–Temporary Meteorological Towers) in May 2012. These three ordinances, at the time, were considered under the umbrella of the REO prompting our review comments dated July 16, 2012. All of the above-mentioned ordinances and the July 16, 2012, comment memo are attached for reference.

- In September 2012, Public Works was asked to review an ordinance titled "Chapter 22.100–Privately Owned, Utility-Scale, and Wind Renewable Energy Facilities," which prompted our review comments dated March 7, 2013. A copy of this ordinance and the applicable comment letter are also attached for reference.

DRAFT

- On November 18, 2013, Public Works provided comments on the July 2013 draft of the REO, which, as we understand, is taking the place of all of the previous ordinances outlined above. Our comment memo is also attached for reference.

The following Public Works comments are related to the April 2013 draft of the REO.

For specific revisions, additions, or deletions of wording directly from the project document, the specific section, subsection, and/or item along with the page number is first referenced then the excerpt from the document is copied within quotations using the following nomenclature:

Deletions are represented by a ~~strikethrough~~.
Additions are represented by *italics* along with an <u>underline</u>.
Revisions are represented by a combination of the above.

Prior to Regional Planning's approval of the ordinance, the following items need to be addressed:

<u>Development Services:</u>

1. Section 22.52.1640, Standards for Temporary Meteorological Towers, Subsection G, Maximum Number and Separation, Item 2 , page 11 of 20: Identify what all the acronyms in Figure 22.52.1640-A stand for. This includes, WECS, OS, W, RS, RM, RHD, and RMI. Please note that this was a previous comment that is reflected on our November 18, 2013, comment memo. Since the April 2014 Draft REO lacked this figure, and only provided a written placeholder for the figure, compliance with this comment could not be verified. This comment still applies however.

2. Section 22.52.1640, Standards for Temporary Meteorological Towers, Subsection H, Maximum Wind Tower Height, page 12 of 20: Identify what the acronym WECS stands for in Figure 22.52.1640-B. Please note that this was a previous comment that is reflected on our November 18, 2013, comment memo. Since the April 2014 draft REO lacked this figure, and only provided a written placeholder for the figure, compliance with this comment could not be verified. This comment still applies however.

DRAFT

3. Section 22.52.1660, Standards for Ground-Mounted, Utility-Scale Renewable Energy Facilities, Subsection G, Site Disruption, page 16 of 21: This Subsection should contain a general statement as noted below:

   "G. Site disturbance. The measures found in this subsection shall in no way be construed as being a substitute for compliance with state requirements imposed by the Air Quality Management District (AQMD)."

4. Section 22.52.1660, Standards for Ground-Mounted, Utility-Scale Renewable Energy Facilities, Subsection G, Site Disruption, Item 1, page 16 of 21: Modify this section as follows:

   "Existing vegetation may be mowed, but removal of existing vegetation root systems shall be prohibited to ensure dust control and minimal soil erosion, except where necessary for *construction of* access roads, ~~drainage~~, *substations, tanks,* ~~debris~~ basins, inverter pads, or other *items required by the* County ~~requirements~~."

5. Section 22.52.1660, Standards for Ground-Mounted, Utility-Scale Renewable Energy Facilities, Subsection G, Site Disruption, Item 2, page 16 of 21: Modify this section as follows:

   "The facility shall be designed to minimize erosion, sedimentation, or other impacts to the natural hydrology and drainage patterns of the site. Existing topography and watercourses shall be retained or restored to pre-existing conditions following construction and during operations, except for drainage features specifically designed to mitigate drainage impacts. A ~~drainage plan~~ *hydrology* study shall be submitted ~~at time of application~~ *prior to any discretionary or ministerial approval* that complies ~~with all requirements showing the extent of drainage impacts, comply~~ with the most recent County standards for addressing drainage impacts to the satisfaction of Department of Public Works. ~~and obtain all agency approvals~~."

6. Section 22.52.1660, Standards for Ground-Mounted, Utility-Scale Renewable Energy Facilities, Subsection G, Site Disruption, Item 3, page 16 of 21: Modify this section as follows:

   "The facility shall be designed *in such a way that* ~~to minimize grading and amount of ground disturbance~~ *the required grading or ground disturbance is limited to only the access roads, substations, tanks, basins, inverter*

DRAFT

pads, or other items required by the County, in order to control fugitive dust and preserve the natural topography. The site plan shall ~~be submitted depicting~~ *depict* the extent of grading and ground disturbance, and *the project shall* comply with all applicable *grading* standards. ~~for addressing grading and ground disturbance impacts. Grading involves any mechanical disturbance that removes the root system with the exception of access roads, drainage, debris basins, and inverter pads.~~"

7. Section 22.52.1660, Standards for Ground-Mounted, Utility-Scale Renewable Energy Facilities, Subsection G, Site Disruption, Item 4, page 16 of 21: Modify this section as follows:

"Fugitive dust emission shall be controlled by phased earthwork, site watering, application of non-toxic soil stabilizers, limiting public access on unpaved areas, posting private roadways with reduced speeds, and/or re-vegetation. Use of other fugitive dust mitigation measures may be implemented if determined by Regional Planning and Public Works to be suitable methods to adequately control dust during construction, operations, and removal and restoration activities.

In addition, work within the existing vegetation where the facility components are being proposed shall be conducted with minimal disturbance and the operator shall take all necessary precautions to not use vehicles or machineries for grading or alter the existing grade in these areas.

When vehicles or machineries are deemed necessary for utility scale renewable energy installation work, appropriate ground-protection practices (such as construction mats, stabilizers, or established vegetation) shall be utilized for both dust suppression and to ensure that the vehicles or machineries are compatible with continued and future vegetation growth. The project shall retain a biologist to confirm that construction practices are compatible with continued and future vegetation growth.

Any grading, disking, scraping, or other ground disturbance proposed as part of the project shall be permanently stabilized with an earth-stabilizing product or other measure that is acceptable to the Departments of Public Works, Regional Planning, and Public Health, to prevent fugitive dust."

DRAFT

Regarding the proposed statement about the use of composted wood chips to control fugitive dust, Public Works cannot substantiate the viability of this mitigation and therefore recommends that it be deleted, as noted above, from the proposed ordinance.

If you have any questions regarding the Development Services comments, or if you require additional information, please contact Matthew Dubiel of Public Works' Land Development Division at (626) 458-4921 or mdubiel@dpw.lacounty.gov.

MD:tb
P:\ldpub\SUBPCHECK\Plan\Zoning\Ord.-Advanced\ORD Energy Ord\2014-05-13 SubmittalRenewable Energy Ord. April 2014.docx

Attach.

DRAFT

This is the second draft of this ordinance. The first draft was released on October 3, 2013. This second draft includes some revisions based on the feedback received on the first draft. Revisions from the first draft are shown in track changes with strikethrough for deleted items and underline for added items. This draft ordinance is intended to provide baseline standards for renewable energy projects. Where a discretionary permit is required, project conditions and/or mitigation measures will be required to address site specific needs.

Please send your questions and comments regarding this draft ordinance via email or postal mail to:

Contact: Thuy Hua
Email: thua@planning.lacounty.gov
Postal Mail: LA County Department of Regional Planning
Attn: Thuy Hua
320 W Temple St 13th Flr
Los Angeles CA 90012

Comments on this draft are due June 4, 2014.

ORDINANCE NO. _____

An ordinance amending Title 22 – Planning and Zoning – of the Los Angeles County Code related to the establishment of regulations for small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary meteorological towers.

SECTION 1. Section 22.08.040 D is hereby amended to add a definition to read as follows:

-- "Decommissioning" means the removal of a use from service, which includes safe storage, dismantling, disposal, recycling, removal of concrete pads, and/or site restoration.

SECTION 2. Section 22.08.070 G is hereby amended to add a definition to read as follows:

-- "Guy wires" means wires or cables used to support a wind tower as defined by Section 22.08.230, or other structures that require the use of such wires or cables for support.

SECTION 3. Section 22.08.190 S, is hereby amended to add definitions to read as follows:

-- "Small-scale solar energy system" means a system where solar resources are used to generate energy primarily for on-site use. Such system may be affixed either to the ground or to a structure other than the system's mechanical support structure, such as a building or carport. Such system does not provide for more than 150% of the on-site energy demand. Any energy generated by a solar energy system that exceeds the on-site energy demand may be used off-site.

-- "Small-scale wind energy system" means a system where wind resources are used to generate energy primarily for on-site use. Such system may be affixed to either the ground or to a structure other than the system's mechanical support structure, such as a building or carport. Such system has a rated capacity of 50 kilowatts or fewer. Any energy generated by a wind energy system that exceeds the on-site energy demand may be used off-site.

-- "Solar array" means the mechanically integrated assembly of modules or panels with a support structure and foundation, tracker, and other components, as required to generate energy using solar resources.

SECTION 4. Section 22.08.210 U is hereby amended to add definitions to read as follows:

-- Utility-scale renewable energy facility, ground-mounted. "Ground-mounted utility-scale renewable energy facility" means a facility affixed to the ground where renewable resources are used to generate energy primarily for off-site use. This definition includes all on-site and off-site equipment and accessory structures related to the facility, including but not limited to solar collector arrays, wind turbines, mounting posts, substations, electrical infrastructure, transmission lines, operations and maintenance buildings, and other accessory structures.

-- Utility-scale renewable energy facility, structure-mounted. "Structure-mounted utility-scale renewable energy facility" means a facility affixed to a structure that is separate from the facility's mechanical support structure, such as a building or carport, where renewable resources are used to generate energy primarily for off-site use. This definition includes all on-site and off-site equipment and accessory structures

related to the facility, including but not limited to solar collector arrays, wind turbines, mounting posts, substations, electrical infrastructure, transmission lines, operations and maintenance buildings, and other accessory structures.

SECTION 5. Section 22.08.230 W is hereby amended to add a definition to read as follows:

-- "Wind tower" means the vertical component, including blades if any, of a small-scale wind energy system, a utility-scale renewable energy facility using wind resources, or a temporary meteorological tower that elevates the wind turbine generator and attached blades above the ground.

SECTION 6. Part 15 of Chapter 22.52 is hereby repealed in its entirety.

SECTION 7. Part 15 of Chapter 22.52 is hereby added to read as follows:

PART 15

RENEWABLE ENERGY

SECTIONS:

22.52.1600 Purpose.

22.52.1610 Applicability.

22.52.1620 Permit Requirements.

22.52.1630 Standards for Small-Scale Solar Energy Systems.

22.52.1640 Standards for Temporary Meteorological Towers.

22.52.1650 Standards for Small-Scale Wind Energy Systems.

22.52.1660 Standards for Ground-Mounted Utility-Scale Renewable Energy Facilities.

22.52.1670 Standards for Structure-Mounted Utility-Scale Renewable Energy Facilities.

22.52.1680 Modifications.

22.52.1600 Purpose.

This Part 15 establishes regulations and permit requirements that support and facilitate the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary meteorological towers in a manner that minimizes potential safety hazards and impacts to the environment.

22.52.1610 Applicability.

A. The provisions of this Part 15 shall apply to the development of any small-scale renewable energy system, utility-scale renewable energy facility, or temporary meteorological tower on private property. The provisions serve as the basis for development standards applicable to other renewable energy technologies, including but not limited to biomass, geothermal, hydrogen, hydropower, ocean, and any future viable renewable energy technology.

B. Applicability of zone and supplemental district regulations. All provisions of the zone and any supplemental district in which a small-scale renewable energy system, utility-scale renewable energy facility, or temporary meteorological tower is located shall also apply. Where a provision of the zone or supplemental district regulates the same matter as this Part 15, whichever provision is more restrictive shall apply.

C. Exemption. The provisions of this Part 15 shall not apply to any small-scale renewable energy system, utility-scale renewable energy facility, or temporary meteorological tower approved prior to the effective date of the ordinance establishing this Part 15.

D. Subsequent application. The provisions of this Part 15 shall apply to:

1. Any subsequent application that would increase the physical size, height, or footprint of a previously approved small-scale renewable energy system, utility-scale renewable energy facility, or temporary meteorological tower; and

2. Any subsequent application that would change the type of equipment used by the previously approved small-scale renewable energy system,

utility-scale renewable energy facility, or temporary meteorological tower, except for replacement of equipment for maintenance purposes.

22.52.1620 Permit Requirements.

A. Property may be used for the following uses, as set forth in Table 22.52.1620-A:

TABLE 22.52.1620-A: RENEWABLE ENERGY PERMIT REQUIREMENTS*

Permit Required By Zone
P = Permitted
Zoning Conformance Review = ZCR
SPR = Site Plan Review, Ministerial
MCUP = Minor Conditional Use Permit
CUP = Conditional Use Permit
N/A = Prohibited

	A-1	*A-2, A-2-H*	*OS, W*	*R-A, R-1, R-2, R-3, R-4,*	*C-H,C-1, C-2 C-3, C-M, C-R, R-R,*	*M-1,M-1.5, M-2,M-2.5, D-2*
Small-Scale Renewable Energy System						
Small-Scale Solar Energy System						
• Structure-mounted	P	P	P	P	P	P
• Ground-mounted	ZCR	ZCR	ZCR	ZCR	ZCR	ZCR
Small-Scale Wind Energy System	MCUP	MCUP	N/A	MCUP	MCUP	MCUP
Utility-Scale Renewable Energy Facility						
Utility-Scale Renewable Energy Facility, Ground-mounted	N/A	CUP	N/A	N/A	CUP	CUP
Utility-Scale Renewable Energy Facility, Structure-mounted	SPR	SPR	N/A	SPR	SPR	SPR
Temporary Meteorological Tower	MCUP	MCUP	N/A	MCUP	MCUP	MCUP

B. Aviation Review. For any use subject to a minor conditional use permit or conditional use permit pursuant to Table 22.52.1620-A above, and located within the Military Installations and Operations Areas (MIOAs) as identified by the General Plan:

1. Consultation. Aviation-related agencies shall be consulted for review of the proposed project for any potential impacts to ensure the safety of

residents and continued viability of military training and testing operations. The Department shall distribute copies of the proposed site plan, elevation plan, and location map to the aviation-related agencies and shall request comments within a minimum 30-day period. Aviation-related agencies to be consulted include, but are not limited to, the Federal Aviation Administration (FAA), United States Navy, Edwards Air Force Base, Air Force Plant 42, United States Forest Service, California Department of Transportation Division of Aeronautics, County Department of Public Works – Aviation Division, County Forester and Fire Warden, and County Sheriff. The consultation review shall request consideration of the following:

a. Uses that produce electromagnetic and frequency spectrum interference, which could impact military operations;

b. Uses that release into the air any substances that may impair visibility such as steam, dust, or smoke;

c. Uses that produce light emissions that could interfere with pilot vision or be mistaken for airfield lighting such as glare or distracting lights;

d. Uses that physically obstruct any portion of the MIOA due to relative height above ground level.

2. Any comments received within the consultation period shall be considered by the Department and provided to the Hearing Officer.

C. Findings. In addition to the findings required under Part 1 of Chapter 22.56, the Hearing Officer shall not approve a minor conditional use permit or conditional use permit it finds that if the requested use penetrates the lower floor elevation of any MIOA, the military operator of the MIOA has determined that the

requested use is not detrimental to the function of the MIOA and would not pose a health or safety hazard to military personnel or the public.

22.52.1630 Standards for Small-Scale Solar Energy Systems.

A. Conformance with state requirements. A small-scale solar energy system shall be in conformance with the California Solar Rights Act (California Civil Code Section 714 et seq.).

B. Structure-mounted. The combined height of a structure and structure-mounted small-scale solar energy system shall not exceed the height limit of the zone by more than five feet.

22.52.1640 Standards for Temporary Meteorological Towers.

A. Access roads. All temporary and permanent ingress and egress points to the facility shall be designed and sited to the satisfaction of the Director of Public Works and the Fire Department, shall consider adequate spacing from intersections, and shall maintain adequate sight distances.

B. Aviation safety.

1. A safety light that meets FAA standards shall be required for any wind tower that exceeds an overall tower height of 200 feet measured from finished grade. A safety light may be required on shorter wind towers when deemed necessary by any aviation-related agency or the Department. No other lights shall be placed on the wind tower.

2. Wind towers of less than 200 feet measured from finished grade shall be marked with alternating bands of aviation orange and white paint, and high

visibility sleeves installed on the outer guys with high spherical marker balls of aviation orange color.

C. Climbing apparatus. All climbing apparatus shall be located at least 12 feet above the finished grade, and all wind towers shall be designed to prevent climbing within the first 12 feet of wind tower height from finished grade.

D. Colors. Except as otherwise required in this section, the colors used in the construction materials or finished surface shall be muted and visually compatible with surrounding development or environment.

E. Location. The minimum setback for a wind tower shall be as depicted in Table 22.52.1640-A – Setback Requirements for Temporary Meteorological Towers. The required distance shall also comply with any applicable fire setback requirements pursuant to California Public Resources Code Section 4290.

TABLE 22.52.1640-A – SETBACK REQUIREMENTS FOR TEMPORARY METEOROLOGICAL TOWERS	
Setback from	Minimum Distance
On-site or Off-site Residence or Habitable Structure	1.5 x system height
Public Road, Highway	As required by Department of Public Works to meet sight distance and minimum setback requirements from traveled lanes.
Above Ground Transmission Line, Public Access Easement, or Public Trail	1.25 x system height
Property Line	1.25 x system height
On-site or Off-site Buildings Other Than a Residential Structure	1 x system height
Trees	As required by the Fire Department
Scenic Drives and Scenic Routes as identified	1,000 feet

in the General Plan or applicable Area or Community Plan	

F. Maintenance. All equipment and facilities shall be maintained in an operational condition that poses no potential safety hazards. Maintenance shall include, but not be limited to, painting, regularly scheduled cleaning, mechanical and/or electrical repairs, structural repairs, and security measures.

G. Maximum number and separation.

1. More than one wind tower may be located on the same property if all of the location requirements and standards of this Part 15 are met for each facility. A maximum of two wind towers are permitted for each five gross acres of land; and

2. Wind towers must be separated from each other by the safe industry practice depicted in Figure 22.52.1640-A - Separation Standards for Temporary Meteorological Towers, below.

FIGURE 22.52.1640-A – SEPARATION STANDARDS FOR TEMPORARY METEOROLOGICAL TOWERS

FIGURE 22.52.1640-A HERE

H. Maximum wind tower height. The maximum wind tower height shall not exceed the height limit as depicted in Figure 22.52.1640-B - Height Standards for Temporary Meteorological Towers below:

1. 35 feet measured from the finished grade to the top of the blade in the vertical position for lots of less than one gross acre in size;

2. 65 feet measured from the finished grade to the top of the blade in the vertical position for lots from one gross acre to less than two gross acres in size; and

3. 85 feet measured from the finished grade to the top of the blade in the vertical position for lots two gross acres or greater in size.

FIGURE 22.52.1640-B – HEIGHT STANDARDS FOR TEMPORARY METEOROLOGICAL TOWERS

FIGURE 22.52.1640-B
HERE

I. Structure-mounted. The combined height of a structure and structure-mounted wind tower shall not exceed the height limit of the zone by more than five feet.

J. Signs. One sign, limited to 18 inches in length and 12 inches in height, shall be posted at the base of each wind tower. The sign shall include a note of no trespassing, a warning of high voltage, and the phone number of the property owner to call in the event of an emergency.

22.52.1650 Standards for Small-Scale Wind Energy Systems. In addition to the standards required under Section 22.52.1640, the following standards shall apply to small-scale wind energy systems:

A. Automatic overspeed controls. A small-scale wind energy system shall be equipped with manual and automatic overspeed controls to limit the blade rotation speed to within the design limits of such system.

B. Blade clearance. No portion of a blade shall extend within 20 feet of the finished grade.

C. Guy wires. Safety wires shall be installed on the turnbuckles on guy wires. Anchor points for any guy wires shall be located within the same property as the system, and located in such a manner so as not to be on or across any above-ground electric transmission or distribution lines; and

D. Noise. Noise from a small-scale wind energy system shall not exceed 60 dBA SEL (single event noise level), as measured at the closest neighboring inhabited dwelling.

E. Visual impact.

1. The highest point of a small-scale wind energy system shall be located at least 50 vertical feet and 50 horizontal feet from a significant ridgeline identified in the General Plan, in an applicable area or community plan, or within an applicable community standards district;

2. Any small-scale wind energy system placed within the viewshed of a Scenic Drive or Scenic Route identified in the General Plan or in an applicable area or community plan shall be assessed for its visual impacts, and appropriate conditions shall be applied relating to siting, buffers, and design of the system; and

3. Within the coastal zone, the placement of any small-scale wind energy system shall not obstruct public views of the ocean from a scenic element (i.e.,

significant ridgeline, scenic route, scenic area, scenic viewpoint) identified in the applicable local coastal program, unless specific provisions for such siting are provided for in the applicable local coastal program and coastal development permit or long-range development plan.

22.52.1660 Standards for Ground-Mounted Utility-Scale Renewable Energy Facilities.

A. Access roads. All temporary and permanent ingress and egress points to the ground-mounted utility-scale renewable energy facility shall be designed and sited to the satisfaction of Director of Public Works and the Fire Department, shall consider adequate spacing from intersections, and shall maintain adequate sight distances.

B. Aviation safety.

1. A ground-mounted utility-scale renewable energy facility shall not be located within the Runway Protection Zone of any airport, as depicted in the County's airport land use plans.

2. A ground-mounted utility-scale renewable energy facility shall not penetrate the imaginary surfaces (primary, approach, transitional, horizontal, and conical surfaces) as defined by the FAA Federal Aviation Regulations Part 77 to protect the use of navigable airspace.

3. A safety light that meets FAA standards shall be required for all wind towers that exceed a height of 200 feet. A safety light may be required on shorter wind towers when deemed necessary by any aviation-related agency. No other lights shall be placed on such wind towers.

C. Fencing. Except as otherwise required by Department of Public Works to maintain minimum corner sight distance:

1. Non-opaque fences may be permitted.

2. Fencing up to eight feet in height may be permitted regardless of any other fencing standards.

3. Fencing shall not be located within 15 feet of a public right-of-way but may be located within the required setback area.

4. Existing drought-tolerant native or non-native vegetation approved by the staff biologist shall be retained, or new such vegetation shall be planted along fencing, unless determined infeasible or inappropriate by the Hearing Officer.

D. Lighting. Night-lighting, limited to that required for safety and security, shall be shielded and directed downward to avoid light trespass, and shall consist of:

1. Motion sensors for entry-lighting to the on-site equipment structures and buildings; and

2. Light-sensor or motion-sensor lighting for the main facility access gate, operations and maintenance building doorways, and any parking areas of facilities with operation and maintenance buildings.

E. Setbacks. Setbacks from the perimeter of the property line shall be:

1. 30 feet in agricultural zones; or

2. As provided in the base zone for all non-agricultural zones.

F. Signs. One ground-mounted or pole-mounted project identification sign may be located at each temporary and permanent ingress and egress point. Signs shall include owner information and emergency contact. No other signs shall be installed for

the facility other than safety, directional, and required warning signs as outlined in Part 10 of Section 22.52.

G. Site disturbance.

1. Existing vegetation may be mowed, but removal of existing vegetation root systems shall be prohibited to ensure dust control and minimal soil erosion, except where necessary for access roads, drainage, debris basins, inverter pads, or other County requirements.

2. The facility shall be designed to minimize erosion, sedimentation, or other impacts to the natural hydrology and drainage patterns of the site. Existing topography and watercourses shall be retained or restored to pre-existing conditions following construction and during operations, except for drainage features specifically designed to mitigate drainage impacts. A drainage plan shall be submitted at time of application that complies with all requirements showing the extent of drainage impacts, comply with the most recent County standards for addressing drainage impacts to the satisfaction of Department of Public Works, and obtain all agency approvals.

3. The facility shall be designed to minimize grading and amount of ground disturbance in order to control fugitive dust and preserve the natural topography. A site plan shall be submitted depicting the extent of grading and ground disturbance, and comply with all applicable standards for addressing grading and ground disturbance impacts. Grading involves any mechanical disturbance that removes the root system with the exception of access roads, drainage, debris basins, and inverter pads.

4. Fugitive dust emission shall be controlled by phased earthwork, site watering, use of clean gravel or composted wood chips not to exceed a depth of six

inches where applicable, application of non-toxic soil stabilizers, limiting public access on unpaved areas, posting private roadways with reduced speeds, and/or re-vegetation. Use of other fugitive dust mitigation measures may be implemented if determined by Regional Planning and Public Works to be suitable methods to adequately control dust during construction, operations, and removal and restoration activities.

H. Transmission lines. On-site and off-site transmission lines shall be placed underground to the satisfaction of Department of Public Works and the Department, except where above-ground crossings are otherwise required (such as over the California Aqueduct). A franchise agreement shall be required for distribution/transmission facilities within the public right of way. Disturbed areas shall comply with Section 22.52.1660.G to ensure dust control and minimal soil erosion.

I. Visual impact.

1. The highest point of a utility-scale renewable energy facility shall be located at least 50 vertical feet and 50 horizontal feet from a significant ridgeline identified in the General Plan, in an applicable area or community plan, or in an applicable community standards district;

2. Any utility-scale renewable energy facility that is placed within the viewshed of a Scenic Drive identified in the General Plan or in an applicable Area Plan or Community Plan shall be analyzed for its visual impacts, and appropriate conditions relating to siting, buffering, height, and design of the facility may be imposed to minimize significant effects on the viewshed; and

3. Within the Coastal Zone, the placement of any utility-scale renewable energy facility shall not obstruct public views of the ocean from a scenic

element (i.e., significant ridgeline, scenic route, scenic area, scenic viewpoint) identified in the applicable local coastal plan unless specific provisions for such siting are provided for in the applicable local coastal plan and coastal development permit or long-range development plan.

J. Water quality protection. Measures to protect groundwater and surface water from waste discharge shall be incorporated into the project design, as appropriate, and shall meet the requirements of the Regional Water Quality Control Board.

K. Blade clearance. No portion of a utility-scale renewable energy facility blade utilizing wind resources shall extend within 30 feet from the finished grade.

L. Impacts to birds and bats. All utility-scale renewable energy facilities utilizing wind resources shall be designed, constructed, and operated pursuant to the *California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development* published by the California Energy Commission and conditions of approval may be imposed by the Hearing Officer, consistent with these guidelines, to reduce significant impacts to birds and bats.

M. Location. The minimum distance and safe clearances for a utility-scale renewable energy facility utilizing wind resources shall be as depicted in Table 22.52.1660-A – Setback Requirements for Ground-Mounted Utility-Scale Renewable Energy Facility Using Wind Resources. The required distance shall also comply with any applicable fire setback requirements pursuant to the California Public Resources Code Section 4290.

TABLE 22.52.1660-A – SETBACK REQUIREMENTS FOR GROUND-MOUNTED UTILITY-SCALE RENEWABLE ENERGY

FACILITY USING WIND RESOURCES	
Setback from	**Minimum Distance**
On-site or Off-site Residence or Habitable Structure	2 x facility height
Public Road or Highway	As required by the Department of Public Works to meet sight distance and minimum setback requirements from traveled lanes
Above Ground Transmission Line, Public Access Easement, or Public Trail	2 x facility height
Property Line	2 x facility height
On-site or Off-site Buildings Other Than a Residential Structure	1 x facility height
Trees	As required by the Fire Department
Scenic Drives and Scenic Routes as identified in the General Plan or in an applicable area or community plan	2 x facility height
Railway	2 x facility height

N. Maximum height. Wind tower height shall not exceed 500 feet above finished grade.

O. Decommissioning. In the event that any portion of a utility-scale renewable energy facility is not in operational condition for a consecutive period of six months, ceased operation, or the permit for the use has expired, operations for that use shall be deemed to have been discontinued. The Department shall send written notice to the permittee advising of the discontinued use and require that the use be removed from the site within the time period specified below:

1. Within six months after the written notice of discontinued use is sent to the permittee, decommissioning of the use shall commence according to the decommissioning plan.

2. Within the six month period specified by subsection 1 above, the permittee may provide the Department with a written request and justification for an extension of up to six months to resume operations of the system, facility, or portions thereof. The Director may approve one six month extension.

22.52.1670 Standards for Structure-Mounted Utility-Scale Renewable Energy Facilities

A. Setbacks. Setbacks from the perimeter of the roof shall be:

1. Three feet on residential buildings; or

2. Four feet on non-residential buildings.

B. Accessory structures. Accessory structures constructed for the purposes of operating and maintaining the utility-scale renewable energy facility must meet all applicable development standards of the zone.

22.52.1680 Modifications

A. Where a site plan review is required pursuant to Section 22.52.1620, a conditional use permit in compliance with Part 1 of Chapter 22.56, is required for any modification to the applicable standards in this Part 15, except as otherwise noted herein. In addition to those required by Section 22.52.1620.B, the applicant for such conditional use permit shall substantiate the following findings:

1. Due to topographic or physical features of the site, strict compliance with all of the required standards would substantially and unreasonably interfere with the establishment of the proposed development on the subject property; and

2. The requested modification(s) would not be contrary to the purpose of this Part 15.

B. Where a minor conditional use permit or conditional use permit is required pursuant to Section 22.52.1620, any modification of the applicable standards in this Part 15 may be requested as part of the minor conditional use permit and conditional use permit, except as otherwise noted herein. The applicant for such minor conditional use permit or conditional use permit shall substantiate the findings provided in subsection A above in addition to those required by Section 22.52.1620.B and Part 1 of Chapter 22.56.

C. A wind tower greater than 500 feet in height requires approval of a variance pursuant to Part 2 of Chapter 22.56.

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

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November 18, 2013

IN REPLY PLEASE
REFER TO FILE: LD-2

TO: Mark Child
Advanced Planning Division
Department of Regional Planning

Attention Thuy Hua

FROM: Anthony Nyivih
SB
Land Development Division
Department of Public Works

RENEWABLE ENERGY ORDINANCE–JULY 2013 DRAFT

Thank you for the opportunity to review the July 2013 draft of the Renewable Energy Ordinance (REO). The intent of this ordinance is to minimize environmental impacts and bring energy production closer to the demand by encouraging small-scale systems and structure-mounted, utility-scale facilities through an easy ministerial process.

It is our understanding that the REO is an all-encompassing combination of previous draft ordinances that were reviewed separately under differing names. As such, for record keeping purposes, the following is a brief outline documenting the evolution of the REO:

- Public Works was asked to review three separate ordinances (Chapter 22.98–Accessory Solar and Wind Facilities, Chapter 22.100–Utility-Scale Solar and Wind Renewable Energy Facilities, and Chapter 22-102–Temporary Meteorological Towers) in May 2012. These three ordinances, at the time, were considered under the umbrella of the REO prompting our review comments dated July 16, 2012. All of the above-mentioned ordinances and the July 16, 2012, comment memo are attached for reference.

- In September 2012, Public Works was asked to review an ordinance titled "Chapter 22.100–Privately Owned, Utility-Scale, and Wind Renewable Energy Facilities," which prompted our review comments dated March 7, 2013. A copy of this ordinance and the applicable comment letter are also attached for reference.

The following Public Works comments are related to the July 2013 draft of the REO, which, as we understand, is taking the place of all of the previous ordinances outlined above.

For specific revisions, additions, or deletions of wording directly from the project document, the specific section, subsection, and/or item along with the page number is first referenced then the excerpt from the document is copied within quotations using the following nomenclature:

Deletions are represented by a ~~strikethrough~~.
Additions are represented by *italics* along with an <u>underline</u>.
Revisions are represented by a combination of the above.

Prior to Regional Planning's approval of the ordinance, the following items need to be addressed:

<u>Transportation:</u>

1. While we understand that the permitting process allows Public Works to review and provide comments on proposed projects, we feel that it is important to clarify in the ordinance the compliance requirements for permit approval as it relates to Aviation. Therefore, the following additions should be made:

   Section 22.52.1620, Permit Requirements, Subsection B, Findings, pages 7 and 8 of 20, modify this subsection as follows:

   "B. Findings: The Reviewing Authority (Director, Hearing Officer, or Regional Planning Commission) shall not approve a Minor Conditional Use Permit or Conditional Use Permit unless the applicant substantiates the following findings:

   1. All findings required by Part 1 of Chapter 22.56 (Conditional Use Permits);

   2. All findings required by Part 27 of Chapter 22.52 (Significant Ecological Areas), if applicable; ~~and~~

   3. If the requested use penetrates the lower floor elevation of any Military Installations and Operations Area (MIOA), the military operator of the MIOA has determined that the requested use is not detrimental

to the function of the MIOA and would not pose a health or safety hazard to the public and military personnel; *and*

4. The proposed project fully complies with all applicable Federal Aviation Administration (FAA) and California Department of Transportation, Division of Aeronautics (Caltrans) rules, regulations, and policies."

If you have any questions regarding the Transportation comment, please contact Jason Morgan of Aviation Division at (626) 300-4602 or jmorgan@dpw.lacounty.gov.

Waste Management:

1. As previously discussed, in addition to solar and wind, please include the following list of renewable energy sources in the renewable energy ordinance. We would like to work with the Department of Regional Planning to determine the various resources that should be identified within each category and the level of detail at which they should be addressed in the ordinance.

    a. Biomass
    b. Geothermal
    c. Hydrogen
    d. Hydropower
    e. Ocean

If you have any questions regarding the Waste Management comment, please contact Christopher Sheppard of Environmental Programs Division at (626) 458-5163 or csheppard@dpw.lacounty.gov.

Development Services:

1. Section 22.52.1640, Standards for Temporary Meteorological Towers, Subsection D, Location, page 9 of 20: Modify Table 22.52.1640-A, Setback Requirements for Temporary Meteorological Towers and Small-Scale Wind Energy Systems as shown below:

TABLE 22.52.1640-A – SETBACK REQUIREMENTS FOR TEMPORARY METEOROLOGICAL TOWERS AND SMALL-SCALE WIND ENERGY SYSTEMS	
Setback from	**Minimum Distance**
On-site Residence or Habitable Structure	1 x system height
~~Public Road, Highway, or~~ Railway	1 x system height
Above-Ground Transmission Line, Public Access Easement, or Public Trail	1 x system height
Property Line	1 x system height
Buildings Other Than a Residential Structure	1 x system height
Trees	As required by the Fire Department
Scenic Drives as identified in the General Plan or in an applicable Area or Community Plan	1,000 feet
Public Road or Highway	*As required by the Department of Public Works to meet sight distance and minimum setback requirements from traveled lanes.*

2. Section 22.52.1640, Standards for Temporary Meteorological Towers, Subsection F, Maximum Number and Separation, Item 2 , page 10 of 20: Identify what all the acronyms in Figure 22.52.1640-A stand for. This includes, WECS, OS, W, RS, RM, RHD, and RMI.

3. Section 22.52.1640, Standards for Temporary Meteorological Towers, Subsection G, Maximum Wind Tower Height, page 11 of 20: A definition of the wind tower height should be provided similar to Chapter 22.100.020.F of the Privately Owned Utility-Scale Solar and Wind Renewable Energy Facilities Ordinance that was previously reviewed (see attached). A suggested modification to Section 22.52.1640.G is below:

   "G. Maximum Wind Tower Height: The maximum wind tower height shall not exceed the following height limits as depicted in Figure 22.52.1640-B -

Height Standards for Temporary Meteorological Towers and Small-Scale Wind Energy Systems, below:

1. 35 feet ~~above~~ *measured from the* finished grade *to the top of the blade in the vertical position* for lots of less than one gross acre in size;

2. 65 feet ~~above~~ *measured from the* finished grade *to the top of the blade in the vertical position* for lots from one gross acre to less than two gross acres in size; and

3. 85 feet ~~above~~ *measured from the* finished grade *to the top of the blade in the vertical position* for lots two gross acres or greater in size."

4. Section 22.52.1640, Standards for Temporary Meteorological Towers, Subsection G, Maximum Wind Tower Height, page 11 of 20: Identify what all the acronym WECS stands for in Figure 22.52.1640-B.

5. Section 22.52.1640, Standards for Temporary Meteorological Towers, page 8 of 20: Add a subsection addressing access roads similar to Subsection A of Section 22.52.1660.

6. Section 22.52.1660, Standards for Ground-Mounted Utility-Scale Renewable Energy Facilities, Subsection H, Transmission Lines, page 16 of 20: Modify this subsection as follows:

   "H. Transmission lines: Transmission lines shall be placed underground to the satisfaction of Public Works and Regional Planning. ~~except where above-ground right-of-way crossings are required.~~ *A franchise agreement will be required for distribution/transmission facilities within the public right of way."*

   It is our understanding that above-ground right-of-way crossings are not specifically "required" anywhere and, therefore, this portion of the ordinance should be deleted as noted above.

7. Section 22.52.1660, Standards for Ground-Mounted Utility-Scale Renewable Energy Facilities, Subsection G, Site Disruption, page 15 of 20: Previous versions of this ordinance included a definition of grading that Public Works provided comments on. This latest version of the ordinance eliminated the grading definition in its entirety. We would like to work with Regional Planning to

include a definition of grading and site disruption in this ordinance as these definitions will have an impact on how our respective departments analyze/review grading plans. The inclusion of these definitions in this ordinance shall be consistent with Supervisor Michael D. Antonovich's Board Motion (http://file.lacounty.gov/bos/supdocs/76703.pdf) regarding fugitive dust control. It is our understanding that Regional Planning's Zoning Permits North staff has been working to develop specific definitions in this regard, and Public Works would like to continue to work with Regional Planning to memorialize these items in this ordinance.

In addition, although this ordinance contains provisions to prevent fugitive dust emissions during construction, it is lacking a plan or specific mitigation for future fugitive dust emissions after the project is constructed. Once a site is disturbed, the potential for transportation of dust increases dramatically. It is recommended that this subsection be expanded upon to include a provision that would require an applicant that is proposing grading to submit a dust mitigation plan for the duration of the project and its decommissioning.

8. Section 22.52.1660, Standards for Ground-Mounted, Utility-Scale Renewable Energy Facilities, Subsection G, Site Disruption, Item 1, page 15 of 20: The language used in this section appears to be in conflict and is subject to differing interpretations.

   The meaning of the phrase "to the greatest extent possible" as used in the first sentence ("To ensure minimal soil erosion and dust control, removal of existing vegetation shall be minimized to the greatest extent possible.") may be interpreted to mean something by County staff while a developer's interpretation may be completely different. In addition, the last sentence that reads, "Methods to maintain the vegetation root system shall be used," appears to require that vegetation remain in place, which is not what the first sentence of this section indicates.

   To minimize soil erosion and provide for adequate dust control, vegetation should remain in place. It is recommended that this ordinance indicate exactly what the County will require an applicant to submit to prove that vegetation will not be impacted.

9. Section 22.52.1660, Standards for Ground-Mounted, Utility-Scale Renewable Energy Facilities, Subsection G, Site Disruption, Item 4, page 16 of 20: Modify this subsection as follows:

"4. Fugitive dust emission shall be controlled by phased earthwork, site watering, *use of* clean gravel and/or wood chips where applicable, application of non-toxic soil stabilizers, limiting public access on unpaved areas, and posting private roadways with reduced speeds. Use of other fugitive dust mitigation measures may be implemented during construction and/or operations and maintenance *if determined by Regional Planning and Public Works* ~~that are suitable for dust shall be controlled~~ *to be suitable methods that will adequately control dust* during construction, operations, and removal and restoration activities."

10. Section 22.52.1660, Standards for Ground-Mounted, Utility-Scale Renewable Energy Facilities, Subsection M, Location, page 18 of 20: Modify Table 22.52.1660-A, Setback Requirements for Ground-Mounted, Utility-Scale Renewable Energy Facility Using Wind Resources as shown below:

TABLE 22.52.1660-A – SETBACK REQUIREMENTS FOR GROUND-MOUNTED UTILITY-SCALE RENEWABLE ENERGY FACILITY USING WIND RESOURCES	
Setback from	**Minimum Distance**
On-site ~~Resident~~ *Residence* or Habitable Structure	2 x facility height
~~Public Road, Highway, or~~ Railway	2 x facility height
Above-Ground Transmission Line, Public Access Easement, or Public Trail	2 x facility height
Property Line	2 x facility height
Buildings Other Than a Residential Structure	1 x facility height
Trees	As required by the Fire Department
Scenic Drives	2 x facility height
Public Road or Highway	*As required by the Department of Public Works to meet sight distance and minimum setback requirements from traveled lanes.*

If you have any questions regarding the Development Services comments, or if you require additional information, please contact Matthew Dubiel of Land Development Division at (626) 458-4921 or mdubiel@dpw.lacounty.gov.

MD:tb
P:\ldpub\SUBPCHECK\Plan Checking Files\Zoning Permits\Ordinances\ORD Privately Owned Utility-Scale Solar and Wind Renewable Energy Facilities Ordiniance.docx

ORDINANCE NO. _____

An ordinance amending Title 22 – Planning and Zoning – of the Los Angeles County Code related to the establishment of regulations for small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary meteorological towers.

SECTION 1. Section 22.08.040, Definitions (D), is hereby amended to add a definition to read as follows:

-- "Decomissioning" means the removal of a utility-scale renewable energy facility from service, which includes safe storage, dismantling, disposal, recycling, and site restoration.

SECTION 2. Section 22.08.070, Definitions (G), is hereby amended to add a definition to read as follows:

-- "Guy wires" means wires or cables used to support a wind tower as defined by Section 22.08.230.

SECTION 3. Section 22.08.190, Definitions (S), is hereby amended to add definitions to read as follows:

-- "Small-scale solar energy system" means a system where solar resources are used to generate energy primarily for on-site use. Such system may be affixed to either the ground or to a structure other than the system's mechanical support structure, such as a building or carport. Such system shall provide no more than 125% of the on-site energy demand. Any energy generated by a solar energy system that exceeds the on-site energy demand may be used off-site.

-- "Small-scale wind energy system" means a system where wind resources are used to generate energy primarily for on-site use. Such system may be affixed to either the ground or to a structure other than the system's mechanical support structure, such as a building or carport. Such system shall have a rated capacity of 50 kilowatts or fewer. Any energy generated by a wind energy system that exceeds the on-site energy demand may be used off-site.

-- "Solar array" means the mechanically integrated assembly of modules or panels with a support structure and foundation, tracker, and other components, as required to form a direct-current, power-producing unit as defined by the California Energy Commission.

SECTION 4. Section 22.08.230, Definitions (W), is hereby amended to add a definition to read as follows:

-- "Wind tower" means the vertical component of a small-scale wind energy system, a utility-scale renewable energy facility utilizing wind resources, or a temporary meteorological tower that elevates the wind turbine generator and attached blades above the ground, or the vertical component of a temporary meteorological tower that elevates the wind measuring devices above the ground.

SECTION 5. Section 22.08.210, Definitions (U), is hereby amended to add definitions to read as follows:

-- Utility-scale renewable energy facility, ground-mounted. "Ground-mounted utility-scale renewable energy facility" means a facility affixed to the ground where renewable resources are used to generate energy primarily for off-site use. This definition includes all equipment and accessory structures related to the facility,

including but not limited to solar collector arrays, wind turbines, mounting posts, substations, electrical infrastructure, transmission lines, operations and maintenance buildings, and other accessory structures.

-- Utility-scale renewable energy facility, structure-mounted. "Structure-mounted utility-scale renewable energy facility" means a facility affixed to a structure other than the facility's mechanical support structure, such as a building or carport, where renewable resources are used to generate energy primarily for off-site use. This definition includes all equipment and accessory structures related to the facility, including but not limited to solar collector arrays, wind turbines, mounting posts, substations, electrical infrastructure, transmission lines, operations and maintenance buildings, and other accessory structures.

SECTION 6. Part 15 of Chapter 22.52 is hereby repealed in its entirety.

SECTION 7. Part 15 of Chapter 22.52 is hereby added to read as follows:

PART 15

RENEWABLE ENERGY

SECTIONS:

22.52.1600 Purpose.

22.52.1610 Applicability.

22.52.1620 Permit Requirements.

22.52.1630 Standards for Small-Scale Solar Energy Systems.

22.52.1640 Standards for Temporary Meteorological Towers.

22.52.1650 Standards for Small-Scale Wind Energy Systems.

22.52.1660 Standards for Ground-Mounted Utility-Scale Renewable Energy Facilities.

22.52.1670 Standards for Structure-Mounted Utility-Scale Renewable Energy Facilities.

22.52.1680 Modifications.

22.52.1600 Purpose.

This Part 15 establishes regulations and permit requirements that support and facilitate the responsible development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary meteorological towers in a manner that minimizes potential safety and environmental impacts as well as potential impacts to the surrounding community.

22.52.1610 Applicability.

A. The provisions of this Part 15 shall apply to any privately-owned small-scale renewable energy system, utility-scale renewable energy facility, or temporary meteorological tower on private property.

B. Exemption. The provisions of this Part 15 shall not apply to any small-scale renewable energy system, utility-scale renewable energy facility, or temporary meteorological tower approved prior to the effective date of the ordinance establishing this Part 15.

C. Subsequent application. The provisions of this Part 15 shall apply to:

1. Any subsequent application that would increase the size, height, or footprint of the previously approved small-scale renewable energy system, utility-scale renewable energy facility, or temporary meteorological tower; and

2. Any subsequent application that would change the type of equipment used by the previously approved small-scale renewable energy system, utility-scale renewable energy facility, or temporary meteorological tower, except for substantially compliant replacement of equipment.

22.52.1620 Permit Requirements.

TABLE 22.52.1620-A: RENEWABLE ENERGY PERMIT REQUIREMENTS						
				Permit Required By Zone *SPR = Site Plan Review* *MCUP = Minor Conditional Use Permit* *CUP = Conditional Use Permit* *N/A = Not Applicable*		
	A-1	*A-2, A-2-H*	*OS, W*	*R-A, R-1, R-2, R-3, R-4, R-5, MXD, MXD-RU*	*C-H,C-1, C-2 C-3, C-M, C-R, R-R, C-RU*	*M-1,M-1.5, M-2,M-2.5, M-3*
Small-Scale Renewable Energy System						
Small-Scale Solar Energy System	SPR	SPR	SPR	SPR	SPR	SPR
Small-Scale Wind Energy System	MCUP	MCUP	N/A	MCUP	MCUP	MCUP
Utility-Scale Renewable Energy Facility						
Utility-Scale Renewable Energy Facility, Ground-mounted	N/A	CUP	N/A	N/A	CUP	CUP
Utility-Scale Renewable Energy Facility, ,Structure-mounted	SPR	SPR	N/A	SPR	SPR	SPR
Temporary Meteorological Tower	SPR	SPR	N/A	SPR	SPR	SPR

A. Aviation Review. If a Minor Conditional Use Permit or Conditional Use Permit is required pursuant to Table 22.52.1620-A above:

1. At least 60 days prior to a decision by the Reviewing Authority (Director, Hearing Officer, or Regional Planning Commission), the Department of Regional Planning shall distribute copies of the proposed site plan, elevation plan, and location map to aviation-related agencies with flight operations in the vicinity of the proposed project and shall request comments. Aviation-related agencies include but are not limited to the California Department of Transportation Division of Aeronautics, the Department of Public Works – Aviation Division, the Federal Aviation Administration

(FAA), the County Forester and Fire Warden, the County Sheriff, Edwards Air Force Base, the United States Navy, and Air Force Plant 42.

2. If the proposed project is located within the Military Installations and Operations Areas (MIOAs) as identified by the General Plan, aviation-related agencies shall review the proposed project for any potential impacts to ensure the safety of residents and continued viability of military training and testing operations. The review shall consider the following:

a. Uses that produce electromagnetic and frequency spectrum interference, which could impact military operations;

b. Uses that release into the air any substances which may impair visibility such as steam, dust, or smoke;

c. Uses that produce light emissions which could interfere with pilot vision or be mistaken for airfield lighting such as glare or distracting lights; and

d. Uses that physically obstruct any portion of the MIOA due to relative height above ground level.

3. Any comments received within 30 days of distribution of the proposed site plan, elevation plan, and location map shall be considered by the Department of Regional Planning and provided to the Reviewing Authority (Director, Hearing Officer, or Regional Planning Commission).

B. Findings. The Reviewing Authority (Director, Hearing Officer, or Regional Planning Commission) shall not approve a Minor Conditional Use Permit or Conditional Use Permit unless the applicant substantiates the following findings:

1. All findings required by Part 1 of Chapter 22.56 (Conditional Use Permits);

2. All findings required by Part 27 of Chapter 22.52 (Significant Ecological Areas) if applicable; and

3. If the requested use penetrates the lower floor elevation of any MIOA, the military operator of the MIOA has determined that the requested use is not detrimental to the function of the MIOA and would not pose a health or safety hazard to the public and military personnel.

22.52.1630 Standards for Small-Scale Solar Energy Systems.

A. Conformance with state requirements. A small-scale solar energy system shall be in conformance with the California Solar Rights Act (California Civil Code Section 714 et seq.).

B. Height. A small-scale solar energy system may exceed the height limit of the zone by no more than five feet if it is placed on a building that is built to the maximum height limit.

C. Setbacks. A small-scale solar energy system shall meet all of the setback requirements of the zone.

22.52.1640 Standards for Temporary Meteorological Towers.

A. Aviation safety. A safety light that meets FAA standards shall be required for any wind tower that exceeds an overall tower height of 200 feet. A safety light may be required on shorter wind towers when deemed necessary by any of the aviation-

related agencies or the Department of Regional Planning. No other lights shall be placed on the wind tower.

B. Climbing apparatus. All climbing apparatus shall be located at least 12 feet above the finished grade and any wind tower shall be designed to prevent climbing within the first 12 feet of wind tower height.

C. Colors. The colors used in the construction materials or finished surface shall be muted and visually compatible with surrounding development.

D. Location. The minimum distance and safe clearances for a wind tower shall be as depicted in Table 22.52.1640-A – Setback Requirements for Temporary Meteorological Towers and Small-Scale Wind Energy Systems, below. The required distance shall also comply with any applicable fire setback requirements pursuant to California Public Resources Code Section 4290.

TABLE 22.52.1640-A – SETBACK REQUIREMENTS FOR TEMPORARY METEOROLOGICAL TOWERS AND SMALL-SCALE WIND ENERGY SYSTEMS	
Setback from	Minimum Distance
On-site Residence or Habitable Structure	1 x system height
Public Road, Highway, or Railway	1 x system height
Above Ground Transmission Line, Public Access Easement, or Public Trail	1 x system height
Property Line	1 x system height
Buildings Other Than a Residential Structure	1 x system height
Trees	As required by the Fire Department
Scenic Drives as identified in the General Plan or in an applicable Area or Community Plan	1,000 feet

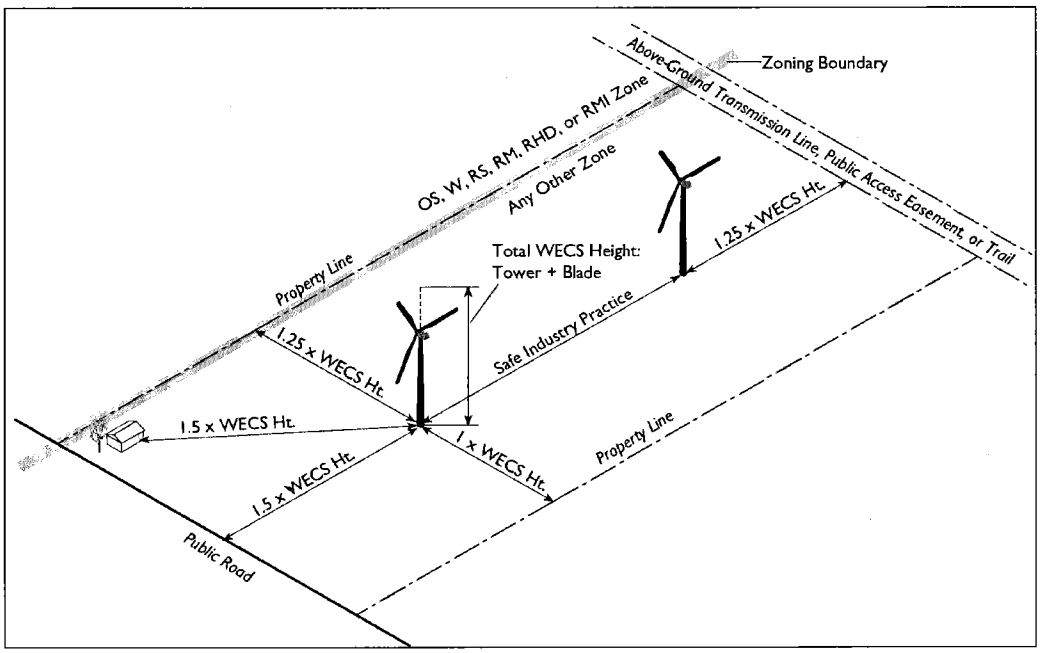
E. Maintenance. All equipment and facilities shall be maintained in an operational condition that poses no potential safety hazards. Maintenance shall include, but not be limited to, painting, regularly scheduled cleaning, mechanical/electrical repairs, structural repairs, and security measures.

F. Maximum number and separation.

1. More than one wind tower may be located on the same property if all of the location requirements and standards of this Part 15 can be met for each facility. A maximum of two wind towers are permitted per each five gross acres of land; and

2. Wind towers must be separated from each other by the safe industry practice depicted in Figure 22.52.1640-A - Separation Standards for Temporary Meteorological Towers and Small-Scale Wind Energy Systems, below.

FIGURE 22.52.1640-A – SEPARATION STANDARDS FOR TEMPORARY METEOROLOGICAL TOWERS AND SMALL-SCALE WIND ENERGY SYSTEMS



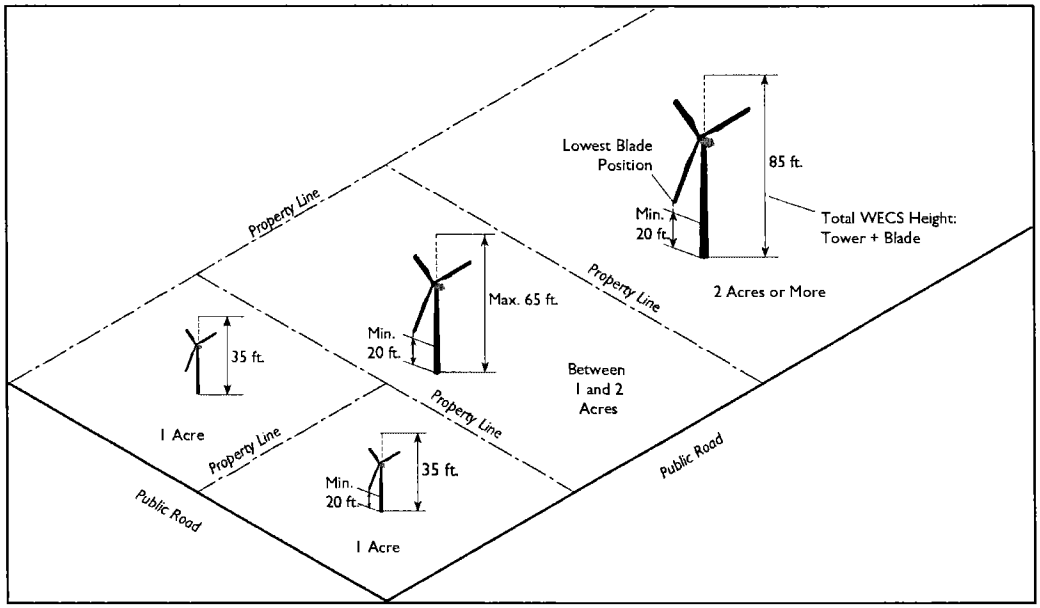
G. Maximum wind tower height. The maximum wind tower height shall not exceed the following height limits as depicted in Figure 22.52.1640-B - Height Standards for Temporary Meteorological Towers and Small-Scale Wind Energy Systems, below :

1. 35 feet above finished grade for lots of less than one gross acre in size;

2. 65 feet above finished grade for lots from one gross acre to less than two gross acres in size; and

3. 85 feet above finished grade for lots two gross acres or greater in size.

FIGURE 22.52.1640-B – HEIGHT STANDARDS FOR TEMPORARY METEOROLOGICAL TOWERS AND SMALL-SCALE WIND ENERGY SYSTEMS



H. Structure-mounted. A structure-mounted wind tower may exceed the height limit of the zone by no more than five feet if is placed on a building that is built to the maximum height limit.

I. Signs. One sign, limited to 18 inches in length and 12 inches in height, shall be posted at the base of the wind tower. The sign shall include a note of no trespassing, a warning of high voltage, and the phone number of the property owner to call in the event of an emergency.

22.52.1650 Standards for Small-Scale Wind Energy Systems. The following standards shall apply in addition to all standards required by Section 22.52.1640:

A. Automatic overspeed controls. A small-scale wind energy system shall be equipped with manual and automatic overspeed controls to limit the blade rotation speed to within the design limits of such system.

B. Blade clearance. No portion of a blade shall extend within 20 feet of the finished grade.

C. Guy wires.

1. Safety wires shall be installed on the turnbuckles on guy wires for a small-scale wind energy system. Anchor points for any guy wires for a small-scale wind energy system shall be located within the property that the small-scale wind energy system is located on and not on, or across any, above-ground electric transmission or distribution lines; and

2. The point of attachment for the guy wires shall be enclosed by a fence six feet high.

D. Noise. Noise from a small-scale wind energy system shall not exceed 60 dBA SEL (single event noise level), as measured at the closest neighboring inhabited dwelling, except during short-term events such as utility outages and severe windstorms.

E. Visual impact.

1. The top of a small-scale wind energy system shall be located at least 25 vertical feet and 50 horizontal feet from a significant ridgeline identified in the General Plan, in an applicable Area or Community Plan, or in an applicable Community Standards District;

2. Any small-scale wind energy system that is placed within the viewshed of a Scenic Drive identified in the General Plan or in an applicable Area or Community Plan shall be assessed for its visual impacts, and appropriate conditions shall be applied relating to siting, buffers, and design of the system; and

3. Within the Coastal Zone, the placement of any small-scale wind energy system shall not obstruct public views of the ocean from a Scenic Drive identified in the applicable Local Coastal Plan, unless specific provisions for such siting are provided for in the applicable Local Coastal Plan and Coastal Development Permit or Long Range Development Plan.

22.52.1660 Standards for Ground-Mounted Utility-Scale Renewable Energy Facilities.

A. Access roads. All temporary and permanent ingress and egress points to the facility shall be designed and sited to the satisfaction of the Director of Public Works,

shall consider adequate spacing from intersections, and shall maintain adequate sight distances.

B. Aviation safety.

1. A utility-scale renewable energy facility shall not be located within the Runway Protection Zone of any airport, as defined in the County's Airport Land Use Plans.

2. A utility-scale renewable energy facility shall not penetrate the imaginary surfaces (primary, approach, transitional, horizontal, and conical surfaces) defined by the Federal Aviation Administration Federal Aviation Regulations Part 77 to protect the use of navigable airspace.

3. A safety light that meets FAA standards shall be required for all wind towers that exceed a height of 200 feet. A safety light may be required on shorter wind towers when deemed necessary by any of the aviation-related agencies. No other lights shall be placed on such wind towers.

C. Fencing.

1. Non-opaque fences may be permitted.

2. Fencing up to eight feet in height may be permitted, regardless of any other fencing standards. Such fences shall not be located within 15 feet of a public right-of-way but can be located within the required setback area.

3. Fencing type, height and placement shall provide for the minimum corner sight distance to the satisfaction of the Department of Public Works.

4. Existing drought-tolerant native or non-native vegetation approved by the County Biologist shall be retained or new such vegetation placed along fencing,

between fencing and any public right-of-way, at least 10 feet in depth, unless determined infeasible or inappropriate by the Reviewing Authority (Hearing Officer or Regional Planning Commission).

D. Lighting. Night-lighting, limited to that required for safety and security, shall be shielded and directed downward to avoid light trespass and shall consist of:

1. Motion sensors for entry-lighting to the on-site equipment structures and buildings; and

2. Light-sensor or motion-sensor lighting for the main facility access gate and operations and maintenance building doorways and parking areas of projects with operation and maintenance buildings.

E. Setbacks. Setbacks from the perimeter of the property line shall be:

1. 30 feet in agricultural zones; or

2. As provided in the base zone for all non-agricultural zones.

F. Signs. One ground-mounted or pole-mounted project identification sign may be located at each temporary and permanent ingress and egress point. Signs shall include owner information and emergency contact. No other signs shall be installed other than safety and required warning signs as outlined in Part 10 of Section 22.52..

G. Site disruption.

1. To ensure minimal soil erosion and dust control, removal of existing vegetation shall be minimized to the greatest extent possible. When necessary to reduce the existing vegetation, seek options to trim rather than remove the vegetation in its entirety. Methods to maintain the vegetation root system shall be used.

2. The project shall be designed to minimize erosion, sedimentation, or other impacts to the natural hydrology and drainage patterns of the site. Existing topography and watercourses shall be retained or restored to pre-existing conditions following construction and during operations except for drainage features specifically designed to mitigate drainage impacts. All projects must submit a Drainage Plan that complies with all requirements to the satisfaction of the Department of Public Works showing the extent of drainage impacts and comply with the most recent County standards for addressing drainage impacts.

3. The project shall be designed to minimize grading and amount of ground disturbance in order to control fugitive dust and preserve the natural topography. All projects must show the extent of grading and ground disturbance on all plans and comply with all applicable standards for addressing grading and ground disturbance impacts.

4. Fugitive dust emission shall be controlled by phased earthwork, site watering, clean gravel and/or wood chips where applicable, application of non-toxic soil stabilizers, limiting public access on unpaved areas, and posting private roadways with reduced speeds. Use of other fugitive dust mitigation measures may be implemented during construction and/or operations and maintenance that are suitable for dust shall be controlled during construction, operations, and removal and restoration activities.

H. Transmission lines. Transmission lines shall be placed underground to the satisfaction of Public Works and Regional Planning, except where above-ground right-of-way crossings are required.

I. Visual impact.

1. Any utility-scale renewable energy facility that is placed within the viewshed of a Scenic Drive identified in the General Plan or in an applicable Area Plan or Community Plan shall be analyzed for its visual impacts, and appropriate conditions relating to siting, buffering, height, and design of the facility may be imposed to minimize significant effects on the viewshed; and

2. Within the Coastal Zone, the placement of any utility-scale renewable energy facility shall not obstruct public views of the ocean from a Scenic Drive identified in the applicable Local Coastal Plan unless specific provisions for such siting are provided for in the applicable Local Coastal Plan and Coastal Development Permit or Long Range Development Plan.

J. Water quality protection. Measures to protect groundwater and surface water from potential spills shall be incorporated into the project design, as appropriate. Any discharge of wastes into surface water shall meet the requirements of the Regional Water Quality Control Board.

K. Blade clearance. No portion of a utility-scale renewable energy facility blade utilizing wind resources shall extend within 30 feet from the finished grade.

L. Impacts to birds and bats. All utility-scale renewable energy facilities utilizing wind resources shall be designed, constructed, and operated pursuant to the *California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development* published by the California Energy Commission and conditions of approval may be imposed by the Regional Planning Commission, consistent with these guidelines, to reduce significant impacts to birds and bats.

M. Location. The minimum distance and safe clearances for a utility-scale renewable energy facility utilizing wind resources shall be as depicted in Table 22.52.1660-A – Setback Requirements for Ground-Mounted Utility-Scale Renewable Energy Facility Using Wind Resources. The required distance shall also comply with any applicable fire setback requirements pursuant to the California Public Resources Code Section 4290.

TABLE 22.52.1660-A – SETBACK REQUIREMENTS FOR GROUND-MOUNTED UTILITY-SCALE RENEWABLE ENERGY FACILITY USING WIND RESOURCES	
Setback from	**Minimum Distance**
On-site Resident or Habitable Structure	2 x facility height
Public Road, Highway, or Railway	2 x facility height
Above Ground Transmission Line, Public Access Easement, or Public Trail	2 x facility height
Property Line	2 x facility height
Buildings Other Than a Residential Structure	1 x facility height
Trees	As required by the Fire Department
Scenic Drives	2 x facility height

N. Maximum height. Wind tower height shall not exceed 500 feet. A wind tower greater than 500 feet in height requires approval of a variance pursuant to Part 2 of Chapter 22.56.

O. Decommissioning. In the event that any portion of a utility-scale renewable energy facility is not in operational condition for a consecutive period of six months, ceased operation, or the permit for the use has expired, operations for that use shall be deemed to have been discontinued. The Department of Regional Planning shall send written notice to the permittee advising of the discontinued use and require that the use be removed from the site within the time period specified below:

1. Within six months after the written notice of discontinued use is sent to the permittee, decommissioning of the use shall commence according to the Decommissioning Plan.

2. Within the six month period specified by subsection 1 above, the permittee may provide the Department of Regional Planning with a written request and justification for an extension of up to six months to resume operations of the system, facility, or portions thereof. The Director of the Department of Regional Planning may approve one six month extension.

22.52.1670 Standards for Structure-Mounted Utility-Scale Renewable Energy Facilities.

A. Height. A structure-mounted utility-scale renewable energy facility that is structure mounted may:

1. Exceed the height limit of the zone by no more than five feet if it is placed on a building that is built to the maximum height limit in residential and agricultural zones; or

2. Exceed the height limit of the zone by no more than 10 feet if it placed on a building that is built to the maximum height limit in commercial and manufacturing zones.

B. Setbacks. Setbacks from the perimeter of the roof shall be:

1. Three feet on residential buildings; or

2. Four feet on non-residential buildings.

C. Accessory structures. Accessory structures constructed for the purposes of operating and maintaining the utility-scale renewable energy facility must meet the development standards of the zone.

22.52.1680 Modifications

A. Where a Site Plan Review is required pursuant to Section 22.52.1620, a Conditional Use Permit in compliance with Part 1 of Chapter 22.56, is required for the modification of any applicable standards in this Part 15. The applicant for such Conditional Use Permit shall substantiate the following findings in addition to those required by Section 22.52.1620.B:

1. Due to topographic or physical features of the site, strict compliance with all of the required standards would substantially and unreasonably interfere with the establishment of the proposed project on the subject property; and

2. The requested modifications would not be contrary to the intent and purpose of this Part 15.

B. Where a Minor Conditional Use Permit or Conditional Use Permit is required pursuant to Section 22.52.1620, modification of any applicable standards in this Part 15 may be requested. The applicant for such Minor Conditional Use Permit or Conditional Use Permit shall substantiate the findings provided in subsection A above in addition to those required by Section 22.52.1620.B.

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

GAIL FARBER, Director

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ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

March 7, 2013

IN REPLY PLEASE
REFER TO FILE: LD-2

TO: Jon Sanabria
Advanced Planning Division
Department of Regional Planning

Attention Thuy Hua

FROM: Anthony Nyivih
Land Development Division
Department of Public Works

SB

PRIVATELY-OWNED, UTILITY-SCALE, SOLAR AND WIND, RENEWABLE-ENERGY FACILITIES DRAFT ORDINANCE.

Thank you for the opportunity to review the proposed draft privately-owned, utility-scale, solar and wind, renewable-energy facility ordinance that was submitted to Public Works for review on September 19, 2012. The draft ordinance establishes regulations and permit requirements that support and facilitate the responsible utilization of the County's solar and wind resources.

Prior to Regional Planning's approval of the ordinances, the following items need to be addressed:

Public Buildings

1. Section 22.100.030.A: Include *"The electrical system must comply with the current edition of the Los Angeles County Electrical Code."*

2. Section 22.100.030.A.2.b: The last sentence currently reads: *"A building permit may be required for the re-inspection of the building or structure; and"*. This sentence should be revised to state: *"A building permit may be required for the reinspection of the building or structure; however, an electrical permit, along with the applicable plan checks, will be required to ensure compliance with the Los Angeles County Electrical Code; and."*

3. Section 22.100.030.A.2.c: The last sentence currently reads: "*A building permit may be required for the re-inspection of the building or structure*. This sentence

should be revised to state: "*A building plan check and permit will be required for the reinspection of the building or structure*".

If you have any questions regarding the Public Building comments, please contact Francis Dominguez of Building and Safety Division at (661) 524-2390 or fdomingu@dpw.lacounty.gov.

Water Resources

Water

1. Section 22.100.20.C: This ordinance applies only to private facilities; however, there will be a question on every project whether the facility is private or not. Most solar farms, and possibly wind farms, are funded with government money but may end up being owned or connected to a private company, (e.g., Southern California Edison). This Ordinance's biggest impact is during construction, not operation. Therefore, clarification is needed in this regard within the Definitions Section.

2. Section 22.100.020.D.6: The definition of grading as indicated in this subsection of the Ordinance is "any amount of earthwork greater than one foot in height or depth which is not otherwise defined as not grading (e.g., footings, foundation work, etc.)." We would like to work with the Department of Regional Planning to improve this definition as this will have an impact on how our respective Departments analyze/review grading plans.

3. Fugitive dust control is a major issue that this ordinance needs to address; however, Section 22.100.050.B.8.a states that site watering and the use of non-toxic soil stabilizers, which require water, shall be used (among other methods) to control dust emissions. Due to the lack of water in some areas throughout the County, proper dust control may not be possible and, therefore, we need to defer to County Counsel for discussions on water supply and how this ordinance should address it, specifically in the Antelope Valley.

If you have any questions regarding the water comments, please contact Greg Even of Waterworks Division at (626) 300-3331 or geven@dpw.lacounty.gov.

Drainage

1. Section 22.100.050.B.15.b currently states that "*Existing topography and watercourses shall be retained or restored to preexisting conditions*". This statement should be revised to state: "*Existing topography and watercourses shall be retained or restored to preexisting conditions except for drainage features specifically designed to mitigate drainage impacts.*"

2. This ordinance should include the following language:

   All projects must submit a drainage plan showing the extent of drainage impacts and comply with the most recent County Standards for addressing drainage impacts. Required analysis may include, but are not limited to, increases in runoff, any change in drainage patterns, debris producing areas, and the capacity of existing storm drain facilities. Preliminary soils and geology reports related to debris, retention, and detention basins may be required based on geographic and adverse geotechnical conditions. Engineering calculations will be required to support sizing of any debris, retention, or detention basins. Flood Hazard analysis may be required for any project within an identified floodplain. Compliance with all existing drainage policies is required to the satisfaction of Public Works.

If you have any questions regarding the drainage comments, please contact Toan Duong at (626) 458-4921 or tduong@dpw.lacounty.gov.

Transportation

Aviation

1. Section 22.100.050.B.2.d,i applies to all renewable-energy facilities and not only within the Military Installations and Operations Area. Therefore, the current heading of Section 22.100.050.B.2.d, "Uses that are determined to produce a visual obstruction within a MOA shall comply with the following standards:", should be deleted and replaced with the verbiage currently contained in Section 22.100.050.B.2.d.i. Section 22.100.050.B.2.d.ii should then become Section 22.100.050.B.2.e.

If you have any questions regarding the aviation comment, please contact Jason Morgan of Aviation Division at (626) 300-4602 or jmorgan@dpw.lacounty.gov.

Development Services

Grading

1. Section 22.100.020.D.3 and 22.100.020.D.4: The definitions for Leveling Box and Finishing Box are similar. The only difference is the maximum box capacity of the equipment used. The definition should not be defined to the capacity of the equipment since our criteria for labeling the work "grading" or not is the elevation difference achieved by use of the process, not the amount of dirt that is actually moved. The definition should be combined into a single category called "Leveling, *the use of box scrapers, or similar equipment, to minimize the elevation differences in a given area through reduction of high points by no more than one foot in height and/or filling of low points by no more than one foot in depth; not grading."*

If you have any questions regarding the grading comment, please contact Mr. Andy Narag of Land Development Division at (626) 458-4921 or anarag@dpw.lacounty.gov.

If you have any other questions or require additional information, please contact Matthew Dubiel at (626) 458-4921 or mdubiel@dpw.lacounty.gov.

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Chapter 22.100 Privately Owned Utility-Scale Solar and Wind Renewable Energy Facilities

Sections:

22.100.010 Purpose
22.100.020 Definitions
22.100.030 Applicability
22.100.040 Permit Requirements
22.100.050 Development Standards for Privately Owned Utility-Scale Renewable Energy Facilities
22.100.060 Development Standards for Privately Owned Utility-Scale Solar Renewable Energy Facilities
22.100.070 Development Standards for Privately Owned Utility-Scale Wind Renewable Energy Facilities

22.100.010 Purpose

This Chapter establishes regulations and permit requirements that support and facilitate the responsible utilization of the County's solar and wind resources. These regulations assure that utility-scale solar and wind renewable energy facilities are designed and located in a manner that minimizes safety and environmental impacts on the surrounding community. The requirements encourage responsible development of these facilities to generate and transmit clean, renewable energy while protecting the health, safety and welfare of residents and the environment.

22.100.020 Definitions

A. **Decommissioning.** Removal of a utility-scale renewable energy facility from service, which includes the later actions of safe storage, dismantling, disposal, recycling and site restoration.

B. **Solar array.** Mechanically integrated assembly of modules or panels with a support structure and foundation, tracker, and other components, as required to form a direct-current, power-producing unit as defined by the California Energy Commission.

C. **Privately owned utility-scale renewable energy facility.** A privately owned and operated facility where energy generation using renewable resources is the primary

use. In addition to the solar collector arrays and wind turbines the facilities include related equipment and other accessory structures including substations, electrical infrastructure, transmission lines, operations and maintenance buildings and other appurtenant structures. Includes privately owned Utility-scale Solar Renewable Energy Facilities (SEF-US) and Utility-scale Wind Renewable Energy Facilities (WEF-US).

D. **Utility-scale renewable energy facility earthwork equipment definitions.**

1. Mow – mowing to ground level without earth movement; not grading.

2. Disk – using farming-type disk equipment to loosen soil a foot or less in depth; not grading.

3. Roll – using a continuous surface roller to lightly compact disked, leveled, or finished soil.

4. Leveling Box – maximum box capacity of [ask for DPW specification?]_cubic yard for leveling earth humps no greater than one foot in depth or for filling no greater than one foot in height; not grading.

5. Finishing Box – maximum box capacity of [ask for DPW specification?] cubic yard for leveling high or low areas no greater than one foot in depth or for filling no greater than one foot in height; not grading.

6. Grading – any amount of earthwork greater than one foot in height or depth which is not otherwise defined as not grading (eg. footings, foundation work, etc.).

E. **Wind facility height.** Facility height for a wind energy facility shall be measured from the finished grade to the top of the blade in the vertical position.

F. **Wind tower height.** Tower height for a wind energy facility shall be measured from the finished grade to the top of the tower, excluding the wind turbine generator, blades, and wind-measuring devices.

22.100.030 Applicability

A. **Requirements.**

1. The permit requirements and development standards in this Chapter apply to the construction of any privately owned utility-scale solar and wind renewable energy facilities.

2. A renewable energy facility approved prior to the effective date of this ordinance shall not be required to meet the requirements of this Chapter, except:

a. Any physical modification to any existing previously permitted utility-scale renewable energy facility that increases the size, height, footprint or type of equipment shall be subject to this Ordinance. Only the modification or alteration is subject to this Ordinance;

b. An increase in wattage due to technical advances does not require additional review by Regional Planning or modification of the permit as long as the components are of a similar size, shape and height and comply with this Ordinance. A building permit may be required for the re-inspection of the building or structure; and

c. Routine operation and maintenance or like-kind replacements do not require a new permit from Regional Planning. A building permit may be required for the re-inspection of the building or structure

B. **Where Allowed.** The uses that are subject to the standards in this Chapter shall be located only where allowed by the base zone, in conformance with Table 22.100.040-A (Utility-Scale Renewable Energy Facilities Permit Requirements).

C. **Co-location.** Renewable energy facilities may be permitted on properties with other primary uses such as, but not limited to, parking lots or on top of buildings. Any co-location of a renewable energy facility requires a conditional use permit.

D. **Other Similar Uses.** The Director may determine that a proposed renewable energy use not listed in Title 22 may be allowed. Any similar use not clearly defined by the County Zoning Ordinance as renewable energy may refer to a State or Federal definition of renewable energy uses if the similar use is so defined. The development standards in this Chapter shall serve as the minimum requirements for any similar use determined to be a renewable energy use. A conditional use permit is required for any similar use. Temporary Meteorological Facilities are regulated by Chapter 22.102 and Small Solar and Wind Facilities are regulated by Chapter 22.104.

22.100.040 Permit Requirements Permit requirements for utility-scaled renewable energy facilities are provided in Table 22.100.040-A.

TABLE 22.100.040-A: UTILITY-SCALE RENEWABLE ENERGY FACILITIES PERMIT REQUIREMENTS						
USE	*Permit Required By Zone* *CUP = Conditional use permit* *N/A = Not Applicable*					
	A-1	*A-2, A-2-H*	*OS, W, MXD, MXD-RU*	*R-A, R-1, R-2, R-3, R-4, R-5*	*C-H,C-1, C-2 C-3, C-M, C-R, R-R, C-RU*	*M-1,M-1.5, M-2,M-2.5, M-3*
Solar Energy Facilities						
Ground-mounted Utility-Scale	N/A	CUP	N/A	N/A	CUP	CUP
Structure-mounted Utility-Scale	N/A	CUP	N/A	N/A	CUP	
Wind Energy Facilities						
Ground-mounted Utility-Scale	N/A	CUP	N/A	N/A	CUP	CUP
Structure-mounted Utility-Scale	N/A	CUP	N/A	N/A	CUP	

22.100.050 Development Standards for Privately Owned Utility-Scale Renewable Energy Facilities

A. **Permit Requirements.**

1. ***Utility-Scale Renewable Energy Facilities.*** Permit requirements are as depicted in Table 22.100.040 – A. The filing information and documents required are as listed in the Department's Application Information and Checklists.

2. ***Findings for Privately Owned Utility-Scale Renewable Energy Facilities.*** The Commission shall approve an application only if the applicant substantiates the following required findings:

   a. The findings for a conditional use permit per Section 22.56.090;

   b. How this request addresses the State's goal of 33 percent of the State's electricity coming from a renewable energy source by December 31, 2020;

   c. The requested use at the location proposed will not be materially detrimental to the use, enjoyment or valuation of property or other persons or Military Installations and Operations Areas located in the vicinity of the site;

d. How the request mitigates any loss of Prime Farm Land, Unique Farmland or Farmland of Statewide Importance according to the State of California; and

e. The effect, if any, upon desirable community character, including the cumulative effect of the project to the area in addition to the ongoing and expected effects of existing and pending renewable energy projects.

3. ***Findings for Privately Owned Utility-Scale Renewable Energy Facilities Located within Military Installations and Operations Areas (MOA).*** The Commission shall approve an application only if the applicant substantiates the following required findings:

a. The findings for a conditional use permit per Section 22.56.090;

b. Facilities that are located within MOAs, as defined by the General Plan, shall be evaluated for any potential impacts to ensure the safety of the residents on the ground and continued viability of military operations within the MOAs. The review shall consider the following:

i. Uses that produce electromagnetic and frequency spectrum interference, which could impact military operations;

ii. Uses that release into the air any substances such as steam, dust and smoke, which impair visibility;

iii. Uses that produce light emissions, glare or distracting lights, which could interfere with pilot vision or be mistaken for airfield lighting; and

iv. Uses that physically obstruct any portion of the MOA due to relative height above ground level.

4. ***Modifications.*** A variance, in compliance with Part 2 of Chapter 22.56, is required for the modification of any development standard specified in this Chapter.

B. **Development Standards.** A privately owned utility-scale renewable energy facility shall comply with the following development standards:

1. ***Access roads.*** Temporary access roads utilized for initial installation shall be restored and re-vegetated to the pre-existing natural condition to the greatest extent possible after completion of the installation. All temporary and permanent ingress and egress points to the facility shall be designed and

sited to the satisfaction of Public Works and shall consider adequate spacing from intersection and sight distance.

2. ***Aviation safety.***

a. The Director shall distribute copies of the proposed site plan, elevation plan, and location map to aviation-related regulatory agencies and privately owned and operated facilities with flight operations in the vicinity of the proposed project, as determined by the Director. Regulatory agencies include the California Department of Transportation Division of Aeronautics, Department of Public Works, Aviation Division, Federal Aviation Administration (FAA), County Forester and Fire Warden, County Sheriff, Edwards Air Force Base, Navy, Air Force Plant 42, and the Airfield Land Use Commission. Any comments received within 30 days of distribution of the plans will be considered in establishing conditions of approval.

b. A safety light that meets FAA standards shall be required for all facilities that exceed an overall tower height of 200 feet. A safety light may be required on shorter towers as deemed necessary by any of the aviation-related regulatory agencies. No other lights shall be placed on the tower. Any safety light shall meet FAA standards and be visible to pilots utilizing night vision equipment.

c. A renewable energy facility shall not be located within the Runway Protection Zone of any airport, as defined in the County's Airport Land Use Plan.

d. Uses that are determined to produce a visual obstruction within a MOA shall comply with the following standards:

i. A utility-scale renewable energy facility shall not penetrate the imaginary surfaces (primary, approach, transitional, horizontal, and conical surfaces) designated by the FAA for airports to enhance the safe and efficient use of navigable airspace as defined by Federal Aviation Part 77; and

ii. Uses shall not penetrate the lower floor elevation of the MOA unless the military operator of the MOA has determined that the proposed use is not detrimental to the function of the MOA and would not pose a health or safety hazard to the public and military personnel. In instances where a written concurrence from the military operator is requested but not received within 30 calendar days, the conditional use permit may be approved upon a finding the benefits of the requested obstruction into the

MOA outweigh the potential impacts on military flight operations.

3. ***Site planning.*** Permanent storage areas, administration, maintenance, and operations buildings, and equipment associated with renewable energy facilities shall be located and screened such that impacts to biological resources, farmland, agricultural resources, and visual quality are minimized.

4. ***Decommissioning Plan.*** Prior to obtaining any grading permit, the permittee shall provide the Department of Regional Planning and the Department of Public Works with a Decommissioning Plan in connection with any and/or all of the terminating events described as a Discontinued Use. The Plan shall include, at a minimum, a detailed plan for decommissioning and deconstructing the facility and for the restoration of the site in the event the project or portion of the project is no longer useable or reusable as described below. The Plan shall be developed to the satisfaction of the Director of Regional Planning and the Director of Public Works. The Decommissioning Plan shall provide for, including, but not limited to, the following:

   a. Removal of solar panel and/or wind turbine structures and all appurtenant above-ground equipment;

   b. Removal of on-site overhead poles and above-ground electricity lines;

   c. Removal of permanent above-ground transmission lines and poles located in the public right-of-way if determined not usable by the County or any other applicable public or private utility. Otherwise such transmission poles shall be allowed to remain;

   d. Privately owned on-site substation may remain if public or private utility assumes ownership of the substation, otherwise it shall be removed;

   e. Restoration of any disturbed soil and revegetation of the site to its preconstruction condition, with native vegetation similar to the vegetation in the surrounding vicinity;

   f. If the site is used for farming, restoration o the site to its previous farmland condition;

   g. If the site includes reusable permanent facilities usable by the owner of the property, such facilities may remain, otherwise such facilities shall be removed and the site restored to pre-existing condition to the greatest extent possible. If the owner maintains existing facilities on the property for a different use an additional entitlement for the proposed use is required;

h. Restoration or reclamation of any project road to their pre-construction condition unless the then-existing owner of the site elects to retain the improved road for access throughout the site;

i. Documentation of the pre-graded condition of the project site, including, but not limited to, a photographic record;

j. Details of the performance and financial assurance guarantees, explaining the amounts and schedule for the provision of such guarantees;

k. Authorization for the County to enter a site and perform any work related to implementing the approved decommissioning plan and utilizing the decommissioning financial assurance guaranties; and

l. The project owner shall post a bond, lien contract agreement acceptable to the Director of Public Works, sufficient to allow for the decommissioning plan.

5. ***Discontinued Use.*** In the event that any portion of the facility is not in operational condition for a consecutive period of 12 months, operations for that portion of the site shall be deemed to have been discontinued and that portion of the facility shall be removed from the site within 90 days from the date that written notice is sent to the permittee from Regional Planning. Within this 90-day period, the permittee may provide the Director a written request and justification for an extension of up to 12 months to resume operations of that portion of the site, which request shall be subject to the satisfaction of the Director.

   A second written request and justification for a second extension of up to 12 months may also be submitted, which the Director may grant if the request is adequately justified based on the Director's determination. In no event shall the operation of the facility or portion of the facility be discontinued for more than 36 months from the date such operations were first deemed discontinued without being decommissioned pursuant to the approved Decommissioning Plan. Further, in no event shall any extension of the period to resume operations of any portion of the site pursuant to this standard be deemed to extend the term or expiration date of the approval.

6. ***Emergency Response Plan.*** An emergency response plan appropriate to the size and operation of the project shall be submitted for the County's Fire Department approval prior to the construction of the project. The plan shall address possible emergencies such as, but not limited to, blow-outs, spills, earthquakes, fires, and floods. The operator shall be responsible for ensuring

that the project is equipped and staffed to carry out all contingency measures at any time.

7. ***Fencing Allowed.*** To protect utility-scale renewable energy facilities chain-link fences up to 8 feet in height, regardless of any other fencing standards, shall be permitted. Such fences may not be located within 15 feet of a public street or highway. Fencing height and placement shall provide for minimum corner sight distance. Drought-tolerant vegetation shall be preserved or placed between fences and property frontage on public right-of-way, unless determined infeasible or inappropriate by the Planning Director. No fencing shall be required where projects employ full-time security guards or use video surveillance or allow for open space buffers. Mitigation measures to be in accordance with applicable state, regional and local regulations.

8. ***Fugitive dust.***

   a. Fugitive dust emission shall be controlled by phased earthwork, site watering, clean gravel where applicable, application of non-toxic soil stabilizers, limiting public access on unpaved areas, and posting roadways with reduced speeds. Dust shall be controlled during construction, operations, and removal and restoration activities. Mitigation measures should be in accordance with applicable state, regional and local regulations.

   b. A project shall be designed so as to minimize the amount of grading necessary to reduce dust impacts.

9. ***Lighting.*** Night-lighting, limited to that required for safety and security, shall be shielded and directed downward to avoid lighting trespass and shall consist of: (a) motion sensor for entry-lighting to the on-site equipment structures and buildings; (b) for projects with operation and maintenance buildings, install light-sensor or motion-sensor lighting for the main plant access gate and operations and maintenance building doorways and parking areas; and (c) all outdoor light fixtures shall be full cut-off light fixtures as defined in Part 9 of Chapter 22.44.

10. ***Maintenance.*** All equipment and facilities shall be maintained in an operational condition that poses no potential safety hazards. Maintenance shall include, but not limited to, painting, regularly scheduled cleaning, mechanical/electrical repairs, structural repairs and security measures.

11. ***Noise.*** Noise-generating equipment in a renewable energy facility shall comply with Title 12, Chapter 12.08 of the Noise Control Ordinance, and comply with the General Plan. No noise shall exceed maximum levels, as measured at the closest neighboring inhabited dwelling, school, church,

hospital, or similar sensitive use, except during short-term events such as utility outages and severe windstorms. The power grid should be designed to minimize the impact associated with the corona effect noise on sensitive receptors.

12. ***Number and Spacing.*** More than one energy facility may be located on the same property if all of the location requirements and standards of this Chapter can be met for each facility. .

13. ***Significant Ecological Areas.*** All utility scale renewable energy projects located within a Significant Ecological Area shall not commence construction or operation prior to having a Habitat Mitigation and Monitoring Plan approved by the Department of Regional Planning as recommended by SEATAC.

14. ***Signs.*** One ground-mounted or pole-mounted project identification sign may be located at each point of project ingress and egress. Total sign area of all signs shall not exceed fifty square feet in area and five feet in height. Signs shall include owner information and emergency contact. No other signs shall be installed other than safety and required warning signs.

15. ***Site disruption.***

    a. Within the project site the land area exposed and the vegetation removed during construction shall be the minimum necessary to install and operate the facility.

    b. Existing topography and watercourses shall be retained or restored to preexisting conditions.

    c. All facilities and access ways shall be designed to minimize erosion, sedimentation, or other impacts to the natural hydrology and drainage patterns of the site.

    d. Grading quantities shall be distinguished from general disturbance earthwork. Use of disc, leveling less than one foot in height or depth, and final rolling of earthwork area is not to be counted as grading quantity.

16. ***Structural Safety.***

    a. All energy facilities shall be designed and constructed based on the current County of Los Angeles Building Code; and

    b. A wind analyses is required, and a geotechnical investigation report may be required, at the discretion of the Director of Public Works.

Conditions of approval may be imposed to implement the safety recommendation of such investigations

17. ***Transmission lines.*** Transmission lines shall be placed underground within existing rights-of-way to the greatest extent feasible. Where transmission lines are proposed to be constructed above ground due to barriers or other significant obstructions to underground construction, they should be planned and designed to minimize visual impacts as seen from public roads, other public viewing areas, and adjacent properties. Undergrounding is not required when connecting to a transmission station.

18. ***Visual impact.***

    a. Any renewable energy project that is placed within the viewshed of a County or State designated Scenic Highway shall be assessed for its visual effects, and conditions of approval relating to siting, buffers, and the height and design of the facility may be imposed to minimize significant effects on the viewshed.

    b. Within the Coastal Zone, the placement of a renewable energy project shall not obstruct public views of the ocean from a County or State designated Scenic Highway, unless specific provisions for such siting are provided for in the applicable Local Coastal Plan and Coastal Development Permit or Long Range Development Plan.

19. ***Water quality protection.*** Measures to protect groundwater and surface water from potential spills shall be incorporated into the project design, as appropriate, and any discharge of wastes into surface water must meet the requirements of the Regional Water Quality Control Board. Any discharge of wastes into surface water must meet the requirements of the Regional Water Quality Control Board.

22.100.060 Additional Development Standards for Privately Owned Utility-Scale Solar Renewable Energy Facilities (SEF-US)

A. **Applicability.** In addition to the development standards in Section 22.100.050.B, utility-scale solar renewable energy facilities shall comply with the development standards in this Section.

B. **Location.**

1. Solar panels shall be placed such that concentrated solar radiation or glare shall not be directed onto nearby properties or roadways.

2. Solar panels shall not be placed in the vicinity of any airport in a manner that would interfere with airport flight patterns. Acknowledgements from the FAA may be necessary.

C. **Maximum Ground Coverage.** Ground-mounted solar arrays may cover all portions of a lot except as limited by other regulations or by conditions of approval. These may include, but are not limited to: setback requirements of the zone, public access easements, additional buffering from sensitive adjacent uses, or environmental resource protection requirements.

D. **Maximum Height.**

1. ***Ground-mounted.*** The height of ground-mounted utility-scale solar energy facility shall meet the height requirements of the zone. Measurement to be taken from finished grade to the top of the solar panels.

2. ***Building-mounted.***

   a. Structures supporting solar energy systems on buildings or structures in agricultural zones may be erected above the building height by up to 3 feet, regardless of building height. The height shall be measured to the highest point of the structure and panel assembly; and

   b. Structures supporting solar energy systems on buildings and structures in all commercial and manufacturing zones where the building roof is flat, may be erected above the building height up to 15 feet, even if the building is built to or above the allowable building height. The height shall be measured to the highest point of the structure and panel assembly.

   (Provide Diagram)

E. **Parking Lots.** The Director of Planning may modify parking stall dimensions when the applicant is retrofitting existing parking lots to accommodate solar structures. The required width and length of a parking stall may be reduced to accommodate a structure supporting a solar energy system if it's in conformance with the following:

1. Support posts or similar structures shall be within 10 inches of a corner of the stall farthest from the access aisle or driveway;

2. When stalls are in tandem, only the stall farthest from the access driveway may have its required dimension reduced;

3. The reductions may not be applied to a parking stall for the disabled;

4. The number of parking accessible parking spaces and the layout shall comply with the latest requirements of the County of Los Angeles Building Code; and

5. The parking lot already exists and is not new construction.

(Provide Diagram)

F. **Setbacks.**

1. ***Agricultural zones.*** A utility-scale solar energy facility located within a agricultural zone shall be 30 feet from all property lines, including all accessory buildings and fencing.

2. ***Other zones.*** A utility-scale solar energy facility located in any zone except agricultural shall meet all of the setback requirements of the zone.

22.100.070 Additional Development Standards for Privately Owned Utility-Scale Wind Renewable Energy Facilities (WEF-US)

A. **Applicability.** In addition to the development standards in Section 22.100.050.B, utility-scale wind renewable energy facilities shall comply with the development standards in this Section.

B. **Clearance of Blade Above Finished Grade Level.** No portion of a WEF-US blade shall extend within 30 feet from the finished grade.

C. **Impacts to birds and bats.** All utility-scale wind renewable energy facilities shall be designed, constructed and operated pursuant to the *California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development* published by the State of California Energy Commission and conditions of approval may be imposed by the Commission, consistent with these guidelines, to reduce significant impacts to birds and bats. Any WEF-US shall be prohibited to be located within the California Condor Preserve.

D. **Location.** The minimum distance and safe between a WEF-US, excluding guy wires and their anchors, shall be as depicted in Table 22.070.D-A Setback Requirements for Utility-scale Wind Energy Systems.

1. The required distance shall also comply with any applicable fire setback requirements pursuant to Section 4290 of the State Public Resources Code; and

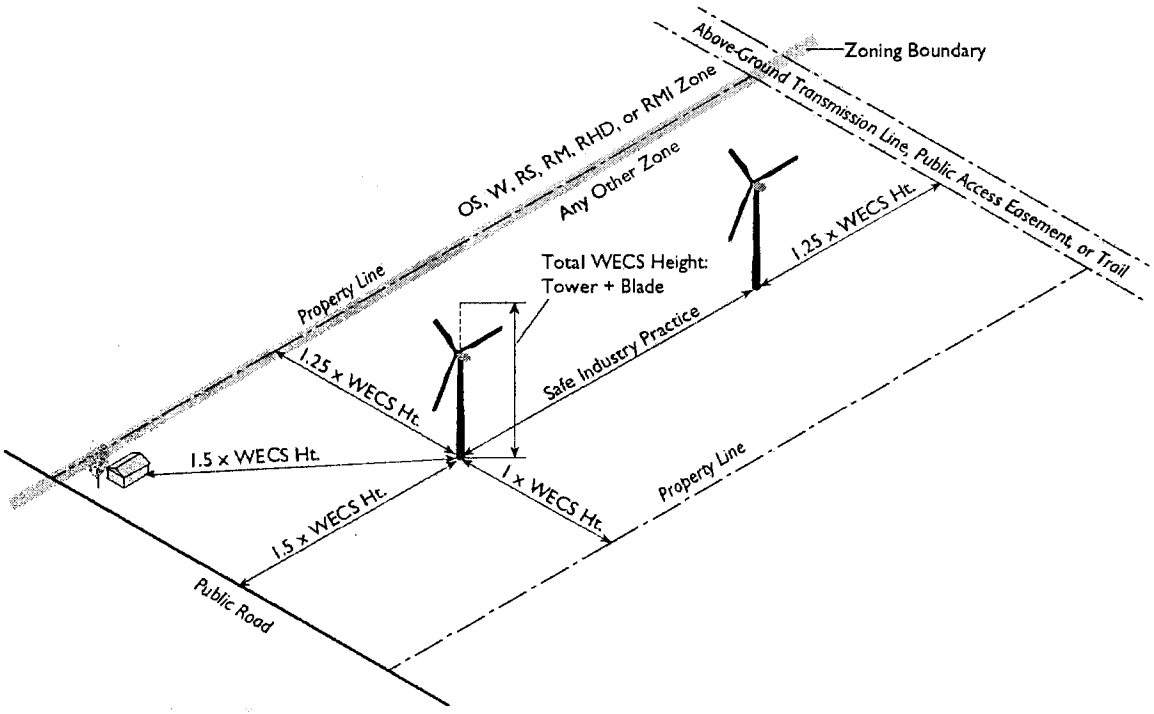
2. The setbacks required by this Section include any setback requirements within Section 22.100.060.

TABLE 22.070.D – A – SETBACK REQUIREMENTS FOR UTILITY-SCALE WIND ENERGY SYSTEMS

Setback From	Distance
On-Site Residence or Habitable Structure	4 x WEF–US facility height
Off-Site Residence or Habitable Structure	4 x WEF-US facility height
Public Road, Highway or Railroad	4 x WEF–US facility height
Public Access Easement, or Public Trail	4 x WEF-US facility height
Above Ground Transmission Line	1 x WEF-US facility height
Trees	As required by the Fire Department
County designated scenic highway	4 x WEF-US facility height

(Diagram to be revised, based on location decision)

UTILITY-SCALE WIND ENERGY FACILITIES



E. **Maximum Height.** Wind tower height shall not exceed 500 feet. A wind tower greater than 500 feet in height requires approval of a Variance pursuant to Section 22.134 of Title 22.

F. **Minimum Lot Size.** The minimum lot size for a WEF-US shall be five gross acres.

G. **Separation.** WEF-US must be separated from each other by the safe industry practice recommended by the manufacturer.

09/18/12

DRAFT

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
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GAIL FARBER, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

July 16, 2012

IN REPLY PLEASE
REFER TO FILE: LD-1

TO: John Gutwein
Land Use Regulation Division
Department of Regional Planning

Attention Alyson Steward

FROM: Anthony Nyivih
Land Development Division
Department of Public Works

SB

PROPOSED DRAFT RENEWABLE ENERGY ORDINANCE

Thank you for the opportunity to review the proposed draft renewable energy ordinance that was submitted to Public Works for review on May 15, 2012.

Prior to Regional Planning's approval of the ordinances, the following items need to be addressed:

Public Buildings

1. Section 22.100.030.A.2.b,c: These exempted items may not require a new permit from Regional Planning but may require a building permit from Public Works. Under the County of Los Angeles' building code, Maintenance Section 3401.2, the Building Official may require the reinspection of the building or structure. To avoid the applicant from thinking that they don't need a building permit or inspection, revise to include *"a building permit may be required for the reinspection of the building or structure."*

2. Section 22.100.050.B.17: The Uniform Building Code (UBC) is referenced instead of the current County of Los Angeles Building Code. A wind analysis is also required and in some cases may even govern. Revised the heading to "*Structural Safety*" and the wording should be revised to *"All energy facilities shall be designed and constructed based on the current County of Los Angeles Building Code."*

Section 22.100.050.B17.b: Geotechnical reports are required by the County of Los Angeles building code, and in some cases, the developer may think that a soils report is not required for structural design and review during the plan checking process. Revised to read, "A geotechnical investigation report may be required at the discretion of the Director."

3. Section 22.100.060.E3: Provide diagram for review.

4. Section 22.100.020.A: Include *"operation and maintenance buildings"* as other accessory structures.

5. Section 22.100.020.B: Include "*disposal" in the definition. "Removal of a utility-scale renewable energy facility from service, which includes the later actions of safe storage, dismantling, disposal, and site restoration."*

6. Section 22.100.020.C: Include "*Wind*" under heading. "*Wind Facility Height*"

7. Section 22.100.20.D: Redefine solar array to be "*mechanically integrated assembly of modules or panels with a support structure and foundation, tracker, and other components, as required, to form a direct-current, power-producing unit as defined in California Energy Commission."*

8. Section 22.100.20.E: Include "*Wind*" under heading. *"Wind Tower Height"*

9. Table 22.100.040-A: Distinguish "*Ground-mounted Utility-Scale"* and *"Structure-mounted Utility Scale."*

10. *Section* 22.100.050.A.2.c: Include "*and"* after the word "residents."

11. Section 22.100.060.E: Include "*Number of accessible parking spaces and the layout shall comply with the latest requirements of the County of Los Angeles Building Code."*

If you have any questions regarding the building and safety comments, please contact Ariel Palomares at (626) 458-3152 or apalomar@dpw.lacounty.gov.

Transportation

Aviation

1. Sections 22.98.060.B.2.a, 22.100.050.B.2.a, and 22.102.050.A.1: Include the California Department of Transportation Division of Aeronautics and the Department of Public Works, Aviation Division. For Section 22.98.060.B.2.a, include "*Navy*" as one of the regulatory agencies.

   The Director shall distribute copies of the proposed site plan, elevation plan, and location map to aviation-related regulatory agencies and facilities with flight operations in the vicinity of the proposed project as determined by the Director. Regulatory agencies include the Federal Aviation Administration (FAA), *California Department of Transportation Division of Aeronautics, Department of Public Works Aviation Division*, County Forester and Fire Warden, County Sheriff, Edwards Air Force Base, the *Navy*, and the Air Force's Plant 42. Any comments received within 30 days of distribution of the plans will be considered in establishing conditions of approval.

2. Section 22.98.060.B.2 and 22.100.050.2: Include a subsection to read the following:

   An accessory wind energy facility shall not penetrate the imaginary surfaces (primary, approach, transitional, horizontal, and conical surfaces) designated by the FAA for airports to enhance the safe and efficient use of navigable airspace as defined by Federal Aviation Regulation Part 77.

3. Section 22.100.050.2B.c: Recommend removal of this subsection.

4. Section 22.100.050B.2.d and 22.100.050B.2.e: Adjust the subsections accordingly.

5. Section 22.102.050.2: Include a subsection to read the following:

   A Temp Met Tower shall not penetrate the imaginary surfaces (primary, approach, transitional, horizontal, and conical surfaces) designated by the FAA for airports to enhance the safe and efficient use of navigable airspace as defined by Federal Aviation Regulation Part 77.

If you have any questions regarding the aviation comments, please contact Jason Morgan at (626) 300-4602 or jmorgan@dpw.lacounty.gov.

Traffic

1. Section 22.100.050.B.1: Add the following statement, *"All temporary and permanent ingress and egress access points to the facility shall be designed and sited to the satisfaction of Public Works and shall consider adequate spacing from intersections and sight distance."*

2. Section 22.100.050.B.11: Add the following statement, *"Fencing height and placement shall provide for minimum corner sight distance."*

If you have any questions regarding traffic and lighting comments, please contact Jeff Pletyak at (626) 300-4721 or jplety@dpw.lacounty.gov.

If you have any other questions or require additional information, please contact Ruben Cruz at (626) 458-4910 or rcruz@dpw.lacounty.gov.

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Chapter 22.100 Utility-Scale Solar and Wind Renewable Energy Facilities

Sections:

22.100.010 Purpose
22.100.020 Definitions
22.100.030 Applicability
22.100.040 Permit Requirements
22.100.050 Development Standards for Utility-Scale Renewable Energy Facilities
22.100.060 Development Standards for Utility-Scale Solar Renewable Energy Facilities
22.100.070 Development Standards for Utility-Scale Wind Renewable Energy Facilities

22.100.010 Purpose

This Chapter establishes regulations and permit requirements that support and facilitate the responsible utilization of the County's solar and wind resources. These regulations assure that utility-scale solar and wind renewable energy facilities are designed and located in a manner that minimizes visual and safety impacts on the surrounding community. The requirements encourage responsible development of these resources to generate and transmit clean, renewable energy while protecting the health, safety and welfare of residents and the environment.

22.100.020 Definitions

A. **Utility-scale renewable energy facility.** A renewable energy facility where energy generation is the primary use. In addition to the solar collector devices and wind turbines the facilities include related equipment and other accessory structures including substations, electrical infrastructure, transmission lines and other appurtenant structures. Includes utility-scale solar renewable energy facilities (SEF-US) and utility-scale wind renewable energy facilities (WEF-US).

B. **Decommissioning.** Removal of a utility-scale renewable energy facility from service, which includes the later actions of safe storage, dismantling, and site restoration.

C. **Facility Height.** Facility height for a wind energy facility shall be measured from the finished grade to the top of the blade in the vertical position.

D. **Solar array.** A linked collection of solar panels providing a single electrical or thermal output. Also known as photovoltaic array or PV array.

E. **Tower height.** Tower height for a wind energy facility shall be measured from the finished grade to the top of the tower, excluding the wind turbine generator, blades, and wind-measuring devices.

22.100.030 Applicability

A. **Requirements.**

1. The permit requirements and development standards in this Chapter apply to the construction of any utility-scale solar and wind renewable energy facilities.

2. A renewable energy facility approved prior to the effective date of this ordinance (DATE) shall not be required to meet the requirements of this Chapter, however:

   a. Any physical modification to any existing previously permitted renewable energy facility that increases the size, height, footprint or type of equipment shall be subject to this Ordinance. Only the modification or alteration is subject to this Ordinance;

   b. An increase in wattage due to technical advances does not require additional review as long as the components are of a similar size, shape and height; and

   c. Routine operation and maintenance or like-kind replacements do not require a new permit.

B. **Where Allowed.** The uses that are subject to the standards in this Chapter shall be located only where allowed by the base zone, in conformance with Table 22.100.040-A (Utility-Scale Renewable Energy Facilities Permit Requirements).

C. **Co-location.** Renewable energy facilities may be permitted on properties with other primary uses such as parking lots or on top of buildings. Any co-location renewable energy facility requires a conditional use permit.

D. **Other Similar Uses.** The Director may determine that a proposed renewable energy use not listed in Title 22 may be allowed. The development standards in this Chapter shall serve as the minimum requirements for any similar use. A conditional use permit is required for any similar use.

22.100.040 Permit Requirements Permit requirements for utility-scaled renewable energy facilities are provided in Table 22.100.040-A.

TABLE 22.100.040-A: UTILITY-SCALE RENEWABLE ENERGY FACILITIES PERMIT REQUIREMENTS						
USE	*Permit Required By Zone* *CUP = Conditional use permit* *DR = Director's Review* *_ = Use not allowed*					
	A-1	*A-2, A-2-H*	*OS, W*	*R-A, R-1, R-2, R-3, R-4*	*C-H,C-1, C-2 C-3, C-M, C-R, R-R*	*M-1,M-1.5, M-2,M-2.5, M-3, M-4,SR-D*
Solar Energy Facilities						
Ground-mounted Utility-Scale	_	CUP	_	_	CUP	CUP
Structure-mounted Utility-Scale	_	CUP	_	_	CUP	DR
Wind Energy Facilities						
Ground-mounted Utility-Scale	_	CUP	_	_	CUP	CUP
Structure-mounted Utility-Scale	_	CUP	_	_	CUP	DR

22.100.050 Development Standards for Utility-Scale Renewable Energy Facilities

A. **Permit Requirements.**

1. ***Conditional Use Permit for Utility-Scale Renewable Energy Facilities.*** A Conditional Use Permit is required for a utility-scale renewable energy facility in compliance with Part 1 of Chapter 22.56. The filing information and documents required are as listed in the Departments Information and Checklists.

2. ***Findings for Utility-Scale Renewable Energy Facilities.*** The Review Authority shall approve an application only if the applicant substantiates the following required findings:

   a. The findings for a conditional use permit per Section 22.56.090;

   b. How this request addresses the County's and State's goals for renewable energy;

   c. That the location, size, design, and operating characteristics of the proposed use will be compatible with adjacent uses, residents, buildings, with consideration given to:

i. Scale, bulk, coverage and density;

ii. The effect, if any, upon desirable community character; and

iii. The suitability of the site for the type and intensity of use or development which is proposed.

d. The following findings that address biotic resources:

i. That the requested development is designed to maintain water bodies, watercourses, and their tributaries in a natural state;

ii. That the requested development is designed so that wildlife movement corridors (migratory paths) are left in an undisturbed and natural state;

iii. That the requested development retains sufficient natural vegetative cover and/or open spaces to buffer critical resource areas from said requested development;

iv. That where necessary, fences or walls are provided to buffer important habitat areas from development; and

v. That roads and utilities serving the proposed development are located and designed so as not to conflict with critical resources, habitat areas or migratory paths.

3. ***Modifications.*** The review authority may modify any development standard specified in this Chapter upon finding that strict compliance with all of the required development standards would substantially and unreasonably interfere with the establishment of the proposed energy facility on the project site, and the requested modifications would not be contrary to the intent and purpose of this section.

B. **Development Regulations.** A utility-scale renewable energy facility shall comply with the following development standards:

1. ***Access roads.*** Temporary access roads utilized for initial installation shall be re-graded and re-vegetated to the pre-existing natural condition to the greatest extent possible after completion of the installation.

2. ***Aviation safety.***

a. The Director shall distribute copies of the proposed site plan, elevation plan, and location map to aviation-related regulatory agencies and facilities with flight operations in the vicinity of the proposed project, as determined by the Director. Regulatory agencies include the Federal

Aviation Administration (FAA), County Forester and Fire Warden, County Sheriff, Edwards Air Force Base, Navy, and Air Force Plant 42. Any comments received within 30 days of distribution of the plans will be considered in establishing conditions of approval.

b. Facilities that are located within the Military Installations and Operations Areas (MOA), as defined by the General Plan, shall be evaluated for any potential impacts to ensure the safety of the residents on the ground and continued viability of military operations within the MOAs. The review shall consider the following:

   i. Uses that produce electromagnetic and frequency spectrum interference, which could impact military operations;

   ii. Uses that release into the air any substances such as steam, dust and smoke, which impair visibility;

   iii. Uses that produce light emissions, glare or distracting lights, which could interfere with pilot vision or be mistaken for airfield lighting; and

   iv. Uses that physically obstruct any portion of the MOA due to relative height above ground level.

c. Any structure that exceeds the height limit established by the County's Airport Land Use Plan shall comply with all of the FAA's requirements for aviation safety.

d. A safety light that meets FAA standards shall be required for all facilities that exceed an overall machine height of 200 feet. A safety light may be required on shorter towers as deemed necessary by any of the aviation-related regulatory agencies. No other lights shall be placed on the tower.

e. A renewable energy facility shall not be located within the Runway Protection Zone of any airport, as defined in the County's Airport Land Use Plan.

3. ***Biological resource protection.*** All utility-scale renewable energy development must demonstrate that potential impacts to biological resources are minimized. Impact avoidance and minimization may be achieved by measures including, but not limited to, completion of an appropriate biological resources survey; avoidance and buffering of sensitive habitat; control of noxious weeds; assignment of a biological monitor; preparation of and

adherence to a habitat mitigation and monitoring plan, a weed control plan, and a revegetation program.

4. ***Compact site planning.*** Required permanent storage areas, administration, maintenance, and operations buildings, and equipment associated with renewable energy facilities shall be clustered and screened such that impacts to biological resources, agricultural resources, and visual quality are minimized.

5. ***Compliance monitoring.*** All applications shall include a Compliance Monitoring Plan for approval by the Review Authority. The Compliance Plan shall provide a means for assuring that the facility is constructed and operated in compliance with public health and safety, environmental and other applicable regulations, guidelines or conditions adopted by the County. A Compliance Plan prepared pursuant to Public Resources Code Section 25532 may be submitted to fulfill this requirement.

6. ***Construction and operational water supply.*** For projects located in un-adjudicated water basins, permit conditions shall specify terms of construction and maximum annual groundwater use for construction, and specify maximum annual groundwater use available for operations.

7. ***Cultural resource protection.*** *A* survey of cultural and archaeological resources on the project site shall be completed for the Review Authority's approval, and all State and federal requirements for tribal consultation and resource protection shall be followed. Conditions of approval may be imposed to ensure cultural resource protection.

8. ***Decommissioning Plan.*** Prior to obtaining any building permit, the permittee shall provide the Department of Regional Planning with a Decommissioning Plan. The Plan shall include, at a minimum, a detailed plan for decommissioning and deconstructing the facility, and for the restoration of the site. The Plan shall be developed to the satisfaction of the Director of Regional Planning and the Director of Public Works and subject to their review and approval. The Decommissioning Plan shall provide for, including, but not limited to, the following:

   a. Removal of solar panel and/or wind turbine structures and all appurtenant above-ground equipment;

   b. Removal of on-site overhead poles and above-ground electricity lines;

   c. Removal of permanent above-ground transmission lines and poles located in the public right-of-way if determined not usable by the

County or any other applicable public or private utility. Otherwise such transmission poles shall be allowed to remain;

d. Privately owned on-site substation may remain if public or private utility assumes ownership of the substation, otherwise it shall be removed;

e. Restoration of any disturbed soil and revegetation of the site to its preconstruction condition, with native vegetation similar to the vegetation in the surrounding vicinity;

f. If the site includes reusable permanent facilities usable by the owner of the property, such facilities may remain, otherwise such facilities shall be removed and the site restored to pre-existing condition to the greatest extent possible;

g. Restoration or reclamation of any project road to their pre-construction condition unless the then-existing owner of the site elects to retain the improved road for access throughout the site;

h. Documentation of the pre-construction condition of the project site, including, but not limited to, a photographic record; and

i. Details of the performance and financial assurance guarantees, explaining the amounts and schedule for the provision of such guarantees.

j. Authorization for the County to enter a site and perform any work related to implementing the approved decommissioning plan and utilizing the decommissioning financial assurance guaranties.

9. ***Discontinued Use.*** In the event that any portion of the facility is not in operational condition for a consecutive period of 12 months, operations for that portion of the site shall be deemed to have been discontinued and that portion of the facility shall be removed from the site within 90 days from the date that written notice is sent to the permittee from Regional Planning. Within this 90-day period, the permittee may provide the Director a written request and justification for an extension of up to 12 months to resume operations of that portion of the site, which request shall be subject to the satisfaction of the Director.

A second written request and justification for a second extension of up to 12 months may also be submitted, which the Director may grant if the request is adequately justified based on the Director's determination. In no event shall the operation of the facility or portion of the facility be discontinued for more than 36 months from the date such operations were first deemed

discontinued without being decommissioned pursuant to the approved Decommissioning Plan. Further, in no event shall any extension of the period to resume operations of any portion of the site pursuant to this standard be deemed to extend the term or expiration date of the approval.

10. ***Emergency Response Plan.*** An emergency response plan appropriate to the size and operation of the project shall be submitted for the Review Authority's approval. The plan shall address possible emergencies such as blow-outs, spills, earthquakes, fires, and floods. The operator will be responsible for ensuring that the project is equipped and staffed to carry out all contingency measures at any time.

11. ***Fencing Allowed.*** To protect utility-scale renewable energy facilities chain-link fences up to 8 feet in height, regardless of any other fencing standards. Such fences may not be located within 15 feet of a public street or highway. Drought-tolerant vegetation shall be preserved or placed between fences and property frontage on public right-of-way, wherever feasible. No fencing shall be required where projects employ full-time security guards or video surveillance.

12. ***Fugitive dust.***

    a. Fugitive dust emission shall be controlled by site watering, clean gravel, and application of soil stabilizers, limiting public access on unpaved areas, and posting roadways with reduced speeds. Dust shall be controlled during construction, operations, and removal and restoration activities.

    b. A project shall be designed so as to minimize the amount of grading necessary to reduce dust impacts.

    c. Project sites shall be revegetated with drought-tolerant native vegetation.

13. ***Lighting.*** Projects shall comply with Part 9 of Chapter 22.44 (Rural Outdoor Lighting District), if applicable. Night-lighting, limited to that required for safety and security, shall be shielded and directed downward to avoid lighting trespass and shall consist of: (a) motion sensor for entry-lighting to the on-site equipment structures; (b) light-sensor or motion-sensor lighting for the main plant access gate and operations and maintenance building doorways and parking areas; and (c) any and all light fixtures shall be full cut-off fixtures as defined in Part 9 of Chapter 22.44.

14. ***Maintenance.*** All equipment and facilities shall be maintained in an operational condition that poses no potential safety hazards nor becomes a

source of visual blight. Maintenance shall include, but not limited to, painting, regularly scheduled cleaning, mechanical/electrical repairs, structural repairs and security measures.

15. ***Noise.*** Noise-generating equipment in a renewable energy facility shall comply with Section 12.08.390 of the County Code, and no noise shall exceed maximum levels, as measured at the closest neighboring inhabited dwelling, school, church, hospital, or similar use, except during short-term events such as utility outages and severe windstorms.

16. ***Number and Spacing.*** More than one energy facility may be located on the same property if all of the location requirements and standards of this Chapter can be met for each facility.

17. ***Seismic Safety.***

    a. All energy facilities shall be constructed to withstand ground shaking, and must comply with the requirements for the applicable seismic zone as established in the Uniform Building Code.

    b. A geotechnical investigation may be required, at the discretion of the Director. Conditions of approval may be imposed to implement the safety recommendation of such investigations.

18. ***Signs.*** One project identification sign, located at each point of project ingress and egress, not to exceed fifty square feet in area and five feet in height may be erected on the project site. No other signs shall be installed other than safety and required warning signs.

19. ***Site disruption.***

    a. Within the project site the land area exposed and the vegetation removed during construction shall be the minimum necessary to install and operate the facility.

    b. Existing topography and watercourses shall be retained or restored to preexisting conditions.

    c. All facilities and access ways shall be designed to minimize erosion, sedimentation, or other impacts to the natural hydrology and drainage patterns of the site.

    d. Grading quantities shall be distinguished from general disturbance earthwork. Use of disc, leveling less than one foot in height or depth, and final rolling of earthwork area is not to be counted as grading quantity.

20. ***Transmission lines.*** Transmission lines shall be placed underground within existing rights-of-way to the greatest extent feasible. Where transmission lines are proposed to be constructed above ground due to barriers or other significant obstructions to underground construction, they should be planned and designed to minimize visual impacts as seen from public roads, other public viewing areas, and adjacent properties.

21. ***Visual impact.***

    a. Any energy project that is placed within the viewshed of a County or State designated Scenic Highway shall be assessed for its visual effects, and conditions of approval relating to siting, buffers, and the height and design of the facility may be imposed to minimize significant effects on the viewshed.

    b. Within the Coastal Zone, the placement of an energy project shall not obstruct public views of the ocean from a County or State designated Scenic Highway, unless specific provisions for such siting are provided for in the applicable Local Coastal Plan and Coastal Development Permit or Long Range Development Plan.

22. ***Water quality protection.*** Measures to protect groundwater and surface water from potential spills shall be incorporated into the project design, as appropriate, and any discharge of wastes into surface water must meet the requirements of the Regional Water Quality Control Board.

22.100.060 Additional Development Standards for Utility-Scale Solar Renewable Energy Facilities

A. **Applicability.** In addition to the development standards in Section 22.100.050.B, utility-scale solar renewable energy facilities shall comply with the development standards in this Section.

B. **Location.**

1. Solar panels shall be placed such that concentrated solar radiation or glare shall not be directed onto nearby properties or roadways.

2. Solar panels shall not be placed in the vicinity of any airport in a manner that would interfere with airport flight patterns. Acknowledgements from the FAA may be necessary.

C. **Maximum Ground Coverage.** Ground-mounted solar arrays may cover all portions of a lot except as limited by other regulations or by conditions of approval. These may include, but are not limited to: setback requirements of the zone, public access easements, or environmental resource protection requirements.

D. **Maximum Height.**

1. ***Ground-mounted.*** The height of a ground-mounted utility-scale solar energy facility buildings and structures shall meet the height requirements of the zone.

2. ***Structure-mounted.***

   a. Structures supporting solar energy systems agricultural zones may be erected above the building height by up to 3 feet, even if the building is built to or above the allowable building height;

   b. Structures supporting solar energy systems in all commercial and manufacturing zones where the building roof is flat, may be erected above the building height up to 10 feet, even if the building is built to or above the allowable building height.

   (Provide Diagram)

E. **Parking Lots.** Parking stall dimensions may be modified when retrofitting existing parking lots to accommodate solar structures. The required width and length of a parking stall can be reduced to accommodate a structure supporting a solar energy system if it's in conformance with the following:

1. Support posts or similar structures shall be within 10 inches of a corner of the stall farthest from the access aisle or driveway;

2. When stalls are in tandem, only the stall farthest from the access driveway may have its required dimension reduced; and

3. The reductions may not be applied to a parking stall for the disabled.

   (Provide Diagram)

F. **Setbacks.**

1. ***Agricultural and open space zones.*** A utility-scale solar energy facility located within an agricultural or open space zones shall be 30 feet from all property lines.

2. ***Other zones***. A utility-scale solar energy facility located in any zone except agricultural or open space shall meet all of the setback requirements of the zone.

22.100.070 Additional Development Standards Utility-Scale Wind Renewable Energy Facilities

A. **Applicability.** In addition to the development standards in Section 22.100.050.B, utility-scale wind renewable energy facilities shall comply with the development standards in this Section.

B. **Clearance of Blade Above Finished Grade Level.** No portion of a WEF-US blade shall extend within 30 feet from the finished grade.

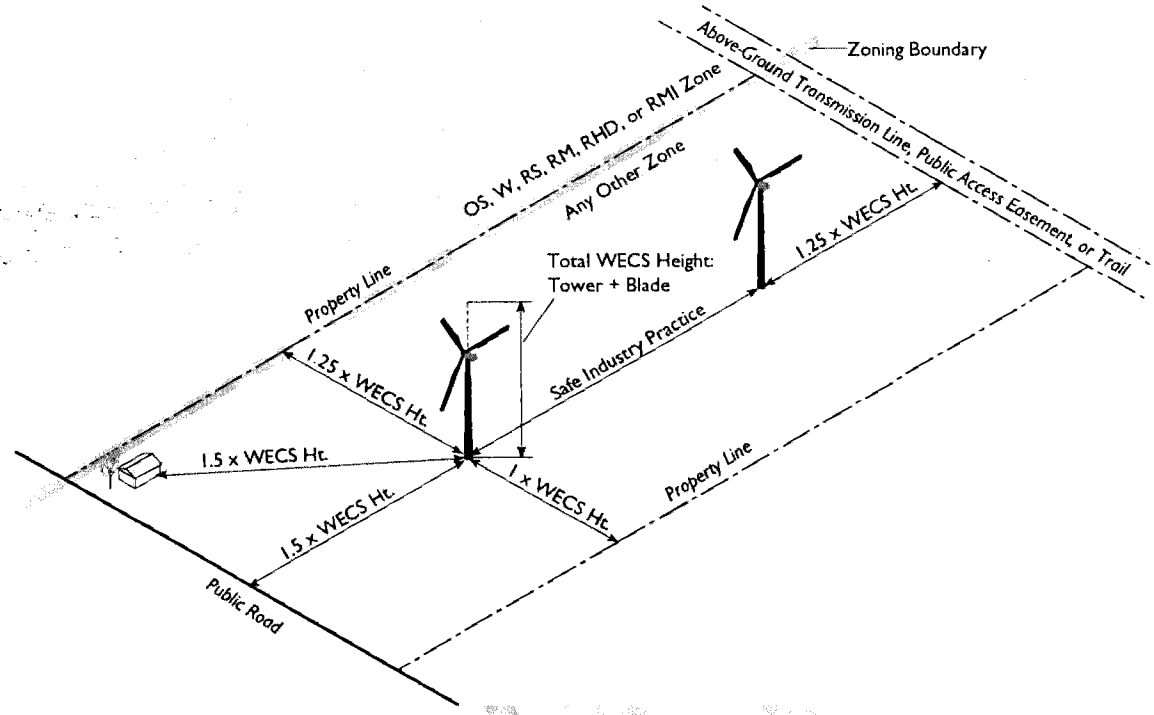
C. **Impacts to birds and bats.** All utility-scale wind energy conversion systems shall be designed, constructed and operated pursuant to the *California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development* published by the State of California Energy Commission and conditions of approval may be imposed by the Review Authority, consistent with these guidelines, to reduce significant impacts to birds and bats.

D. **Location.** The minimum distance and safe clearances between a WEF-US, excluding guy wires and their anchors, shall be as depicted in Table 22.070.D-A Setback Requirements for Utility-scale Wind Energy Systems. The required distance shall also comply with any applicable fire setback requirements pursuant to Section 4290 of the State Public Resources Code.

TABLE 22.070.E – A – SETBACK REQUIREMENTS FOR UTILITY-SCALE WIND ENERGY SYSTEMS	
Setback From	**Distance**
On-Site Residence or Habitable Structure	8 x WEF–US facility height
Public Road, Highway or Railroad	8 x WEF–US facility height
Public Access Easement, or Public Trail	8 x WEF-US facility height
Above Ground Transmission Line	1 x WEF-US facility height
Trees	As required by the Fire Department
County designated scenic highway	8 x WEF-US facility height

(Diagram to be revised, based on location decision)

FIGURE 22.100.070.E-B: LOCATION STANDARDS FOR UTILITY-SCALE WIND ENERGY FACILITIES



E. **Maximum Height.** Wind turbines shall not exceed 500 feet in height. A wind turbine greater than 500 feet in height requires approval of a Variance pursuant to Section 22.134 of Title 22.

F. **Minimum Lot Size.** The minimum lot size for a WEF-US shall be five acres.

G. **Required rotor-speed certification.** All permit applications shall include a statement by a California-registered professional engineer certifying that the rotor and overspeed controls have been designed and fabricated for the proposed use in compliance with good engineering practices, and that the proposed towers and rotors are structurally compatible. A certification supplied by the manufacturer may be accepted by the Review Authority in lieu of an engineer's certification.

H. **Separation.** WEF-US must be separated from each other by the safe industry practice recommended by the manufacturer.

05/11/2012

Chapter 22.98 Accessory Solar and Wind Energy Facilities

Sections:

22.98.010 Purpose
22.98.020 Definitions
22.98.030 Applicability
22.98.040 Permit Requirements
22.98.050 Development Standards for Accessory Solar Energy Facilities
22.98.060 Development Standards for Accessory Wind Energy Facilities

22.98.010 Purpose

The Section provides a uniform and comprehensive set of standards, conditions, and procedures for the placement of accessory solar and wind energy facilities to encourage the generation of electricity for on-site use, thereby reducing the consumption of electrical power supplied by utility companies. These regulations assure that such facilities are designed and located in a manner that minimizes visual and safety impacts on the surrounding community, while reducing significant regulatory barriers to the construction of accessory energy facilities.

22.98.020 Definitions

A. **Facility height.** Facility height for a wind energy facility shall be measured from the finished grade to the top of the blade in the vertical position.

B. **Solar Photovoltaic (PV) Systems.** A linked collection of solar panels providing a single electrical or thermal output.

C. **Tower height.** Tower height for a wind energy facility shall be measured from the finished grade to the top of the tower, excluding the wind turbine generator, blades, and wind-measuring devices.

22.98.030 Applicability

A. **Requirements.** The permit requirements and development standards in this Chapter apply to the construction and operation of any accessory wind and solar energy facility. The accessory facilities shall be subject to all applicable regulations of the zone in which they are proposed, except that the following standards shall

take precedence over regulations of the zone to the extent that they differ from the regulations of the zone.

B. **Where Allowed.** The uses that are subject to the standards in this Chapter shall be located only where allowed by the base zone, in conformance with Table 22.98.040-A (Accessory Energy Facilities Permit Requirements).

22.98.040 Permit Requirements

Permit requirements for accessory energy facilities are provided in Table 22.98.040-A.

TABLE 22.98.040-A: ACCESSORY ENERGY FACILITIES PERMIT REQUIREMENTS					
USE	*Permit Required By Zone* *P = Permitted use, zoning conformance review required* *MCUP = Minor conditional use permit* *_ = Use not allowed*				
	A-1, A-2, A-2-H	*OS, W*	*R-A, R-1, R-2, R-3, R-4*	*C-H,C-1, C-2 C-3, C-M, C-R, R-R*	*M-1,M-1.5, M-2,M-2.5, M-3, M-4,SR-D*
Solar Energy Facilities					
Accessory Use*	P	P	P	P	P
Wind Energy Facilities					
Accessory Use	MCUP	_	MCUP	MCUP	MCUP

* Refer to Section 22.98.050.A regarding residential exemptions

22.98.050 Development Standards for Accessory Solar Energy Facilities

A. **Applicability.**

1. ***Conformance with State Requirements.*** Accessory solar energy facilities shall be in conformance with the California Solar Rights Act (Section 714 of the Civil Code).

2. ***Residential Exemption.*** Roof-mounted solar photovoltaic systems on residential dwellings (single family or duplex), where the system does not project above the highest part of the existing roof, does not require review by Regional Planning.

B. **Permit Requirements.** A Zoning Conformance Review is required for a SEF-A in all zones. The filing information and documents required are as listed in the SEF-A Information Sheet and Checklist.

22.98.060 Development Standards for Accessory Wind Energy Facilities

A. **Permit Requirements.**

1. ***Minor Conditional Use Permit for WEF-A.*** A Minor Conditional Use permit is required for a WEF-A in compliance with Section 22.56.085. The filing information and documents required are as listed in WEF-A Information Sheet and Checklist.

2. ***Conditional Use Permit for WEF-A.*** A Conditional Use Permit is required for a WEF-A when:

   a. A Minor Conditional Use permit for a project has been denied by the Review Authority, but the applicant requests that the Commission hear the same application. The filing information and documents required are as listed in the WEF-A Information Sheet and Checklist.

   b. The applicant is requesting modifications to any of the WEF-A development standards listed in this Chapter.

3. ***Findings for WEF-A.*** The Commission shall approve an application only if the applicant substantiates the following required findings:

   a. The findings for a Conditional Use Permit per Section 22.56.090;

   b. How this request addresses the County's and State's goals for renewable energy;

   c. The proposed use complies with all applicable development standards specified in this Chapter, unless specifically modified as provided herein;

   d. The wind turbine generator is certified by a qualified, licensed engineer as meeting the requirements of wind turbine-specific safety or performance standards adopted by a national or international standards-setting body, including, but not limited to IEC (International Electric Code) standard 61400-2;

   e. The wind turbine generator has a manufacturer's warranty with at least five years remaining from the date the application is filed; and

   f. The model of equipment proposed has a documented record of at least one year of reliable operation at a site with average wind speeds of at least 12 mph.

4. ***Modification.*** If the applicant requests modification of any development standards, then the applicant shall submit to the satisfaction of the Commission:

a. Strict compliance with all of the required development standards would substantially and unreasonably interfere with the establishment of any proposed WEF-A in the subject property, and

b. The requested modifications would not be contrary to the intent and purpose of this Chapter.

B. **Development Standards.** An accessory wind energy system shall comply with the following development standards:

1. ***Automatic Overspeed Controls.*** A WEF-A shall be equipped with manual and automatic overspeed controls to limit the blade rotation speed to within the design limits of the WEF-A.

2. ***Aviation Safety.***

a. The Director shall distribute copies of the proposed site plan, elevation plan, and location map to aviation-related regulatory agencies and facilities with flight operations in the vicinity of the proposed project, as determined by the Director. Regulatory agencies include the Federal Aviation Administration (FAA), County Forester and Fire Warden, County Sheriff, Edwards Air Force Base, and Air Force Plant 42. Any comments received within 30 days of distribution of the plans will be considered in establishing conditions of approval.

b. A safety light that meets FAA standards shall be required for all facilities that exceed an overall machine height of 200 feet. A safety light may be required on shorter towers as deemed necessary by any of the aviation-related regulatory agencies. No other lights shall be placed on the tower.

c. An accessory wind energy facility shall not be located within the Runway Protection Zone of any airport, as defined in the County's Airport Land Use Plan.

3. ***Clearance of Blade Above Finished Grade.*** No portion of a WEF-A blade shall extend within 20 feet of the finished grade.

4. ***Climbing Apparatus.*** All climbing apparatus must be located at least 12 feet above the finished grade, and any tower must be designed to prevent climbing within the first 12 feet. If the tower is constructed so that it can be climbed within the first 12 feet, security fencing of at least five feet high is required around the tower. This fence shall be constructed of masonry block, woven or welded wire, chain link, wrought iron, metallic panels or similar materials approved by the Director. No barb or concertina wire fencing or barbed wire wrapped around the base of the tower is allowed.

5. ***Colors.*** The colors used in the construction materials or finished surface shall be muted and visually compatible with surrounding development. High-visibility colors, such as yellow, shall be prohibited.

6. ***Displacement of Parking Prohibited.*** The location of a WEF-A or Temp Met Tower shall not result in the displacement of required parking as specified in Part 11 of Section 22.52.

7. ***Guy Wires.***

   a. Safety wires shall be installed on the turnbuckles on guy wires of guyed towers. Anchor points for any guy wires for a tower shall be located within the property that the system is located on and not on or across any above-ground electric transmission or distribution lines.

   b. The point of attachment for the guy wires shall be enclosed by a fence six feet high or sheathed in a covering from three to eight feet above finished grade.

8. ***Location.*** The minimum distance and safe clearances for a WEF-A shall be as depicted in Table 22.98.070.C.4-A – Setback Requirements for Accessory Wind Energy Systems. The required distance shall also comply with any applicable fire setback requirements pursuant to Section 4290 of the State Public Resources Code.

TABLE 22.98.060.C.8 – A – SETBACK REQUIREMENTS FOR ACCESSORY WIND ENERGY SYSTEMS	
Setback From	**Distance**
On-Site Residence or Habitable Structure	1 x WEF–A facility height
Public Road, Highway or Railroad	1 x WEF–A facility height
Above Ground Transmission Line, Public Access Easement, or Public Trail	1 x WEF–A facility height
Property Line	1 x WEF–A facility height
Buildings Other Than a Residential Structure	6 feet
Trees	As required by the Fire Department
County designated scenic highway	1000 feet

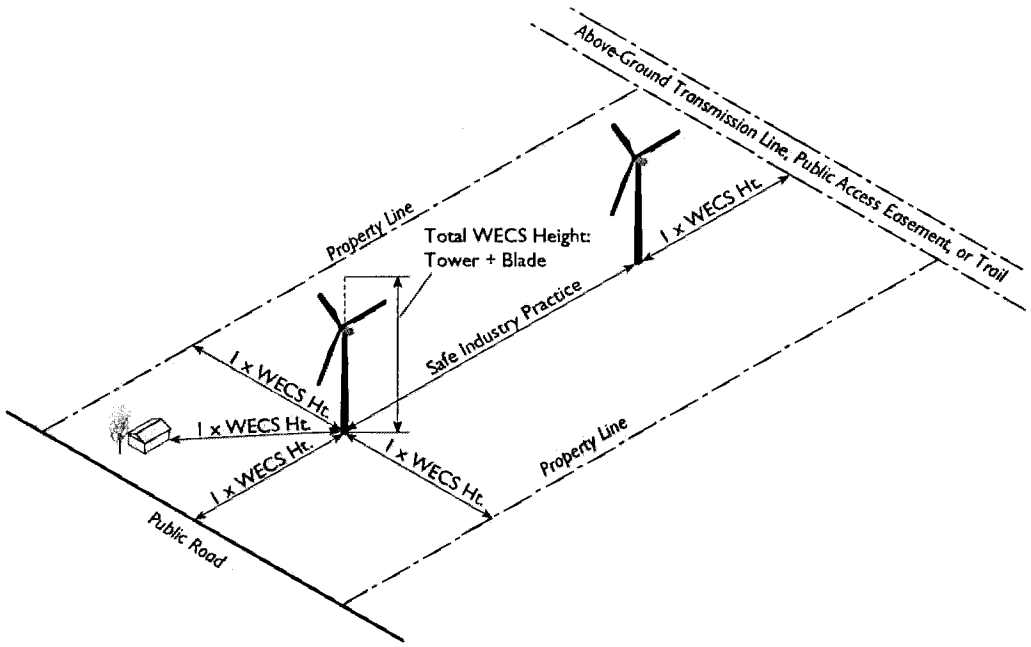
9. ***Maintenance.*** All equipment and facilities shall be maintained in an operational condition that poses no potential safety hazards. Maintenance shall include, but not limited to, painting, regularly scheduled cleaning, mechanical/electrical repairs, structural repairs and security measures.

10. ***Maximum Number and Separation.***

a. More than one WEF-A may be located on the same property if all of the location requirements and standards of this Chapter can be met for each facility. A maximum of two WEF-A units are permitted per five acres.

b. A WEF-A must be separated from one another by the safe industry practice.

FIGURE 22.98.060.C.10-A: LOCATION AND SEPERATION STANDARDS FOR ACCESSORY WIND ENERGY FACILITIES



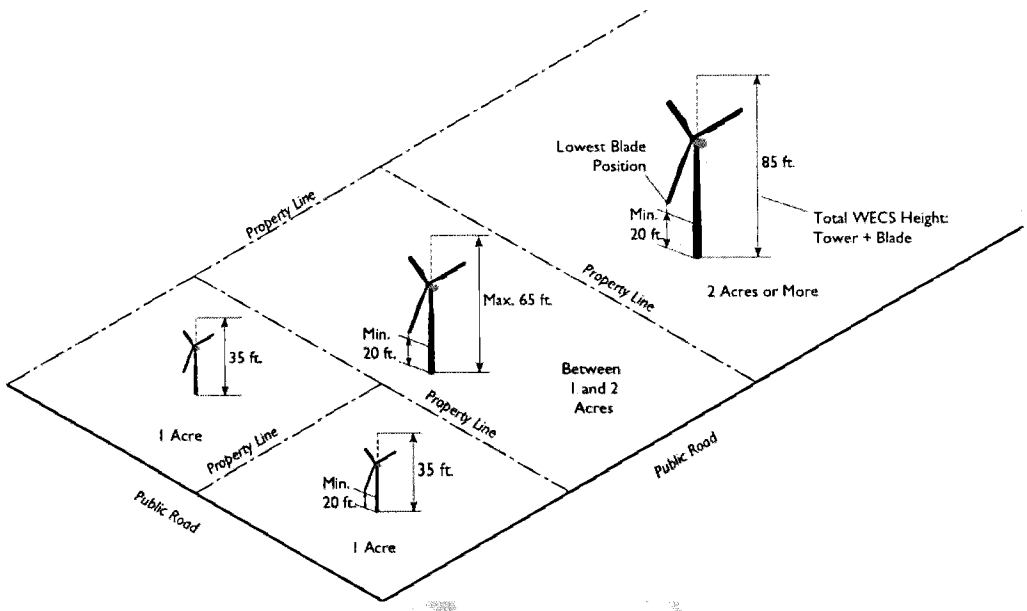
11. ***Maximum Tower Height.*** The maximum tower height shall not exceed:

a. The tower shall not exceed a height of 35 feet above finished grade for lots of less than one acre in size.

b. The tower shall not exceed a height of 65 feet above finished grade for lots from one acre to less than two acres in size.

c. The tower shall not exceed a height of 85 feet above finished grade for lots two acres or greater in size.

FIGURE 22.98.060.C.11-A: HEIGHT STANDARDS FOR ACCESSORY WIND ENERGY SYSTEMS



12. ***Noise.*** Noise from a WEF-A shall not exceed 60 dBA SEL (single event noise level), as measured at the closest neighboring inhabited dwelling, except during short-term events such as utility outages and severe windstorms.

13. ***Rooftop or building mounted.*** No rooftop- or building-mounted WEF-A shall exceed the maximum height limit of the zone in which it is located.

14. ***Minimum Lot Size.*** The minimum lot size for a WEF-A shall be 0.5 acres.

15. ***Removal.*** Within six months after the operation of a WEF-A has ceased or the permit for the use has expired, whichever occurs first, the permittee shall remove the facility, clear the site of all equipment, and restore the site as nearly as practicable to its condition prior to the installation of the facility. Failure to remove such facility as required above shall constitute a public nuisance. Prior to installation of any such facility, the permittee shall sign and file an affidavit with the Department of Regional Planning agreeing to remove the facility in the event it becomes inoperative for six months. In the event the facility is not so removed within 90 days after the permittee's receipt of notice requiring removal, the County may itself cause the facility to be removed, and the permittee shall be required to pay the County's costs of removal.

16. ***Signs.*** One sign, limited to 18 inches in length and one foot in height, shall be posted at the base of the tower; the sign shall include a note of no

trespassing, a warning of high voltage, and the phone number of the property owner to call in the event of an emergency.

17. ***Visual Effects.***

a. The top of a WEF-A facility shall be located at least 25 vertical feet and 50 horizontal feet from a significant ridgeline.

b. Any WEF-A that is placed within the viewshed of a designated Major, Secondary, Limited Secondary, or Scenic Highway shall be assessed for its visual effects, and appropriate conditions relating to siting, buffers, and design of the facility shall be applied.

c. Within the Coastal Zone, the placement of an energy project shall not obstruct public views of the ocean from a County or State designated Scenic Highway, unless specific provisions for such siting are provided for in the applicable Local Coastal Plan and Coastal Development Permit or Long Range Development Plan.

4/23/2012

DRAFT

Chapter 22.102 Temporary Meteorological Towers

Sections:

22.102.010 Purpose
22.102.020 Definitions
22.102.030 Applicability
22.102.040 Permit Requirements
22.102.050 Development Standards for Temporary Meteorological Towers

22.102.010 Purpose

The Section provides minimum standards and procedures for the placement of temporary meteorological towers (Temp Met Towers) for the purpose of establishing the viability of wind-generated energy for both accessory and utility-scale renewable energy facilities. These regulations assure that such towers are designed and located in a manner that minimizes visual and safety impacts on the surrounding community.

22.102.020 Definitions

A. **Facility Height.** Facility height for a Temp Met Tower shall be measured from the finished grade to the top of the vertical component that elevates the wind measuring devices above the ground.

B. **Temporary Meteorological Tower.** An interim meteorological station that gathers atmospheric information. This information may include: temperature, humidity, solar radiation, wind speed, direction, duration, intensity and regularity. Includes ground-mounted and facilities mounted on existing structures.

22.102.030 Applicability The permit requirements and development standards in this Chapter apply to the construction and operation of Temp Met Towers for temporary use on and for the site where the Temp Met Tower is located. The Temp Met Towers shall be subject to all applicable regulations of the zone in which they are proposed, except that the following standards shall take precedence over regulations of the zone to the extent that they differ from the regulations of the zone.

22.102.040 Permit Requirements

A. **Allowed Use.** Temp Met Towers may be located in any zones except Watershed and Open Space. The Temp Met Tower shall be used only to measure or evaluate wind and other relevant conditions on and as to the land or site on which the tower is to be located.

B. **Time Requirement.** A Temp Met Tower may be placed on the property for no longer than thirty-six months from the date of the permit approval.

C. **Director's Review for Temp Met Towers.**

1. A Director's Review is required for Temp Met Towers. The filing information and documents required are as listed in the Temporary Meteorological Tower Information Sheet and Checklist.

2. In approving a Director's Review application for a Temp Met Tower, the Director shall impose conditions and all applicable development standards as specified in this Chapter and any other conditions the Director determines to be necessary to ensure that such use will be in accord with the findings.

22.102.050 Development Standards for Temporary Meteorological Towers

A. **Aviation Safety.**

1. The Director shall distribute copies of the proposed site plan, elevation plan, and location map to aviation-related regulatory agencies and facilities with flight operations in the vicinity of the proposed project, as determined by the Director. Regulatory agencies include the Federal Aviation Administration (FAA), County Forester and Fire Warden, County Sheriff, Edwards Air Force Base, Air Force Plant 42, and the Navy. Any comments received within 30 days of distribution of the plans will be considered in establishing conditions of approval.

2. Facilities that are located within the Military Installations and Operations Areas (MOA), as defined by the General Plan, shall be evaluated for any potential impacts to ensure the safety of the residents on the ground and continued viability of military operations within the MOAs. The review shall consider the following:

   i. Uses that produce electromagnetic and frequency spectrum interference, which could impact military operations;

   ii. Uses that release into the air any substances such as steam, dust and smoke, which impair visibility;

iii. Uses that produce light emissions, glare or distracting lights, which could interfere with pilot vision or be mistaken for airfield lighting; and

iv. Uses that physically obstruct any portion of the MOA due to relative height above ground level.

3. A safety light that meets FAA standards shall be required for all facilities that exceed an overall machine height of 200 feet. A safety light may be required on shorter towers as deemed necessary by any of the aviation-related regulatory agencies. No other lights shall be placed on the tower.

4. A Temp Met Tower shall not be located within the Runway Protection Zone of any airport, as defined in the County's Airport Land Use Plan.

B. **Climbing Apparatus.** All climbing apparatus must be located at least 12 feet above the finished grade, and any tower must be designed to prevent climbing within the first 12 feet. If the tower is constructed so that it can be climbed within the first 12 feet, security fencing of at least five feet high is required around the tower. This fence shall be constructed of masonry block, woven or welded wire, chain link, wrought iron, metallic panels or similar materials approved by the Director. No barb or concertina wire fencing or barbed wire wrapped around the base of the tower is allowed.

C. **Colors.** The colors used in the construction materials or finished surface shall be muted and visually compatible with surrounding development. High-visibility colors, such as yellow, shall be prohibited.

D. **Displacement of Parking Prohibited.** The location of a Temp Met Tower shall not result in the displacement of required parking as specified in Part 11 of Section 22.52.

E. **Guy Wires.**

1. Safety wires shall be installed on the turnbuckles on guy wires of guyed towers. Anchor points for any guy wires for a tower shall be located within the property that the system is located on and not on or across any above-ground electric transmission or distribution lines.

2. The point of attachment for the guy wires shall be enclosed by a fence six feet high or sheathed in a covering from three to eight feet above finished grade.

F. **Location.** The minimum distance and safe clearances between a Temp Met Tower, excluding guy wires and their anchors, shall be as depicted in Table 22.102.070.F -A – Setback Requirements for Temp Met Towers. The required distance shall also

comply with any applicable fire setback requirements pursuant to Section 4290 of the State Public Resources Code.

TABLE 22.102.060.F – A – SETBACK REQUIREMENTS FOR TEMP MET TOWERS	
Setback From	**Distance**
On-Site Residence or Habitable Structure	1 x facility height
Public Road, Highway or Railroad	1 x facility height
Above Ground Transmission Line, Public Access Easement, or Public Trail	1 x facility height
Property Line	1 x facility height
Buildings Other Than a Residential Structure	6 feet
Trees	As required by the Fire Department
County designated scenic highway	1000 feet

G. **Maintenance.** All equipment and facilities shall be maintained in an operational condition that poses no potential safety hazards. Maintenance shall include, but not limited to, painting, regularly scheduled cleaning, mechanical/electrical repairs, structural repairs and security measures.

H. **Maximum Number and Separation.**

1. More than one Temp Met Tower may be located on the same property if all of the location requirements and standards of this Chapter can be met for each tower. A maximum of two Temp Met Towers are permitted per five acres.

2. Temp Met Towers must be separated from each other by the safe industry practice.

I. **Maximum Facility Height.** The maximum height of Temp Met Towers installed prior to the installation of an accessory or utility-scale wind energy facility shall not exceed:

1. The tower shall not exceed a height of 35 feet above finished grade for lots of less than one acre in size.

2. The tower shall not exceed a height of 65 feet above finished grade for lots from one acre to less than two acres in size.

3. The tower shall not exceed a height of 85 feet above finished grade for lots two acres or greater in size.

J. **Minimum Lot Size.** The minimum lot size for a Temp Met Tower shall be 0.5 acres.

K. **Noise.** Noise from a Temp Met Tower shall not exceed 60 dBA SEL (single event noise level), as measured at the closest neighboring inhabited dwelling.

L. **Removal.** Within six months after the operation of a Temp Met Tower has ceased or the permit for the use has expired, whichever occurs first, the permittee shall remove the facility, clear the site of all equipment, and restore the site as nearly as practicable to its condition prior to the installation of the facility. Failure to remove such facility as required above shall constitute a public nuisance. Prior to installation of any such facility, the permittee shall sign and file an affidavit with the Department of Regional Planning agreeing to remove the facility in the event it becomes inoperative for six months. In the event the facility is not so removed within 90 days after the permittee's receipt of notice requiring removal, the County may itself cause the facility to be removed, and the permittee shall be required to pay the County's costs of removal.

M. **Rooftop or structure-mounted.** No rooftop- or structure-mounted Temp Met Tower shall exceed the maximum height limit of the zone in which it is located.

N. **Signs.** One sign, limited to 18 inches in length and one foot in height, shall be posted at the base of the tower; the sign shall include a note of no trespassing, a warning of high voltage, and the phone number of the property owner to call in the event of an emergency.

5/11/2012

From: KIERNAN, SCOTT E NH-03 USAF AFMC 412 TW/XPO
To: Thuy Hua
Cc: Hulse, David S CIV NAVFAC SW; PERRY, MICHELLE R NH-03 USAF AFMC 412 CE/CENPL; "Peacher, Kimberly N CIV NAVFAC SW, ESWD"; NEITZEL, KENNETH C GS-13 USAF AFMC AFLCMC/OL-AF Plant 42/AM; HUGHES, TIMOTHY W GS-14 USAF AFMC AFLCMC/OL-AF Plant 42
Subject: RE: AF Comments: Draft Renewable Energy Ordinance
Date: Wednesday, May 28, 2014 3:07:06 PM

Thuy,
I am providing some additional comments that relate to development around a military airfield. Please give consideration to amending the terminology to include military requirements into the scoping process and ultimately into the ordinance.

As stated in the draft document:
A utility-scale renewable energy facility shall not be located within the Runway Protection Zone of any airport, as depicted in the county's airport land use plans. 2. A utility-scale renewable energy facility shall not penetrate the imaginary surfaces (primary, approach, transitional, horizontal, and conical surfaces)
defined by the FAA Federal Aviation Regulations Part 77 to protect the use of navigable airspace."

It is important to note that military aircraft fly with a different purpose when compared to civil aviation. To ensure safety of flight, the DoD operates an enhanced safety area as published in DoD regulations.

To ensure the additional protection is preserved it would be relevant to state the military requirements, in addition to the FAR part 77 requirements, relating to imaginary surfaces (primary, approach, transitional, horizontal, and conical surfaces) and Accident Potential Zones (APZ) for land use near military airfields with a reference to an Air Installation Compatible Use Zone (AICUZ) study. The purpose of an AICUZ is to protect the public's health, safety, and welfare while preventing incompatible development from degrading the operational capability of military air installations in meeting national security. An AICUZ will define Clear Zones and APZs, and may include noise contours based on the aircraft that operate at the particular installation.

Example: An Air Force class "B" runway would have the following requirements; a Clear Zone of 3000', APZ-1 of 5000' and APZ II of 7000' for a total protection area that spans 15,000 feet in length from the end of each runway. This is approximately twice the length of a typical FAA designated runway safety area.

Open to any questions from your end...

VR,
Scott
_____
Scott Kiernan
Sustainability Officer/
Encroachment Prevention Mgmt
412 TW/XPO, Edwards AFB
O: (661) 277-3792
C: (661) 810-6662

-----Original Message-----
From: Thuy Hua [mailto:thua@planning.lacounty.gov]
Sent: Wednesday, May 21, 2014 11:31 AM
To: 'Peacher, Kimberly N CIV NAVFAC SW, ESWD'
Cc: KIERNAN, SCOTT E NH-03 USAF AFMC 412 TW/XPO; Hulse, David S CIV NAVFAC SW
Subject: RE: AF Comments: Draft Renewable Energy Ordinance

Kimberly,

Thank you for your comments. They will be included as a part of the scoping comments.

Best,
Thuy

-----Original Message-----
From: Peacher, Kimberly N CIV NAVFAC SW, ESWD [mailto:kimberly.peacher@navy.mil]
Sent: Monday, May 05, 2014 12:13 PM
To: Thuy Hua
Cc: 'KIERNAN, SCOTT E NH-03 USAF AFMC 412 TW/XPO'; Hulse, David S CIV NAVFAC SW
Subject: RE: AF Comments: Draft Renewable Energy Ordinance

Hello Thuy,

As previously mentioned we had only a few comments below from our last review of the draft ordinance back in November 2013. Recently I saw that the DEIR preparation notice came out. To the extent required please include a discussion in the DEIR of our military operations and the need for coordinated review of all projects in and around military operating areas.

Please let me know if you have any questions. Thank you.

V/R,
Kimberly N. Peacher
Intergovernmental Planner
NAVFACSW Intergovernmental Branch AM-3
1220 Pacific Hwy, San Diego, CA 92132
DSN 522-1187 COM 619-532-1187
kimberly.peacher@navy.mil

-----Original Message-----
From: KIERNAN, SCOTT E NH-03 USAF AFMC 412 TW/XPO [mailto:scott.kiernan@us.af.mil]
Sent: Tuesday, November 26, 2013 10:44 AM
To: Hua, Thuy
Cc: HUGHES, TIMOTHY W GS-14 USAF AFMC AFLCMC/OL-AF Plant 42; PERRY, MICHELLE R NH-03 USAF AFMC 412 CE/CENPL; HASELTINE, SUSAN B NH-03 USAF AFMC 412 CE/CEVA; ARENSON, STEVEN L GS-14 USAF HAF AFCEC/SAF/IEE REO SF; PADO, JOSEPH E GS-13 USAF AFMC HQ AFMC/A7NX
Subject: AF Comments: Draft Renewable Energy Ordinance

Hi Thuy,

I am providing a submission of recommendations from the Air Force on the Los Angeles County Draft Renewable Energy Ordinance. As always, thanks for allowing us to be part of the process.

If you have questions or comments, please contact me.

VR,

Scott----------

_____

Scott Kiernan

Sustainability Officer/

Encroachment Prevention Mgmt

412 TW/XPO, Edwards AFB

O: (661) 277-3792

C: (661) 810-6662

Section 3 (Page 3 of 21) - Recommend an adjustment to refer to the energy use by the principle use on the subject or adjoining parcel.

Section 22.52.1610 (B) (Page 6 of 21) - Recommend addressing applicability of standards to applications filed prior to ordinance enactment, but not yet approved.

Section 22.52.1620(A) (Page 7 of 21) - Recommend integration of subject subsection with 22.52.1660(B) to improve and expansion of applicability of civilian aviation reviews in 1660(B) to both small scale wind energy systems and utility scale renewable energy facilities, ground mounted. Request location map required under 22.52.1620(A)(1) identify GPS coordinates (and/or latitude/longitude) and elevation for each wind tower with blade extension.

Section 22.52.1620(A)(1) (Page 8 of 21) - Section 22.52.1620(A)(1) paragraph line 5 on pg. 8: change Air Force Plant to read Air Force Plant 42.

Section 22.52.1620(A)(2) (Page 8 of 21) - Section 22.52.1620(A)(1) requires the Department of Regional Planning provide notice to aviation related agencies 60 days in advance of the scheduled decision by the Reviewing Authority. This section however requires that a response be provided 30 days following the distribution of notice for it to be considered by the Reviewing Authority. Since most conditional use permits are statutorily required to be subject to public hearing, any written testimony should be of-record and subject to consideration by the Reviewing Authority. We recognize that earlier submittal of response will permit proper consideration of any objection within a staff report; however consideration by the Reviewing Authority should be afforded for any comments submitted prior to a decision.

Section 22.52.1460 (A) and (C) (Pages 9 and 10 of 21) - Department of Air Force recommends the adoption and application of standards adopted by the Federal Aviation Administration on 20 June 2011 (http://www.gpo.gov/fdsys/pkg/FR-2011-06-24/html/2011-15746.htm) for future publication in Advisory Circular No. 70/7460-1 recommending that meteorological towers less than 200 Feet AGL be marked with alternating bands of aviation orange and white paint and that high visibility sleeves be installed on the outer guys with high spherical marker balls of aviation orange color. Towers greater than 200 feet AGL remain subject to FAA review jurisdiction.

Section 22.52.1460(F)(Page 11 of 21) - Recommend consideration of new micro turbine technology which provides for attachment and integration of wind energy technology onto habitable structures. The current definition of wind tower does not appear to make a sufficient distinction which would permit multiple uses of this technology.

General comment: Section 22.52.1650(C)(2)(Page 13 of 21) - the requirement for a fenced enclosure of guy wire anchors appears unnecessary. Similar requirements are not imposed on power pole guys anchors.

General comment: Section 22.52.1660(G)(Page 16 of 21) - Minimizing the removal of vegetation for ground mounted utility scale solar electrical generating facilities is not consistent with industry best practices. Vegetation within a solar array can represent a wildfire safety risk and hazard to fire suppression efforts. Recommend mandatory use of dust suppressants and soil stabilizers as provided for under this subsection 4 during construction and operation, including periodic renewal of application as may be required to control fugitive dust emissions as a conditional use requirement.

From: Los Angeles County Department of Regional Planning [mailto:thua@planning.lacounty.gov]
Sent: Wednesday, October 16, 2013 2:40 PM
To: KIERNAN, SCOTT E NH-03 USAF AFMC 412 TW/XPO
Subject: Community Meeting - Draft Renewable Energy Ordinance

<http://r20.rs6.net/on.jsp?t=1115301948541.0.1112735176147.23&ts=S0963&r=3&o=http://ui.constantcontact.com/images/p1x1.gif>

<http://your.website.address.here>

<http://img.constantcontact.com/letters/images/1101116784221/S.gif>

October 16, 2013

Good afternoon,

Community Meeting

A community meeting has been scheduled to discuss the Draft Renewable Energy Ordinance. We will be providing an overview of the ordinance contents, project status, and answer questions specific to the proposed regulations. We encourage you to review the draft and invite you to attend the community meeting scheduled as follows:

Saturday - October 26, 2013

9:00am

Antelope Valley College - Performing Arts Theater

3041 W Avenue K

Lancaster, CA 93536

The closest parking lots on campus to the Performing Arts Theater are Lots 3 and 5. Daily parking permits cost $0.50 and are available at vending machines found in each lot. Parking without a permit may result in a $33 parking citation. A map to the meeting location is provided here <http://r20.rs6.net/tn.jsp?e=001QvHFJweua-bKQQB9Ogn4D-bRWa7MkwvBTPSQhXN-SAfjucMkg8-17mmtwf33UI1PKsUnjMCXxRn9wl_riIoC8h-wYaF_nBUFPBBL68hPwiWxOj15uTmYDqMoEquU5KND_fsucYho3Nk_Qe5tzfwXTL1EPg6RQzGuAIx7zV9k3NOqKufu0usoi3fHnNASzUrxpMFDyYiDQYpfk0jrZY3t8PULDBLEe5MemsfxStHpVOXWoyDadXZUVDiWc-bgN2vXd4Q5ijMJzPiN9mKb2vuGkXvL_IVG4fBRDIeBr8SES85m27MIBS8DZVDDppA9hFiSEo_ZDrUhr-XtqQBcBrpMsOFI5yZR8kjh> .

<http://img.constantcontact.com/letters/images/1101116784221/S.gif>

Ordinance*

The Los Angeles County Department of Regional Planning is currently drafting regulations to guide the development of renewable energy in the unincorporated areas of the County. The intent is to provide baseline standards that support and facilitate the responsible development of small-scale systems and utility-scale facilities in a manner that minimizes potential safety and environmental impacts. The Draft Renewable Energy Ordinance is now available for public review and comment. It is available for download at http://planning.lacounty.gov/energy <http://r20.rs6.net/tn.jsp?e=001QvHFJweua-aEyELGH2JgaZS9TPjj-AWld-ZvqNLuJ6fj72FcEB16IjBTN-tole_uGWzNg-lP_Q89m_qLUFC4SjSGCWD47vOoFJB4PZ_5HAHYnVGxoAj3_A0EIws7oY7I_ZjyUL0ZZwdCkCzeTwNq96MHhbW-OAkYxnrjApmQj0jxMNlA9YUuJ_8pJeNWDPfy0FaVlUOT9f1Mh57PVDZUniQfurPzkdmT4asUkc7U5Kvnhv66Uj53JcCfcETcSwlNbQXjgE9GsWQGRKeyUlwXtnnCZOj_D6eEn-xxFSQDQu4=> , with a direct link provided here <http://r20.rs6.net/tn.jsp?e=001QvHFJweua-Zmh-PwXZGu3CRa6itRa2gtGA2Ae_YT1vcaUu08B3fauXztDHwvc4k5C3Ghin8DlQwJ9svkDENVV2IwMsf_DpRCWE2wJaCOB-zlRFM7SPRxW-dF8uMGAG0ilwyv4lkPFDXYyhCZJbh0dq2NcLNntUm_NRWcRTi6ui9N2lyIjV8bN7xLrtrgrHxMO0HK0a1S2ThEE4Fa1ebQS64fIm_bhbSepJvXbdVQ9cTHM7pnye5OQxGZy7oZskABHhjchjwkTlyAMw800Y80aSkOCGOmY2-Qdzu6_wJn53GACcyN9fnMZej1Em_yiSTzkZrdSwtSj5z5AerrccoRnqzvjnrQf9NUeJlED6FwL48=> .

*No development is being proposed by the County through this ordinance. It will establish rules for those who wish to develop small-scale systems or utility-scale facilities to produce energy using renewable resources such as solar and wind.

<http://img.constantcontact.com/letters/images/1101116784221/S.gif>

Contact

Please send your questions and comments regarding the Draft Renewable Energy Ordinance via email or postal mail to:

Contact: Thuy Hua

Email: thua@planning.lacounty.gov

Postal Mail: LA County Department of Regional Planning

320 W Temple St 13th Flr

Los Angeles, CA 90012

<http://img.constantcontact.com/letters/images/1101116784221/S.gif>

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Los Angeles County Department of Regional Planning | 320 West Temple Street 13th Flr | Los Angeles | CA | 90012

ENDANGERED HABITATS LEAGUE
DEDICATED TO ECOSYSTEM PROTECTION AND SUSTAINABLE LAND USE

May 22, 2014

Los Angeles Department of Regional Planning
ATTN: Thuy Hua
320 W Temple St 13th Floor
Los Angeles, CA 90012

RE: Renewable Energy Ordinance, Second Draft

Dear Ms. Hua:

The Endangered Habitats League (EHL) appreciates the opportunity to comment on this Ordinance. For your reference, EHL is Southern California's only regional conservation group. Our concern is with the adverse environmental effects of large scale solar and of wind turbines. *As a matter of policy, Los Angeles County should prioritize, incentivize, and facilitate rooftop solar as the renewable energy source of choice.*

Wind

We commend the requirement for compliance with the *California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development* for utility-scale turbines. However, the most important step in reducing the killing of birds and bats by turbines is their initial placement. Site selection is the critical factor, and it is not *explicitly* referenced in this Ordinance, as only design, construction, and operation are mentioned. The language of the Ordinance should reflect the emphasis of the *Guidelines* on initial site selection by making explicit that all aspects of the Guidelines must be followed, including placement, on both macro and micro scales.

The Ordinance can and should do far more to protect birds and bats for "small" turbines, which are 50 kw or less. Small turbines, which may be 80 feet tall or more, and particularly if sited badly, can also do great harm, as height only determines which species—low or high-flying—are killed or maimed. As an initial step, we urge more restrictive limits on the number of "small" turbines per parcel, both to reduce harm and in order to incentivize the environmentally superior option of small scale solar. Limits should be no greater than one per parcel of 5 acres or less, and two turbines for larger parcels.

The conditional use process of the County, which includes CEQA review, appropriately applies to "small" turbines. This review should mandate a Bird and Bat Study performed according to CEC guidance, and reviewed by a County biologist.

8424 SANTA MONICA BLVD SUITE A 592 LOS ANGELES CA 90069-4267 ♦ WWW.EHLEAGUE.ORG ♦ PHONE 213.804.2750

Please note that these very procedures have been adopted by Marin County[1] demonstrating their feasibility as mitigation measures. As a result of the site-specific Bird and Bat Study, siting and design should be optimized and no turbine should be allowed if an appropriate site with minimal risk to birds and bats is not identified.

A short list of siting and design measures is placed below, which is *not* a substitute for the site-specific Bird and Bat Study, but a summary of minimal mitigation measures that should be required by the forthcoming Ordinance. This list of mitigation measures should be characterized as "including but not limited to." As these *exact* measures were imposed by San Diego County—which uses a ministerial rather than conditional use permit process for "small" turbines—in its 2013 Wind Energy Ordinance[2], they should all be considered feasible.

- Setbacks (300 feet or five times the turbine height, whichever is greater) from electric transmission lines and towers, where birds perch.
- Setbacks (300 feet or five times the turbine height, whichever is greater) from riparian areas and wetlands (which have high concentrations of birds) using the surrogate of "blue line" USGS maps for watercourses and water bodies when site-specific surveys are not available.
- Setbacks (300 feet or five times the turbine height, whichever is greater) from bat roosting sites.
- Setbacks (300 feet or five times the turbine height, whichever is greater) from preserve areas, protected open space, or recorded open space easements.
- Setbacks from golden eagle nests of a minimum of 4,000 feet.
- Avoidance of ridgelines (which are corridors for bird movement) and standards to prevent encroachment into ridgeline airspace. (A small wind turbine tower shall not be located on a ridgeline, and the turbine blades shall not exceed the height of the ridgeline in an area within 150 feet of the ridgeline.)
- Prohibition of guy wires and trellis designs (which are perching sites and collision hazards). Turbines must be self-supporting.
- Sole use of California Energy Commission-approved turbine models (May 23, 2012, California Energy Commission, List of Eligible Small Turbines).
- Siting in already disturbed locations and disturbance limits (25 foot radius around the base of a tower, and an access path to the tower that is a maximum of four feet wide).

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[1] *See* Marin County Wind Energy Ordinance, November 2009 and Marin County Development Code Title 22. *See also* California Energy Commission and California Department of Fish and Game. 2007, California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development. <http://www.energy.ca.gov/2007publications/CEC-700-2007-008/CEC-700-2007-008-CMF.PDF>

[2] See Wind Energy Ordinance at Section 6951: http://www.sdcounty.ca.gov/pds/zoning/z6000.pdf

- Clearing and prevention of vegetation growth at the base of the turbine. (The area within 10 feet of the base shall be cleared of all vegetation and shall be covered with gravel, mulch or other similar material.)
- Undergrounding of all power lines connecting turbine towers and/or generators to structures.
- Removal of non-operable turbines.

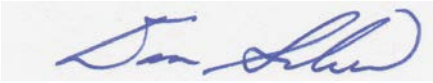
Please see the San Diego County ordinance text for sample language. A more complete list of mitigation measures (prepared by Scott Cashen, wildlife biologist) is also enclosed for reference. While prepared for the DEIR of the San Diego Ordinance, it is equally relevant here.

Solar

The Ordinance should contain siting standards for large scale solar when not part of the DRECP master plan. Such standards should target already disturbed areas like fallowed fields or agricultural land. Solar facilities that mimic water bodies through reflections should be prohibited.

Thank you very much for considering our recommendations.

Yours truly,



Dan Silver
Executive Director

Recommended Mitigation for Potentially Significant Impacts Caused by the Ordinance

The Ordinance would have potentially significant impacts on several sensitive biological resources. Under CEQA, the County is obligated to adopt all feasible mitigation to avoid or lessen significant impacts. The DEIR is deficient in this regard because it fails to demonstrate a substantive attempt to formulate feasible mitigation measures that could reduce impacts to a level considered less than significant. The following mitigation measures are feasible, and they must be incorporated into the Ordinance's mitigation program. In addition, these measures will minimize a permittee's civil and potential criminal liability for violations of the Endangered Species Act, the Migratory Bird Treaty Act, and the Bald and Golden Eagle Protection Act—federal protections that preempt state law, including AB 45.

General standards-

1. Turbines should be sited on disturbed land when practical.
2. Existing roads should be used to the maximum extent feasible.
3. Construction should be scheduled to avoid disruption of wildlife reproductive activities or other important behaviors.
4. As has been adopted by Marin County, a Bird and Bat Study should be conducted for each proposed wind energy facility. A County-approved biologist should conduct the Bird and Bat Study according to California Energy Commission and CDFG guidelines.[1]
5. If the Bird and Bat Study for a proposed ministerial project finds that there is a potential for impacts to any (a) listed State or Federal threatened or endangered species; or (b) bird or bat "species of special concern" found to nest or roost in the area of the proposed project site, the project should become discretionary.
6. Wind turbines, MET towers, and supporting infrastructure should be prohibited near sensitive biological resources, as determined by a County-approved biologist and/or the CDFG and USFWS. At a minimum, wind turbines, MET towers, and supporting infrastructure should be prohibited within 5 times the height or 300 feet, whichever is greater, of:
    a. a known nest or roost of a listed State or Federal threatened or endangered species or "species of special concern."
    b. a known or suspected migratory concentration or stopover point.

[1] *See* Marin County Development Code Title 22. *See also* California Energy Commission and California Department of Fish and Game. 2007. California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development. Commission Final Report. California Energy Commission, Renewables Committee, and Energy Facilities Siting Division, and California Department of Fish and Game, Resources Management and Policy Division. CEC 700 2007 008 CMF.

c. known or suspected corridors that enable movement of special-status species, especially narrow corridors (e.g., a culvert), or corridors that are essential to landscape-level connectivity.

d. wildlife nursery sites.

e. an essential habitat element (e.g., burrow) for any threatened or endangered species.

f. any plant listed as threatened or endangered, or that is a candidate for future listing as threatened or endangered, under the California Endangered Species Act ("ESA") or federal ESA.

g. any plant listed as rare under the California Native Plant Protection Act, or as a "List 1" or "List 2" species by the California Native Plant Society.

h. all water courses, ponds, lakes, and other wetlands.

i. all riparian habitat.

j. previous and pending mitigation lands, conservation reserves, and lands encumbered by a conservation easement.

k. State and Federal parks, refuges, wilderness areas, and other designated wildlife management areas.

l. in any areas where impacts would threaten the persistence of a special-status species population.

Information on the resources listed above should be obtained through a biological field study in conjunction with a review of previously completed field studies; consultation with state and federal resource agencies and local experts; and queries of the California Natural Diversity Database, California Partners in Flight Database, and California Consortium of Herbaria Database.

7. Areas disturbed during construction should be restored to the native habitat and subject to inspection. Habitat restoration should begin as soon as possible after the completion of construction. The County, in conjunction with the resource agencies, should develop success standards for all restoration efforts. If restoration sites do not meet success standards within five years following construction, the wind turbine operator should be responsible for funding remedial actions conducted by a County-approved contractor or purchasing credits at an approved habitat conservation bank.

8. All wind turbines operators should provide compensation for permanent impacts to native habitat. Compensation could be achieved through: (a) the acquisition and permanent protection of replacement habitat; (b) purchasing

credits at an approved habitat conservation bank; or (c) contribution to a mitigation fund established by the County.[2]

9. The wind turbine operator should be responsible for erosion and sediment control on slopes disturbed during construction. Disturbed slopes should be subject to inspection, and the wind turbine operator should be responsible for funding remedial actions conducted by a County-approved contractor if the wind turbine site does not meet water quality standards.
10. The County should conduct and document the aforementioned inspections at the frequency necessary to ensure compliance.
11. All large wind energy facilities should be responsible for implementing the "California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development," and all other survey and mitigation guidelines issued by the State and Federal resource agencies.[3] The Ordinance must specify that compliance with these guidelines is mandatory.

Birds and Bats-

1. Projects should not be located in areas with a high incidence of fog and mist, or other meteorological conditions that cause low visibility.
2. All large wind energy facilities should develop an (a) Avian and Bat Protection Plan; and (b) Adaptive Management Plan. These plans should conform to guidelines issued by the USFWS. The Ordinance must specify that preparation and implementation of the plans is mandatory.
3. Wind turbines of any size should be prohibited:
   a. at the edge of a steep slope, on a steep slope, or in a saddle, ravine, or canyon.
   b. along ridgelines, in saddles of ridges, in saddles between ridges, and especially where saddles form the apex of ravines that face a prevailing wind direction.
   c. on benches of hill slopes or ridges, or at the base of shoulders of hills (i.e., in locations of sudden elevation changes).
   d. next to artificial rock piles or natural rock formations.
   e. next to transmission towers, electric distribution poles, or litter control fences around a landfill .

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[2] *See* National Wind Coordinating Collaborative. 2007 May. Mitigation Toolbox. Available at: http://www.nationalwind.org/publications/wildlifewind.aspx

[3] California Energy Commission and California Department of Fish and Game. 2007. California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development. Commission Final Report. California Energy Commission, Renewables Committee, and Energy Facilities Siting Division, and California Department of Fish and Game, Resources Management and Policy Division. CEC 700 2007 008 CMF.

f. where slope-accelerated winds would likely position a raptor at the height domain of the rotor plain of functional turbines, including where lips in the slope can locally accelerate winds.[4]

4. Facilities shall be designed to discourage their use as perching or nesting substrates for birds.
5. Ground disturbance should be conducted outside of the avian breeding season. If vegetation clearing cannot occur outside the avian breeding season, a County-approved biologist should conduct a preconstruction survey for nesting birds no more than seven days prior to vegetation clearing.
6. Unavoidable impacts to birds and bats should be compensated. Feasible compensation measures include protecting habitat that benefits birds and bats, acquiring high-priority conservation sites, and implementing management actions that benefit species affected by wind-energy (among other potential measures).[5]
7. The County should implement a scientific study designed to examine the effects of small wind turbines on birds and bats. Data obtained from the study should be used to make informed decisions on turbine siting and adaptive management practices.
8. The County should develop a program that encourages wind turbine operators to report bird and bat fatalities. Fatality data should be kept in a County-maintained database.
9. The County, in conjunction with state and federal wildlife professionals, should establish acceptable mortality thresholds for target bird and bat species.
10. The County should conduct a scientifically defensible monitoring study to estimate fatality levels associated with wind turbines.
11. The County must establish a contingency plan to implement if operational monitoring shows unacceptable impacts to birds and bats or their habitat.
12. If significant mortality rates cannot be resolved, then turbines should be shut down during periods of peak risk to birds or bats.

Golden Eagle-

1. Wind turbines should be located at least six miles from a golden eagle nest.[6]

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[4] *See* Scientific Review Committee for the Altamont Pass Wind Resource Area. 2010 May 23. Guidelines for siting wind turbines recommended for relocation to minimize potential collision-related mortality of four focal raptor species in the Altamont Pass Wind Resource Area. Available at: www.altamontsrc.org/alt_doc/p70_src_relocation_guidelines.pdf

[5] Smallwood KS, C Thelander. 2004. Developing Methods to Reduce Bird Mortality in the Altamont Pass Wind Resource Area. Prepared by BioResource Consultants for the California Energy Commission Public Interest Energy Research (PIER) Program, Report #500-04-052.

[6] USFWS. 2010 Sep 20. Request for Comments on the Application for Site Certification for the Proposed Summit Wind Ridge project, Wasco County, Oregon.

2. All large wind energy facilities should develop an Eagle Conservation Plan that conforms to the guidelines issued by the USFWS. The Ordinance must specify that preparation and implementation of the plan is mandatory.
3. The County should not approve any project that does not comply with the Bald and Golden Eagle Protection Act.
4. Individuals that propose turbines that may impact the golden eagle should be required to provide compensatory mitigation such that the net effect on the eagle population is, at a minimum, no change. Feasible compensation measures are described in the USFWS's Draft Eagle Conservation Plan Guidance. These include retrofitting "lethal" power poles and provision of funding for eagle conservation.

COUNTY OF LOS ANGELES

FIRE DEPARTMENT

1320 NORTH EASTERN AVENUE
LOS ANGELES, CALIFORNIA 90063-3294

DARYL L. OSBY
FIRE CHIEF
FORESTER & FIRE WARDEN

RECEIVED
JUN 09 2014
BY:

June 5, 2014

Thuy Hua, Planner
Department of Regional Planning
Community Studies North Section
320 West Temple Street
Los Angeles, CA 90012

Dear Thuy Hua:

PREPARATION OF DRAFT ENVIRONMENTAL IMPACT REPORT, PROJECT NO. R2014-01160 (1-5), CASE NO. ADVANCED PLANNING NOS. 2014-00004, ENIVIRONMENRAL ASSESSMENT NO. 2014-0096, "LOS ANGELES COUNTY RENEWABLE EMERGY ORDINANCE," PROPOSES AN ORDINANCE AMENDING THE LOS ANGELES COUNTY CODE TITLE 22 TO ESTABLISH REGULATIONS FOR THE DEVELOPMENT OF SMALL-SCALE RENEWABLE ENERGY SYSTEMS, UTILITY-SCALE RENEWABLE ENERGY FACILITIES, AND TEMPORARY METEOROLOGICAL TOWERS, COUNTY OF LOS ANGELES (FFER #201400071)

The Preparation of Draft Environmental Impact Report has been reviewed by the Planning Division, Land Development Unit, Forestry Division, and Health Hazardous Materials Division of the County of Los Angeles Fire Department. The following are their comments:

PLANNING DIVISION:

1. We have no comments at this time.

LAND DEVELOPMENT UNIT:

1. The development of this project must comply with all applicable code and ordinance requirements for construction, access, water mains, fire flows and fire hydrants.

2. Some development as a result of this project might be located within the area described by the Forester and Fire Warden as Very High Fire Hazard Severity Zone (VHFHSZ). All applicable

fire code and ordinance requirements for construction, brush clearance and fuel modification plans, must be met.

3. Specific fire and life safety requirements for the construction phase will be addressed at the building fire plan check. There may be additional requirements during this time.

4. The County of Los Angeles Fire Department, Land Development Unit, has no specific requirements for this project at this time. There may be additional requirements during the review of the Draft Environmental Impact Report.

5. The County of Los Angeles Fire Department, Land Development Unit, appreciate the opportunity to comment on this project. Should any questions arise regarding, please contact the inspector, Juan Padilla, at (323) 890-4243 or at Juan.Padilla@fire.lacounty.gov.

FORESTRY DIVISION – OTHER ENVIRONMENTAL CONCERNS:

1. The statutory responsibilities of the County of Los Angeles Fire Department, Forestry Division include erosion control, watershed management, rare and endangered species, vegetation, fuel modification for Very High Fire Hazard Severity Zones, archeological and cultural resources, and the County Oak Tree Ordinance. Potential impacts in these areas should be addressed in the Draft Environmental Impact Report.

HEALTH HAZARDOUS MATERIALS DIVISION:

1. The Health Hazardous Materials Division has no objection to the proposed project.

If you have any additional questions, please contact this office at (323) 890-4330.

Very truly yours,

Frank Vidales

FRANK VIDALES, CHIEF, FORESTRY DIVISION
PREVENTION SERVICES BUREAU

FV:jl

RECEIVED
JUN 04 2014
BY:_____

May 23, 2014

Los Angeles County Department of Regional Planning
Attn: Thuy Hua
320 W. Temple St., 13th Floor
Los Angeles, CA 90012

Thank you for having the Renewable Energy Ordinance Scoping meeting (REO) on Tuesday, May 20, 2014 in the Antelope Valley, since most of the large projects will be located here. Enclosed are comments.

The meeting was poorly run: no sign in sheet was available; the screens for the presentation were more distracting than helpful; no one was able to read most of the slides on the screens. If every chair had been filled, then reserving one hour for the scoping meeting would not have been enough time, as the few people who did show up took up an hour with their questions alone. No handouts of the slides or written information were distributed by representatives of the County or the company preparing the REO Environmental Impact Report. Certain questions about the CEQA process could not be adequately explained to a general audience.

The comments during the meeting were not recorded, and all comments concerning the subject needed to be written or submitted electronically. Few questions could be answered so it appeared that no one needed to be present, since oral comments would not count.

Thank you again for the local Scoping Meeting. We, and many others like us who live here, care very much for good planning and for the rural character of our community. We look forward to see how we can demonstrate our viewpoint in a civil, gracious way. At the same time we would like the County to shows its support to the residents of the County.

Sincerely,

Judith Fuentes, 47458 92nd Street West, Antelope Acres, CA 93536

Virginia Stout, 9136 West Avenue F-4, Antelope Acres, CA 93536

Enclosure

c: <u>Without Enclosure</u>
Supervisor Antonovich
Norm Hinkling

Renewable Energy Ordinance Environmental Impact Report Scoping meeting
May 21, 2014
Comments of Judith Fuentes and Virginia Stout

1) A separate Renewable Energy Ordinance for the unincorporated Antelope Valley must be created to attend to the significant environmental issues and needs of the people here because of a greater difference of topographical, biological and climate conditions. Because it is extremely important to local residents who spent their life savings to live in a rural area and because Antelope Valley is at a greater risk for utility-scale solar generating projects, a blanket ordinance would be irresponsible.

2) Another Ordinance could be crafted for the rest of the greater Los Angeles County, like the General Plan and Area-wide plan. .

3) Education, outreach, meetings and/or hearings must be conducted in the area where utility-size renewable energy facilities are to be located.

4) Utility size generating facilities should be in industrial zoned areas not agricultural zoned areas. People who chose to live in a rural area (N-1 or N-2) should not have to live with utility-size renewable energy generating facilities that belong in an industrial setting.

5) No utility scale wind generating facilities to be allowed in the Antelope Valley.

6) A rural locality that does not have any "sanctioned" scenic highways is not considered as a scenic area or having a view, but it is still a view that is considered as scenic open space, farmland-type vista and should be protected from utility size projects. Because utility-scale renewable energy projects in rural areas will have a significant environmental affect on the visual aesthetics, it cannot be properly mitigated. Mitigation must be held to a higher standard than the County has so far allowed on other projects in the Antelope Valley. Alternatively, it is more practical to promote renewable energy systems on homes and existing structures.

7) It is simple. No one would deliberately take a drive to see solar panels, transmission lines, etc. Why not? It is not scenic.

8) Landscaping should be required on all sides of utility scale projects, not just on some sides or on some projects

9) At least one biological 'expert' working on the Environmental Impact Report for the ordinance should be from the local area or have demonstrated to have expert knowledge of the Mojave Desert flora and fauna.

10) Encourage and expedite the application process for home solar and wind energy.

11) Promote residential and rooftop solar and wind energy by keeping permits and processing fees affordable

12) New large scale buildings shall produce a percentage of renewable energy on site.

13) All renewable energy storage and collection batteries for use such as for nighttime utility size electrical generation facilities must be located on land currently zoned as heavy industrial.

14) If sensitive receptors within a 5-mile radius will be affected by utility scale renewable energy facilities, permits should not be granted without an agreement with those receptors. Another ordinance can be crafted, as done for the Antelope Valley Area-wide General Plan.

SCOPING MEETING COMMENT FORM

Renewable Energy Ordinance Environmental Impact Report

Please hand in during the meeting or mail or email by 5:00 PM PST on June 4, 2014. Comments submitted electronically can be sent to thua@planning.lacounty.gov and should include the submitter's name. All comments received will become part of the official administrative record and may be made available to the public.

* REQUIRED FIELDS. PLEASE PRINT CLEARLY.					
* Name (First and Last)	Judith Fuentes				
Organization	Virginia Stout, Antelope Acres Town Council				
* Address	47458 92nd St. W.				
* City	Antelope Acres	* State	CA	* Zip Code	93536
Email	-None				
Phone	661-723-1882				
Completing this form will automatically add you to the mailing list for project updates and notices of document availability. If you prefer to not be on this mailing list, check this box ☐					

COMMENTS ON THE SCOPE OF ISSUES AND ALTERNATIVES THAT WILL BE ADDRESSED IN THE ENVIRONMENTAL IMPACT REPORT:

Alternatives should include promoting energy conservation, promoting more 'stand-alone' solar water heaters, solar stand alone to run small fans, pumps - such as for swamp coolers. Promote solar (and lunar) clothes dryers. Hang clothes outside when there is no rain. Promote and demand more renewable energy systems on homes, buildings, parking lots that already cover impervious soil.

Cumulative impacts need to be recognized as collectively threatening the ecological balance of a delicate area - the desert, West Antelope Valley, north Los Angeles County's doorway.

Attached letter

Karen Bryan
10715 Leona Ave.
Leona Valley, CA 93551

Thuy Hua
LA County Department of Regional Planning
320 W Temple St 13th Floor
Los Angeles CA 90012

June 4, 2014

Re: Renewable Energy Ordinance ï May 2014 Draft

Dear Ms. Hua:

I have attended most of the county meetings regarding the proposed new energy ordinance. I understand the mandate from the state and the need for the county to comply.

I am a believer in renewable energy but more so for the Distributed Generation type. I do understand that rooftop solar and small wind turbines canôt generate enough to compensate for the heavy industrial users therefore we need Utility Scale generation plants.

I have two primary concerns for your consideration:

1. That the county doesnôt ñover-permitò or allow more or go beyond (by 10%) that which the state requires in any of its Renewable Energy mandate updates. To overburden the residents of the Antelope Valley simply because no one else in Los Angeles County wants these in their back yard is unfair, at best. The cumulative impacts, when these projects are taken as a whole, has to be a primary consideration. The burden of the renewable energy projects needs to be distributed throughout the state and not just isolated in one area.
2. Coccidioidomycosis (Valley Fever) is a disease that is endemic in the Antelope Valley ï this is a fact. My concern is that with the increased dust, brought on in large part by the existing renewable energy projects, that the valley will soon have Valley Fever in epidemic proportions. I donôt feel that those at the county level have a true understanding of the seriousness of this disease. I recently attended a neighboring town council meeting where a county veterinarian spoke about the hazards to the animals in the valley. His statement that 60% of those that get Valley Fever (people and animals) get flu-like symptoms and then get over it, was true. What he failed to acknowledge is that of the remaining 40% that get the disseminated form of the disease usually die from it or suffer very long term (costly) medical treatment before eventually succumbing. I believe that before a permit is granted for any of these projects that require large ground clearance that the county require soil testing for the arthroconidia (spores) of Coccidioides immitis. If these spores are present then the permit should be denied.

Any increases in Valley Fever in the Antelope Valley not only impact the person infected but it also has an economic impact to the county. As noted in the attached document during the 2-year sample period in Kern County there was a $66 million cost directly attributable to this infection. Considering the figures in this document were taken more than 10 years ago when there was very little known about this disease I would venture to guess that the numbers would be quite

staggering today. Unfortunately, neither the state, county, or medical profession is very well educated about the seriousness of this disease or how rapidly this disease is spreading.

The county has a chance to slow down the progression of Coccidioidomycosis over the next 30 years though its ordinances. If the USGS can issue a such a comprehensive document for its employees to follow while working in endemic areas the least the county can do is have similar cautions (through ordinances or any other means) in place to protect the residents of the Antelope Valley from all the additional dust brought on by the renewable energy projects. By the way, watering down the dust as a mitigation measure just amplifies the arthroconidia (spores) of Coccidioides immitis to germinate.

Please read the attached USGS document thoroughly. While doing so remember that this document is now 14 years old and much of the problem with Valley Fever and the associated costs have only increased.

The good that is being proposed by renewable energy cannot outweigh the future health of an entire area.

Thank you for your consideration.

Karen Bryan

Operational Guidelines (version 1.0) for Geological Fieldwork in Areas Endemic for Coccidioidomycosis (Valley Fever)

by

Frederick S. Fisher[1], Mark W. Bultman[2] and Demosthenes Pappagianis[3]

U.S. Geological Survey Open-File Report 00-348
Version 1.0

2000

U.S. DEPARTMENT OF THE INTERIOR
BRUCE BABBITT, Secretary

U.S. GEOLOGICAL SURVEY
Charles G. Groat, Director

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Abstract

Coccidioidomycosis (Valley Fever) is a disease caused by the inhalation of the arthroconidia (spores) of *Coccidioides immitis*, a fungus that lives in the soils of southwestern United States. Although large numbers of people are exposed to the arthroconidia and are consequently infected**,** very few individuals contract the more serious forms of the disease. Earth scientists working in field areas where *Coccidioides immitis* is endemic have an increased risk of becoming infected. Because field operations often disturb the upper surface of the ground**,** they may inhale large numbers of arthroconidia. This also increases their risk of developing more severe forms of the disease. Any other occupations or activities that create dusty conditions in endemic areas also have increased risk of infection.

Risk management strategies can lower the incidence of infection and also reduce the numbers of arthroconidia inhaled thereby decreasing the chances of developing more serious disease. Dust control, by utilizing dust masks, and dust prevention, by limiting ground disturbing activities, are the primary weapons against infection. However, infection risk can also be lowered by conducting fields studies in the winter months; avoiding sites favorable for *Coccidioides immitis* growth; seeking prompt medical treatment if flu-like or respiratory illness occur during, or within a few weeks following, fieldwork; getting a coccidioidin skin test to determine susceptibility to the disease; and by educating all members of the field party about the possibilities and consequences of infection.

Introduction

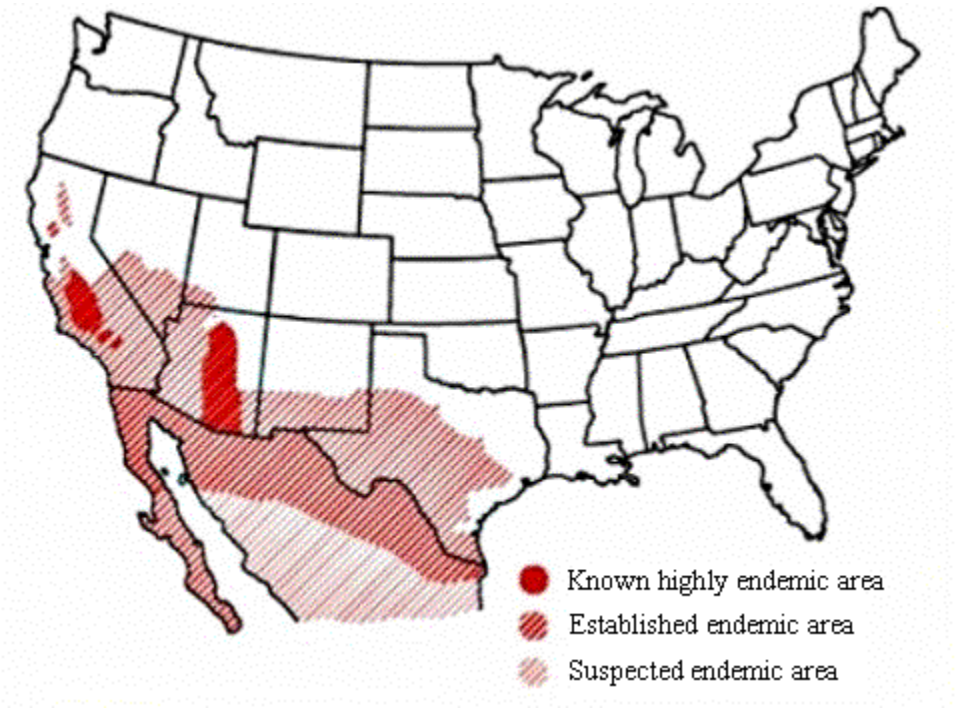
The purpose of this report is to present operational guidelines that will lower the risk of contracting coccidioidomycosis for individuals who work outdoors in areas where the disease is endemic. Coccidioidomycosis (or as it is sometimes called, Valley Fever) is an infection usually caused by the inhalation of (rarely by traumatic introduction through the skin) arthroconidia (spores) of the soil inhabiting fungus *Coccidioides immitis*. The disease may occur in any individual residing, visiting, or even passing through endemic areas. While this report is directed at earth scientists it also applies to other occupations involving outdoor activity in dusty conditions (e.g. farming, ranching, construction, archaeology, soil scientist, etc.). However, specific occupation is not as important in determining infection risk as is the amount of time spent outdoors and involvement in activities that expose an individual to dusty conditions or to intensive contact with soils. This report also applies to many outdoor recreational pursuits (e.g.. gardening, landscaping, equestrian, biking, hiking etc.). The recommendations made here are based on information available to date on the habitat of *Coccidioides immitis*. This information may change as new data are currently being collected by ongoing studies at the University of Arizona and by the U.S. Geological Survey that are focused specifically on the habitat of *C. immitis*. This paper does not discuss medical treatments for the disease, however, the authors do utilize knowledge about the ailment to help individuals apply strategies that will lower their risk of becoming infected. Definitive discussions of the medical

aspects and treatments of coccidioidomycosis may be found in Einstein and Johnson, (1993) and Galgiani, (1993).

Endemic areas

Rapid population growth, greater numbers of recreational visits and activities, and continued stationing of military personnel for active training in the deserts of the southwestern U.S. place an increasingly large unexposed population within endemic areas. These demographic changes, coupled with increasing numbers of individuals with suppressed immune systems due to the ongoing AIDS epidemic, and the growing use of immunosuppressing medical therapies are of concern to public health officials (Galgiani, 1992, 1993, 1999; Rush and others, 1993; Pappagianis and others, 1993).

Figure 1. Endemic regions of *C. immitis* in the United States and northern Mexico
Courtesy of the Valley Fever Americas Foundation, Bakersfield, California



In the conterminous United States *C. immitis* is endemic in parts of Arizona, California, New Mexico, Nevada, Texas, and Utah (fig. 1). Outside of the United States it is endemic in parts of Argentina, Brazil, Colombia, Guatemala, Honduras, Mexico, Nicaragua, Paraguay, and Venezuela. With some exceptions endemic areas are generally

arid to semiarid with low to moderate rainfall (5 to 20 inches), mild winters, and long hot seasons. The Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia declared in 1993 that coccidioidomycosis was epidemic in parts of California (Kern County) and also issued a warning to physicians nationwide to watch for the disease in patients who may have become infected while traveling in endemic areas. The CDC also listed coccidioidomycosis as an example of one of the important emerging disease threats to the Nation and has called for expanded studies of the disease (Bryan, and others, 1994).

In endemic areas, recognized cases of coccidioidomycosis are under-reported (Lundergan and others, 1985, p. 53; Galgiani, 1992, p. 100). In 1957 it was shown that, in infected individuals, the disease resulted in an average of 33 to 35 lost work days (Scogins, 1957). Pappagianis (1980) estimated that the overall annual cost to the nation was one million person-days of labor. A review by the CDC (Goodman, 1994) of the medical records in Kern County, California showed that coccidioidomycosis accounted for approximately $66 million in direct costs of hospitalization and outpatient care during the period 1991-1993. Infection rates for humans vary throughout the endemic areas. In 1966 long-term residents in Arizona (several years) showed the following infection rates by county; Apache 13%, Cochise 37%, Coconino 5%, Gila 48%, Graham 60%, Greenlee 40%, Maricopa 71%, Mohave 57%, Pima 72%, Pinal 76%, Santa Cruz 40%, Yavapai 14%, Yuma 26% (Converse and Reed, 1966, p. 682, fig. 4).

Character of the Disease

Arthroconidia of *C. immitis* can be released into the air when soils are disturbed by natural or anthropogenic means. Inhalation of the arthroconidia into the lungs of an appropriate host can cause primary infection. Once in the lung the arthroconidia change into a spherule form and reproduce efficiently by endosporulation causing relatively rapid growth and increased infection (Galgiani, 1993; Einstein and Johnson, 1993). Primary coccidioidomycosis is limited to the lesions in the lungs with symptoms that may include fever, chills, night sweats, chest pains, cough, appetite loss, and muscle and joint aches. Symptoms usually clear within a few weeks. Disseminated coccidioidomycosis occurs when the disease spreads to sites in the body other than the lungs and can involve any organ with the exception of the gastrointestinal tract which is rarely involved (Einstein and Johnson, 1993). Disseminated forms of the disease are more severe and have a variety of symptoms. Involvement of a vital organ can lead to death.

Most people who are long-term residents (several years) in areas where *C. immitis* is present are exposed to the arthroconidia of the fungus and are consequently infected. About 60 percent of the people infected are asymptomatic, their exposure to the infection being reflected only by a positive coccidioidin skin test. Most symptomatic cases result in primary infection with relatively mild cold or influenza-like symptoms for which only about 10 percent of the people seek medical attention; however, in some cases there may be pneumonia. In about 1 percent of those infected, *C. immitis* disseminates elsewhere in the body beyond the pulmonary system with much more serious, and at times, fatal results (Pappagianis and others, 1993). Early diagnosis and treatment of coccidioidomycosis is

of value in managing primary infections and is essential in most cases of disseminated disease (Galgiani, 1999). Pregnant women, African-Americans, Filipinos, and possibly Asians, Hispanics, and Native Americans have higher rates of dissemination of the disease (Pappagianis and others, 1979; Einstein and Johnson, 1993). Coccidioidomycosis is often severe and life threatening in patients whose immune systems have been compromised. The disease is capable of lying dormant in some infected individuals for years, becoming active and opportunistic only when the immune system is weakened by other conditions (Cuellar and others, 1993). In addition to humans the disease affects many species of domestic and wild animals including burros, cattle, dogs[1] , horses, sheep, swine, bats, coyotes, mountain lions, rodents, sea otters, and reptiles (Reed and others, 1994; Pappagianis, 1988).

New infections are frequently seasonal and appear to be related to several factors including humidity, rainfall, sunlight, temperature, and wind conditions (Smith and others, 1946; Egeberg, 1953; Pappagianis, 1988). Rates of infection are highest during hot dry spells that follow cooler rainy seasons and rates often spike following large dust storms (Pappagianis, 1988). Other new infections are related to ground-disturbing activities with consequent exposure to soil and dust, such as construction, mining, agriculture, archaeological excavations, military maneuvers, recreational activities, etc.(Johnson, 1981; Pappagianis, 1983). Laboratory studies have shown that as few as 10 arthroconidia are sufficient to cause an infection in dogs and monkeys (Converse and Reed, 1966) and it has been suggested that even a single arthroconidia could be responsible for infection in humans (Bulmer, 1979; Galgiani, 1993). Many severe infections in animals and humans are related to inhaling aerosols containing high doses of arthroconidia derived from sites where *C. immitis* is present in the soils (Converse and Reed, 1966; Pappagianis, 1988). Once an individual has been infected by *C. immitis*, even mild cases, and is skin-tested positive, immunity to additional infection by *C. immitis* is developed (Fiese, 1958, pp 92-97; Galgiani, 1999).

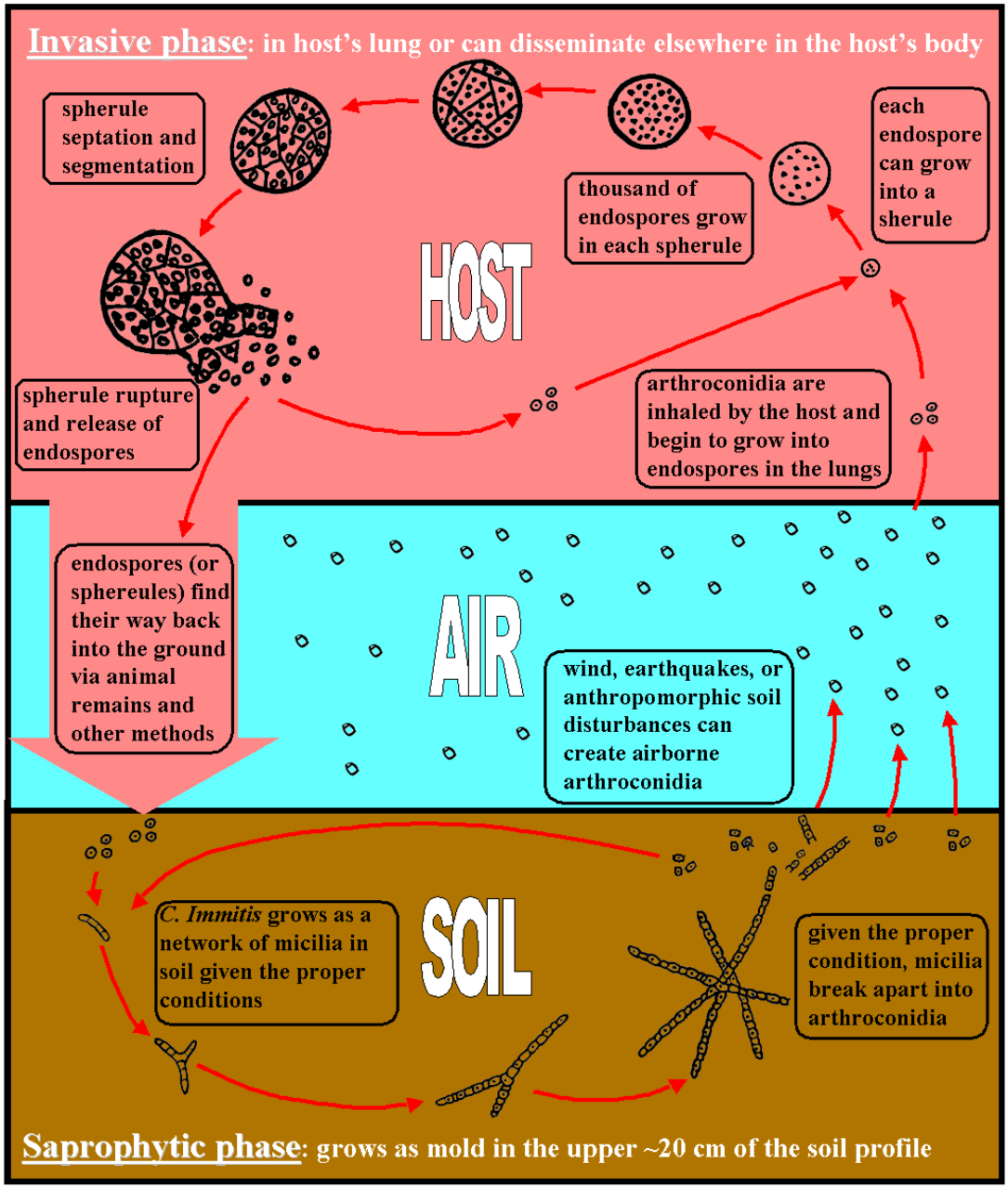
Habitat of *C. immitis*

C. immitis grows in the upper (5 - 20 cm) horizons of soils in endemic areas (fig. 2). This saprophytic phase of the fungus is characterized by branching segmented hyphae that form a network of mycelium. As the fungus matures, arthroconidia, 2 to 5*u*m in size, are formed as barrel shaped, rectangular segments of the hyphae. Given the right environmental conditions, alternate arthroconidia undergo autolysis leaving the viable arthroconidia which are easily separated by soil disturbance (natural or anthropogenic) and consequently easily dispersed by the wind. Arthroconidia are also very buoyant and may be readily moved by sheet-wash water during rainstorms only to be concentrated in fine sedimentary material some distance from the initial growth site. Under suitable environmental conditions the arthroconidia can germinate to form new hyphae and mycelium, which can repeat the cycle. However, numerous studies suggest that *C.*

[1] Dogs are very prone to infection because of their habit of sniffing the ground and frequent deep inhalation of air in rodent burrows. Once infected many dogs develop severe forms of the disease which most often necessitates euthanasia (Davidson and Pappagianis, 1994).

immitis does not readily colonize outside of existing growth sites. The reasons for this are not completely understood but may be associated with the sensitivity of the fungus to environmental factors and competition from other soil inhabiting organisms (Swatek, 1975; Pappagianis, 1980, 1988).

Figure 2. Life cycle of *C. immitis*



If the airborne arthroconidia are inhaled by an appropriate host (humans, animals, even reptiles) the invasive phase of *C. immitis* is initiated (fig. 2). In tissue the arthroconidia transform into spherules 10 to 80 *u*m in diameter which when mature are internally divided into endospores that are 2 to 5 *u*m in diameter. The mature spherules then rupture and the endospores are released into the surrounding tissue thereby spreading the infection locally, or at times, into other organs by disseminating outside of the respiratory system. The invasive phase may end with the death of the host or by the expulsion of spherules outside of living tissue by sputum, pus, or exudates. If this occurs in an acceptable environment then the spherules (or endospores) will germinate and hyphae and mycelium will be developed and the saprophytic phase will again be initiated (Fiese, 1958). In some cases both mycelia and spherule forms of *C. immitis* have been observed in tissue and sputum (Fiese, 1958, p. 34-35).

The presence of *C. immitis* in specific areas is determined by direct sampling of soils, identification of positive skin and serologic tests in non-mobile human populations, and recognition of the infection in humans and animals (mostly dogs). Several authors have noted that these occurrences or growth sites are relatively restricted in size, with individual sites ranging from several tens to several hundreds of square meters (Maddy and Crecelius, 1967; Egeberg and others, 1964; Swatek, 1975; Pappagianis, 1980, 1988). Although some growth sites have been identified, their distribution and recognition throughout the entire endemic area of the southwestern U.S. is poorly known.

Laboratory and site specific field studies have shown that many physical, chemical, climatic, and biological factors influence the growth of *C. immitis* in the soil and the consequent development and deployment of arthroconidia (Fiese, 1958; Sorensen, 1964; Swatek, 1975; Pappagianis, 1988). Key factors include, amount and timing of rainfall and available moisture (humidity), temperature, soil texture, alkalinity, salinity and types of water-soluble salts, organic content of soils, and degree of exposure to sunlight and ultraviolet light. Others that may be important are the presence of marine sedimentary rocks, presence of borates, soil chemistry, presence of specific vegetation types, inclusion within the Lower Sonoran Life Zone, competition with other fungal and/or plant species, presence of Indian middens, and presence of rodent burrows and middens (Maddy, 1957; Egeberg, 1962; Pappagianis, 1988). Many of the above mentioned factors are closely interrelated and the influence on the presence and/or growth of *C. immitis* by any combination of, or single factor, is an intricate balance that varies both in time (season) and in response to changes in the physical, chemical, and biological environment at any given location.

Risk Management Strategies

Because ambient airborne *C. immitis* arthroconidia may be present anywhere within endemic areas, absolute prevention of infection is virtually impossible, and, as no effective vaccine for coccidioidomycosis is currently available, consideration of risk management strategies seems prudent. Some of these methods may not be practical for individuals who are not involved closely with soils, aerosols, or other materials derived directly from *C. immitis* growth sites; however, earth scientists doing fieldwork in

endemic areas can lower their risk of infection by following strategies appropriate for their own particular activities.

Education of individuals and institutions about the disease is the first step in developing risk management strategies and it is to that end this report is directed. General information brochures on coccidioidomycosis may be obtained from the American Lung Association of Arizona (2819 E. Broadway Blvd., Tucson, AZ, 85716), the California Department of Health Services (2151 Berkeley Way, Berkeley, CA, 94704), and The Valley Fever Center for Excellence (Mail Stop 111, 3601 S. 6th Ave., Tucson, AZ, 85723).

The factors listed below, all of which increase the chance of infection, are associated with the probability of inhaling *C. immitis* arthroconidia and must be considered in a risk management strategy.

1) Residence within endemic areas; longer times increases risk
2) Travel within endemic areas; again longer time increases risk
3) No previous history of infection as shown by a negative coccidioidin skin test; (successful recovery from coccidioidomycosis, even mild cases, imparts immunity to further infection)
4) Exposure to dust containing arthroconidia, as a result of incidental circumstances, occupation, recreation, or life style
5) Duration of time spent outdoors
6) Duration of time spent in dusty conditions (inhalation of larger numbers of arthroconidia has been associated with more severe cases of coccidioidomycosis)
7) Activities (and duration of time) that involve intensive contact with soils in endemic areas
8) Exposure to fomites derived from endemic areas

In addition to the above it is also important to consider the risk factors associated with development of the more serious disseminated forms of the disease as listed below:

1) A compromised immune system (HIV/AIDS, organ transplants, diabetes, chemotherapy, etc.)
2) African-American, Filipino, or other Asian heritage (possibly also Hispanic and native American)
3) second and third trimester of pregnancy
4) male gender

For those earth scientists living in or assigned to work in endemic areas several strategies should be considered to lower the risk and severity of infection by *C. immitis* arthroconidia. A coccidioidin skin test should be done to determine prior exposure to the disease. Those who test negative indicating no prior exposure should be more diligent in adopting risk reducing strategies and should seek medical treatment early in the course of flu-like illnesses that may develop a few weeks following fieldwork in endemic areas. Those who test positive are unlikely to become reinfected and probably only need to use extra precautions when exposed to intensive contact with soils in highly infective areas

(i.e. rodent burrows in known *C. immitis* growth sites). Individuals who are at a higher risk of developing disseminated disease, especially the immunosuppressed, may be wise to a) limit fieldwork in endemic areas, b) completely avoid locations containing favorable *C. immitis* growth sites and, c) avoid dust producing activities.

Infections by *C. immitis* frequently have a seasonal pattern with infection rates that generally spike in the first few weeks of hot dry weather that follow extended milder rainy periods. In California infection rates are generally higher during the hot summer months especially if weather patterns bring the usual winter rains between November and April. The normal weather pattern in Arizona is a winter rainy season in December, January, and February followed by hot dry weather and also a summer monsoon season in July and August again followed by hot dry weather. Thus in Arizona infection rates are often higher in spring, then decrease during the summer monsoons and increase again in autumn, with highest rates often occurring in November, and finally decreasing to the lowest rates during the winter rainy season. Numerous studies have suggested the connection between above average rainfall during the winter and spring and higher infection rates the following summer (Smith and others, 1946; Maddy, 1965, Pappagianis, 1988). Increased moisture is believed to provide a longer period for growth of *C. immitis* and consequently greater production of arthroconidia which, with the onset of dry, hot, windy weather creates infective conditions for susceptible hosts (Maddy, 1965). During rainfall, dust and arthroconidia are washed from the air and wetting of the soil decreases the opportunity for spores to become airborne thereby creating less infective conditions. The seasonal character of infections should be considered in risk management strategies and earth scientists should whenever possible schedule fieldwork in endemic areas during the winter rainy periods when infection rates are generally lowest.

Clearly, dust-control measures are the main defense against infection. However it is important to note that dust itself is only an indicator that *C. immitis* arthroconidia may be airborne in a given area and that some dust clouds may be completely free of arthroconidia. Arthroconidia of *C. immitis* have slow settling rates in air due to their small (2*u*m - 5*u*m) size, low terminal velocity (0.003 cm/sec), and possibly also due to their buoyancy, barrel shape and commonly attached empty hyphae cell fragments (Gregory, 1973; Dimmick, 1965; Lacey, 1981). Thus arthroconidia, whose size is well below the limits of human vision, may be present in air that appears relatively clear and dust free. Such ambient, airborne arthroconidia with their low settling rates can remain aloft for exceedingly long periods and be carried hundreds of kilometers from their point of origin (Table 1).

Table 1

Time of flight and range of distances of particles moving in moderately strong winds (15 m/sec.). Modified from Chorley and others, 1984

Particle type	Diameter (mm)	Fall Velocity (cm/sec)	Flight time (maximum)	Transportation distance (max.)
clay	0.001	0.00824	9-90 years	4-40 x 10^6 km
C. immitis arthroconidia	0.002-0.005	0.003	?	?
silt	0.01	0.824	8-80 years	4-40 x 10^2km
very fine sand	0.10	82.4	0.3-3 sec.	46-460 meters

Arthroconidia may also become airborne by hitchhiking rides on larger dust or sand sized particles. Large dust storms, at times carrying arthroconidia of *C. immitis*, in California and Arizona have long been noted for creating epidemic conditions (Smith and others, 1946). More recently dust clouds resulting from the January 17, 1994, earthquake in California are believed to be responsible for outbreaks of coccidioidomycosis from eastern Ventura County to the western San Fernando Valley (Pappagianis and others, 1994; Schneider and others, 1997; Jibson and others, 1998). Viability of fungi spores in the atmosphere depends on several factors including temperature, desiccation, radiation (especially in the ultraviolet wave lengths), and how robust individual types of spores are when placed in different environments (Gregory, 1973; Lacey, 1981). How long airborne *C. immitis* arthroconidia remain infective for humans is unknown but laboratory experiments suggest that *C. immitis* arthroconidia are hardy (Friedman and others, 1956; Pappagianis, 1988) and thus may be viable in the atmosphere for extended periods. Weather patterns with associated strong winds can carry arthroconidia great distances and coupled with their robust viability can spread infection well outside of recognized endemic areas. For example, in 1977 strong winds (gusts to 160 km/hr) centered in Kern County, California (located in the southern San Joaquin Valley) scoured topsoil to depths of 15 cm creating a dust cloud that reached elevations of approximately 1500 meters. The storm carried *C. immitis* arthroconidia 500 km north to the vicinity of Sacramento, California (an area not considered endemic for *C. immitis*) (Flynn and others, 1979). The dust spread over an area of about 87,000 km^2 reaching Sacramento about 20 hours after the start of the storm in Kern County and infecting as many as 7,000 people in Sacramento County (Pappagianis and Einstein, 1978; Flynn and others, 1979, p. 360).

There are many ways to avoid and control dusty conditions during field operations, although some may not be practical for certain operations. Few methods (perhaps none)

are 100 percent effective. Following are suggestions for reducing infection risk by limiting exposure to dust in endemic areas:

1) Avoid working outdoors during windy conditions
2) If possible use machinery with enclosed cabs and utilize air conditioning
3) Use air conditioning in field vehicles
4) Avoid unnecessary digging or soil disturbance
5) Use dust masks; Although the use of dust masks for protection against the inhalation of *C. immitis* arthroconidia has not been scientifically evaluated, their application by workers in dusty conditions is strongly recommended. Several types of masks are available that have been proven to be very effective against dust particles as small as 0.4 microns in size, which is several times smaller than *C. immitis* arthroconidia. Masks capable of filtering particles as small as 0.4 microns should provide nearly total protection if fitted properly and conscientiously utilized during dusty operations. Manufactures instructions must be followed and it should be noted that mustaches or beards may prevent a mask from making an airtight seal against the face and thus may allow unfiltered dust to be inhaled.
6) Wet soils before digging or collecting samples (a small backpack weed sprayer containing water may be useful)
7) camp and sleep upwind of known or suspected *C. immitis* growth sites or dusty areas
8) avoid sandy campsites; camp on vegetated areas as much as possible
9) sterilize soil or rock samples by heating them to 60^0C for thirty minutes which will kill *C. immitis*
10) Use fungicides to kill *C. immitis* (Elconin and others, 1967) but be aware that they are only effective on the soil surface and possibly to a depth of 0.5 cm

Don't take *C. immitis* arthroconidia home with you or unwittingly expose other individuals to infection by fomites from endemic areas. Many cases of coccidioidomycosis have occurred as a result of exposure to contaminated materials derived from endemic areas (Albert and Sellers, 1963).

1) wash and sterilize rocks, soils, fossils, vegetation, or other sampled material before removing it from the field to the laboratory
2) keep field vehicles washed, and clean interiors by using water (do not create dust by sweeping or vacuuming interiors)
3) remove dusty clothing after fieldwork and store in closed plastic bags until washed
4) clean field equipment before returning to the home, office or laboratory

The distribution of *C. immitis* within endemic areas is not uniform and growth sites are commonly small (a few tens of meters) and widely scattered. Known sites appear to have some ecological factors in common suggesting that certain physical, chemical, and biological conditions are more favorable for *C. immitis* growth. Avoidance, when possible, of sites favorable for the occurrence of *C. immitis* is a prudent risk management strategy. Listed below are ecologic factors and sites favorable for the occurrence of *C. immitis*:

1) Rodent burrows (often a favorable site for *C. immitis*, perhaps because temperatures are more moderate and humidity higher than on the ground surface)
2) Old (prehistoric) Indian campsites near fire pits
3) Areas with sparse vegetation and alkaline soils
4) Areas with high salinity soils
5) Areas adjacent to arroyos (where residual moisture may be available)
6) Packrat middens
7) Upper 30 cm of the soil horizon, especially in virgin undisturbed soils
8) Sandy well aerated soil with relatively high water holding capacities

Sites within endemic areas less favorable for the occurrence of *C. immitis* include:

1) Cultivated fields
2) Heavily vegetated areas (e.g. grassy lawns)
3) Higher elevations (above 7,000')
4) Areas where commercial fertilizers (e.g. ammonium sulfate) have been applied
5) Areas that are continually wet
6) Paved (asphalt or concrete) or oiled areas
7) Soils containing abundant microorganisms
8) Heavily urbanized areas where there is little undisturbed virgin soil

In summary, because arthroconidia of *C. immitis* can occur anywhere within endemic areas, or even possibly a few hundred kilometers outside of endemic areas, (given windy, dusty conditions as documented above) 100 percent protection against infection is impossible. However earth scientists conducting field studies within endemic areas can limit their risk of becoming infected and most likely, reduce the severity of the disease in those that do become infected by; 1) scheduling fieldwork during winter months; 2) avoiding activities (if possible) in areas most favorable for *C. immitis* occurrences; 3) utilizing dust control methods when appropriate; 4) having a coccidioidin skin test and, if test is negative, exerting additional caution while working in dusty conditions; 5) seeking prompt treatment of flu like or respiratory illness that occur during, or a few weeks following, fieldwork and also informing their physician about possible exposure to *C. immitis* arthroconidia; and 6) educating all members of the field party about the disease. Those individuals at high risk of developing severe disseminated disease should carefully evaluate the necessity of conducting field studies within endemic areas, however, it should be remembered that the large majority of individuals infected suffer no or very minor symptoms and that the severe disseminated form of the disease occurs in less than one percent of those exposed.

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P.O. Box 931057
Los Angeles, California 90093

June 4, 2014

Los Angeles Department of Regional Planning
ATTN: Thuy Hua
320 W. Temple Street, 13th Floor
Los Angeles, CA 90012

via email: thua@planning.lacounty.gov

Dear Ms. Hua:

Los Angeles Audubon has been a voice for birds and conservation in Los Angeles for over 100 years. Our mission is to promote the enjoyment and protection of birds and other wildlife through recreation, education, conservation and restoration. We have more than 10,000 members and supporters in the County of Los Angeles.

Los Angeles Audubon supports renewable energy to reduce the impacts of climate change when the energy generation structures and transmission are sited properly to avoid, minimize or mitigate effectively for impacts on birds and other wildlife and their habitat.

Thank you for the opportunity to provide comments on draft 2 of the Renewable Energy Ordinance of the County of Los Angeles.

1. **22.52.1640-B-Height Standards for Temporary Meteorological Towers.**

The ordinance should require higher standards for permitting meteorological towers that measure wind speeds. Tower height, guy wires and steady-burning lights have a tremendous impact on species of birds, especially nocturnal migrants protected under the federal Migratory Bird Treaty Act (MBTA) and other laws.[1]

The ordinance should encourage the use of LIDAR or other remote sensing meteorological measuring technologies that avoid impacts on birds and bats, and if towers are permitted they should have no guy wires and no steady-burning lights.

Flight diverters have limited effectiveness in deterring nocturnal migrants.

2. 22.52.1660 Standards for Ground-Mounted Utility-Scale Renewable Energy Facilities

Section H – Transmission lines.

[1] Longcore et al, Height, Guy Wires, and Steady-burning lights increase hazard of communication towers to nocturnal migrants: A review and meta-analysis, http://www.urbanwildlands.org/Resources/Longcore_06-253.pdf

The ordinance should require applicants to conform to Avian Power Line Interaction Committee (APLIC) guidelines http://www.aplic.org if any power lines, gen-tys or substation connections sited above ground. We appreciate the efforts of the County to site transmission and power lines under ground.

Section L – Impacts to Birds and Bats

We are especially concerned that Section L of 22.52.1660 Standards for Ground-Mounted Utility-Scale Renewable Energy Facilities is too brief and provides little guidance to permit applicants in siting their project.

We recommend that Section L.

- include a list of the current regulatory framework of federal, state and municipal laws, executive orders, and treaties that protect birds, bats, and their habitat .
- require conformance by permit applicant to federal as well as state guidelines for utility-scale wind energy projects

http://www.energy.ca.gov/windguidelines/
http://www.fws.gov/windenergy/docs/weg_final.pdf

- state a preference for avoidance of impacts over minimization or compensatory mitigation for impacts
- require consultation with U.S. Fish & Wildlife Service and California Department of Fish & Wildlife on preparation of an Avian Bat Protection Plan (also known as Bird Bat Conservation Strategy) for both solar and wind projects whether an endangered or threatened species is present on the site. Solar projects impacts on birds are shown to be potentially significant.

While these guidelines are aimed at utility-scale wind projects, the siting process is also generally valid and useful for siting small-scale wind energy systems, and some elements are useful for siting solar projects.

3. **22.52.1650 Standards for Small-Scale Wind Energy Systems**

Ridges are known to concentrate bird and bat movements.[2] Raptors are especially vulnerable to wind turbines sited on ridges. Strickland et al. (2001) concluded that wind turbines located away from the edge of the ridge at Foote Creek Rim, Wyoming, would result in lower raptor fatality rates than turbines located immediately adjacent to the edge. Smallwood and Neher (2004) had similar findings in that they determined that raptors fly disproportionately more often on the prevailing windward aspects of slopes.[3]

The ordinance should use the best available science to determine a setback from a ridge for a wind energy project, and what the setbacks should be for windward slopes. 50 feet is not adequate. We recommend 500 feet.

Sincerely,

Garry George
Conservation Chair
garrygeorge@laaudubon.org
323-933-6660 p

[2] California Energy Commission & California Dept of Fish & Wildlife, California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development
[3] California Energy Commission & California Dept of Fish & Wildlife, California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development

Los Angeles Department of Water & Power

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General Manager

June 4, 2014

Thuy Hua, AICP
Los Angeles County Department of Regional Planning
Senior Regional Planner – Department of Regional Planning
County of Los Angeles
320 West Temple Street
Los Angeles, CA 90012

Dear Thuy Hua:

Subject: Comments on the Proposed "Los Angeles County Renewable Energy Ordinance"

The Los Angeles Department of Water and Power (LADWP) appreciates the opportunity to provide the following comments regarding the Los Angeles County's (County) proposed Renewable Energy Ordinance to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary meteorological towers across 2,600 square miles of unincorporated portions of the County.

Serving more than 1.4 million customers in Los Angeles with a generating capacity of over 7,300 megawatts (MW), LADWP is the nation's largest municipal utility. LADWP is vertically integrated, owning and operating a large portfolio of generation, transmission, and distribution assets spanning several states. LADWP is making unprecedented efforts to transform its electric utility system and address the risk of climate change which include reaching 33 percent of renewable energy by 2020. Over the past decade, LADWP's efforts have resulted in a downward trajectory in its power generation portfolio C02 emissions and C02 emissions intensity since 2000. Between 1990 and 2012, LADWP's C02 emissions have been reduced by 22 percent and its emissions intensity has decreased by 29 percent.

As a municipal utility, we are fully committed to the interest and goals of the State of California towards increasing renewable energy and appreciate the County's goal to "help facilitate the development of renewable energy within the County and assist the County to meet the goals of AB 32 [the Global Warming Solutions Act of 2006]".

111 N. Hope Street, Los Angeles, California 90012-2607 *Mailing address:* Box 51111, Los Angeles, CA 90051-5700
Telephone: (213) 367-4211 www.LADWP.com

However, we are concerned that the proposed ordinance outlined in the April 30, 2014, Notice of Preparation of a Draft Environmental Impact Report and Notice of Public Scoping Meeting document will discourage renewables development in the County.

As LADWP looks into the future, most of the issues influencing strategic and resource planning are based on the critical issues that LADWP is facing in the areas of greenhouse gas emission (GHG) reduction, while LADWP is trying to maintain its foremost priorities to protect its ratepayers from unnecessary rate impacts and ensure the continuous reliable operation of its electric grid. LADWP is concerned that the proposed ordinance as outlined can discourage renewable projects investments in Los Angeles County and negatively impact GHG reduction efforts.

In particular, LADWP believes that this ordinance would add additional burdens by requiring transmission lines to be built underground and placing excessive regulatory requirements on the projects. These will have the net effect that future renewable projects will become so expensive or difficult to site as to prevent investment in these worthy projects. Accordingly, the ordinance would increase the costs of renewables which would have an adverse effect on the underlying purpose of improving air quality.

LADWP respectfully request that the County not only take into consideration LADWP's concerns, but also conform to the intended outcome of Assembly Bill (AB) 32.

Furthermore, LADWP supports the comments filed by the Southern California Public Power Authority (SCPPA).

If you have any questions, please contact me at (213) 367-0881.

Sincerely,

John R. Dennis
Director, Power Planning and Development

SF:ps

CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIQUEZ
SECRETARY FOR
ENVIRONMENTAL PROTECTION

Lahontan Regional Water Quality Control Board

June 3, 2014

File: Environmental Doc Review
Los Angeles County

Thuy Hua
Los Angeles County Department of Regional Planning
320 W. Temple Street, 13th Floor
Los Angeles, CA 90012
Email: thua@planning.lacounty.gov

COMMENTS ON THE NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE LOS ANGELES COUNTY RENEWABLE ENERGY ORDINANCE, LOS ANGELES COUNTY, STATE CLEARINGHOUSE NO. 2014051016

The California Regional Water Quality Control Board, Lahontan Region (Water Board) staff received the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the above-referenced ordinance (Ordinance) on May 5, 2014. The NOP was prepared by the Los Angeles County Department of Regional Planning (County) and submitted in compliance with provisions of the California Environmental Quality Act (CEQA). The Los Angeles County Renewable Energy Ordinance will establish regulations, including development standards, for the development of renewable energy projects in unincorporated areas where the County has land use jurisdiction. Water Board staff, acting as a responsible agency, is providing these comments to specify the scope and content of the environmental information germane to our statutory responsibilities pursuant to CEQA Guidelines, California Code of Regulations, title 14, section 15096. We commend the County in taking the initiative to develop an ordinance to guide future renewable energy development and establish minimum development standards for these types of projects. We encourage the County to incorporate into the Ordinance elements that (1) promote watershed management, (2) support "Low Impact Development" (LID), (3) reduce the effects of hydromodification, (4) encourage solar development on previously disturbed lands and on rooftops, and (5) encourage recycled water uses. Our comments on the NOP are outlined below.

AUTHORITY

All groundwater and surface waters are considered waters of the State. Surface waters include streams, lakes, ponds, and wetlands, and may be ephemeral, intermittent, or perennial. All waters of the State are protected under California law. State law assigns responsibility for protection of water quality in the Lahontan Region to the Lahontan Water Board. Some waters of the State are also waters of the U.S. The Federal Clean Water Act (CWA) provides additional protection for those waters of the State that are also waters of the U.S.

The *Water Quality Control Plan for the Lahontan Region* (Basin Plan) contains policies that the Water Board uses with other laws and regulations to protect the quality of waters of the State within the Lahontan Region. The Basin Plan sets forth water quality standards for surface water and groundwater of the Region, which include designated beneficial uses as well as narrative and numerical objectives which must be maintained or attained to protect those uses. The Basin Plan can be accessed via the Water Board's web site at http://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/references.shtml.

Los Angeles County is located within the jurisdiction of two Regional Water Boards, the Lahontan and Los Angeles Water Boards. The eastern portion of the County, specifically the Antelope Valley and the watersheds that drain towards the Antelope Valley, are within the jurisdiction of the Lahontan Water Board. The western portion of Los Angeles County that drains towards the Pacific Ocean is within the jurisdiction of the Los Angeles Water Board. We request that the DEIR recognize that the Ordinance area falls under the jurisdiction of both the Lahontan and Los Angeles Water Boards and that a copy of the DEIR be made available to both Regional Water Boards **and** the State Water Resources Control Board for review and comment.

RECOMMENDED ELEMENTS TO INCLUDE IN THE ORDINANCE

The goal of the Los Angeles County Renewable Energy Ordinance is to establish regulations and development standards for small-scale and utility-scale renewable energy projects in unincorporated areas of Los Angeles County. In the high desert, the quantity and quality of water are integral components driving development, especially in the Antelope Valley area. To that end, we encourage the County to incorporate into the Ordinance elements that promote watershed management, support LID, reduce the effects of hydromodification, encourage solar development on previously disturbed lands and on rooftops, and encourage recycled water uses.

A Watershed Approach

Healthy watersheds are sustainable. Watersheds supply drinking water, provide for recreational uses, and support ecosystems. Watershed processes include the movement of water (i.e. infiltration and surface runoff), the transport of sediment, and the delivery of organic material to surface waters. These processes create and sustain the streams, lakes, wetlands, and other receiving waters of our region.

The planning area occupies the southern half of the Antelope Valley watershed, a closed drainage basin whereby all surface runoff flows towards the interior playas. Big Rock Wash, Little Rock Wash, and Amargosa Creek are the primary hydrologic features in the planning area. These surface waters drain to the north and east across the planning area and terminate at Rosamond Dry Lake. The majority of groundwater recharge occurs in these streams at the head of the alluvial fan systems, with Big Rock Creek and Little Rock Creek contributing a combined 80% of the total groundwater recharge of the Antelope Valley Groundwater Basin. With the planning area occupying roughly half of the Antelope Valley Watershed, disruption of watershed processes within the planning area has the potential to degrade the overall health of the watershed as a whole.

The watershed approach for managing water resource quality and quantity is a collaborative process that focuses public and private efforts on the highest priority problems within a drainage basin. The Antelope Valley Integrated Regional Water Management Group is a

collaborative group of stakeholders, both public and private, to address both water quantity and water quality within the Antelope Valley Watershed. A number of water management plans have been developed to date through that stakeholder collaboration process, and strategies continue to be developed and refined to sustain water quantity (i.e. imported water, stormwater recharge, recycled water uses, etc.) and to manage salts and nutrients to maintain the quality of groundwater within the watershed. The County is encouraged to play an active stakeholder role in the development of these plans and to incorporate applicable implementation strategies into their Ordinance.

Low Impact Development Strategies

The foremost method of reducing impacts to watersheds from urban development is LID, the goals of which are maintaining a landscape functionally equivalent to predevelopment hydrologic conditions and minimal generation of non-point source pollutants. LID results in less surface runoff and potentially less impacts to receiving waters, the principles of which include:

- Maintaining natural drainage paths and landscape features to slow and filter runoff and maximize groundwater recharge;
- Reducing the impervious cover created by development and the associated transportation network; and
- Managing runoff as close to the source as possible.

We understand that LID development practices that would maintain aquatic values could also reduce local infrastructure requirements and maintenance costs, and could benefit air quality, open space, and habitat. Vegetated areas for stormwater management and infiltration onsite are valuable in LID and may enhance the aesthetics of the property. We encourage the County to establish specific LID implementation strategies and incorporate these elements in the Ordinance.

Stormwater Management

Because increased runoff from developed areas is a key variable driving a number of other adverse effects, attention to maintaining the pre-development hydrograph will prevent or minimize many problems and will limit the need for other analyses and mitigation. However, traditional methods for managing urban stormwater do not adequately protect the environment. They treat symptoms instead of causes. Such practices have led to channelization and stream armoring that permanently alter stream habitat, hydrology, and aesthetics, resulting in overall degradation of a watershed.

Stormwater control measures that are compatible with LID are preferred over more traditional measures. Examples include the use of bioretention swales, pervious pavement, and vegetated infiltration basins, all of which can effectively treat post-construction stormwater runoff, help sustain watershed processes, protect receiving waters, and maintain healthy watersheds in the face of urbanization. Any particular one of these control measures may not be suitable, effective, or even feasible on every site, but the right combination, in the right places, can successfully achieve these goals. We encourage the County to establish guidelines for implementing specific stormwater control measures and incorporate those guidelines in the Ordinance. Additional information regarding LID and

sustainable stormwater management can be accessed online at http://www.waterboards.ca.gov/water_issues/programs/low_impact_development/.

Hydromodification

Hydromodification is the alteration of the natural flow of water through a landscape (i.e. lining channels, flow diversions, culvert installations, armoring, etc.). Disturbing and compacting soils, changing or removing the vegetation cover, increasing impervious surfaces, and altering drainage patterns limit the natural hydrologic cycle processes of absorption, infiltration, and evapotranspiration, and increases the volume and frequency of runoff and sediment transport. Hydromodification results in stream channel instability, degraded water quality, changes in groundwater recharge processes, and aquatic habitat impacts. Hydromodification also can result in disconnecting a stream channel from its floodplain. Floodplain areas provide natural recharge, attenuate flood flows, provide habitat, and filter pollutants from urban runoff. Floodplain areas also store and release sediment, one of the essential processes to maintain the health of the watershed.

We encourage the County to identify existing sources of hydromodification and to develop mitigation measures to minimize those impacts, as well as establish guidelines that will help to avoid hydromodification from future projects. The guidelines should include maintaining natural drainage paths of Big Rock Wash, Little Rock Wash, Amargosa Creek, and other ephemeral streams within the planning area and establishing buffers and setback requirements to protect channels and floodplain areas from encroaching development. Information regarding hydromodification can be accessed online at http://www.swrcb.ca.gov/water_issues/programs/stormwater/hydromodification.shtml.

Focus Development on Previous Disturbed Lands

We recommend that the County promote and provide incentive for renewable energy development on previous disturbed lands as part of the renewable energy Ordinance. Desert ecosystems are fragile. Biological soil crusts are common and provide a variety of functions including soil stabilization and nutrient cycling. When these ecosystems are disturbed, recovery is slow, on the order of decades. To minimize impacts to undisturbed desert lands, we encourage the County to support and promote development and reuse of previously disturbed lands, such as former agricultural lands. Such reuse can benefit environmental resources, including hydrology and water quality, by maintaining relatively undisturbed natural areas and avoiding direct impacts to established habitats and surface waters. In more urbanized areas, we encourage the County to support and promote small-scale rooftop solar development. Such development avoids impacts to water quality and hydrology, reduces the project footprint by siting the solar generating equipment closer to the end user, and reduces the need for secondary projects such as new transmission lines or utility upgrades.

Recycled Water Uses

The State Water Resources Control Board adopted the Recycled Water Policy in February 2009 (effective May 14, 2009, and amended January 22, 2013). The purpose of the policy is to increase the use of recycled water from municipal wastewater sources, in a manner that implements state and federal water quality laws, as a means towards achieving sustainable local water supplies. The Recycled Water Policy establishes goals and mandates for recycled water use. The mandates are to increase the use of recycled water

from the amount used in 2009 by 200,000 acre-feet per year by 2020 and by 500,000 acre-feet per year by 2030. Incentives for implementing recycled water projects include grant opportunities and priority funding.

In July 2009, the State Water Resources Control Board adopted General Waste Discharge Requirements for Landscape Irrigation Uses of Municipal Recycled Water (General Permit). Some of the allowable recycled water uses include: landscape irrigation of parks, greenbelts, playgrounds, school yards, athletic fields, golf courses, and cemeteries; dust control for construction activities and road maintenance; mixing concrete; and soil compaction.

The Water Board supports recycled water as a safe alternative to potable water for such approved uses as those outlined above and encourages the County to consider recycled water use as a development standard in their Ordinance. The Los Angeles County Sanitation District treatment facilities in Lancaster and Palmdale both have the technologies to supply project developers with recycled water for both construction and operational needs.

PERMITTING REQUIREMENTS

A number of activities associated with renewable energy development have the potential to impact waters of the State and, therefore, may require permits issued by either the State Water Resources Control Board (State Water Board) or Lahontan Water Board. The required permits may include:

- Land disturbance of more than 1 acre may require a CWA, section 402(p) stormwater permit, including a National Pollutant Discharge Elimination System (NPDES) General Construction Stormwater Permit, Water Quality Order (WQO) 2009-0009-DWQ, obtained from the State Water Board, or an individual stormwater permit obtained from the Lahontan Water Board;

- Recycled water use for landscape irrigation and dust control may require Waste Discharge Requirements (WDRs), issued by the Lahontan Water Board; and

- Streambed alteration and/or discharge of fill material to a surface water, including water diversions, may require a CWA, section 401 water quality certification for impacts to federal waters (waters of the U.S.), or dredge and fill WDRs for impacts to non-federal waters, both issued by the Lahontan Water Board.

We request that the DEIR recognize the potential permits that may be required of project developers, as outlined above. Information regarding these permits, including application forms, can be downloaded from our web site at http://www.waterboards.ca.gov/lahontan/.

Thank you for the opportunity to comment on the NOP. We are encouraged that the County is taking the initiative to establish long-term planning strategies for renewable energy development. If you have any questions regarding this letter, please contact me at (760) 241-7376 (jzimmerman@waterboards.ca.gov) or Patrice Copeland, Senior Engineering Geologist, at (760) 241-7404 (pcopeland@waterboards.ca.gov).

Jan M. Zimmerman, PG
Engineering Geologist

cc: State Clearinghouse (SCH 2014051016)
(via email, state.clearinghouse@opr.ca.gov)
California Department of Fish and Wildlife, South Coast Region
(via email, AskR5@wildlife.ca.gov)

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LAND VERITAS

January 14, 2014

Thuy Hua
LA County Department of Regional Planning
320 W Temple Street, 13th Floor
Los Angeles CA 90012

Dear Ms. Hua,

Land Veritas Corp. has reviewed the presentation materials and draft Renewable Energy Ordinance dated October 26, 2013 and offers this letter in response to your request for public comment, although we note that the comment period has passed.

Land Veritas owns two large properties where it is processing mitigation/conservation banks in Los Angeles County: a 317-acre site adjacent to Elizabeth Lake and the 3,852-acre Petersen Ranch. Likely consumers of the mitigation and conservation credits generated on these properties include utility-scale renewable energy developments within the banks' service areas.

As you know, Land Veritas has been working with the California Energy Commission and the DRECP on establishing mitigation standards for renewable energy projects. Attached please find a document produced for the DRECP regarding the preference for established mitigation banks.

The adoption of a comprehensive countywide Renewable Energy Ordinance presents an opportunity to reinforce the regulatory efficiency and conservation impact of mitigation banks. Banks are uniquely positioned to protect substantial contiguous ecological resources with long-term management structures. Therefore, we respectfully request that the Draft Ordinance include specific guidance on mitigation requirements via established banks. Such language might read:

> *Renewable energy projects that require habitat or waters of the U.S. or State and/or CEQA mitigation should utilize mitigation banks in Los Angeles County that have conservation easements and endowments in place to fund long-term habitat management in perpetuity.*

Thank you for the opportunity to provide these comments. Please do not hesitate to contact me with any questions.

Sincerely,

Tracey Brownfield
President

Cc: Norm Hickling
Julie Vandermost
Terry Watt

LAND VERITAS

DRECP Mitigation:
Preference for Established Mitigation Banks

- In 2008, the U.S. Army Corps of Engineers released a Mitigation Rule that continues to serve as the template for environmental impact offsets in California. The Rule articulates a clear preference for established mitigation banks and provides incentives for private and public developers who utilize these banks.

- Statewide procedures for processing mitigation banks are identified in California State Senate Bill 1148. The bill requires all mitigation banks to establish conservation easements and secure bank approval in writing from the California Department of Fish and Wildlife (CDFW).

- Pursuant to the bill, all California mitigation banks are now subject to a rigorous review and approval process by an Internal Review Team (IRT) made up of state and federal regulatory agency representatives.

- The IRT process ensures that approved mitigation banks provide full protection, enhancement, and restoration of native habitat by requiring all mitigation banks to establish long-term perpetual management plans and/or conservation easements.

- Detailed plans for long-term resource management provide mitigation credit purchasers with assurance that environmental offset resources are protected and managed in perpetuity with appropriate funding mechanisms. Due to the complexity and vulnerability of environmentally sensitive resources, such planning is essential to the sustainability of lands set aside for mitigation.

- The assembly of larger tracts of protected land offered by the mitigation bank model is strongly preferred by regulatory agencies both for its institutional efficiency and its conservation effectiveness. According to the CDFW, "Mitigation banking helps to consolidate small, fragmented wetland mitigation projects into large contiguous sites which have much higher wildlife habitat value."

- Creating new or customized structures for offset credits will require significant time and cost in resource identification, regulatory approval, and long-term management, without the assurance of support from federal and state agencies.

- **Utilizing established mitigation banks offers a *streamlined, reliable, and credible* means for the DRECP to offset large-scale environmental impacts.**

Los Angeles
World Airports

RECEIVED
JUN 09 2014
BY:

June 4, 2014

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Matthew M. Johnson
Dr. Cynthia A. Telles
Gina Marie Lindsey
Executive Director

Thuy Hua
Los Angeles County
Department of Regional Planning
320 W. Temple Street, 13th Floor
Los Angeles, CA 90012

Dear Ms. Hua,

Los Angeles World Airports (LAWA) has great appreciation for the various meetings and the mutual cooperation we have had with Department of Regional Planning staff over the past several of years. We are writing this letter to reaffirm our comments and positions in regards to the County of Los Angeles proposed Renewable Energy Ordinance. These commentaries reiterate those made to staff and we remain confident that we can collectively find solutions that address all our concerns. As a proprietary department (LAWA), of the City of Los Angeles that owns and operates Los Angeles International Airport, LA/Ontario International Airport, Van Nuys Airport, and has future plans to develop Palmdale Regional Airport (PMD). LAWA acknowledges and supports the County's goal to bring consistency and predictability to the development of renewable energy facilities.

LAWA's main concern with the draft Renewable Energy Ordinance in its current form (i.e., second draft of proposed ordinance) is that, according to Table 22.52.1620-A, Utility-Scale Ground-Mounted Renewable Energy facilities would be prohibited in areas zoned A-1 Light Agriculture. LAWA feels strongly that renewable energy development is a very worthy and compatible use within such agricultural areas, and the draft ordinance offers no basis for why it should be prohibited. Should the County have concerns about potential land and development compatibility issues associated with such renewable energy development in areas zoned A-1, such issues, if any, could be better evaluated, addressed, and likely resolved if subject to a Conditional Use Permit (CUP) requirement. An outright prohibition of this type of renewable energy facility in A-1 areas does not serve the County or the environment, especially in a day an age when a true need for access to clean alternative/renewable energy exists.

June 4, 2014

Additionally, the final ordinance should consider M-2.5 zones for ministerial review or site plan review for renewable Utility-Scale Ground-Mounted Renewable Energy projects. The M-2.5 zone is a heavy-industrial (airport) use zone that occurs only surrounding airports and does not appear to pose the residential-adjacency issues found in low-intensity industrial and agricultural zones. If the goal of the ordinance is to promote renewable energy operations while protecting residential uses from adjacency impacts, encouraging such uses where the impacts do not occur is a logical policy tool. For long range plans PMD could serve as a future regional airport; however, for the short term, LAWA is evaluating for renewable energy use, in the interim, and other economically productive limited-time uses on the property. This zone – M-2.5 - creates a synergetic land use for the property, its intended function, and the ability to use it for clean, renewable energy.

It has always been LAWA's sincere pleasure to work the County DRP team on important planning initiatives impacting the Antelope Valley such as the Renewable Energy Ordinance. If you have any questions or comments regarding these declarations or if LAWA can provide any information that will be beneficial to your planning efforts, please do not hesitate to contact us at (424) 646-5186.

Thank you,

Lisa Trifiletti
Director of Environmental & Land Use Planning
Regional Planning & Environmental Assessment

cc: Christopher Koontz
File

June 3, 2014

Leona Valley Town Council
P·O· Box 795 • Leona Valley • CA 93551

Thuy Hua
LA County Department of Regional Planning
320 W Temple St 13th Floor
Los Angeles CA 90012

Re: Renewable Energy Ordinance – May 2014 Draft

Dear Ms. Hua:

Thank you for giving us the opportunity to submit comments on the proposed Renewable Energy Ordinance as part of the scoping process. The Ordinance will dramatically impact uses, health and development in the North County area. Because of the dynamic proposed changes, it is important to provide input in order to retain our rural communities while prudently addressing how such projects shall be integrated into the existing land use framework. We held the submission of our comments until after your presentation to our community, input from residents and completion of your most recent draft. The Leona Valley Town Council reserves the right for additional review and commentary should further changes to the draft Renewable Energy Ordinance occur.

Our concerns are addressed on the pages that follow.

Respectfully,

Alice M. Wollman

Alice Wollman
Vice President
Leona Valley Town Council

Cc: Supervisor Michael D. Antonovich
Norm Hickling, Deputy to Supervisor Antonovich

<u>The following is for your consideration</u>

Section 22.08.040 D

Under definition for "decommissioning": "Decommissioning" means the removal of a use from service, which includes safe storage, dismantling, disposal, recycling, removal of concrete pads, and/or site restoration. We object to the use of the word **<u>"or"</u>** for site restoration. With respect to site restoration, how will a site be "restored"? Does this include the replanting of native plant species? How long or how many attempts shall be made to perform "site restoration"? What if the project becomes bankrupt? Will there be some sort of an escrow account? Or stipend set aside for future decommissioning?

22.52.1610 Applicability:

A. Other technologies should include solar and wind energy too.

D. (2) Replacement for maintenance purposes should specify that replacement of equipment should be of the same or lesser size/height. The size/height and footprint may not be increased.

Section 1. Section 22.08.040:

"Decommissioning": Please describe how and what is to be restored on the site once the project is decommissioned? Does this mean the 500-1,000+ year old Joshua trees that were removed or destroyed are to be replanted? What level of restoration is going to occur? We request a performance bond requirement for all renewable energy projects.

Section 3. Section 22.08.190:

With respect to a "small scale" solar energy system: How will the County determine what the necessary demand is for a single-family dwelling? How is the 150% calculated? What is the formula that determines how much energy is required to support a dwelling? Does this include secondary structures? An entire site? All of the ancillary improvements? If demand is to be used "off-site" does this mean a private residential property can develop enough energy to sell privately to adjacent properties? The sentence "Any energy generated by a wind energy system that exceeds the on-site energy demand may be used offsite" is vague. Specificity is required for this ordinance and this should not be left open to interpretation. Does this mean we can all start our own mini energy businesses on our private residential sites?

Section 4. Section 22.08.210

Utility-scale renewable energy facility, structure mounted: If each utility scale energy facility is comprised of pedestals on which the energy device is placed, does this constitute structure mounted? The definition of "structure" needs to be expanded to what it is likely intended to be: office building, apartment complex, school or other public facility.

22.52.1620 Permit Requirements

With respect to Utility-Scale Renewable Energy Facilities, Structure Mounted: All systems are a combination of structure and ground mounts.

Small-Scale Renewable Energy System: The permit process requires a minor conditional use permit for a small scale wind energy system. Will this type of CUP address protected views-capes and ridgelines? Or, will anyone and everyone be able to place these towers on a ridge or within an adjacent property's prime view? Is it permissible to place a small scale solar array on top of a ridgeline, blighting a protected ridge? What is the criteria for the site plan review? Is it merely to ascertain setback requirements?

Utility Scale Renewable Energy Facility: Because "structure mounted" has not been adequately explained, it appears that a minor site plan review is all that is required, even if some low structure is built by a developer to circumvent the conditional use permit process in A1, A2, Commercial and Manufacturing zones. While the intent of the County may be for placement on existing buildings, does this also mean if an energy Developer installs rudimentary carports that will never be used, that the CUP process is then circumvented?

Based upon a review of the chart, large scale utility projects with ground mounting systems will be supported only by those sufficiently large sites in heavy agricultural zones (A-2), commercial or industrial zones. Where in the County of Los Angeles are there sites that are sufficiently large to accommodate a large scale project? Did the County of Los Angeles determine where such sites are located? There are sites that are sufficient in size in the Santa Monica Mountains; however, most are exempt because of the coastal zone limitation as well as a scenic drive restriction. While we support these limitations, it truly is for the benefit of the coastal areas while further directing any and nearly all potential renewable energy projects to the Antelope Valley. We further assert that the majority of those lots sufficient in size to support a large scale renewable energy project (outside scenic or coastal areas) are in the Antelope Valley. This appears to be a fact rather than a statement as the County of Los Angeles Planning Department has emphasized outreach for the Renewable Energy portion of the County Plan to the Antelope Valley. While we understand that the County is under an obligation to produce a certain amount of renewable energy, it appears District 5 of Los Angeles County is shouldering, by percentage, nearly the entire burden.

The Antelope Valley has a very high unemployment rate and family incomes are already below the state average. The Antelope Valley, as a whole, is an economically disadvantaged area and renewable energy projects do not produce permanent, high paying jobs. Furthermore, the increased amount of dust produced by these projects increases the risk of Valley fever in an already economically disadvantaged area. "A review by the CDC (Goodman, 1994) of the

medical records in Kern County, California showed that coccidioidomycosis accounted for approximately $66 million in direct costs of hospitalization and outpatient care during the period 1991-1993." (USGS report) The large scale utility projects will not provide energy to the Antelope Valley, but will service more affluent areas in the Bay area, Los Angeles and beyond. With respect to CEQA and NEPA, the Antelope Valley will receive disparate impacts in the form of socioeconomic discrimination on low income communities. These communities already bear the brunt of disproportionately high environmental burdens, and will continue to do so based on how the County Renewable Energy Plan inadvertently or purposely directs by statute the large scale utility projects to the Antelope Valley. This Plan makes it easier to build harmful projects in low-income areas. There is a pervasive pattern of siting the most dangerous, environmentally degrading facilities in communities with predominantly low-income residents and minorities. This trend is driven in large part by zoning requirements, low property costs, and the fact that many low-income communities lack the political clout and/or education to effectively oppose these projects.

22.52.1630, Standards for Small Scale Solar Energy Systems

Item "B" states that the height shall not exceed the zone by more than 5 feet. Please address where and how this measurement is applied, even if contained elsewhere in the County code.

22.52.1640. Standards for Temporary Meteorological Towers

Access Roads: Please provide a standard for temporary access roads with ingress/egress points. Does this mean that these roads will require temporary grading? A grading permit? Please address the issue of runoff, land/mudslide and dust. Will such facilities be permitted in a landslide or liquefaction zone?

Setback Requirements: there is a failure to consider the bounce and/or roll of the tower apparatus, which will exceed the 1.25 system height;

Maintenance: Please identify a minimum schedule for maintenance. What is "regularly scheduled"? Is that weekly, monthly, yearly?

22.52.1650 Standards for Small-Scale Wind Energy Systems

During the Plan presentation before the Leona Valley Town Council meeting we discussed the noise of a small scale system. According to our own environmental expert, 60 dBA SEL is the equivalent noise level of a heavy traffic street. This figure has not been reduced, although discussion and facts were presented to the County at our Town Council meeting. If there are multiple towers contained in one small community, the noise will be overwhelming, particularly in a town with hillsides bordering a valley on multiple sides (like Leona Valley) which will exacerbate the high noise levels.

22.52.1660. Standards for Ground Mounted Utility-Scale Renewable Energy Facilities

Access Roads: Please provide a standard for temporary access roads with ingress/egress points. Does this mean that these roads will require temporary grading? A grading permit? Please address the issue of runoff, land/mud slide and dust. Will such facilities be permitted in a landslide or liquefaction zone?

Fencing: Non-opaque fencing is permitted; as is fencing of eight feet in height "regardless of any other fencing standards." Many Community Standards Districts have fencing guidelines in order to create an open, non-view obscuring environment. This standard now trumps what is considered a community value.

Fencing of solar facilities, building roads and transmission lines will transect enormous portions of habitat, and impede movement of wildlife who travel through "wildlife corridors" that, according to the Western Governors Association, have never been adequately mapped. There is concern that this transection will further isolate interconnected habitats, and create "islands" of parkland and protected areas that will reduce biodiversity.

Drought tolerant native or non-native vegetation: How is it determined to be infeasible? Is insufficient water supply a cause for not requiring vegetation? By the way, if water is insufficient, then the project should not be placed in the location. Please explain how or why plantings would be infeasible.

Light sensor or motion sensor lighting for the main facility: Should comply with the Dark Sky standard of unincorporated Los Angeles County.

Setbacks: 30 feet in agricultural zones is insufficient to allow for bounce and roll.

Signs: Please state minimum and maximum size of the signs.

Site disturbance: It is stated that existing vegetation may be removed (except for root systems), but sensitive or unique plant species are not addressed. Existing policy resulted in the clear cutting of a Joshua tree grove off of West Avenue "M" as this industrially zoned site had no environmental restrictions as a result of the County policy. If this were a grove of oak trees, there would be permits pulled and mitigation for the removal of each oak tree, yet in the world, Joshua trees are rarer and a unique species only found in the Mojave Desert. It is impossible to replace a grove of Joshua trees by the nature of the species, which grows only one to three inches per year. A fifty foot tall tree is minimally 200 years old, yet the County has failed to implement

a strategy to protect Joshua woodlands and the lack of policy to protect these indigenous species will further degrade an already at risk environment.

An additional issue with site disturbance is that clearing of desert vegetation can invite invasive species that can escape developed areas and spread and further disturb sensitive desert species. A mitigation requirement should be in place to prevent invasive plant species from spreading off site.

Fugitive Dust Emission: The Plan addressed fugitive dust during construction, but not after construction is completed. Dust storms emitting from renewable projects in the West Antelope Valley off of Highway (138) have resulted in blindness to drivers and put the general public at risk due to the increased risk of transmission of Valley Fever, asthma and other ailments.

C. immitis grows in the upper (5 - 20 cm) horizons of soils in endemic areas" Although some growth sites have been identified, their distribution and recognition throughout the entire endemic area of the southwestern U.S. is poorly known.

Water Quality Protection: Shall the projects be permitted to use herbicides? How will weeds be cleared? What efforts will be made to protect the ground water as the result of use of potential herbicides?

Impacts to Birds and Bats: The County of Los Angeles is relying exclusively on the State guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development; however, the "guidelines" have not satisfied issues at other facilities, including one facility (Kern County/DWP) that has the highest song bird kill rate in the United States. Furthermore, the County has failed to address any plan to protect migratory birds from solar facilities.

In February 2014, the Wall Street Journal published an article regarding solar arrays catching migratory birds on fire. There are two large issues that will be difficult, if not impossible to mitigate and the County should address in advance of any policy from the State of California. The large collection of mirrored solar arrays has resulted in bird wings getting singed or catching fire. "U.S. Fish and Wildlife Service told state regulators that they were concerned that heat produced by the project could kill golden eagles and other protected species. The agency also is investigating the deaths of birds, possibly from colliding with structures, found at two other, unrelated solar farms. One of those projects relies on solar panels and the other one uses mirrored troughs. Biologists think some birds may have mistaken the vast shimmering solar arrays at all three installations for a lake and become trapped on the ground after landing." The article refers to solar farms located here, in the Mojave Desert. The Antelope Valley is classified as an internationally recognized Important Bird Area. The solar developments are now hop-

scotching across the West Antelope Valley (rather than clustering) in such a manner that there will be no safe migratory areas, even with suitable nesting habitat, thereby creating eco-traps in which birds are encouraged to breed and flourish but will most assuredly reach death as a result of the renewable energy contiguous location. This will have a ripple affect across the animal food chain.

Set Back for Facilities Using Wind Resources: the chart recommends two times the facility height. On multiple occasions, wind turbines have fallen off of high towers, and have had accelerated rolls and over-turns onto Highway 58, where the largest wind energy plants are located. Two times the height does not address bounce or a potential defect in the wind turbines and can result in danger, if not death, to members of the general public.

NOT ADDRESSED IN DRAFT

Environmental Mitigation

We have observed that mitigation is required on large scale solar projects. In fact, a most recent approval required a mitigation of 2 acres for every 1 acre destroyed. However, the County failed to address how and in what time frame this is to be mitigated. The mitigation was required over a period of 40 years, but it did not state the mitigation should be done in advance of the permit. The solar company took this to mean that they could mitigate a couple acres each year until the end of forty years. There is specific LEGAL language that is required for mitigation in the environmental permitting process. The County Planning Department does not appear to have obtained legal input from an expert in environmental law. This language should be prepared in advance of the approval of the Renewable Energy plan. Language such as “fully endowed”, “in advance” are all pertinent features. Often, there is a risk of bankruptcy on these projects, therefore, performance bonds and an endowment must be required. Additionally, with mitigation on a per acre basis, the mitigation should take place in the area in which the environmental degradation has occurred.

Because the majority of renewable energy projects will require mitigation, it is important to incorporate a mitigation banking standard as part of the proposed Renewable Energy Ordinance. It is recommended that all renewable energy projects that require habitat or waters of the Federal or State and/or CEQA mitigation should utilize mitigation banks in Los Angeles County that have conservation easements and endowments in place to fund long-term habitat management in perpetuity.

The County should be mindful that allowing utility-scale solar facilities on thousands of acres of land primarily in one area (Antelope Valley) is akin to scraping clean and fencing thousands of acres of desert habitats that can never be restored, much like primeval forest once cut can never be "primeval" again.

Significant Ecological Areas

The document does not address the development of renewable facilities in Significant Ecological Areas. While it unlikely to prohibit such development, there should be an additional layer of protection for those significant areas through a conditional use permit process, including an environmental study, regardless of the zoning. Utility scale Renewable Energy production *is* an industrial use.

Conversion of Prime Farmland

The proposed plan encourages the conversion of prime farmland into renewable energy development. What is important is we don't allow this 21st century 'Gold Rush' to get out of hand and jeopardize our food security, our watersheds, habitat areas and health to future generations. We don't have to put large-scale solar on prime farmland just because it is close to a substation. Presently, many farmers in the West Antelope Valley have allowed their land to go fallow in order to join the 21st Century gold rush for renewable energy. This is resulting in the conversion of a rural lifestyle into a temporary financial gain for a handful. Once other, more reliable, energy producers are created at a lower cost, the large footprint of renewable energy will place a permanent scar on the Antelope Valley, regardless of decommissioning rules. The rich rural history of the Antelope Valley will become just that, history.

Fire

The County proposal fails to address issues pertaining to renewable energy development in areas classified for High Fire (Class IV) Severity Area or a High Wind Severity Area. For example, should an area with High Fire and Wind Severity be developed with 500 foot tall wind energy towers, the surrounding communities will be put at risk as emergency aircraft will not be able to access the area and exit routes for communities will be hampered if not blocked, putting the public at extreme risk.

Ground Water Depletion

Desert wildlife is dependent on surface water, springs, seeps, creeks, wetlands, and seasonal streams. Little, if any, rainfall percolates downward to reach the water table. Pumping on utility scale or by cumulative numbers of smaller operations will cause groundwater depletion and loss of surface water that would be devastating to fish, plants, riparian communities, birds, reptiles, mammals, and microscopic organisms living in the desert soil, causing collapse to ecosystems that depend on these resources. Please address preventative measures with respect to this issue.

Structure Testing

Wind energy tower structures should be engineered and tested to withstand the strongest of historical wind events.

Placement Restriction

Restrict placement of solar facilities to areas directly adjacent to sources of water that are transported from outside the area via aqueduct or pipeline, so no groundwater pumping need occur, or require water to be hauled via truck tanker. (This can offset the benefit of renewable energy, when truck trips are factored in.)

Installation Types

In the rush to meet the high demand for renewable energy projects at a low cost, some Developers are obtaining solar panels from foreign manufacturers. Due to the demand for solar panels, manufacturers in China are reportedly cutting corners, and as a result, are seeing high failure rates. It is feasible that with a high failure rate due to a lower quality work product, a Developer could walk away from a project, particularly if government subsidies are eliminated. Furthermore, some foreign manufacturers are using lead components that leach into the soil. Therefore, it is most important to obtain a bond or some other means of guaranteeing decommissioning a project; second, it is also important to complete soil studies for those Developers using foreign components, both for testing for lead deposits that could leach into the ground water; and to ascertain if on site pesticides have leached into the soil.

Air Quality

Studies indicate that the desert is valuable as a carbon sink. Will the large-scale removal of vegetation required for solar plants seriously reduce this value? Evaluation of the cost/benefit of this loss should be weighed against the value of the so called renewable energy produced. Assure that loss of a project's carbon dioxide sink's capability will be completely offset and produce a clear net carbon dioxide reduction benefit. Monitor, and review in an ongoing way, a solar plant's carbon footprint.

Nearly all of the areas included in the West Mojave Plan (which includes the Antelope Valley) have recorded concentrations of pollutants in excess of national and state ambient air quality standards for PM10 and a variety of others. In addition, the presence of numerous new dirt roads invites vehicle trespass that would compound the problem of particulates in the air. Construction and maintenance activities will cause serious air quality issues for wildlife and human inhabitants of the desert. Vast amounts of water will be required to subdue dust. Water, as a dust mitigation measure, could have a reverse impact and subsequent consequences as it helps in the propagation of the arthroconidia (spores) of Coccidioides immitis This plan should include a mechanism to prevent off-road use; and trip/travel reductions during and after projects have been constructed.

Consider all impacts of air pollution, including drift from other areas as total to that area, regardless of the source, when evaluating solar projects. Do not allow subtraction of transported ozone in determining attainment and non-attainment areas.

Refuse multisource projects that use a small portion of solar energy production to facilitate approval and then use natural gas or some other greenhouse gas producing fuel to make electricity. Solar plants should be one hundred percent solar-only, and should only be considered for facilitated permit processes.

Separately Analyzing Aspects of the Total Project is Piecemealing

The County of Los Angeles is creating this Renewable Energy Plan as part of the General Plan, which is presently being updated. At community meetings throughout the Antelope Valley we were also told that the "plan" was being created due to the need, the high demand and creation of renewable energy projects in the County of Los Angeles as part of the mandated and established Renewable Portfolio Standard (RPS) by the State of California.

During the September 29, 2011 LADWP Barren Ridge scoping meeting in Leona Valley, the community was informed of other potential projects by energy developers that are presently in the LADWP "queue", waiting in line in the event this project is approved. A similar circumstance had arisen with Southern California Edison's Tehachapi Renewable Energy Project. Wind and solar renewable energy projects were in Edison's "queue" and are now being executed with plans to connect to the new Edison 500kv transmission lines. The cumulative impacts were never assessed or addressed. Upon the Record of Decision, these projects began a permit process and were therefore, a foreseeable event in violation of the California Environmental Quality Act. Based upon immediate past events we believe those projects in the County "queue" as well as solicitations not yet in the system, should also be considered as part of the whole project, with plans to connect to the LADWP/Edison transmission lines. The projects in the "queue" as well as this proposed County Renewable Energy Plan are in fact part of the whole action.

The Los Angeles County Renewable Energy Plan proposal, the LADWP Barren Ridge Project and the Tehachapi Renewable Transmission Project are part of the same mandated and established Renewable Portfolio Standard (RPS) by the State of California. As such, all of these projects are part of the same cumulative impacts of the same action. When completing an environmental study of all of these issues, the County planning department must address the cumulative impacts to the Antelope Valley as the result of their "plan" which coincides and, in fact, helps implement all of these renewable energy projects in one specific area in the County of Los Angeles. These projects need to fall under review of a separate environmental impact report that should be undertaken specifically for the Antelope Valley.

CEQA defines "project" as "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonable foreseeable indirect physical change in the environment…." (CEQA Guidelines, § 15378, subd. (a); see also CEQA Guidelines, §15063, subd. (a)(1) {the lead agency must consider "all phases of project planning, implementation and operation.}). NEPA similarly requires that the DEIS succinctly describe the environment affected. (40 C.F.R. § 1502.15) An Agency cannot treat one project as a succession of smaller projects, none of which, by itself, causes significant impacts. (Burbank-Glendale-Pasadena Airport Authority v. Hensier (1991) 233 Cal. App. 3d 577, 592{"CEQA mandates environmental considerations do not become submerged by chopping a large project into little ones"}; see also NEPA mandate that connected projects be included in the DEIS, 40 C.F.R. § 1508.25, subd. (a); Blue Ocean Preservation Society v Walkins (D. H1.1991) 754 F. Supp. 1450.)

A project description must include all relevant parts of a project, including reasonably foreseeable future expansion or other activities that are part of the project. (Laurel Heights I, 47 Cal. 3d at 396.). The California Supreme Court in Laurel Heights I stated that "an EIR must include an analysis of the environmental effects of future expansion or other action if "(1) it is a reasonably foreseeable consequence of the entire project; and (2) the future expansion or action will be significant in that it will likely change the scope or nature of the initial project or its environmental effects." (Id.). The lack of one concrete project description violates CEQA in that it precludes the public from intelligent participation in the analysis of the project (County of Inyo v. City of Los Angeles (1977) 71 Cal. App. 3d 185, 197). (See also NEPA requirements regarding connected actions, 40 C.F.R. §§ 1508.7, 1508.8, 1508.23, 1508.25, subd. (a)(2) and subd (c).) The proposed Renewable Energy Plan is, in fact, incorporating and part of several projects, including proposed renewable energy projects. The "Plan" is being created as a result of the TRTP and Barren Ridge projects. Thereby, this Renewable Energy Plan is part of a larger project, and as such, is a reasonably foreseeable consequence of the initial project, the mandated and established Renewable Portfolio Standard (RPS) by the State of California.

Further, piecemealing results in an inaccurate project description because essential pieces of the project(s) are not included. "An accurate project description is necessary for an intelligent evaluation of the potential environmental effects of a proposed activity." (Burbank-Glendale-Pasadena Airport Authority, 233 Cal. App. 3d at 592.) "A curtailed, enigmatic or unstable project description draws a red herring across the path of public input" (County of Inyo. 71 Cal. App. 3d 185 at 193; McQueen v Board of Directors (1988) 202 Cal. App. 3d 1136, 1143 overruled on another point in Western States Petroleum Associates v. Superior Court (1995) 9 13 Cal. 4th 559, 570, fn 2; Mira Monte Homeowner's Association v County of Ventura (1985) 165 Cal. App. 3d 357, 365.). Because the project description is limited by piecemealing, the public and decision makers are being deprived of the ability to understand impacts from the synergistic

effects, conflicts and cumulative impacts of all of the collective projects associated with the renewable energy plans that were created as a result of Barren Ridge and the Tehachapi Renewable Energy projects. This includes the proposed Renewable Energy Plan for the County of Los Angeles.

From: Peacher, Kimberly N CIV NAVFAC SW, ESWD
To: Thuy Hua
Cc: "KIERNAN, SCOTT E NH-03 USAF AFMC 412 TW/XPO"; Hulse, David S CIV NAVFAC SW
Subject: RE: AF Comments: Draft Renewable Energy Ordinance
Date: Monday, May 05, 2014 12:13:55 PM

Hello Thuy,

As previously mentioned we had only a few comments below from our last review of the draft ordinance back in November 2013. Recently I saw that the DEIR preparation notice came out. To the extent required please include a discussion in the DEIR of our military operations and the need for coordinated review of all projects in and around military operating areas.

Please let me know if you have any questions. Thank you.

V/R,
Kimberly N. Peacher
Intergovernmental Planner
NAVFACSW Intergovernmental Branch AM-3
1220 Pacific Hwy, San Diego, CA 92132
DSN 522-1187 COM 619-532-1187
kimberly.peacher@navy.mil

-----Original Message-----
From: KIERNAN, SCOTT E NH-03 USAF AFMC 412 TW/XPO [mailto:scott.kiernan@us.af.mil]
Sent: Tuesday, November 26, 2013 10:44 AM
To: Hua, Thuy
Cc: HUGHES, TIMOTHY W GS-14 USAF AFMC AFLCMC/OL-AF Plant 42; PERRY, MICHELLE R NH-03 USAF AFMC 412 CE/CENPL; HASELTINE, SUSAN B NH-03 USAF AFMC 412 CE/CEVA; ARENSON, STEVEN L GS-14 USAF HAF AFCEC/SAF/IEE REO SF; PADO, JOSEPH E GS-13 USAF AFMC HQ AFMC/A7NX
Subject: AF Comments: Draft Renewable Energy Ordinance

Hi Thuy,

I am providing a submission of recommendations from the Air Force on the Los Angeles County Draft Renewable Energy Ordinance. As always, thanks for allowing us to be part of the process.

If you have questions or comments, please contact me.

VR,

Scott----------

_____

Scott Kiernan

Sustainability Officer/

Encroachment Prevention Mgmt

412 TW/XPO, Edwards AFB

O: (661) 277-3792

C: (661) 810-6662

Section 3 (Page 3 of 21) - Recommend an adjustment to refer to the energy use by the principle use on the subject or adjoining parcel.

Section 22.52.1610 (B) (Page 6 of 21) - Recommend addressing applicability of standards to applications filed prior to ordinance enactment, but not yet approved.

Section 22.52.1620(A) (Page 7 of 21) - Recommend integration of subject subsection with 22.52.1660(B) to improve and expansion of applicability of civilian aviation reviews in 1660(B) to both small scale wind energy systems and utility scale renewable energy facilities, ground mounted. Request location map required under 22.52.1620(A)(1) identify GPS coordinates (and/or latitude/longitude) and elevation for each wind tower with blade extension.

Section 22.52.1620(A)(1) (Page 8 of 21) - Section 22.52.1620(A)(1) paragraph line 5 on pg. 8: change Air Force Plant to read Air Force Plant 42.

Section 22.52.1620(A)(2) (Page 8 of 21) - Section 22.52.1620(A)(1) requires the Department of Regional Planning provide notice to aviation related agencies 60 days in advance of the scheduled decision by the Reviewing Authority. This section however requires that a response be provided 30 days following the distribution of notice for it to be considered by the Reviewing Authority. Since most conditional use permits are statutorily required to be subject to public hearing, any written testimony should be of-record and subject to consideration by the Reviewing Authority. We recognize that earlier submittal of response will permit proper consideration of any objection within a staff report; however consideration by the Reviewing Authority should be afforded for any comments submitted prior to a decision.

Section 22.52.1460 (A) and (C) (Pages 9 and 10 of 21) - Department of Air Force recommends the adoption and application of standards adopted by the Federal Aviation Administration on 20 June 2011 (http://www.gpo.gov/fdsys/pkg/FR-2011-06-24/html/2011-15746.htm) for future publication in Advisory Circular No. 70/7460-1 recommending that meteorological towers less than 200 Feet AGL be marked with alternating bands of aviation orange and white paint and that high visibility sleeves be installed on the outer guys with high spherical marker balls of aviation orange color. Towers greater than 200 feet AGL remain subject to FAA review jurisdiction.

Section 22.52.1460(F)(Page 11 of 21) - Recommend consideration of new micro turbine technology which provides for attachment and integration of wind energy technology onto habitable structures. The current definition of wind tower does not appear to make a sufficient distinction which would permit multiple uses of this technology.

General comment: Section 22.52.1650(C)(2)(Page 13 of 21) - the requirement for a fenced enclosure of guy wire anchors appears unnecessary. Similar requirements are not imposed on power pole guys anchors.

General comment: Section 22.52.1660(G)(Page 16 of 21) - Minimizing the removal of vegetation for ground mounted utility scale solar electrical generating facilities is not consistent with industry best practices. Vegetation within a solar array can represent a wildfire safety risk and hazard to fire suppression efforts. Recommend mandatory use of dust suppressants and soil stabilizers as provided for under this subsection 4 during construction and operation, including periodic renewal of application as may be required to control fugitive dust emissions as a conditional use requirement.

From: Los Angeles County Department of Regional Planning [mailto:thua@planning.lacounty.gov]
Sent: Wednesday, October 16, 2013 2:40 PM
To: KIERNAN, SCOTT E NH-03 USAF AFMC 412 TW/XPO
Subject: Community Meeting - Draft Renewable Energy Ordinance

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October 16, 2013

Good afternoon,

Community Meeting

A community meeting has been scheduled to discuss the Draft Renewable Energy Ordinance. We will be providing an overview of the ordinance contents, project status, and answer questions specific to the proposed regulations. We encourage you to review the draft and invite you to attend the community meeting scheduled as follows:

Saturday - October 26, 2013

9:00am

Antelope Valley College - Performing Arts Theater

3041 W Avenue K

Lancaster, CA 93536

The closest parking lots on campus to the Performing Arts Theater are Lots 3 and 5. Daily parking permits cost $0.50 and are available at vending machines found in each lot. Parking without a permit may result in a $33 parking citation. A map to the meeting location is provided here <http://r20.rs6.net/tn.jsp?e=001QvHFJweua-bKQQB9Ogn4D-bRWa7MkwvBTPSQhXN-SAfjucMkg8-17mmtwf33UI1PKsUnjMCXxRn9wl_riIoC8h-wYaF_nBUFPBBL68hPwiWxOj15uTmYDqMoEquU5KND_fsucYho3Nk_Qe5tzfwXTL1EPg6RQzGuAIx7zV9k3NOqKufu0usoi3fHnNASzUrxpMFDyYiDQYpfk0jrZY3t8PULDBLEe5MemsfxStHpVOXWoyDadXZUVDiWc-bgN2vXd4Q5ijMJzPiN9mKb2vuGkXvL_IVG4fBRDIeBr8SES85m27MIBS8DZVDDppA9hFiSEo_ZDrUhr-XtqQBcBrpMsOFI5yZR8kjh> .

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Ordinance*

The Los Angeles County Department of Regional Planning is currently drafting regulations to guide the development of renewable energy in the unincorporated areas of the County. The intent is to provide baseline standards that support and facilitate the responsible development of small-scale systems and utility-scale facilities in a manner that minimizes potential safety and environmental impacts. The Draft Renewable Energy Ordinance is now available for public review and comment. It is available for download at http://planning.lacounty.gov/energy <http://r20.rs6.net/tn.jsp?e=001QvHFJweua-aEyELGH2JgaZS9TPjj-AWld-ZvqNLuJ6fj72FcEB16IjBTN-tole_uGWzNg-lP_Q89m_qLUFC4SjSGCWD47vOoFJB4PZ_5HAHYnVGxoAj3_A0EIws7oY7I_ZjyUL0ZZwdCkCzeTwNq96MHhbW-OAkYxnrjApmQj0jxMNlA9YUuJ_8pJeNWDPfy0FaVlUOT9f1Mh57PVDZUniQfurPzkdmT4asUkc7U5Kvnhv66Uj53JcCfcETcSwlNbQXjgE9GsWQGRKeyUlwXtnnCZOj_D6eEn-xxFSQDQu4=> , with a direct link provided here <http://r20.rs6.net/tn.jsp?e=001QvHFJweua-Zmh-PwXZGu3CRa6itRa2gtGA2Ae_YT1vcaUu08B3fauXztDHwvc4k5C3Ghin8DlQwJ9svkDENVV2IwMsf_DpRCWE2wJaCOB-zlRFM7SPRxW-dF8uMGAG0ilwyv4lkPFDXYyhCZJbh0dq2NcLNntUm_NRWcRTi6ui9N2lyIjV8bN7xLrtrgrHxMO0HK0a1S2ThEE4Fa1ebQS64fIm_bhbSepJvXbdVQ9cTHM7pnye5OQxGZy7oZskABHhjchjwkTlyAMw800Y80aSkOCGOmY2-Qdzu6_wJn53GACcyN9fnMZej1Em_yiSTzkZrdSwtSj5z5AerrccoRnqzvjnrQf9NUeJlED6FwL48=> .

*No development is being proposed by the County through this ordinance. It will establish rules for those who wish to develop small-scale systems or utility-scale facilities to produce energy using renewable resources such as solar and wind.

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Contact

Please send your questions and comments regarding the Draft Renewable Energy Ordinance via email or postal mail to:

Contact: Thuy Hua

Email: thua@planning.lacounty.gov

Postal Mail: LA County Department of Regional Planning

320 W Temple St 13th Flr

Los Angeles, CA 90012

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Los Angeles County Department of Regional Planning | 320 West Temple Street 13th Flr | Los Angeles | CA | 90012

SENT VIA EMAIL
June 4, 2014

Planner Thuy Hua
Los Angeles County Department of Regional Planning
320 West Temple Street Thirteenth Floor
Los Angeles, CA 90012

Dear Ms. Hua,

Subject: Renewable Energy Ordinance Draft 2

We appreciate the opportunity to comment again on the Renewable Energy Ordinance (REO). We have grave concerns about the rapid industrialization of the Western Antelope Valley due to the construction of utility-scale solar installations and the consequent negative impacts to the Antelope Valley California Poppy Reserve and other protected open spaces. Both existing and proposed Los Angeles County planning documents emphasize the importance of preserving the "rural character" of the area while also ensuring "compatibility of development adjacent to state and regional parks" (from the Los Angeles County Regional Planning's General Plan Land Use Element Policy). Yet we see no language in the current draft of the REO that reinforces these approved planning goals. Instead we do see emphasis placed on protecting viewsheds along the coast with no mention of the importance of other scenic inland viewsheds. This is not equitable.

In addition, the draft REO does not reflect current standards for setbacks for utility-scale wind installations; allows wind energy proponents to mislead the public concerning energy production; and needs additional language in the section on "Site disturbance" concerning the proliferation of non-native species.

VIEWSHED

Located in the Western Antelope Valley, the Antelope Valley California Poppy Reserve is a popular destination park for large numbers of Californians and tourists from throughout the world. Thousands of visitors come to the Poppy Reserve every spring to experience firsthand the spectacle of vast carpets of native wildflowers. Visitors include travelers from all over the country and all over the world. A century ago, Californians could view colorful scenes like these in many places throughout the state. Now only one landscape in California is specifically dedicated to preserving the unique scenic experience provided by expanses of California's vibrant orange state flower, the California Poppy, thriving in the Western Antelope Valley amongst the gold, magenta, lavender and purple displays of numerous other native California wildflowers.

Poppy Reserve visitors photograph these floral survivors with the magnificent views of the majestic Tehachapi and San Gabriel Mountains in the background. Millions of family photographs like these, taken for over a generation from the park's hiking trails, may soon

be a thing of the past. The Poppy Reserve, established due to the dedicated efforts of Antelope Valley residents and other Californians like them who realized the importance of protecting a remnant of California's once vast inland scenic treasures, is headed for a crossroad. The rapid renewable energy industrialization of the Antelope Valley, particularly in the west where the Poppy Reserve is located, poses grave threats to these scenic treasures.

Damage to the viewshed will greatly diminish the visitor experience at the Poppy Reserve. The Reserve is on elevated land in the area of the Fairmont Buttes. Hiking trail viewpoints look down and across the surrounding landscape to the mountains of the Angeles Forest and Tehachapi Mountains, views much photographed by park visitors.

Both proposed and existing county planning documents recognize the importance of protecting scenic resources such as state and regional parks. The Los Angeles County Regional Planning's General Plan (1980) Land Use Element Policy states the following goals:

> "Prevent inappropriate development in areas that are environmentally sensitive"
> "Establish and implement regulatory controls that ensure compatibility of development adjacent to …State and Regional Parks."

Los Angeles County Preliminary Draft Antelope Valley Area Plan
Goal COS 19 states that, **"**New development meets open space objectives while maintaining rural character." Policies listed under this heading consistently emphasize that development incorporates strategies that

> "preserve rural character"
> are "consistent with a rural environment"
> and "maximize protection of environmental and scenic resources."

Goal COS 18 addresses **"**Permanently preserved open space areas throughout the Antelope Valley." Policies under this heading state the need to preserve open space in SEAS and "other sensitive habitat areas, scenic resources and lands adjoining preserve, sanctuaries and State and National Parks."

However, the draft REO does not reflect the above stated goals regarding protecting these scenic resources. Instead, in regarding potential impact to viewsheds the draft REO states mentions only scenic drives and coastal views (pages 17 – 18):

> Any utility-scale renewable energy facility that is placed within the viewshed of a Scenic Drive identified in the General Plan or in an applicable Area Plan

> or Community Plan shall be analyzed for its visual impacts, and appropriate conditions relating to siting, buffering, height, and design of the facility may be imposed to minimize significant effects on the viewshed;
> Within the Coastal Zone, the placement of any utility-scale renewable energy facility shall not obstruct public views of the ocean from a scenic element (i.e., significant ridgeline, scenic route, scenic area, scenic viewpoint) identified in the applicable local coastal plan unless specific provisions for such siting are provided for in the applicable local coastal plan and coastal development permit or longrange development plan.

The preceding does not mention the viewshed of state and regional parks or the importance of providing "maximum protection of environmental and scenic resources." It also does not mention, as does the proposed county plan, of the importance of analyzing potential impact to "other sensitive habitat areas, scenic resources and lands adjoining preserve, sanctuaries and State and National Parks."

The ordinance needs to clearly state the importance of protecting the viewshed of these scenic resources. A requirement to analyze potential impact to public views that mentions only coastal California vastly underserves the need to protect inland scenic resources as well. We suggest this change to the draft REO so that it reflects existing Los Angeles planning goals (suggested additional language in bolded italics):

> Any utility-scale renewable energy facility that is placed within the viewshed of a Scenic Drive identified in the General Plan, ***scenic resources and lands in the viewshed of preserves, sanctuaries and state and national parks or forests*** or in an applicable Area Plan or Community Plan shall be analyzed for its visual impacts, and appropriate conditions relating to siting, buffering, height, and design of the facility may be imposed to minimize significant effects on the viewshed;

In addition, all industrial energy plants proposed for the viewshed of these protected public places must also include visual simulations of the damage to the viewshed from Key Observation Points (KOPS) in these parks. Those key observation points must be identified by state park personnel **after** viewing project maps of any proposed wind or solar renewable energy installations. KOPs identified without prior access to project maps are useless. All visual simulations must also accurately display proposed fencing, roads, buildings and any above ground electrical lines.

Visitors come to the Antelope Valley California Poppy Reserve for an almost purely visual experience. The essence of that experience would be radically altered by the construction of industrial energy installations in its view shed. The most accurate representation of this radical alteration, in the form of accurate visual simulations must be created so that all interested parties have a clear representation of what would be lost if industrial energy projects are constructed in the park view shed.

A requirement for visual simulations including KOPS identified after full access to project maps is missing from the current draft of the REO and should be included.

Further, RE project maps should also fully label nearby protected areas including state parks, land held by conservation groups and the Angeles National Forest so that the full impact of proposed projects will be fully disclosed to all interested parties including those not familiar with the biologically protected areas in the Antelope Valley.

A requirement for full and inclusive labeling of all conservation areas such as state parks and the national forest near proposed RE projects on all project maps is missing from the current draft of the REO and should be included. Without this requirement, project proponents are able to mislead the public concerning the impact that the siting of their projects will have on nearby protected areas.

INVASIVE SPECIES

Invasion of non-native species including Russian thistle, European grasses and non-native species of mustard is a pressing concern at the Poppy Reserve. These opportunistic species are among the first to sprout on cleared terrain. In Lancaster, growth of these invasive plants underneath and adjacent to solar panels is common. If this growth is not vigilantly eradicated the threat of such species spreading outward into the Poppy Reserve will exacerbate the demand for control efforts on the Reserve and lead to increased detrimental competition with native annuals.

Section G "Site Disturbance" of the REO should require project plans for utility-scale solar installations to include a plan for ongoing maintenance to prevent the growth of non-native species.

ENERGY PRODUCTION

Current practices by proponents of utility-scale wind and solar energy mislead the public concerning the actual amount of energy that will be produced. It is of utmost importance that the REO includes provisions that end this misleading practice by requiring full transparency concerning the project's rated capacity versus predictions of actual megawatt output. For example, a typical wind energy project plan includes only the rated

capacity by stating that its project represents a 300-megawatt facility with “enough energy to power more than 114,000 houses.”

Not clarified is that the actual anticipated average output will be far less than 300-megawatts “rated capacity.” and thus this energy plant will never produce all of the energy needed by 114,00 houses. “Rated capacity” represent the maximum energy produced under optimal conditions. For wind installations this will occur only when the wind is blowing at optimal speeds (typically 30 to 55 mph) and for solar, during the day with no cloud cover. For the purposes of establishing Power Purchase Agreements (PPAs) with utility companies wind energy companies in Scotland and elsewhere typically contract for 30% of the “rated” capacity and solar installations also contract for far less than “rated capacity.”

To allow utility scale alternative energy to describe their proposed projects only in terms of rated capacity dramatically misleads the public.

To prevent this misleading practice, the REO should require that project proponents describe projected energy production that reveals the actual amount contracted for with utility companies through the Power Purchase Agreement, using PPA figures in place of rated capacity. The use of rated capacity should be eliminated from renewable energy project descriptions so that the public will not be misled concerning actual expected energy output of proposed utility-scale renewable installations.

SETBACKS

Setbacks proposed by the draft REO remain inadequate and do not reflect latest practices in comparable counties throughout the country also currently experiencing alternative energy development adjacent to scenic public areas and private residences.

Ostego County, New York: “Sensitive environmental areas shall have a setback of between **2 to 5 miles** and shall be determined by the Otsego County Planning Commission and the Department of Natural Resources.” (This county also limits turbine height to 200 feet) **“Scenic** areas, including parks, highways, recreational areas, and others as determined by the County and Townships, shall have a setback of not less than **1 mile.”**

Umatilla County, Oregon: Newly adopted wind energy ordinances require a **2 mile** setback from a “city urban growth boundary” and a **1 mile** setback for land zoned “unincorporated community.”

Goodhue County, Michigan and Barnsdale County, Massachusetts: Both just adopted setbacks of 10 “rotor-diameters” – amounts to at least **1.2 miles.**

Adam’s County, Illinois: Setback currently is **one-quarter mile (1,320 feet**), residents are asking to change it to **one half-mile (2,640 feet).**

Even when counties propose a decrease in setbacks, those new setbacks are much

larger than the 2x facility height proposed in the draft REO. **Wexford County, Michigan** proposes to decrease setbacks to 3 times the turbine height (measured to blade tip).

Based on this information from ordinances around the country, we believe that setbacks in Los Angeles County should provide the same level of protections from damage to viewsheds and increase in manmade noise levels afford to citizens in Oregon, New York, Massachusetts and Michigan.

On the chart labeled "Facility Using Wind Resources"

The entry "Scenic drives and Scenic Routes as identified in the General Plan or in applicable area or community plan" should be changed to

> "Scenic drives and Scenic Routes as identified in the General Plan, ***scenic resources and lands in the viewshed of preserves, sanctuaries and state and national parks or forests*** or in applicable area or community plan"
>
> And the setback for this entry should be ***at least 1 mile.***

For all other setbacks mentioned on the chart 2 x facility height should be changed to ***4 x*** the facility height, including the entry for Public Road or Highway.

Finally, all instances where facility height is described concerning wind energy, the description should be:

> N. Maximum height. Wind tower, ***including highest sweep of turbine blades,*** shall not exceed 500 feet above the finished grade.

Respectfully,

Margaret Rhyne
President, Poppy Reserve/ Mojave Desert Interpretive Association
June 4, 2014

Quartz Hill Town Council

P.O. Box 3481, Quartz Hill, CA 93586-3481
info@qhtowncouncil.org | 661.524.5312 | www.qhtowncouncil.org

May 25, 2014

Ms. Thuy Hua
LA County Department of Regional Planning
320 West Temple Street
13th Floor
Los Angeles, CA 90012

Re: Renewable Energy Ordinance – April 2014

Dear Ms. Hua:

On behalf of the Quartz Hill Town Council, I would like to say we appreciate the opportunity to comment on the second Draft of the Renewable Energy Ordinance dated April 2014, especially as it relates to plans and other ordinances that affect our rural community. Regarding this particular ordinance, our primary focus is in the preservation of our rural lifestyle, the scenic and historic areas within our line of sight that are worthy of our preservation, and the symbiotic and interdependent environment we share with the remarkable plants and wildlife found only in this area.

To this end, we are concerned about the:

- The unattractive and unsightly visual effects of industrial scale projects – suited best for industrial areas only;
- The disproportionately high and unhealthful noise levels;
- The injurious air quality caused by all aspects of these projects;
- The proven and unproven production of hazardous waste materials and by-products;
- The degradation of the water quality and accessibility available to residents, animals, wildlife, and crops for ingestion;
- The condition of project equipment and environment once water has been extinguished from the area due to statewide or other emergency drought procedures, the impact of this lack of water availability on the health and well-being of the community, and the impact on near and outlying areas and communities.
- The perilous and damaging effects to local, and valley-wide life forms of all types, in particular human residents at risk including the infirm, the elderly, and children;
- The reduction of property values, the community degradation, the decrease of businesses and corporate exodus, and an increase in criminal activity for all residents living in a “throw-away” community.

All created by industrial and utility-scale, as well as small-scale, projects built in inappropriate and unsuitable areas. We encourage you to please review and act upon our comments attached.

The Quartz Hill Town Council's Position

The Quartz Hill Town Council believes that the Quartz Hill area as well as the entire Antelope Valley's quality of life and conservation values are economic drivers that attract businesses, homeowners, and cultural opportunities to our area. These quality of life and conservation values also attract tourists from around the world, especially to the mountain and open space areas. These tourists and visitors eat in our restaurants, rest and rejuvenate in our lodgings, and buy gas and souvenirs and potentially purchase property, infusing our local economy with millions of dollars annually.

The Quartz Hill Town Council believes that industrial scale renewable energy development will harm scenic vistas, wildlife, open space, clean air, watersheds, free-flowing traffic, small town sense of community and access to recreation--the very elements that support our recreational tourism economy. Finally, the Quartz Hill Town Council is very concerned that industrial scale renewable energy development conflicts with the quality of life in residential neighborhoods, in light of current county regulations.

Additionally, the presence of industrial scale solar projects in Rural Residential Zones in the Quartz Hill Community will jeopardize property values and have an adverse impact on Los Angeles County's tax base. We feel strongly that renewable energy goals for the state and county can be met through distributed solar and wind in the built environment and lands identified by the Environmental Protection Agency without harming conservation lands.

Summary of The Quartz Hill Town Council's Recommendations

General

- We advise that land use planning for renewable energy be consistent with the County General Plan and guided by local Community Plan values. It is also critical that planning documents have clearly articulated enforcement mechanisms and are proactively enforced by Los Angeles County.

- We advise all land use decisions in Los Angeles County are based on unbiased science, informed research, verified data collection, and monitoring.

- We advise all land use decisions should enhance the County Vision, not be compromising to our future.

Summary of Economic Analysis of Industrial Solar Development

- Increase the energy efficiency of the built environment by providing incentives for and prioritizing this measure in County buildings and communities throughout Los Angeles County. Some renewable energy experts say the future of utility-scale solar is far from assured, in part because they believe distributed solar — meaning panels on individual buildings — will become increasingly dominant as the price of PV panels continues to fall [1]

[1] "For Utility-Scale Solar Industry, Key Questions About the Future, Large-scale solar projects are enjoying steady growth in California and the southwestern United States. But will shifting government incentives and mandates slow the

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June 4, 2014

Thuy Hua, AICP
Senior Regional Planner – Department of Regional Planning
County of Los Angeles
320 West Temple Street
Los Angeles, CA 90012

Re: Comments on the Proposed "Los Angeles County Renewable Energy Ordinance"

Thank you for the opportunity to provide comments on Los Angeles County's proposed Renewable Energy Ordinance to "establish regulations, which include definitions and development standards, for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary meteorological towers" across 2,600 square miles of unincorporated portions of the County. While we greatly appreciate the County's goal to "help facilitate the development of renewable energy within the County and assist the County to meet the goals of AB 32 [the Global Warming Solutions Act of 2006]," we believe that the proposal outlined in the April 30, 2014 *Notice of Preparation of a Draft Environmental Impact Report and Notice of Public Scoping Meeting* document may in fact ***deter*** renewables development in the County.

The Southern California Public Power Authority (SCPPA) is a joint powers authority consisting of eleven municipal utilities and one irrigation district. SCPPA Members deliver electricity to approximately two million customers over a 7,000 square mile area, with a total population of 4.8 million people. Seven SCPPA Member cities are located in Los Angeles County.

Publicly-owned utilities are heavily regulated at the local, regional, state, and federal levels towards procuring renewable energy resources and/or complying with aggressive emissions reduction goals. For example, the California Energy Commission oversees implementation of the State's ambitious 33% by the end of 2020 Renewables Portfolio Standard (RPS) goal. The law directed the Energy Commission to adopt new regulations specifying RPS enforcement procedures for publicly-owned utilities, and to certify and verify eligible renewable resources and to monitor compliance. SCPPA Members are working diligently to implement a wide range of mandatory programs towards reducing greenhouse gases to meet California's RPS and AB 32 goals, and are on target to meet or exceed the requirements.

However, SCPPA is concerned that the proposed ordinance as outlined may actually *deter* renewable project investments in Los Angeles County. An ordinance that would add unduly burdensome requirements – such as undergrounding transmission lines and placing excessive special conditions on projects – would likely make many future renewables projects so expensive that very few, if any, prospective buyers would be willing to purchase the power. Dramatically increasing the cost of renewables, especially for SCPPA Members interested in local renewables projects, would have a detrimental impact on ratepayers, small- and medium-sized renewables developers, and do little to further air quality improvements. SCPPA urges the County to give careful consideration to the long-term consequences of such an ordinance.

SCPPA appreciates the opportunity to provide these comments. Thank you for your time and consideration.

Respectfully submitted,

Tanya DeRivi

Tanya DeRivi
Director of Regulatory Affairs

- Require the preparation and consideration of economic studies that examine the impact of industrial scale renewable energy development on regional tourism, giving special attention to cumulative effects, for all proposed projects in Los Angeles County.

- Throughout Los Angeles County, adhere to Environmental Protection Agency recommendations that renewable energy projects be sited preferentially on brownfields, superfund sites, landfills, mining sites, parking lots and residential, commercial and industrial rooftops.

Summary of Conservation Values

- Prioritize the protection of the Significant Ecological Areas, private and public trust lands, and adjacent and connected conservation land's rural character and quality of life.

- Prioritize the protection of viewsheds and night sky resources.

- Prioritize the protection of buffers and separators that maintain distinct community identity, promote compatible adjacent land uses and prevent encroachment on the Significant Ecological areas.

- Prioritize the protection of wildlife corridors and connectivity as identified in the SC Wildlands Reports: A Linkage Network for the California Deserts.[2] This report has been used extensively by other organizations, agencies, and areas to reject industrial scale solar development and was quoted extensively by the Basin Energy Assessment Team's Renewable Energy Analysis on behalf of Morongo Basin.[3]

For additional reports outlining the various hazardous and unhealthful side effects, please see Appendix C.

In the face of such a plethora of scientific materials, we hope you will consider and promote our recommendations.

Very truly yours,

Quartz Hill Town Council
Pat Hartford, President
Bruce Thomas, Vice President
Debbie Schmidt, Secretary
James Biddle, Treasurer
Camillia Jones, Councilmember

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expansion of this key part of the solar energy industry? Dave Levitan, http://e360.yale.edu/feature/for_utility-scale_solar_industry_key_questions_about_the_future/2713/

[2]A Linkage Network for the California Deserts, Prepared by Kristeen Penrod, Paul Beier, Emily Garding, Clint Cabanero, http://www.scwildlands.org/reports/ALinkageNetworkForTheCaliforniaDeserts.pdf , see Appendix B for preferred citation.

[3] Basin Energy Assessment Team Renewable Energy Analysis, http://www.drecr.com/526190_final_BEAT_REPORT_10_1_13.pdf

Draft 2, Renewable Energy Ordinance (April 2014) Comments

Section 1

The language is vague and inadvertently allows companies or local government to leave buried metal, concrete, toxic or non-toxic run-off and/or materials, unnamed/unknown materials, and/or chemicals and/or chemical residue behind. Restoration should include all of these aspects, and those that have not been discovered due to the monetary urgency to build. The language also allows for non-mandatory restoration. To be clear, it is common knowledge that all building and/or construction leaves areas that need to be restored.

- Pg 7/21—Table 22.52.1620 A

  Temporary Met Towers for Utility-Scale Renewable Energy projects should be required to have a Conditional Use Permit, and the associated public review periods, as opposed to a Site Plan Review. Changing the permitting requirements to minor conditional use permit does not give these precursors to larger projects with the potential to have significant impact to residents and limited review and response periods the full gravity they deserve.

- Pg 7/21

  All utility-scale projects, ground-mounted or structure-mounted should require a CUP. In a scenic or recreational area, they could potentially obstruct views.

- Pg 11/21—Table 22.52.1640-A & B

  Where are the tables?

- Pg 12-13/21

  No setbacks are identified for small scale energy systems. Setbacks should be at least 100 feet to allow for the possibility of disguising fencing and overall aesthetic injuries.

- Pg 13/21—Visual Impact

  No small-scale wind system should extend beyond 35 feet tall, regardless of property size. If they are to be allowed; they should be structure mounted or of a style that is visually pleasing.

- Pg 13/21 – Noise.

  60 decibels of noise is equivalent to a vacuum cleaner running. Maximum noise at nearest adjacent residence should not exceed “Quiet Rural Area” at 30 dB. See previous stats presented for Draft 1: http://www.chem.purdue.edu/chemsafety/training/ppetrain/dblevels.htm

- Pg 15/21—D.

  Same question as Draft 1: Exactly what lighting is required for safety and security at unmanned projects? Motion-sensor lighting creates literal sore eyes, going on and off all night long when the wind blows, an animal crosses its path (and most projects bisect frequent wildlife migration routes). Motion-sensor lighting is not recommended under any circumstances and since these projects are unmanned, only remote controlled lighting is, or should be, required.

• Pg. 16/21—G.1-Site Disturbance

Isn't this basically the near entire area? What percentage of uprooted vegetation for each proposed project is necessary to protect the community and surrounding areas from uncontrolled dust, excessive water use/consumption, and resulting soil erosion? What do the experts – actual non-corporate scientists – say? What have other communities learned from their experiences? One environmental scientist reports the following. Please see complete list of authors in Appendix A.:[4]

… A recent analysis of water use by USSE installations in the southwestern US indicates that water for dust control is a major component (60–99%) of total water consumption in both dry cooled CSP and PV installations (Ravi et al., in review), whereas no information is available for other regions where USSE installations are expected to increase in the near future. Even though other cleaning technologies (e.g., electrostatic) exist, most are not yet commercially available, and the impacts of conventional technologies (e.g., cleaning using chemical sprays) on the environment are not completely understood [50] and [65].

In the case of CSP, the water consumption depends on the cooling system adopted—wet cooling, dry cooling, or a combination of the two (hybrid cooling) [108]. Concentrating solar power consumes vast quantities of water in wet cooling (i.e., 3.07 m3/MW h), which is greater than coal and natural gas consumption combined [18] and [108]. The use of dry cooling, which reduces water consumption by 90% to 95%, is a viable option in water-limited ecosystems. Historically, reduced efficiency and higher startup costs have been an economic deterrent to dry cooling [108]. However, Holbert and Haverkamp [53] found that dry cooling startup costs are offset by 87–227% over a 20-year time interval, owing to cost savings in water use and consumption. Global regions already water stressed, such as many arid and semiarid habitats, may be vulnerable to changes in local hydrology [133], such as those incurred by USSE activities. In water-constrained areas, the deployment of USSE projects may also conflict with the use of water by other human activities (e.g., domestic use, agriculture), at least at the local scale [18] and [108]. Ultimately, the choice of dry or wet cooling in a CSP plant can lead to highly divergent hydrological impacts for USSE facilities.

This same report discusses health hazards in Section 2.4. Human Health And Air Quality:

As with the development of any large-scale industrial facility, the construction of USSE power plants can pose hazards to air quality, the health of plant employees, and the public [122]. Such hazards include the release of soil-borne pathogens [91], increases in air particulate matter (including PM2.5, [46] and [100]), decreases in visibility for drivers on nearby roads, and the contamination of water reservoirs [70]. For example, disturbance of soils in drylands of North and South America, which are places targeted for USSE, aids transmission of **Coccidioides immitis,** *a fungus causing Valley Fever in humans [10]. In areas where surface soil contains traces of chemical and radioactive contaminants (e.g., radionucleotides, agrochemical residues), increased aeolian transport resulting from soil disturbances increases contaminant concentrations in airborne dust [95].*

[4] "Environmental Impacts of Utility-Scale Solar Energy," Rebecca R. Hernandez, Environmental Earth System Scientist, http://www.rebeccarhernandez.com/environmental-impacts-of-utility-scale-solar/ Chapter 2.2 Water Use And Consumption

During the decommissioning phase, PV cells can be recycled to prevent environmental contamination due to toxic materials contained within the cell, including cadmium, arsenic, and silica dust [144] and [145]. In the case of inappropriate handling or damaged cells, these industrial wastes can become exposed, which can be hazardous to the public and environment [144]. For example, inhalation of silica dust over long periods of time can lead to silicosis, a disease that causes scar tissue in the lungs and respiratory decline. In severe cases, it can be fatal [148]. In addition, chemical spills of materials such as dust suppressants, coolant liquids, heat transfer fluids, and herbicides can pollute surface ground water and deep water reservoirs [70] and [126].

On rooftops, solar PV panels have also been shown to reduce roof heat flux, conferring energy savings and increases in human comfort from cooling [31]. In that vein, the insulating properties of rooftop solar PV may serve co-beneficially to mitigate heat wave-related illness and mortality [131]. The fire hazard potential of both rooftop and ground-mounted USSE infrastructural materials (e.g., phosphine, diborane, cadmium), and their proper disposal, presents an additional challenge to minimizing the environmental impacts of USSE facilities [43]. This is particularly true in light of the dramatic increases in the frequency and intensity of wildland fires in arid and semiarid regions of the world as a result of climate change ([134] and [15]).[5]

Furthermore, serious health problems in light of new findings concerning the use of herbicide and pesticide toxins are anticipated with non-native invasive species wherever the ground is disturbed. Subsequent use of herbicides cause harm to humans, plants, and wildlife, especially when these toxins ends up in water. See above.

- Pg 16/21—G. 2

  Existing water courses should be retained—not restored. Will water in retention basins be required to meet standards that certify no pollutants exist that were not present before the project started?

- Pg 17/21—G.3.

  What are “all applicable standards for addressing grading?” Grading plans should be required and provided before the process has been permitted, not after. At no time can the public speak out after a project is underway and a CUP is issued by Regional Planning without deep pockets to retain attorneys to litigate afterthought grading plans.

  As also noted previously, destruction of vegetation is increased by airborne soil stabilizers, which have, so far, proved incapable of controlling wind-driven dust events in the Antelope Valley

- Pg 16-17/21—G.4.

  Due to a lack of water in California and a drought state declared by the Governor, how do you plan to implement site watering now and in the future? In addition, what are the “suitable methods” determined by Regional Planning and Public Works? Are they suitable for human consumption or suitable for expediency’s sake?

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[5] Environmental Impacts of Utility-Scale Solar Energy,” Rebecca R. Hernandez, Environmental Earth System Scientist, http://www.rebeccarhernandez.com/environmental-impacts-of-utility-scale-solar/

Moreover, we are curious as to what methods will maintain root systems and allow native vegetation or grasslands to flourish after being mowed to a maximum of six inches, as required by the Los Angeles County Fire Department.

Using composted wood chips to six inched deep in dry desert areas could create serious and dangerous fire situations.

- Pg 17/21—I. Visual Impact
  All utility-scale projects should be excluded from Significant Ecological Areas, and Scenic Highways, current and proposed, by the very nature of their lack of aesthetics. We are interested in knowing how the visual impact of utility-scale wind turbines can be "minimized."

- Pg 17-18/21— I.3. Visual Impact
  The arid and desert areas of Los Angeles County respectfully requests the same consideration as that given to the Coastal Zones: "(i.e., significant ridgeline, scenic route, scenic area, scenic viewpoint) identified in the applicable local plan unless specific provisions for such siting are provided for in the applicable local plan and long-range development plan." In addition, we are curious as to what methods will maintain root systems and allow native vegetation or grasslands to flourish after being mowed to a maximum of six inches, as required by the Los Angeles County Fire Department.

- Pg 18/21—J. Water Quality Protection
  Please add ", scientific findings, and EPA standards for safe water from toxins known and unknown, and due to any practice by the project, run-off of project machinery oils, metals, or other known or unknown toxins due to rain, snow, or other natural or man-made occurrence. Moreover, petroleum based oil from turbine gearboxes leaking into water courses, a variety of maintenance operations leaving residues to be washed into water courses or retention basins, and/or end-of-life tear down or abandonment toxins could attract and harm wildlife, soils, and groundwater and deep water reservoirs."

- Pg 18-19/21—Table 22.52.1660-A
  All utility-scale projects should be excluded from Significant Ecological Areas, and Scenic Highways, current and proposed as stated in Pg 17-18/21 – I.3., above.

- Pg 18-19/21—. Table 22.52.1660-A
  Setbacks for all utility scale projects should be at least 500 feet for safety and

- Pg 19/21-- M. Table 22.52.1660A
  Setbacks are insufficient to alleviate visual, noise, and air pressure effects generated by wind turbines.

- Pg 19-20/21 – O. Decommissioning
  Many questions are left unanswered and reference an unstated "decommissioning plan" or plans. To wit:
  - Who will review the land and area for compliance with the above requirements and the determination of toxins in the land, and local and deep water reservoirs?
  - What happens in the case of negligence and multiple owner determination litigation? So many of the current projects have already changed owners twice or more.

- Does the County of Los Angeles and/or the State of California have the funds set aside to litigate these cases in the long-term?
- Has LAC done due diligence in the cases of bankruptcy of other projects in other states and other countries? If escrow funds are always set aside, why are their entire "dead" wind turbine farms in parts of CA?

• Pg 20/21—22.52.1670 – Standards for Structure-Mounted Utility-Scale Renewable Energy Facilities—A.& B.—Height

Height limits in commercial, manufacturing, residential, and agricultural zones are restricted to no more than five feet on a building built to maximum height in a residential, commercial, or manufacturing zone. The desert areas respectfully request the same consideration to provide the same measure of protection afforded residential, industrial, and commercial areas in our rural and/or agricultural communities.

Pg 21/21—22.52.1680—Modifications—A. 1.

If physical features are such that compliance substantially and unreasonably interfere with the establishment of the proposed development on the subject property," then the project should not be built on subject property. This opens the ordinance up to almost anything goes, and no project would be restrained from occurring in sub-optimal conditions.

Pg 21/21—22.52.1680—Modifications—A. 2.

Based on the open-ended requirements and loopholes listed above, it is unclear what the exact purpose of this Part 15 actually is: a common sense shield for the people, communities, and environment that Los Angeles County has a duty to protect, or streamlined, fast-track, hand-shake deals for industrial scale utilities. Please clarify.

At the very least, there should be exclusion of utility-scale renewable energy projects from Significant Ecological Areas, along scenic roads and highways, along Forest Service view shed, and within line-of-sight of public and private trust lands. These badly sited types of projects are adverse to the tourism-based economies prevalent in mountain areas and open space in the Antelope Valley and surround areas.

Appendix A

ENVIRONMENTAL IMPACTS OF UTILITY-SCALE SOLAR ENERGY

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Appendix B

Preferred Citation: Penrod, K., P. Beier, E. Garding, and C. Cabañero. 2012. A Linkage Network for the California Deserts. Produced for the Bureau of Land Management and The Wildlands Conservancy. Produced by Science and Collaboration for Connected Wildlands, Fair Oaks, CA www.scwildlands.org and Northern Arizona University, Flagstaff, Arizona http://oak.ucc.nau.edu/pb1/.

Appendix C

Union of Concerned Scientists, Environmental Impacts of Solar Power, http://www.ucsusa.org/clean_energy/our-energy-choices/renewable-energy/environmental-impacts-solar-power.html

Environment 360, For Utility-Scale Solar Industry, Key Questions About the Future, by Dave Levitan,

The Real Problem With Renewables, Forbes, by Robert Bryce, http://e360.yale.edu/feature/for_utility-scale_solar_industry_key_questions_about_the_future/2713/

Renewable Energy: Economic and Environmental Issues, by David Pimentel, G. Rodrigues, T. Wane, R. Abrams, K. Goldberg, H. Staecker, E. Ma, L. Brueckner, L. Trovato, C. Chow, U. Govindarajulu, and S. Boerke, (Originally published in BioScience -- Vol. 44, No. 8, September 1994)

"The low benefit of industrial wind," by Eric Rosenbloom
a brief summary of documents
(summary in html also available)

- cited by the Blue Ribbon Panel on Development of Wind Turbine Facilities in Coastal Waters, N.J., final report, April 2006)
- featured in *Opposing Viewpoints: Energy Alternatives*, Greenhaven Press, 2006

"Ridden by the Wind," by Eric Rosenbloom
a social activist view

"Not so fast with wind power," by Eric Rosenbloom
editorial: low benefit, high adverse impact

"Exploitation and destruction: some things to know about industrial wind power," by Eric Rosenbloom
another social activist view

"Industrial wind, corporate vandalism," by Joanna Lake
a progressive view

"How to fight the big wind onslaught," by Calvin Luther Martin
a matter of conscience

"Wind Turbine Noise - a themed sequence of sonnets," by Gail Atkinson-Mair
a poet's view

"Windmill farms are industrial development," by Martha Frey
a preservationist view

"Questioning the faith of wind power," by David Roberson
an environmentalist view

"Big money discovers the tax breaks," by Glenn Schleede
a fiscal conservative view

"9 days and 7 wind farms," by Sue Sliwinski
a report of the human toll

"Free lunch or Damocles' sword?" by John Etherington
an analysis of big wind's minuscule benefit

"He is not an environmentalist," by Eric Rosenbloom
a critique of Charles Komanoff on wind

"Bluff and bluster," by Eric Rosenbloom
a response to critics

June 4, 2014

Thuy Hua
LA County Department of Regional Planning
320 W Temple St 13th Flr
Los Angeles CA 90012
thua@planning.lacounty.gov

Dear Ms. Hua,

Thank you for the opportunity to comment on the second draft of the ordinance amending Title 22 – Planning and Zoning – of the Los Angeles County Code related to the establishment of regulations for small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary meteorological towers (the "Draft Ordinance").

The Sierra Club is a national nonprofit organization of approximately 2.5 million members and supporters (over 380,000 who live in California) dedicated to exploring, enjoying, and protecting the wild places of the earth; to practicing and promoting the responsible use of the earth's ecosystems and resources; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. The Sierra Club's concerns encompass protecting our lands, wildlife, air and water while at the same time rapidly increasing our use of renewable energy to reduce global warming.

The Sierra Club support renewable energy as a means to address the challenge of climate change by reducing greenhouse gas emissions. However, renewable energy development, like all development, must be sited, constructed and operated sustainably to protect natural resources while ensuring full compliance with all applicable laws. The Draft Ordinance offers an opportunity for Los Angeles County (the "County") to integrate land use and environmental values with energy planning. We support the County's efforts to update their policies, and their outreach efforts to include a wide range of stakeholders in developing these policies.

We recognize that the County will likely participate in the Desert Renewable Energy Conservation Plan (DRECP), and that the DRECP is an opportunity to both develop more

granular information on the conservation of the unique, rich biological resources of Los Angeles County. We understand the County is working closely with the California Energy Commission to ensure consistency between the DRECP and final ordinance, and encourage continued cooperation.

Additionally, we support the Center for Biological Diversity's comments regarding California condor and golden eagle, and the potential benefits of a Natural Community Conservation Plan (NCCP) to protect sensitive species in Los Angeles County but outside of the DRECP boundary.

We also specifically incorporate our previous recommendations related to avoiding environmentally sensitive areas and wind energy avoidance areas, as well as our species-specific recommendations.

We provide the following recommended changes to the Draft Ordinance:

A. Applicability.

We thank the County for adding provision 22.52.160 (B) "Applicability". We recommend replacing the term "*zone and supplemental district regulations*" with "*local, state or federal planning processes with completed CEQA and/or NEPA review*" wherever it appears in this provision. We believe this change more accurately captures the range of land-use designations which could affect development, included completed Habitat Conservation Plans, NCCPs and U.S. Fish and Wildlife Service (USFWS) designated critical habitat.

B. Wildlife Agency Review.

The Antelope Valley provides a refuge for many special-status species birds and animals. We reinforce our previous recommendation that the Ordinance require utility-scale renewable energy facility applicants to meet with California Department of Fish & Wildlife (CDFW) and USFWS to discuss animals with special status or protections and for any guidelines for surveys or mitigation for those species We also reinforce our previous recommendation that the Ordinance specifically require applicants to meet with USFWS at the survey stage to determine whether a golden eagle take permit is recommended and if so, to require such a permit, and to discuss conflicts with the historic range and current occurrences of California Condor.

We recommend the Draft Ordinance include a new section "*Wildlife Agency Review*" parallel to 22.52.160 (Aviation Review). Like the requirements for consultation with aviation-related agencies, this new section should require an applicant for a project subject to a minor conditional use permit or conditional use permit to meet with representatives of CDFW and USFWS to obtain their review and comments regarding the

potential impacts of the proposed use on sensitive plant and animal species, and that any comments from CDFW and USFWS be considered by the Department and provided to the Hearing Officer.

C. Setbacks from Areas of High Biological Value.

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The Draft Ordinance requires certain setbacks for temporary meteorological towers and ground-mounted utility-scale wind facilities from residential structures, property lines and various types of infrastructure. However, the Draft Ordinance does not include analogous setbacks from areas of high value to sensitive biological resources.

In addition to reinforcing our previous recommendations regarding avoiding development in areas of high biological value, we recommend that the County meet with USFWS and CDFW to develop appropriate development restrictions and setbacks from important habitat or movement corridors for avian and terrestrial species from ground-mounted utility-scale renewable energy facilities.

D. Dust Control.

We thank the County for revising 22.52.1160 (G) to more accurately address dust control issues. Dust control is a very important public health and environmental issue in this area. We also recognize that water is very limited, and to the extent water is used as dust mitigation, this could exacerbate non-native germination and growth as well as deplete aquifers

Thank you very much for the opportunity to comment on the Draft Ordinance. We look forward to continued collaboration with the County on this valuable effort.

Sincerely,

Sincerely,

Sarah K. Friedman
Senior Campaign Representative
Sierra Club Beyond Coal Campaign

Three Points-Liebre Mountain Town Council
P.O. Box 76
Lake Hughes, CA 93532

SENT VIA EMAIL

4 June 2014

Planner Thuy Hua
Los Angeles County Department of Regional Planning
320 West Temple Street Thirteenth Floor
Los Angeles, CA 90012

Dear Ms. Hua,

Subject: Renewable Energy Ordinance Draft 2

Our Town Council appreciates being able to comment on the Renewable Energy Ordinance, and I have been tasked with responding. However, we have concerns about several aspects that we believe bear importance to rural areas, openspace, viewshed, biological significance, preservation lands—public and private. Regarding this particular ordinance, our main interests lie in preservation of our lifestyle and health, our viewshed, and the environment we share with amazing wildlife. To this end, we are concerned about the ordinance allowing unsightly visual effects; excessive noise; unhealthful air quality; potential hazardous waste generation; damage to water quality; ill-effects to local, and valley-wide biota created by utility-scale, and also small-scale projects.

For clarity's sake, we do not approve of utility-scale renewable energy as described in the ordinance, which addresses primarily wind and solar generation. We are of the opinion that industrial uses covering thousands of acres comprise inappropriate development that is not consistent with either the current or proposed Antelope Valley Areawide Plans as they describe policies and goals to "protect" rural communities and their lifestyles. Furthermore, "industrializing" agricultural land that is not technically degraded, through ministerial review or conditional use permit, is injurious to communities and wildlife.

County elected representatives will never review projects in their constituents' area unless an expensive appeal is initiated (currently $800 per project, per level of appeal, i.e., Hearing Officer to Planning Commission to Board of Supervisors). Moreover, projects that have more than one site, like Silverado West, with six separate projects, would cost $4,800 to appeal. This is an affront to rural residents, and may violate the California Environmental Quality Act. We disagree with the use of ministerial review and conditional use permits. It is not unreasonable to request that all proposed utility-scale renewable energy, currently allowed on so-called"disturbed" agricultural land, or within any other land use area, require a zone change to industrial use that triggers review by the Board of Supervisors---our elected representatives.

Creating this ordinance and conducting its programmatic environmental impact review is a disservice to the people of the Antelope Valley. Our taxpayer monies have provided the grant Los Angeles County Regional Planning is using to create a streamlined process of review that will seriously harm agricultural and rural communities, SEAs, scenic roads, ridgelines, public and private trust lands; and will create dust and air quality issues that contribute to serious health problems like Valley Fever. As stated in the press release dated June 12, 2013, by Sandra Louie, "Los Angeles County will receive $603,000 to create a renewable energy ordinance and a programmatic EIR that will help mitigate development issues such as cumulative impacts. Having the ordinance and the EIR will help shorten the environmental review because developers can use information from the EIR when seeking permits for individual projects. Renewable energy polices will be revised as the county updates the general plan and the Antelope Valley Area Plan. The policies will be the foundation for the ordinance." Certainly, the time saved in facilitated environmental review could be allocated for Board of Supervisors' review. Rather than streamline the process for damage and injury to residents that will undoubtedly be caused by utility-scale RE development, we believe that *promoting and incentivizing* distributed generation could help eliminate the wholesale destruction of thousands of acres in the north county.

So-called"disturbed" agricultural areas often support special status species and large winter raptor populations. Many perceive agricultural lands as appropriate places to site renewable energy projects because of the supposed "disturbed" nature and potentially lower biotic values of these lands. Imposing a streamlined process for A-2 Heavy Agriculture zoned land by describing it as "disturbed" is mistaken and a misuse of the term for purposes of siting projects that really are inappropriate. This, in turn, inappropriately targets farmland for RE (Renewable Energy) development, and codifies the misuse. Farmland is not degraded land. It not only supports grazing and crops, but provides high-quality habitat and foraging areas for a variety of wildlife in the Antelope Valley; hence its designation by the National Audubon Society as a Globally Important Bird Area. Many Significant Ecological Areas contain agricultural land use designations. The only lands that should be streamlined for industrial utility-scale renewable energy are "degraded" lands. Degraded lands include brownfields, closed and capped landfills, Superfund sites, Resource Recovery and Conservation Act lands, abandoned or closed open pit mining areas, i.e., areas that do not support environmentally sensitive resources, winter forage for migratory birds, or special status species. Also,there must be assurance that the ordinance describe criteria, including penalties, that will guard against the strategic or artificial degradation or fallowing of land to make it available for development.

In 2011, Regional Planning passed the "Rural Outdoor Lighting Ordinance," meant to reduce glare, light trespass, and preserve dark night skies. In its overview, it states, " Height limits for residential, agricultural, open space and watershed zones is 20 feet, except each outdoor light fixture installed above 15 feet shall have an output rating of less than 400 lumens. Height limit for commercial zones is 30 feet, and height limits for industrial zones is 35 feet." This confirms another reason for requirement of a Conditional Use Permit and Zone Change for placement of meteorological towers, and wind towers, and validates the case for another inconsistency concerning the Renewable Energy Ordinance. Since the height of utility-scale wind turbine towers and some meteorological towers will exceed 200 feet in height; the lighting regulations of the Federal Aviation Administration for pilot safety will supercede the the lighting ordinance,

allowing obtrusive, flashing red lights in dark sky areas. Of what use is the Rural Outdoor Lighting Ordinance if Regional Planning allows placement of wind turbines as tall as 500 feet and met towers of over 200 feet in unincorporated areas?

We continue to request that utility-scale renewable energy projects be excluded from Significant Ecological Areas (SEAs), high fire hazard Areas, flood zones, and earthquake zones. Many current and proposed SEAs and SEA expansions are in mountain and canyon areas that may be deemed suitable for wind energy development, and may be in Hillside Management areas, and/or are classed as "Hazard Management Areas." This includes flood potential, injury or pollution of watershed areas (oil leaks from turbine motors and soil erosion), catastrophic earthquake, and dreaded wildfire.

One of our most serious concerns is the fire hazard posed by utility-scale wind energy positioned along our mountains and grassland transition areas, all considered "Extremely High Fire Hazard Areas." Our Lakes Communities experienced the Pine Fire in the Three Points area (17,418 acres) in 2004, losing two residences, several outbuildings, and surrounding forest areas; and most recently, the Powerhouse Fire in 2013, burning more than 30,000 acres, which destroyed 53 structures, including 24 homes. At the fire's peak it threatened more than 1000 structures, and two thousand firefighters were deployed to fight the fire. The communities of Lake Hughes, Elizabeth Lake, and Green Valley were evacuated. Additional threat, beyond what exists already is too much a burden to our area. Research has confirmed a serious level of threat by wind turbines and is detailed in an article by George H. Potter, posted on www.fireengineering.com. Several important points relevant to our argument are listed below:

- "Wind turbines must be considered industrial facilities subject to a full range of emergencies such as fire, entrapments, electrical accidents, falls, and even hazmat."

- "Fuels can include electrical cables, plastics, and even textiles, any and all of which can also be found at all heights. Since the construction materials used in these towers and their components will invariably include plastics and possibly some combustible metals (e.g., titanium and aluminum, among others), as well as relatively easily deformable metallic structural and enclosure materials, the consequences of a fire in a wind turbine can be disastrous."
- "Also, a fire in a turbine assembly can propagate to surrounding vegetation and produce a wildland fire risk, and a fire involving surrounding vegetation could pose a threat to the wind farm"--and our additon: thousands of homes; forest lands; state parks; and other public and private conservation lands!
- "The origins of fires in wind generators are numerous and in some instances almost inevitable. Statistics show that the major cause of fires in aerogenerators is lightning. Although aerogenerators include lightning arresters and other elements to reduce the potential of ignition from lightning strikes, they do not completely eliminate possible lightning damage."
- "Another frequent cause of fires is the mechanical friction among the multiple moving parts of the turbine assembly, gears, shafts, and other moving or rotating metal components that may provoke sparking. Since the average wind turbine may contain

more than 200 gallons of hydraulic fluid plus variable quantities of other lubricants and similar combustible liquids, there's no shortage of fuel."

- "Electrical short circuits can occur in numerous locations, anywhere from the windmill's top to the base. Fires in wind turbines are known to contribute to structural failure and collapse."
- "Responding fire departments may normally be several miles away and have to travel over roads that quite often require all-wheel-drive vehicles. The primary limiting factors to fire department intervention are the height of the fire and the extremely limited vertical access."

Furthermore, aerial firefighting would be hindered in a field of wind turbines, and could exclude the use of multi-engine air tankers. These air tankers typically make retardant drops from a height of 150 to 200 feet above vegetation and terrain, at air speeds from 125 to 150 knots (American Helicopter Services and Aerial Firefighting Association at AHSAFA.org). Without high-capacity loads of retardant from large air tankers, uncontrolled wildfire could devastate our communities.

There is a large amount of anecdotal evidence of low-frequency vibration and shadow flicker that pose considerable nuisance, and frequently, health problems to residents near large wind turbines. For the Renewable Energy Ordinance Draft 1, we suggested that noise levels for any residents maintain current levels. As indicated, quiet rural areas generally measured at 24 dB or quieter. For areas such as ours, no increase in noise levels created by small-scale or utility-scale projects should be allowed. It is unreasonable to expect neighbors to withstand noise impacts beyond current "quiet rural areas." To avoid vibrational effects and noise, research has show the minimum safe distance is 1.5 miles for large turbines to assure dissipation of frequencies and minimization of advertant shadow flicker. This should be considered, also, for small-scale wind turbines that may cast shadow and cause shadow flicker upon neighboring properties. Distance measured should include the longest shadows of the year in locating small-scale wind systems, which would rely upon height, and should not encroach on neighboring structures or properties.

Ordinances supposedly designed to protect scenic areas mention setbacks of 2x facility height, which is the same for any residence or habitable structure. Unfortunately, a five hundred foot tall wind turbine will be quite visible from any area for fifty miles or more—even at night. How does this ordinance, then, protect viewshed? We request that no utility-scale wind projects be allowed in viewshed along the proposed SEA 21, along which lies several conservation trust areas, public and private, and scenic roads listed in the Scenic Highways Element 1974, and proposed for the Antelope Valley Areawide Plan 2035. This also includes scenic areas in the eastern portion of the north county along the San Gabriel Mountains. Views are very important in the north county, whose presence generates a great deal of economic value to local communities and municipalities.

This viewshed extends to the wind towers that support meteorological study. By the way, please use "met tower" when you mean meteorological tower. The use of "wind tower" for all towers is slightly confusing. As mentioned before, the use of aviation orange paint for met towers under 200 feet will certainly affect scenic viewshed. Some met towers will become permanent; some

orange and white towers may become permanent, yet there is no part of the ordinance that addresses the conversion, clearly. The Table 22.52.1620-A does not indicate what type of permit is required for a temporary met tower, or the process of conversion or modification, or the permanent placement of a met tower. Any tower should be placed without guy wires. Guy wires have been shown to kill as many birds as a wind turbine, as noted by California Department of Fish and Wildlife Central Region Manager Jeffry R. Single, Ph.D. In his comment regarding NextEra's North Sky-Jawbone Project, he states, **"** The Department recommends that all met towers are free-standing, without guy wires. In both of the available fatality studies from Kern County wind power plants (Alite project and Pine Tree Wind Farm), avian fatalities at individual met towers equaled or exceeded the rates attributed to any single turbine (Erickson et al. 2009, Bioresource Consultants, Inc. 2011). If un-guyed turbine structures are to be erected, then the Department requests clarification as to why un-guyed met towers would be infeasible." Concerning bird flight diverters, he says, "there is no evidence that bird flight diverters are effective at guy wire arrays (studies to date deal with only power lines)."

Public participation at all levels of review are crucial. Requirement of notification no matter what the project size should be part of the ordinance. In rural areas, that might mean individual property owners on all sides or in a reasonable distance of a project be notified by certified mail, and proposal signage be posted at the nearest well-traveled, paved road. At this point in time it is only CUPs and CEQA that trigger notifications. We request that you include MCUPs, and SPRs, and modifications to permits as well.

Residents here generally believe their communities are healthy places to live. We have mentioned shadow flicker and low-frequency vibration, and seek further protections to humans who are subject to the effects of utility-scale RE projects. Air quality should not be compromised, and the inclusion in the ordinance of measures like wood chips and preservation and mowing of native vegetation are admirable, but so far, no projects have been successful in controlling fugitive dust, not AQMD best management practices, not soil stabilizers, not water, not additional water. A Los Angeles Times article by Julie Cart, titled "Officials study Valley Fever Outbreak at Solar Power Projects," states:

> The threat of acquiring the respiratory illness extends to residents living near expansive construction sites. That risk is rising given the scope of the renewable energy boom centered in the state. Scores of solar projects are planned for millions of acres across California's Mojave Desert and elsewhere. The Centers for Disease Control and Prevention announced in March that valley fever cases in the Southwest have increased by 90% from 1998-2011. California's increase mirrors that, with reported cases growing 71% over the decade 2001 to 2011. A journal article published last year examined national death records from 1990 to 2008 and found 3,089 instances in which valley fever was the underlying or contributing cause of death. Nearly half of those deaths — 1,451 — occurred in California.

Does the ordinance protect public health from serious disease like Valley Fever? High wind events are common in the Antelope Valley, and the required cessation of work during such events exceeding 25 miles per hour has not protected downwind residents from Dust Bowl-like clouds of dirt, and infiltration of sand into their homes and drifts piling onto their properties. What cost will rural residents endure in order that massive RE projects can be built in unincorporated areas?

We would like to add that the requirement that large-scale projects adhere to California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development, October 2007 (Guidelines), is helpful, but request clarification that adherence to the Guidelines is not a guarantee of project approval, that narrower restrictions may be required for the health, safety, and well-being of residents; and NEPA, CEQA, Endangered Species Act, the California Endangered Species Act, the Golden and Bald Eagle Protection Act, and the Migratory Bird Treaty Act provide further protections to wildlife, and that more stringent accommodation to reduce loss of wildlife may be required and demanded by these documents and the public.

Yours truly,

Susan Zahnter
Vice President

CC: Supervisor Michael Antonovich, Planning Deputy Edel Vizcarra, Field Deputy Norm Hickling

This is the second draft of this ordinance. The first draft was released on October 3, 2013. This second draft includes some revisions based on the feedback received on the first draft. Revisions from the first draft are shown in track changes with strikethrough for deleted items and underline for added items. This draft ordinance is intended to provide baseline standards for renewable energy projects. Where a discretionary permit is required, project conditions and/or mitigation measures will be required to address site specific needs.

Please send your questions and comments regarding this draft ordinance via email or postal mail to:

Contact: Thuy Hua
Email: thua@planning.lacounty.gov
Postal Mail: LA County Department of Regional Planning
Attn: Thuy Hua
320 W Temple St 13th Flr
Los Angeles CA 90012

Comments on this draft are due June 4, 2014.

ORDINANCE NO. _____

An ordinance amending Title 22 – Planning and Zoning – of the Los Angeles County Code related to the establishment of regulations for small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary meteorological towers.

SECTION 1. Section 22.08.040 D is hereby amended to add a definition to read as follows: -- "Decommissioning" means the removal of a use from service, which includes safe storage, dismantling, disposal, recycling, removal of concrete pads, and/or site restoration.

SECTION 2. Section 22.08.070 G is hereby amended to add a definition to read as follows:

-- "Guy wires" means wires or cables used to support a wind tower as defined by Section 22.08.230, or other structures that require the use of such wires or cables for support.

SECTION 3. Section 22.08.190 S, is hereby amended to add definitions to read as follows:

-- "Small-scale solar energy system" means a system where solar resources are used to generate energy primarily for on-site use. Such system may be affixed either to the ground or to a structure other than the system's mechanical support structure, such as a building or carport. Such system does not provide for more than 150% of the on-site energy demand. Any energy generated by a solar energy system that exceeds the on-site energy demand may be used off-site.

-- "Small-scale wind energy system" means a system where wind resources are used to generate energy primarily for on-site use. Such system may be affixed to either the ground or to a structure other than the system's mechanical support structure, such as a building or carport. Such system has a rated capacity of 50 kilowatts or fewer. Any energy generated by a wind energy system that exceeds the on-site energy demand may be used off-site.

-- "Solar array" means the mechanically integrated assembly of modules or panels with a support structure and foundation, tracker, and other components, as required to generate energy using solar resources.

SECTION 4. Section 22.08.210 U is hereby amended to add definitions to read as follows:

-- Utility-scale renewable energy facility, ground-mounted. "Ground-mounted utility-scale renewable energy facility" means a facility affixed to the ground where renewable resources are used to generate energy primarily for off-site use. This definition includes all on-site and off-site equipment and accessory structures related to the facility, including but not limited to solar collector arrays, wind turbines, mounting posts, substations, electrical infrastructure, transmission lines, operations and maintenance buildings, and other accessory structures.

-- Utility-scale renewable energy facility, structure-mounted. "Structure-mounted utility-scale renewable energy facility" means a facility affixed to a structure that is separate from the facility's mechanical support structure, such as a building or carport, where renewable resources are used to generate energy primarily for off-site use. This definition includes all on-site and off-site equipment and accessory structures

related to the facility, including but not limited to solar collector arrays, wind turbines, mounting posts, substations, electrical infrastructure, transmission lines, operations and maintenance buildings, and other accessory structures.

SECTION 5. Section 22.08.230 W is hereby amended to add a definition to read as follows:

-- "Wind tower" means the vertical component, including blades if any, of a small-scale wind energy system, a utility-scale renewable energy facility using wind resources, or a temporary meteorological tower that elevates the wind turbine generator and attached blades above the ground.

SECTION 6. Part 15 of Chapter 22.52 is hereby repealed in its entirety.

SECTION 7. Part 15 of Chapter 22.52 is hereby added to read as follows:

PART 15

RENEWABLE ENERGY

SECTIONS:

22.52.1600 Purpose.

22.52.1610 Applicability.

22.52.1620 Permit Requirements.

22.52.1630 Standards for Small-Scale Solar Energy Systems.

22.52.1640 Standards for Temporary Meteorological Towers.

22.52.1650 Standards for Small-Scale Wind Energy Systems.

22.52.1660 Standards for Ground-Mounted Utility-Scale Renewable Energy Facilities.

22.52.1670 Standards for Structure-Mounted Utility-Scale Renewable Energy Facilities.

22.52.1680 Modifications.

22.52.1600 Purpose.

This Part 15 establishes regulations and permit requirements that support and facilitate the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary meteorological towers in a manner that minimizes potential safety hazards and impacts to the environment.

22.52.1610 Applicability.

A. The provisions of this Part 15 shall apply to the development of any small-scale renewable energy system, utility-scale renewable energy facility, or temporary meteorological tower on private property. The provisions serve as the basis for development standards applicable to other renewable energy technologies, including but not limited to biomass, geothermal, hydrogen, hydropower, ocean, and any future viable renewable energy technology.

B. Applicability of zone and supplemental district regulations. All provisions of the zone and any supplemental district in which a small-scale renewable energy system, utility-scale renewable energy facility, or temporary meteorological tower is located shall also apply. Where a provision of the zone or supplemental district regulates the same matter as this Part 15, whichever provision is more restrictive shall apply.

C. Exemption. The provisions of this Part 15 shall not apply to any small-scale renewable energy system, utility-scale renewable energy facility, or temporary meteorological tower approved prior to the effective date of the ordinance establishing this Part 15.

D. Subsequent application. The provisions of this Part 15 shall apply to:

1. Any subsequent application that would increase the physical size, height, or footprint of a previously approved small-scale renewable energy system, utility-scale renewable energy facility, or temporary meteorological tower; and

2. Any subsequent application that would change the type of equipment used by the previously approved small-scale renewable energy system,

utility-scale renewable energy facility, or temporary meteorological tower, except for replacement of equipment for maintenance purposes.

22.52.1620 Permit Requirements.

A. Property may be used for the following uses, as set forth in Table 22.52.1620-A:

TABLE 22.52.1620-A: RENEWABLE ENERGY PERMIT REQUIREMENTS*

Permit Required By Zone
P = Permitted
Zoning Conformance Review = ZCR
SPR = Site Plan Review, Ministerial
MCUP = Minor Conditional Use Permit
CUP = Conditional Use Permit
N/A = Prohibited

	A-1	*A-2, A-2-H*	*OS, W*	*R-A, R-1, R-2, R-3, R-4,*	*C-H,C-1, C-2 C-3, C-M, C-R, R-R,*	*M-1,M-1.5, M-2,M-2.5, D-2*
Small-Scale Renewable Energy System						
Small-Scale Solar Energy System						
• Structure-mounted	P	P	P	P	P	P
• Ground-mounted	ZCR	ZCR	ZCR	ZCR	ZCR	ZCR
Small-Scale Wind Energy System	MCUP	MCUP	N/A	MCUP	MCUP	MCUP
Utility-Scale Renewable Energy Facility						
Utility-Scale Renewable Energy Facility, Ground-mounted	N/A	CUP	N/A	N/A	CUP	CUP
Utility-Scale Renewable Energy Facility, Structure-mounted	SPR	SPR	N/A	SPR	SPR	SPR
Temporary Meteorological Tower	MCUP	MCUP	N/A	MCUP	MCUP	MCUP

B. Aviation Review. For any use subject to a minor conditional use permit or conditional use permit pursuant to Table 22.52.1620-A above, and located within the Military Installations and Operations Areas (MIOAs) as identified by the General Plan:

1. Consultation. Aviation-related agencies shall be consulted for review of the proposed project for any potential impacts to ensure the safety of

residents and continued viability of military training and testing operations. The Department shall distribute copies of the proposed site plan, elevation plan, and location map to the aviation-related agencies and shall request comments within a minimum 30-day period. Aviation-related agencies to be consulted include, but are not limited to, the Federal Aviation Administration (FAA), United States Navy, Edwards Air Force Base, Air Force Plant 42, United States Forest Service, California Department of Transportation Division of Aeronautics, County Department of Public Works – Aviation Division, County Forester and Fire Warden, and County Sheriff. The consultation review shall request consideration of the following:

a. Uses that produce electromagnetic and frequency spectrum interference, which could impact military operations;

b. Uses that release into the air any substances that may impair visibility such as steam, dust, or smoke;

c. Uses that produce light emissions that could interfere with pilot vision or be mistaken for airfield lighting such as glare or distracting lights;

d. Uses that physically obstruct any portion of the MIOA due to relative height above ground level.

2. Any comments received within the consultation period shall be considered by the Department and provided to the Hearing Officer.

C. Findings. In addition to the findings required under Part 1 of Chapter 22.56, the Hearing Officer shall not approve a minor conditional use permit or conditional use permit it finds that if the requested use penetrates the lower floor elevation of any MIOA, the military operator of the MIOA has determined that the

requested use is not detrimental to the function of the MIOA and would not pose a health or safety hazard to military personnel or the public.

22.52.1630 Standards for Small-Scale Solar Energy Systems.

A. Conformance with state requirements. A small-scale solar energy system shall be in conformance with the California Solar Rights Act (California Civil Code Section 714 et seq.).

B. Structure-mounted. The combined height of a structure and structure-mounted small-scale solar energy system shall not exceed the height limit of the zone by more than five feet.

22.52.1640 Standards for Temporary Meteorological Towers.

A. Access roads. All temporary and permanent ingress and egress points to the facility shall be designed and sited to the satisfaction of the Director of Public Works and the Fire Department, shall consider adequate spacing from intersections, and shall maintain adequate sight distances.

B. Aviation safety.

1. A safety light that meets FAA standards shall be required for any wind tower that exceeds an overall tower height of 200 feet measured from finished grade. A safety light may be required on shorter wind towers when deemed necessary by any aviation-related agency or the Department. No other lights shall be placed on the wind tower.

2. Wind towers of less than 200 feet measured from finished grade shall be marked with alternating bands of aviation orange and white paint, and high

visibility sleeves installed on the outer guys with high spherical marker balls of aviation orange color.

C. Climbing apparatus. All climbing apparatus shall be located at least 12 feet above the finished grade, and all wind towers shall be designed to prevent climbing within the first 12 feet of wind tower height from finished grade.

D. Colors. Except as otherwise required in this section, the colors used in the construction materials or finished surface shall be muted and visually compatible with surrounding development or environment.

E. Location. The minimum setback for a wind tower shall be as depicted in Table 22.52.1640-A – Setback Requirements for Temporary Meteorological Towers. The required distance shall also comply with any applicable fire setback requirements pursuant to California Public Resources Code Section 4290.

TABLE 22.52.1640-A – SETBACK REQUIREMENTS FOR TEMPORARY METEOROLOGICAL TOWERS	
Setback from	Minimum Distance
On-site or Off-site Residence or Habitable Structure	1.5 x system height
Public Road, Highway	As required by Department of Public Works to meet sight distance and minimum setback requirements from traveled lanes.
Above Ground Transmission Line, Public Access Easement, or Public Trail	1.25 x system height
Property Line	1.25 x system height
On-site or Off-site Buildings Other Than a Residential Structure	1 x system height
Trees	As required by the Fire Department
Scenic Drives and Scenic Routes as identified	1,000 feet

in the General Plan or applicable Area or Community Plan	

F. Maintenance. All equipment and facilities shall be maintained in an operational condition that poses no potential safety hazards. Maintenance shall include, but not be limited to, painting, regularly scheduled cleaning, mechanical and/or electrical repairs, structural repairs, and security measures.

G. Maximum number and separation.

1. More than one wind tower may be located on the same property if all of the location requirements and standards of this Part 15 are met for each facility. A maximum of two wind towers are permitted for each five gross acres of land; and

2. Wind towers must be separated from each other by the safe industry practice depicted in Figure 22.52.1640-A - Separation Standards for Temporary Meteorological Towers, below.

FIGURE 22.52.1640-A – SEPARATION STANDARDS FOR TEMPORARY METEOROLOGICAL TOWERS

FIGURE 22.52.1640-A HERE

H. Maximum wind tower height. The maximum wind tower height shall not exceed the height limit as depicted in Figure 22.52.1640-B - Height Standards for Temporary Meteorological Towers below:

1. 35 feet measured from the finished grade to the top of the blade in the vertical position for lots of less than one gross acre in size;

2. 65 feet measured from the finished grade to the top of the blade in the vertical position for lots from one gross acre to less than two gross acres in size; and

3. 85 feet measured from the finished grade to the top of the blade in the vertical position for lots two gross acres or greater in size.

FIGURE 22.52.1640-B – HEIGHT STANDARDS FOR TEMPORARY METEOROLOGICAL TOWERS

FIGURE 22.52.1640-B
HERE

I. Structure-mounted. The combined height of a structure and structure-mounted wind tower shall not exceed the height limit of the zone by more than five feet.

J. Signs. One sign, limited to 18 inches in length and 12 inches in height, shall be posted at the base of each wind tower. The sign shall include a note of no trespassing, a warning of high voltage, and the phone number of the property owner to call in the event of an emergency.

22.52.1650 Standards for Small-Scale Wind Energy Systems. In addition to the standards required under Section 22.52.1640, the following standards shall apply to small-scale wind energy systems:

A. Automatic overspeed controls. A small-scale wind energy system shall be equipped with manual and automatic overspeed controls to limit the blade rotation speed to within the design limits of such system.

B. Blade clearance. No portion of a blade shall extend within 20 feet of the finished grade.

C. Guy wires. Safety wires shall be installed on the turnbuckles on guy wires. Anchor points for any guy wires shall be located within the same property as the system, and located in such a manner so as not to be on or across any above-ground electric transmission or distribution lines; and

D. Noise. Noise from a small-scale wind energy system shall not exceed 60 dBA SEL (single event noise level), as measured at the closest neighboring inhabited dwelling.

E. Visual impact.

1. The highest point of a small-scale wind energy system shall be located at least 50 vertical feet and 50 horizontal feet from a significant ridgeline identified in the General Plan, in an applicable area or community plan, or within an applicable community standards district;

2. Any small-scale wind energy system placed within the viewshed of a Scenic Drive or Scenic Route identified in the General Plan or in an applicable area or community plan shall be assessed for its visual impacts, and appropriate conditions shall be applied relating to siting, buffers, and design of the system; and

3. Within the coastal zone, the placement of any small-scale wind energy system shall not obstruct public views of the ocean from a scenic element (i.e.,

significant ridgeline, scenic route, scenic area, scenic viewpoint) identified in the applicable local coastal program, unless specific provisions for such siting are provided for in the applicable local coastal program and coastal development permit or long-range development plan.

22.52.1660 Standards for Ground-Mounted Utility-Scale Renewable Energy Facilities.

A. Access roads. All temporary and permanent ingress and egress points to the ground-mounted utility-scale renewable energy facility shall be designed and sited to the satisfaction of Director of Public Works and the Fire Department, shall consider adequate spacing from intersections, and shall maintain adequate sight distances.

B. Aviation safety.

1. A ground-mounted utility-scale renewable energy facility shall not be located within the Runway Protection Zone of any airport, as depicted in the County's airport land use plans.

2. A ground-mounted utility-scale renewable energy facility shall not penetrate the imaginary surfaces (primary, approach, transitional, horizontal, and conical surfaces) as defined by the FAA Federal Aviation Regulations Part 77 to protect the use of navigable airspace.

3. A safety light that meets FAA standards shall be required for all wind towers that exceed a height of 200 feet. A safety light may be required on shorter wind towers when deemed necessary by any aviation-related agency. No other lights shall be placed on such wind towers.

C. Fencing. Except as otherwise required by Department of Public Works to maintain minimum corner sight distance:

1. Non-opaque fences may be permitted.

2. Fencing up to eight feet in height may be permitted regardless of any other fencing standards.

3. Fencing shall not be located within 15 feet of a public right-of-way but may be located within the required setback area.

4. Existing drought-tolerant native or non-native vegetation approved by the staff biologist shall be retained, or new such vegetation shall be planted along fencing, unless determined infeasible or inappropriate by the Hearing Officer.

D. Lighting. Night-lighting, limited to that required for safety and security, shall be shielded and directed downward to avoid light trespass, and shall consist of:

1. Motion sensors for entry-lighting to the on-site equipment structures and buildings; and

2. Light-sensor or motion-sensor lighting for the main facility access gate, operations and maintenance building doorways, and any parking areas of facilities with operation and maintenance buildings.

E. Setbacks. Setbacks from the perimeter of the property line shall be:

1. 30 feet in agricultural zones; or

2. As provided in the base zone for all non-agricultural zones.

F. Signs. One ground-mounted or pole-mounted project identification sign may be located at each temporary and permanent ingress and egress point. Signs shall include owner information and emergency contact. No other signs shall be installed for

the facility other than safety, directional, and required warning signs as outlined in Part 10 of Section 22.52.

G. Site disturbance.

1. Existing vegetation may be mowed, but removal of existing vegetation root systems shall be prohibited to ensure dust control and minimal soil erosion, except where necessary for access roads, drainage, debris basins, inverter pads, or other County requirements.

2. The facility shall be designed to minimize erosion, sedimentation, or other impacts to the natural hydrology and drainage patterns of the site. Existing topography and watercourses shall be retained or restored to pre-existing conditions following construction and during operations, except for drainage features specifically designed to mitigate drainage impacts. A drainage plan shall be submitted at time of application that complies with all requirements showing the extent of drainage impacts, comply with the most recent County standards for addressing drainage impacts to the satisfaction of Department of Public Works, and obtain all agency approvals.

3. The facility shall be designed to minimize grading and amount of ground disturbance in order to control fugitive dust and preserve the natural topography. A site plan shall be submitted depicting the extent of grading and ground disturbance, and comply with all applicable standards for addressing grading and ground disturbance impacts. Grading involves any mechanical disturbance that removes the root system with the exception of access roads, drainage, debris basins, and inverter pads.

4. Fugitive dust emission shall be controlled by phased earthwork, site watering, use of clean gravel or composted wood chips not to exceed a depth of six

inches where applicable, application of non-toxic soil stabilizers, limiting public access on unpaved areas, posting private roadways with reduced speeds, and/or re-vegetation. Use of other fugitive dust mitigation measures may be implemented if determined by Regional Planning and Public Works to be suitable methods to adequately control dust during construction, operations, and removal and restoration activities.

H. Transmission lines. On-site and off-site transmission lines shall be placed underground to the satisfaction of Department of Public Works and the Department, except where above-ground crossings are otherwise required (such as over the California Aqueduct). A franchise agreement shall be required for distribution/transmission facilities within the public right of way. Disturbed areas shall comply with Section 22.52.1660.G to ensure dust control and minimal soil erosion.

I. Visual impact.

1. The highest point of a utility-scale renewable energy facility shall be located at least 50 vertical feet and 50 horizontal feet from a significant ridgeline identified in the General Plan, in an applicable area or community plan, or in an applicable community standards district;

2. Any utility-scale renewable energy facility that is placed within the viewshed of a Scenic Drive identified in the General Plan or in an applicable Area Plan or Community Plan shall be analyzed for its visual impacts, and appropriate conditions relating to siting, buffering, height, and design of the facility may be imposed to minimize significant effects on the viewshed; and

3. Within the Coastal Zone, the placement of any utility-scale renewable energy facility shall not obstruct public views of the ocean from a scenic

element (i.e., significant ridgeline, scenic route, scenic area, scenic viewpoint) identified in the applicable local coastal plan unless specific provisions for such siting are provided for in the applicable local coastal plan and coastal development permit or long-range development plan.

J. Water quality protection. Measures to protect groundwater and surface water from waste discharge shall be incorporated into the project design, as appropriate, and shall meet the requirements of the Regional Water Quality Control Board.

K. Blade clearance. No portion of a utility-scale renewable energy facility blade utilizing wind resources shall extend within 30 feet from the finished grade.

L. Impacts to birds and bats. All utility-scale renewable energy facilities utilizing wind resources shall be designed, constructed, and operated pursuant to the *California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development* published by the California Energy Commission and conditions of approval may be imposed by the Hearing Officer, consistent with these guidelines, to reduce significant impacts to birds and bats.

M. Location. The minimum distance and safe clearances for a utility-scale renewable energy facility utilizing wind resources shall be as depicted in Table 22.52.1660-A – Setback Requirements for Ground-Mounted Utility-Scale Renewable Energy Facility Using Wind Resources. The required distance shall also comply with any applicable fire setback requirements pursuant to the California Public Resources Code Section 4290.

TABLE 22.52.1660-A – SETBACK REQUIREMENTS FOR GROUND-MOUNTED UTILITY-SCALE RENEWABLE ENERGY

FACILITY USING WIND RESOURCES	
Setback from	**Minimum Distance**
On-site or Off-site Residence or Habitable Structure	2 x facility height
Public Road or Highway	As required by the Department of Public Works to meet sight distance and minimum setback requirements from traveled lanes
Above Ground Transmission Line, Public Access Easement, or Public Trail	2 x facility height
Property Line	2 x facility height
On-site or Off-site Buildings Other Than a Residential Structure	1 x facility height
Trees	As required by the Fire Department
Scenic Drives and Scenic Routes as identified in the General Plan or in an applicable area or community plan	2 x facility height
Railway	2 x facility height

N. Maximum height. Wind tower height shall not exceed 500 feet above finished grade.

O. Decommissioning. In the event that any portion of a utility-scale renewable energy facility is not in operational condition for a consecutive period of six months, ceased operation, or the permit for the use has expired, operations for that use shall be deemed to have been discontinued. The Department shall send written notice to the permittee advising of the discontinued use and require that the use be removed from the site within the time period specified below:

1. Within six months after the written notice of discontinued use is sent to the permittee, decommissioning of the use shall commence according to the decommissioning plan.

2. Within the six month period specified by subsection 1 above, the permittee may provide the Department with a written request and justification for an extension of up to six months to resume operations of the system, facility, or portions thereof. The Director may approve one six month extension.

22.52.1670 Standards for Structure-Mounted Utility-Scale Renewable Energy Facilities

A. Setbacks. Setbacks from the perimeter of the roof shall be:

1. Three feet on residential buildings; or

2. Four feet on non-residential buildings.

B. Accessory structures. Accessory structures constructed for the purposes of operating and maintaining the utility-scale renewable energy facility must meet all applicable development standards of the zone.

22.52.1680 Modifications

A. Where a site plan review is required pursuant to Section 22.52.1620, a conditional use permit in compliance with Part 1 of Chapter 22.56, is required for any modification to the applicable standards in this Part 15, except as otherwise noted herein. In addition to those required by Section 22.52.1620.B, the applicant for such conditional use permit shall substantiate the following findings:

1. Due to topographic or physical features of the site, strict compliance with all of the required standards would substantially and unreasonably interfere with the establishment of the proposed development on the subject property; and

2. The requested modification(s) would not be contrary to the purpose of this Part 15.

B. Where a minor conditional use permit or conditional use permit is required pursuant to Section 22.52.1620, any modification of the applicable standards in this Part 15 may be requested as part of the minor conditional use permit and conditional use permit, except as otherwise noted herein. The applicant for such minor conditional use permit or conditional use permit shall substantiate the findings provided in subsection A above in addition to those required by Section 22.52.1620.B and Part 1 of Chapter 22.56.

C. A wind tower greater than 500 feet in height requires approval of a variance pursuant to Part 2 of Chapter 22.56.

Comments on this document from Margaret Rhyne
on behalf of Friends of Antelope Valley Open Space.
www.avopenspace.org
m.rhyne@verizon.net

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT AND NOTICE OF PUBLIC SCOPING MEETING

To: State Clearinghouse, Responsible and Trustee Agencies, and Interested Individuals
Date: April 30, 2014
Subject: Notice of Preparation of a Draft Environmental Impact Report and Notice of Public Scoping Meeting
Project: Los Angeles County Renewable Energy Ordinance
Lead Agency: Los Angeles County

NOTICE IS HEREBY GIVEN that County of Los Angeles ("County"), through the Department of Regional Planning ("Department"), will be the Lead Agency for the preparation of an Environmental Impact Report (EIR) in accordance with the California Environmental Quality Act ("CEQA") for the project described below.

PROJECT INFORMATION: The project is an ordinance amending Title 22 of the County Code to establish regulations, which include definitions and development standards, for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary meteorological (MET) towers. The proposed Renewable Energy Ordinance ("Project") would apply to unincorporated portions of the County over which the County has land use jurisdiction; see Figure 1, Regional Location Map.

NOTICE OF PREPARATION: A Notice of Preparation (NOP) for the EIR, which describes the project and outlines the potential environmental impacts, has been prepared. The NOP will be available for review from **May 5, 2014** to **June 4, 2014** on the Department's website at http://planning.lacounty.gov/energy. Hardcopies will be available at the following locations:

Los Angeles County Regional Planning - 320 W. Temple St., Los Angeles, CA 90012, (213) 974-6476
Regional Planning Field Office – 335A East Avenue K-6, Lancaster, CA 93535, (661) 723-4475
Regional Planning Field Office – 26600 Agoura Rd., Calabasas, CA 91302, (818) 880-3799
Regional Planning Field Office – 4801 E. Third St., Los Angeles, CA 90022, (323) 881-7057
Regional Planning Field Office – 16005 E. Central Ave., La Puente, CA 91744, (213) 974-6411
Regional Planning Field Office – 125 S. Baldwin Ave., Arcadia, CA 91007, (213) 974-6411
Regional Planning Field Office – 23757 Valencia Blvd., Valencia, CA 91355, (661) 222-2570
Regional Planning Field Office – 13523 Telegraph Rd., Whittier, CA 90605, (213) 974-6411
Regional Planning Field Office – 1320 W. Imperial Hwy., Los Angeles, CA 90044, (213) 974-6411
Acton Agua Dulce Library – 33792 Crown Valley Rd., Acton, CA 93510, (661) 269-7101
Agoura Hills Library – 29901 Ladyface Court, Agoura Hills, CA 91301, (818) 889-2278
Avalon Library – 215 Sumner Ave., Avalon, CA 90704, (310) 510-1050
Florence Library – 1610 E. Florence Ave., Los Angeles, CA 90001, (323) 581-8028
La Crescenta Library – 2809 Foothill Blvd., La Crescenta, CA 91214, (818) 248-5313
Lancaster Regional Library - 601 W. Lancaster Blvd., Lancaster, CA 93534, (661) 948-5029
Lennox Library – 4359 Lennox Blvd., Lennox, CA 90304, (310) 674-0385
Littlerock Library – 35119 80th Street East, Littlerock, CA 93543, (661) 944-4138

Quartz Hill Library – 42018 N. 50th St. West, Quartz Hill, CA 93536, (661) 943-2454
Rowland Heights Library – 1850 Nogales St., Rowland Heights, CA 91748, (626) 912-5348
South Whittier Library – 14433 Leffingwell Rd., Whittier, CA 90604, (562) 946-4415
Temple City Library – 5939 Golden West Ave., Temple City, CA 91780, (626) 285-2136
Valencia Library – 23743 W. Valencia Blvd., Santa Clarita, CA 91355, (661) 259-8942
View Park Library – 3854 W. 54th St., Los Angeles, CA 90043, (323) 293-5371

The Department is seeking input from both agencies and members of the public on the scope and content of the environmental information and analysis to be contained in the EIR. Due to the time limits mandated by State law, written comments must be sent via mail, e-mail, or fax no later than 5:00 PM on **Wednesday, June 4, 2014**. Please send your comments at the earliest possible date to:

Los Angeles County Department of Regional Planning
Attn: Thuy Hua
320 W. Temple Street, 13th Floor
Los Angeles, CA 90012
Email: thua@planning.lacounty.gov
Fax: (213) 626-0434

PUBLIC SCOPING MEETING: Pursuant to the California Public Resources Code Section 21803.9, Los Angeles County will conduct two public scoping meetings. These meetings will provide a public forum for information dissemination and dialogue regarding the components of the proposed project, the overall process, and the draft EIR. While staff will summarize the issues raised at these meetings, anyone wishing to make formal comments on the NOP must do so in writing. The public scoping meetings will be held at the times and locations listed below:

Date: **Tuesday - May 20, 2014**
Time: **5:00 p.m. to 6:00 p.m.**
Location: **Antelope Valley Transit Authority – Board Room**
42210 6th Street West
Lancaster, CA 93534

Date: **Thursday - May 22, 2014**
Time: **12:00 p.m. to 1:00 p.m.**
Location: **Los Angeles County**
Department of Regional Planning
320 W. Temple Street, Room 150 – Commission Hearing Room
Los Angeles, CA 90012

Attachments: Figure 1, Regional Location Map
Initial Study

DUDEK

8124

FIGURE 1

Regional Location Map

RENEWABLE ENERGY ORDINANCE IS/NOP

Environmental Checklist Form (Initial Study)

County of Los Angeles, Department of Regional Planning

Project title: Renewable Energy Ordinance / Project No. R2014-01160 (1-5) / Case No(s). Advanced Planning No. 2014-00004, Environmental Assessment No. 2014-0096

Lead agency name and address: Los Angeles County Department of Regional Planning: 320 West Temple Street, Los Angeles, California 90012

Contact Person and phone number: Thuy Hua, (213) 974-6476

Project sponsor's name and address: Los Angeles County, 320 W Temple Street, Los Angeles, CA 90012

Project location: The proposed Renewable Energy Ordinance (project) would apply to the unincorporated portions of the County of Los Angeles (County) over which the County has land use jurisdiction.

Gross Acreage: Countywide; approximately 2,583 square miles (1,653,056 acres)

General plan designation: Variable

Community/Area wide Plan designation: All Area Plan and Community Plan designations

Zoning: Variable

Description of project: The project proposes an ordinance amending the Los Angeles County (County) Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary meteorological (MET) towers.

Surrounding land uses and setting: The County stretches along 75 miles of the Pacific Coast of Southern California and is bordered to the east by Orange County and San Bernardino County, to the north by Kern County, and to the west by Ventura County. Los Angeles County also includes two offshore islands, Santa Catalina Island, and San Clemente Island.

The unincorporated areas in the northern portion of the County are covered by large amounts of sparsely populated land and include the Angeles National Forest, part of the Los Padres National Forest, and the Mojave Desert. The unincorporated areas in the southern portion of the County consist of noncontiguous land areas, which are often referred to as the County's unincorporated urban islands. The Antelope Valley Planning Area covers approximately 1,800 square miles and includes over two dozen communities. The Antelope Valley Planning Area is bounded by Kern County to the north, Ventura County to the west, the Angeles National Forest (inclusive) to the south, and San Bernardino County to the east. It excludes the Cities of Lancaster and Palmdale.

Other public agencies whose approval may be required: None

Major projects in the area:

Project/Case No.

General Plan Update
Antelope Valley Area Plan Update
East Los Angeles 3rd Street Specific Plan
Florence-Firestone Community Plan
Santa Monica Mountains Local Coastal Program
Willowbrook TOD Specific Plan
Centennial Specific Plan

Reviewing Agencies:

Responsible Agencies

- ☐ None
- Regional Water Quality Control Board:
  - ☒ Los Angeles Region
  - ☒ Lahontan Region
- ☐ Coastal Commission
- ☒ Army Corps of Engineers

Special Reviewing Agencies

- ☒ Santa Monica Mountains Conservancy
- ☐ National Parks
- ☒ National Forest
- ☒ Edwards Air Force Base
- ☐ Resource Conservation District of Santa Monica Mountains Area
- ☒ City of Lancaster
- ☒ City of Palmdale
- ☒ Kern County
- ☒ San Bernardino County
- ☒ Antelope Valley Resource Conservation District
- ☒ State Department of Fish and Wildlife
- ☒ Antelope Valley Air Quality Management Board
- ☒ Southcoast Air Quality Management Board

Regional Significance

- ☐ None
- ☐ SCAG Criteria
- ☒ Air Quality
- ☐ Water Resources
- ☐ Santa Monica Mtns. Area

Trustee Agencies

- ☐ None
- ☒ State Dept. of Fish and Wildlife
- ☐ State Dept. of Parks and Recreation DPR should be included!
- ☒ State Dept. Conservation
- ☒ Caltrans
- ☐ State Lands Commission
- ☐ University of California (Natural Land and Water Reserves System)

County Reviewing Agencies

- ☒ DPW:
  - Land Development Division (Grading & Drainage)
  - Geotechnical & Materials Engineering Division
  - Watershed Management Division (NPDES)
  - Traffic and Lighting Division
  - Environmental Programs Division
  - Waterworks Division
  - Sewer Maintenance Division
- ☒ Fire Department
  - Forestry, Environmental Division
  - Planning Division
  - Land Development Unit
  - Health Hazmat
- ☒ Sanitation District
- ☒ Public Health/Environmental Health Division: Land Use Program (OWTS), Drinking Water Program (Private Wells), Toxics Epidemiology Program (Noise)
- ☒ Sheriff Department
- ☒ Parks and Recreation
- ☐ Subdivision Committee

Many state parks including the Antelope Valley California Poppy Reserve and other state parks and recreation areas in Los Angeles County could be negatively impacted by utility-scale renewable energy installations.
The California Department of Parks and Recreation should be included as a trustee agency.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project.

☒ Aesthetics	☒ Greenhouse Gas Emissions	☐ Population/Housing
☒ Agriculture/Forest	☒ Hazards/Hazardous Materials	☒ Public Services
☒ Air Quality	☒ Hydrology/Water Quality	☒ Recreation
☒ Biological Resources	☒ Land Use/Planning	☒ Transportation/Traffic
☒ Cultural Resources	☒ Mineral Resources	☒ Utilities/Services
☐ Energy	☒ Noise	☒ Mandatory Findings of Significance
☒ Geology/Soils		

DETERMINATION: (To be completed by the Lead Department.)
On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

_____ _____
Signature (Prepared by) Date

_____ _____
Signature (Approved by) Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources the Lead Department cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the Lead Department has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level. (Mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced.)

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA processes, an effect has been adequately analyzed in an earlier EIR or negative declaration. (State CEQA Guidelines § 15063(c)(3)(D).) In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of, and adequately analyzed in, an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

7) The explanation of each issue should identify: the significance threshold, if any, used to evaluate each question, and; mitigation measures identified, if any, to reduce the impact to less than significance. Sources of thresholds include the County General Plan, other County planning documents, and County ordinances. Some thresholds are unique to geographical locations.

8) Climate Change Impacts: When determining whether a project's impacts are significant, the analysis should consider, when relevant, the effects of future climate change on: 1) worsening hazardous conditions that pose risks to the project's inhabitants and structures (e.g., floods and wildfires), and 2) worsening the project's impacts on the environment (e.g., impacts on special status species and public health).

1. AESTHETICS

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Have a substantial adverse effect on a scenic vista?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance is Countywide and therefore would allow these uses to be located near or within the viewshed of a scenic vista. Determining the level of impact to a scenic vista requires analyzing the changes to the vista as a whole and also to individual visual resources. A scenic viewshed provides a scenic vista from a given location, such as a highway, a park, a hiking trail, river/waterway, or even from a particular neighborhood. The boundaries of a viewshed are defined by the field of view to the nearest ridgeline. Scenic viewsheds vary by location and community and can include ridgelines, unique rock outcroppings, buttes, ocean views, or various other unusual or scenic landforms.

The County recognizes that the coastline, mountain vistas, and other scenic features of the region are significant resources for the County. The Hillside Management Areas within the County are designated to protect some of the dramatic views and scenic resources and vistas. The Hillside Management Areas are mountainous or foothill terrain with a natural slope of 25% or greater. Wind energy systems, as allowed under the ordinance, require open space in order to harness high wind resource potential. Therefore, they are generally located near ridgelines or hillside areas, or in open areas that tend to be visible. However, the proposed ordinance includes measures to minimize visual impacts to scenic vistas. For example, the top of a small-scale wind energy system must be located at least 50 vertical feet and 50 horizontal feet from any designated significant ridgelines. Also, any transmission lines for utility-scale renewable energy systems must be placed underground unless aboveground right-of-way crossings are required. The ordinance also includes height restrictions, lighting restrictions, color requirements to blend with surroundings, setbacks, and special conditions to minimize visual impacts to scenic drives, scenic routes, and public ocean views in the coastal zone. It is also important to note that the Hillside Management Areas Ordinance protects these scenic resources by requiring almost all development on properties with either the urban or non-urban designation to obtain a conditional use permit (CUP) with the intent of preserving the remaining natural topography.

Even though future projects will be required to implement the measures in the proposed ordinance and the Hillside Management Ordinance, renewable energy systems and temporary MET towers could introduce new vertical elements within the viewshed of a scenic vista and therefore may result in a substantial adverse impact on a scenic vista. The proposed ordinance's potential to result in a substantial adverse impact on a scenic vista will be further addressed in the program environmental impact report (PEIR).

b) Be visible from or obstruct views from a regional riding or hiking trail? ☒ ☐ ☐ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance is Countywide and therefore would allow these uses to be located near a regional riding or hiking trail. The County offers unique trail use opportunities that showcase its diverse scenery and provide connectivity to parks, open spaces, cultural resources, and wilderness areas. The County's regional trails are largely concentrated in the Santa Monica Mountains as well as in unincorporated areas surrounding the Angeles National Forest and throughout the Antelope Valley and Santa Clarita Valley.

The ordinance includes measures that would minimize visual impacts to regional riding or hiking trails. For example, transmission lines for utility-scale renewable energy systems must be placed underground unless aboveground right-of-way crossings are required. The ordinance also includes height restrictions, lighting restrictions, color requirements to blend with surroundings, and setbacks. Even though future projects will be required to implement these measures in the ordinance, renewable energy systems and temporary MET towers could result in potentially significant adverse impacts to regional trails since they could introduce new vertical elements within the viewshed of a regional trail and would potentially degrade the scenic character in and around the trail. The proposed ordinance's potential to result in a substantial adverse impact on regional riding or hiking trails will be further addressed in the PEIR.

c) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? ☒ ☐ ☐ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance is Countywide and therefore would allow these uses to be located near a state scenic highway. State scenic highways refer to those highways that are officially designated by the California Department of Transportation (Caltrans) as scenic (Caltrans California Scenic Highway Program (http://www.dot.ca.gov/hq/LandArch/scenic highways/scenic hwy.htm). Generally, the area defined within a state scenic highway is the land adjacent to and visible from the vehicular right-of-way. The dimension of a scenic highway is usually identified using a motorist's line of vision, but a reasonable boundary is selected when the view extends to the distant horizon. The scenic highway corridor extends to the visual limits of the landscape abutting the scenic highway.

The ordinance includes specific measures to minimize visual impacts to a scenic drive or scenic route. The ordinance requires any small-scale wind energy system or utility-scale ground-mounted renewable energy system placed within the viewshed of a scenic drive to be analyzed for visual impacts and apply appropriate conditions such as siting, buffering, height, and design to minimize significant effects. Other measures that would generally minimize visual impacts, such as those to trees, rock outcroppings, and historic buildings within a scenic highway, include undergrounding transmission lines, height restrictions, lighting restrictions, color requirements to blend with surroundings, and setbacks. Even though future projects will be required to implement the measures in the ordinance, renewable energy systems and temporary MET towers could result in potentially significant adverse impacts to scenic resources within a scenic highway since they could introduce new vertical elements within the viewshed of a scenic highway. The proposed ordinance's

potential to result in a substantial adverse impact on scenic resources within a state scenic highway will be further addressed in the PEIR.

d) Substantially degrade the existing visual character or quality of the site and its surroundings because of height, bulk, pattern, scale, character, or other features?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance would allow these uses that may substantially degrade the existing visual character or quality of a site and its surroundings because of height, bulk, pattern, scale, character, or other features. Visual character is the objective composition of the visible landscape within a viewshed. Visual character is based on the organization of the pattern elements line, form, color, and texture. Visual character is commonly discussed in terms of dominance, scale, diversity, and continuity. Visual quality is the viewer's perception of the visual environment and varies based on exposure, sensitivity, and expectation of the viewers.

The ordinance includes design measures to help future projects integrate with surrounding visual character and to minimize visual impacts. Such measures include undergrounding transmission lines, height restrictions, lighting restrictions, color requirements to blend with surroundings, and setbacks. Additionally, the ordinance requires special conditions to minimize visual impacts to scenic drives, scenic routes, and public ocean views in the coastal zone. Even though future projects will be required to implement the measures in the ordinance, renewable energy systems and temporary MET towers could result in potentially significant adverse impacts to visual character since they could introduce new facilities with height, bulk, and scale that may differ from existing surrounding uses. For example, a utility-scale wind energy system is a type of renewable energy system that requires open space to harness higher wind resource potential; therefore, these systems are generally located near ridgelines or in open areas that tend to be visible. The proposed ordinance's potential to result in a substantial adverse impact to visual character will be further addressed in the PEIR.

e) Create a new source of substantial shadows, light, or glare which would adversely affect day or nighttime views in the area?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance would allow these uses that could generate shadows, light, or glare.

Shadows

Solar energy systems are typically not tall enough to generate substantial shadows that would affect nearby sensitive receptors. Future wind energy systems and temporary MET towers allowed under the ordinance may generate shadows due to their height. However, the massing of wind turbines is broken up, which creates passages through which light may pass, thereby minimizing impacts to nearby sensitive receptors.

Light

The ordinance prohibits lighting on temporary MET towers and ground-mounted utility-scale renewable energy system towers except for safety lighting to meet Federal Aviation Administration (FAA) standards or to meet other aviation agency requirements. Night-lighting for safe and secure access to entryways and operation and maintenance buildings for all future projects under the ordinance, as applicable, shall be shielded and directed downward and shall include motion sensors. Additionally, future projects located within the rural outdoor lighting district shall comply with the County's Rural Outdoor Lighting District Ordinance. The County's Rural Outdoor Lighting District Ordinance was developed to effectively address and minimize the impact of new source light pollution on nighttime views. Compliance with the County's Rural Outdoor Lighting District Ordinance is required prior to issuance of any building permit for any project located within the rural outdoor lighting district. Mandatory compliance for all new building permits ensures that future projects under the proposed ordinance, in combination with all past, present, and future projects, will not contribute to a cumulatively considerable impact. Therefore, compliance with the County's Rural Outdoor Lighting District Ordinance and lighting requirements of the proposed ordinance ensures that the project will not create a significant new source of substantial light that would adversely affect daytime or nighttime views in the area, on a project or cumulative level.

Glare

The ordinance requires all renewable energy facilities to use non-reflective colors and materials. However, solar projects would still have the potential to generate glare, primarily produced from the solar panels, which reflect a small portion of the sun's image back to the viewer. It is important to understand that glare intensity is directly related to the angle of incidence of the sun striking the panel, and may account for a wide range of results depending on whether the solar panels are static or moving throughout the day. The level of impact from glare exposure depends on the location of sensitive receptors. Sensitive receptors may include residents, recreationists, and motorists. Glare from solar panels may also result in potential hazards to flight operations; this issue is addressed in Section 9, Hazards and Hazardous Materials. Temporary MET towers and wind energy systems are less likely to result in glare impacts, although lighting associated with these facilities may result in glare. The proposed ordinance's potential to result in a substantial adverse visual impact due to glare will be further addressed in the PEIR. It should also be noted that for discretionary solar projects, the County typically includes the following mitigation measure: "glass used to cover the flat-plate photovoltaic (PV) panels shall be high-transmission, low-iron tempered glass and have a reflectance value of 8 percent or less."

Shadow Flicker

Future wind energy systems may result in shadow flicker, which is commonly defined as alternating changes in light intensity at a given stationary location. In order for shadow flicker to occur, three conditions must be met:

- The sun must be shining with no clouds obscuring the sun
- The rotor blades must be spinning and be located between the receptor and the sun
- The receptor must be sufficiently close to the turbine to be able to distinguish a shadow created by the turbine.

Concerns are occasionally raised about adverse health effects caused by shadow flicker such as annoyance, stress, and/or seizures in persons with photosensitive epilepsy. Concerns are also sometimes raised about shadow flicker on roadways distracting drivers and causing accidents. Utility-scale wind energy systems may result in significant shadow flicker effects if sensitive receptors are within 2,000 meters (6,562 feet) of the proposed turbines. Beyond 2,000 meters, the human eye cannot discern a shadow cast from a wind turbine. The proposed ordinance's potential to result in a substantial adverse impact related to shadow flicker will be further addressed in the PEIR.

2. AGRICULTURE / FOREST

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance is Countywide and would allow these uses to be located on land designated as Prime Farmland, Unique Farmland, and Farmland of Statewide or Local Importance according to the State Farmland Mapping and Monitoring Program. The proposed ordinance may have a potentially significant impact due to conversion of these farmland types to a non-agricultural use. The proposed ordinance's potential to convert Important Farmland to a non-agricultural use will be addressed in the PEIR.

b) Conflict with existing zoning for agricultural use, with a designated Agricultural Opportunity Area, or with a Williamson Act contract?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance is Countywide and therefore would allow these uses to be located on land zoned for agriculture, the County-designated Agricultural Opportunity Areas, or Williamson Act contract lands. The only Williamson Act contract lands in the County are located on Catalina Island and held by the Catalina Island Conservancy as set asides for open space and recreational purposes.

Per County Code Title 22, electric generating plants are a conditionally allowed use in the Heavy Agricultural (A-2) zones upon obtaining a CUP, which indicates they are generally compatible uses in agricultural zones. The future uses allowed pursuant to the ordinance could be found on land under a Williamson Act contract or in a County-designated Agricultural Opportunity Area. The Williamson Act contract may need to be reviewed or removed from the property; however, this would be determined on a case-by-case basis. The proposed ordinance's potential to conflict with agricultural zoning, a County-designated Agricultural Opportunity Area, or a Williamson Act contract will be addressed in the PEIR.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code § 12220 (g)), timberland (as defined in Public Resources Code § 4526), or timberland zoned Timberland Production (as defined in Government Code § 51104(g))? ☐ ☐ ☒ ☐

This should be indicated as "potentially significant" as the zoning for lands adjacent to existing protected areas including SEAs, state parks and conservation lands could subjected to zoning changes resulting in negative edge effects to protect land.

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Within the unincorporated areas of the County, the Angeles National Forest and a small portion of the Los Padres National Forest encompass nearly 650,000 acres of land. Nearly 40,000 acres of the national forests are privately owned. The U.S. Forest Service is responsible for managing public forest lands. For the privately owned forest land parcels, commonly referred to as inholdings, the County retains responsibility for land use regulation.

Per County Code Title 22, forest lands within the County are zoned Open Space (OS) and Watershed (W) zones. Per County Code Title 22, electric generating plants are not permitted within the OS zone; however, they are permitted within the W zone with a CUP. Forest lands would not serve as an ideal location for future renewable energy facilities. Impacts resulting from implementation of the proposed ordinance would be less than significant.

d) Result in the loss of forest land or conversion of forest land to non-forest use? ☐ ☐ ☐ ☐

General Discussion

See Response 2(c).

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use? ☒ ☐ ☐ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County and therefore facilities developed pursuant to the proposed ordinance may be located adjacent to or near agricultural or forest land. Therefore, implementation of the proposed ordinance could have an impact on existing agricultural land, existing agricultural uses, and forest and timberland. This potential impact will be addressed in the PEIR.

3. AIR QUALITY

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Conflict with or obstruct implementation of applicable air quality plans of either the South Coast AQMD (SCAQMD) or the Antelope Valley AQMD (AVAQMD)?	☐	☐	☒	☐

Due to the ongoing well documented severe problems with fugitive dust in the Antelope Valley caused by installation including AV Solar I, this should be changed to Potentially Significant Impact. This is a threat to both the health and safety of the residents and those traveling through the area on Highways 14 and 138.

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project is Countywide and therefore is located within two air basins. The boundaries of the two air basins reflect two distinct geographical areas called the Los Angeles Basin and Antelope Valley. The Los Angeles Basin is part of the South Coast Air Basin (SCAB), while the Antelope Valley is part of the Mojave Desert Air Basin (MDAB).

The air pollutants that are regulated by the federal and California Clean Air Acts fall under three categories, each of which is monitored and regulated:

- Criteria air pollutants
- Toxic air contaminants
- Global warming and ozone-depleting gases.

In 1970, the U.S. Environmental Protection Agency (EPA) identified six criteria air pollutants they found to be the most harmful to human health and welfare. These include:

- Ozone (O_3)
- Particulate matter (PM_{10} and $PM_{2.5}$)
- Carbon monoxide (CO)
- Nitrogen dioxide (NO_2)
- Sulfur dioxide (SO_2)
- Lead (Pb).

The entire SCAB is designated as a nonattainment area for both federal and state O_3 standards. The EPA has classified the SCAB as an "extreme nonattainment" area and has mandated that it achieve attainment no later than June 15, 2024. The federal NO_2 standard was revised in 2010, and all areas of California have been designated unclassifiable/nonattainment, and the SCAB is also designated as a nonattainment area for the state NO_2 standards. The SCAB is designated as an attainment area for federal and state CO and SO_2 standards, as an attainment area for the federal PM_{10} standard, and as a nonattainment area for the state PM_{10} standards. The SCAB is designated as a nonattainment area for both federal and state $PM_{2.5}$ standards. The MDAB is designated as a nonattainment area for both federal and state O_3 standards. The MDAB is also designated as a nonattainment area for state PM_{10} standards.

In response to the region's poor air quality, the South Coast Air Quality Management District (SCAQMD) and the Antelope Valley Air Quality Management District (AVAQMD) were created. The SCAQMD and the AVAQMD are responsible for monitoring air quality as well as planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards in the region.

The SCAQMD implements a wide range of programs and regulations, most notably, the Air Quality Management Plan (AQMP). The SCAQMD jurisdiction covers approximately 10,743 square miles and includes all of Los Angeles County except for the Antelope Valley, which is covered by the AVAQMD. According to the SCAQMD, if a project does not conform to a general plan, then it is not within the Southern California Association of Governments' (SCAG's) population and vehicle miles traveled projections, which form the foundation of the AQMP. The proposed ordinance would not generate growth, increase population, or require the alteration of an existing land use designation through amendments to the general plan or changes to zoning. Therefore, the level of development as a result of implementing the proposed ordinance would not exceed what was considered in the AQMP and would not conflict with or obstruct implementation of an air quality plan. The AVAQMD has adopted many of the same rules and regulations as those that are enforced by the SCAQMD. Rules include measures to reduce fugitive dust by requiring implementation of best available control measures for all fugitive dust sources and by prohibiting all forms of visible particulate matter from crossing any property line. The rule pertaining to fugitive dust, which would apply to projects in both AQMD jurisdictions, is intended to reduce particulate matter emissions from any transportation, handling, construction, or storage activity that has the potential to generate fugitive dust. Compliance with this rule would help alleviate fugitive dust generated by utility-scale renewable energy facilities. Discretionary review by the air quality management district in which a proposed renewable energy facility is located would be required to demonstrate compliance with that district's programs and regulations. Impacts are anticipated to be less than significant.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐

Please see previous comment - should be changed to Potentially Significant.

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project is Countywide and therefore is located within two air basins, the SCAB and the MDAB.

Construction and grading activities associated with development of renewable energy facilities may result in emissions of PM_{10}, oxides of nitrogen (NO_x), and volatile organic compounds (VOCs). Construction emissions would be generated from two principal sources: (1) engine exhaust of construction equipment and vehicles, and (2) particulate emissions from soil disturbance due to grading, earthmoving, and vehicle activity on unpaved roads and work areas. Particulate pollutants of concern are diesel particulate matter from construction equipment and particulates in dust raised by earthmoving and grading; diesel particulate matter contributes to $PM_{2.5}$ air quality emission levels. Additional emissions would be generated by any workers commuting to future project sites and vehicle travel on unpaved roadways during construction and operation.. Additionally, future projects allowed by the ordinance would contribute to lowering polluting emissions from large power plants supplying power to the County. Therefore, impacts would be considered less than significant.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project is Countywide and therefore is located within two air basins, the SCAB and the MDAB.
As discussed in Response 3b, future projects allowed by the proposed ordinance are not anticipated to exceed screening levels of criteria pollutants. However, future projects, when combined with cumulative projects, may potentially result in new sources of particulate matter from construction activities and/or vehicle trips that may result in a significant increase in criteria pollutant emissions for which the SCAB or the MDAB are in nonattainment. The proposed ordinance's potential to result in an impact related to the violation of air quality standards will be addressed in the PEIR.

d) Expose sensitive receptors to substantial pollutant concentrations? ☐ ☐ ☒ ☐

Should be changed to Potentially Significant for reasons stated above.

General Discussion

Air quality regulators typically define sensitive receptors as schools (preschool through 12th grade), hospitals, resident care facilities, daycare centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. Residences are also considered sensitive receptors since they may house children and the elderly.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project is Countywide and therefore sensitive receptors could be identified within a quarter mile (the radius determined by the SCAQMD in which the dilution of pollutants is typically significant) of a future proposed renewable energy facility or temporary MET tower. However, a renewable energy system or temporary MET tower does not propose uses or activities that would result in exposure of sensitive receptors to significant pollutant concentrations and will not place sensitive receptors near CO hotspots. Additionally, future projects allowed under the ordinance would contribute to lowering polluting emissions from large power plants supplying power to the County. As such, implementation of the proposed ordinance would not expose sensitive populations to excessive levels of air pollutants and impacts would be less than significant.

e) Create objectionable odors affecting a substantial number of people? ☐ ☐ ☒ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. A future project developed under the ordinance could produce objectionable odors, which would result from VOCs, ammonia (NH_3), carbon dioxide (CO_2), hydrogen sulfide (H_2S), methane (CH_4), alcohols, aldehydes, amines, carbonyls, esters, disulfides, dust, and endotoxins from the construction and operational phases. However, these substances, if present at all, would only be in trace amounts (less than 1 microgram per cubic meter). Subsequently, no significant air quality / odor impacts are expected to affect surrounding receptors. Moreover, the effects of objectionable odors would be localized to the immediate surrounding area and would not contribute to a cumulatively considerable odor. Impacts are expected to be less than significant.

4. BIOLOGICAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS)?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Some future renewable energy systems will be located on developed lots or already cleared areas and will not have an impact on any candidate, sensitive, or special-status species. Some future renewable energy systems may be built on land that contains native habitat and possibly even candidate, sensitive, or special-status species.

Special-status biological resources include declining habitats and species that have been accorded special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, rare, or otherwise of concern. Databases of such resources are maintained by the CDFW, USFWS, and special groups such as the California Native Plant Society. Within the County, areas that are designated as Significant Ecological Areas (SEAs) or Sensitive Environmental Resource Areas (SERAs) in the coast zone are considered sensitive biological resources and may contain candidate, sensitive, or special-status species.

All future renewable energy systems built pursuant to the proposed ordinance would be required to comply with all existing state and federal regulations that ensure the protection of candidate, sensitive, or special-status species, including the federal Endangered Species Act and the California Endangered Species Act. Furthermore, future renewable energy systems developed pursuant to the proposed ordinance that are located within a SEA, even if only in part, are subject to review by the Significant Ecological Area Technical Advisory Committee (SEATAC) and those in a SERA are subject to review by the Environmental Review Board (ERB). SEA buffers are also mapped and treated the same as the SEAs or SERAs around which they are located. The SEATAC and ERB will recommend mitigation measures, such as minimizing development footprint, reducing project height, and avoidance of certain natural resources, to reduce potential impacts to biological resources, as necessary. Future renewable energy systems located in urbanized areas outside an SEA are not likely to contain candidate, sensitive, or special-status species. The proposed ordinance's potential to impact candidate, sensitive, or special-status species through habitat modification will be addressed in the PEIR.

b) Have a substantial adverse effect on any sensitive natural communities (e.g., riparian habitat, coastal sage scrub, oak woodlands, non-jurisdictional wetlands) identified in local or regional plans, policies, regulations or by CDFW or USFWS? ☒ ☐ ☐ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Some future temporary MET towers and renewable energy systems will be located on developed lots or already-cleared areas and will not have an impact on any sensitive natural communities. Some future renewable energy systems may be built on land that contains riparian habitat or other sensitive natural communities as defined by the Natural Community Conservation Plan (NCCP), the California Fish and Game Code, the Endangered Species Acts, the Clean Water Act (CWA), or other local or regional plans, policies, or regulations. Sensitive habitats and vegetation communities are those that are considered rare in the region, support special-status plant or animal species, or receive regulatory protection, including those that are of special concern to resource agencies or are afforded specific consideration through the California Environmental Quality Act (CEQA), Section 1602 of the California Fish and Game Code, Section 404 of the federal CWA, and the state's Porter-Cologne Water Quality Control Act. In addition, sensitive natural communities within the County include County-designated SEAs, SERAs in the Santa Monica Mountains Coastal Zone, and vegetation habitats recognized as sensitive by the state. SERAs include Environmentally Sensitive Habitat Areas, oak woodlands and savannas, significant watersheds, migration corridors, and special resource management areas. State-recognized sensitive vegetation habitats include those indicated as such by the CDFW on their Natural Communities List (http://www.dfg.ca.gov/biogeodata/vegcamp/natural_communities.asp), oak woodland, and any other habitats listed in a California Natural Diversity Database 9-quad analysis.

Future renewable energy systems built pursuant to this proposed ordinance would be required to comply with all existing state and federal regulations that ensure the protection of riparian and sensitive habitat communities, including the federal Endangered Species Act, the California Endangered Species Act, the federal CWA, and the California Streambed Alteration Agreement. Furthermore, future renewable energy systems developed pursuant to the proposed ordinance that are located within a SEA, even if only in part, are subject to review by the SEATAC and those in a SERA are subject to review by the ERB. SEA Buffers are also mapped are treated the same as the SEA or SERA around which it is located. The SEATAC and ERB will recommend mitigation measures, such as minimizing development footprint, reducing project height, and avoidance of certain natural resources, to reduce potential impacts to biological resources, as necessary. Future renewable energy systems located in urbanized areas outside an SEA are not likely to contain sensitive natural communities. The proposed ordinance's potential to impact any sensitive natural communities identified in local or regional plans, policies, or regulations or by the CDFW or USFWS will be addressed in the PEIR.

c) Have a substantial adverse effect on federally or state protected wetlands (including, but not limited to, marshes, vernal pools, coastal wetlands, and drainages) or waters of the United States, as defined by § 404 of the federal Clean Water Act or California Fish & Game Code § 1600, et seq. through direct removal, filling, hydrological interruption, or other means? ☐ ☐ ☒ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Any future renewable energy system built pursuant to the proposed ordinance would be required to comply with all federal regulations that ensure the protection of wetlands as defined by Section 404 of the CWA, including, but not limited to, marsh, vernal pool, and coastal. The U.S. Army Corps of Engineers (ACOE) issues Section 404 permits under the CWA, and generally takes jurisdiction over navigable waters or tributaries thereof within streams and rivers to the ordinary high water mark, as defined by erosional cues, sedimentation, and changes in vegetation. The Regional Water Quality Control Board (RWQCB) issues Section 401 Water Quality Certifications and regulates the discharge of waste within any region that could affect waters of the state, under authority of the provisions of the Porter-Cologne Water Quality Control Act. Prior to the issuance of a CWA Section 404 permit by the ACOE, a Section 401 Certification must be obtained from the RWQCB. No discharging into, directly removing, or hydrologically interrupting any federally protected wetlands will be permitted without appropriate authorization from the ACOE and RWQCB. At the state level, the Lake and Streambed Alteration Program requires written notification to the CDFW prior to altering a riparian area (a type of wetland) supported by a lake, river, or stream, including federally protected wetlands. Therefore, impacts would be less than significant.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? ☒ ☐ ☐ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers and renewable energy systems may be built on land that contains native habitat and possibly on land that provides wildlife corridors or native wildlife nursery sites. Wildlife corridors are linear landscape features that connect large patches of natural open space and provide avenues for animals to migrate between these natural areas. To function effectively, a wildlife corridor must link two or more patches of habitat for which connectivity is desired, and it must be suitable for the focal target species to achieve the desired demographic and genetic exchange between populations. Identified wildlife movement corridors within the County are mapped as SERAs in the Santa Monica Mountains Coastal Zone. Outside of the Santa Monica Mountains Coastal Zone, wildlife corridors and habitat linkages are being mapped as part of the SEA update program. These corridors and linkages are being identified as areas where wildlife is able to move from one open space area or SEA to another. While the current mapping of wildlife corridors in the County is extensive, the reality of wildlife movement corridors and linkages is more complex and exists in more locations that are not easily mapped (bird and bat migration corridors and most linear natural features such as mountain ranges and watercourses, for example). Where no specific corridor or linkage has been

mapped, the preparer should be aware of any natural drainage courses, streams, or ridgelines in the area, as these can be important wildlife and plant linkage areas.

Future renewable energy systems developed pursuant to the proposed ordinance may introduce new structures or vertical elements or may result in ground disturbance that could interfere with wildlife movement or impede the use of nursery sites. The proposed ordinance would allow for wind energy systems that may have the potential to impact birds that travel within the County. The Pacific Flyway is a major north–south migration route for birds that travel between North and South America. In Southern California, birds typically use the coastal and inland areas. The Pacific Coast route is used by gulls, ducks, and other water birds. Pursuant to the proposed ordinance, all utility-scale wind energy facilities shall be designed, constructed, and operated pursuant to the California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development published by the California Energy Commission[1] and conditions of approval may be imposed by the Regional Planning Commission, consistent with these guidelines, to reduce significant impacts to birds and bats.

Indirect effects may also occur from increased noise levels or nighttime lighting, which would potentially discourage movement within corridors and linkages. The proposed ordinance's potential to interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites, will be addressed in the PEIR.

e) Convert oak woodlands (as defined by the state, oak woodlands are oak stands with greater than 10% canopy cover with oaks at least 5 inch in diameter measured at 4.5 feet above mean natural grade) or otherwise contain oak or other unique native trees (junipers, Joshuas, southern California black walnut, etc.)?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, some future temporary MET towers and renewable energy systems may be built on land that contains oak woodlands or other unique native trees. The presence of oak trees (*Quercus* spp.) or oak woodlands has been documented within the SERAs in the Santa Monica Mountains Coastal Zone and in the SEAs. In addition to oaks and oak woodlands, other unique species of trees in the County include juniper (*Juniperus* spp.), Joshua (*Yucca brevifolia*), Northern and Southern California black walnut (*Juglans hindsii*, *J. californica*), and California sycamore (*Platanus racemosa*). All of these species have been identified by the County as unique native trees, with the juniper and Joshua having also been identified by the state, under the Desert Plant Conservation Act, as unique species in California and in need of preservation. Future renewable energy projects would need to identify whether any unique species of trees are present within the site. Impacts to these unique species of trees may result from clearing or grading activities and from planting ornamental plants in close

[1] California Energy Commission. 2007. *California Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development*. Commissioner Final Report, CEC-700-2007-008-CMF. Produced by the California Energy Commission with the assistance of the California Department of Fish and Wildlife. October 2007. http://www.energy.ca.gov/windguidelines/.

proximity. Any impact to oak trees requires an Oak Tree Permit, and under the adopted CEQA Guidelines[2] may result in a potentially significant impact if two or more trees are impacted. The proposed ordinance's potential to impact oak woodlands or other unique native trees will be addressed in the PEIR.

f) Conflict with any local policies or ordinances protecting biological resources, including Wildflower Reserve Areas (L.A. County Code, Title 12, Ch. 12.36), the Los Angeles County Oak Tree Ordinance (L.A. County Code, Title 22, Ch. 22.56, Part 16), the Significant Ecological Areas (SEAs) (L.A. County Code, Title 22, § 22.56.215), and Sensitive Environmental Resource Areas (SERAs) (L.A. County Code, Title 22, Ch. 22.44, Part 6)? ☒ ☐ ☐ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. The project area includes ten wildflower reserve areas, which are designated in Title 12, Ch. 12.36 of the L.A. County Code. Future renewable energy projects would not be developed within these wildflower reserve areas, with the exception of rooftop solar facilities, which would be permitted on buildings within a wildflower reserve area. The presence of oak trees or oak woodlands has been documented within the SERAs in the Santa Monica Mountains Coastal Zone and the SEAs. Future renewable energy projects would need to be consistent with the County's Oak Tree Ordinance and identify if any unique species of trees are present within the site. Impacts to these unique species of trees may result from clearing or grading activities, and planting ornamental plants in close proximity. Any impact to oak trees requires an Oak Tree Permit, and under the adopted CEQA Guidelines may result in a potentially significant impact if two or more trees are impacted. Future renewable energy facilities located in or around SERAs would require review by the ERB and may require mitigation measures, such as minimizing development footprint, reducing project height, and avoidance of certain natural resources, to reduce any potential impacts to biological resources. The proposed ordinance's potential to conflict with any local policies or ordinances protecting biological resources will be addressed in the PEIR.

g) Conflict with the provisions of an adopted state, regional, or local habitat conservation plan? ☒ ☐ ☐ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County.

At the state level, the CDFW has created several regional NCCPs. These plans are intended to be broader in scope than localized conservation plans and have the intent of preserving the integrity of large ecosystems, which sometimes stretch over multiple cities and counties. Currently, there are no NCCPs within the County.

[2] 14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

At the federal level, the Endangered Species Act requires a project seeking an incidental take permit for one or more federally listed species to develop an HCP, which must be approved by the USFWS. The only active HCP in the County is the Newhall Farm Seasonal Crossings HCP, which addresses temporary vehicle crossings and water diversions along the portion of the Santa Clara River west of Valencia to the Ventura County line.

Future temporary MET towers or renewable energy systems may be located in proximity to or within a local coastal program, one or more SEAs, an NCCP, or a federal Endangered Species Act HCP. The proposed ordinance's potential to conflict with the provisions of these plans will be addressed in the PEIR.

5. CULTURAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines § 15064.5?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located on a site that has a national or state-designated historical resource as defined under Section 15064.5(a) of the CEQA Guidelines. Future temporary MET towers or renewable energy systems may adversely affect historical sites or resources through the introduction of visual, auditory, or atmospheric effects that are out of character with the historical resources or alter the setting of the resource when the setting contributes to the resources' significance. The proposed ordinance's potential to impact historical resources will be addressed in the PEIR.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines § 15064.5?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located on a site that contains an archeological resource as defined by Section 15064.5 of the CEQA Guidelines. Future MET towers or renewable energy systems could negatively impact archeological resources if they result in ground-disturbing activities without proper regulation and monitoring. Ground-disturbing activities, such as excavation and grading, have the potential to damage or destroy archaeological resources that may be present on or below the ground surface, particularly in areas that have not previously been developed. Any future project developed pursuant to the proposed ordinance that is located in an area that has not been previously developed would require

notification to the South Central Coastal Information Center to determine the potential existence of archaeological resources on or near the project site. The proposed ordinance's potential to impact archeological resources will be addressed in the PEIR.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or contain rock formations indicating potential paleontological resources?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located on a site that contains a unique paleontological resource or site or a unique geologic feature. Future MET towers or renewable energy systems could negatively impact paleontological resources if they result in ground-disturbing activities without proper regulation and monitoring. Ground-disturbing activities, such as excavation and grading, have the potential to damage or destroy paleontological resources that may be present on or below the ground surface, particularly in areas that have not previously been developed. Any future project developed pursuant to the proposed ordinance that is located in an area that has not been previously developed would require notification to the County's Natural History Museum (NHM) to determine the potential existence of paleontological resources on or near the project site. If the NHM notifies the preparer that there are no known paleontological resources on or near the site, then the project will result in no impact to paleontological resources. However, the NHM may note that the project site is located near a known paleontological resource site and that buildout could affect paleontological resources at the nearby site. Under this scenario, the NHM may tell the preparer to order a Phase I archaeological survey to verify the existence of any paleontological resources. If it is determined that paleontological resources may exist on the future project site, the future project would incorporate mitigation measures as provided by the NHM or the Phase I archaeological survey. If the NHM does not provide a response, it is unlikely that they know of any resources in the vicinity of the project site and no impacts would occur. Under certain circumstances, County staff may prompt the applicant to order a Phase I archaeological survey. These circumstances include the presence of a unique geological feature on or near the future project site or known paleontological resources near the future project site due to another project located nearby. The County does not currently maintain any known map of identified paleontological resource areas. The potential for the implementation of the proposed ordinance to impact paleontological resources will be addressed in the PEIR.

d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located in an area known to contain human remains. As outlined in the CEQA Guidelines, Section 15064.5, in the event that human remains are discovered during grading or construction of a project, the County will work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in the California Public Resources Code, Section 5097.98, to ensure that all human remains will be appropriately treated or disposed of with

appropriate dignity and that any items associated with Native American burials will be provided to the appropriate Native Americans, as identified by the Native American Heritage Commission. As such, potential impacts associated with implementation of the proposed ordinance would be less than significant.

6. ENERGY

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Conflict with Los Angeles County Green Building Ordinance (L.A. County Code Title 22, Ch. 22.52, Part 20 and Title 21, § 21.24.440) or Drought Tolerant Landscaping Ordinance (L.A. County Code, Title 21, § 21.24.430 and Title 22, Ch. 22.52, Part 21)?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance includes a measure requiring existing drought-tolerant native or non-native vegetation approved by County staff biologist to be retained or new such vegetation to be placed along any fencing. The proposed ordinance would not conflict with the Los Angeles County Green Building Ordinance or Drought-Tolerant Landscaping Ordinance. Impacts would be less than significant.

b) Involve the inefficient use of energy resources (see Appendix F of the CEQA Guidelines)?	☐	☐	☐	☒

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Therefore, future projects allowed by the ordinance would contribute to lowering polluting emissions from large power plants supplying power to the County. The proposed ordinance would not involve the inefficient use of energy resources; therefore, no impact would occur.

7. GEOLOGY AND SOILS

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as	☐	☐	☒	☐

delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known active fault trace? Refer to Division of Mines and Geology Special Publication 42.

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located in a fault-rupture hazard zone as identified by the Alquist-Priolo Earthquake Fault Zoning Act, Special Publication 42, Revised 1997, Fault-Rupture Hazards Zones in California, or within an area with substantial evidence of a known fault. However, structures that will be built pursuant the proposed ordinance will be required to comply with the County Building Code requirements. Included in the County Building Code are requirements that address seismic events through engineering requirements prior to the issuance of a building permit. Additionally, if a future temporary MET tower or renewable energy system is located in close proximity to any known fault trace or designated fault zone, the County's Department of Public Works (DPW) will likely require a geology or geotechnical report. A geology report describes the geology of the project site, whereas a geotechnical report is a geology report with an additional analysis providing construction standards to be incorporated into the future project to address any on-site seismic conditions. The seismic impact will be based on the findings of that report. Therefore, due to these requirements, the proposed ordinance does not have the potential to expose people or structures to substantial adverse effects. Impacts from the exposure of people or structures to a known fault rupture hazard zone as a result of the proposed ordinance would be less than significant.

ii) Strong seismic ground shaking?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located near a near a known activefault zone as defined within the International Conference of Building Officials Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada (for use with the 1997 Uniform Building Code). To ensure the structural integrity of all buildings and structures, a project must conform to the Seismic Requirements, Chapter 16, Section 162, Earthquake Design, as outlined within the California Building Code. Additionally, as described in Response 7(a)(i), a geology report may be required for future projects located near a known fault zone. The geology report would recommend construction standards to be incorporated into future projects to address any on-site seismic conditions. Therefore, compliance with the building codes and preparation of a geology report, if required, would reduce potential impacts from the exposure of people or structures to potential adverse effects from strong seismic ground shaking to less than significant.

iii) Seismic-related ground failure, including liquefaction and lateral spreading?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located on soils subject to liquefaction. To ensure the structural integrity of all buildings and structures, any future structures located in these areas must conform to the Seismic Requirements, Chapter 16, Section 162, Earthquake Design, as outlined within the California Building Code. Section 162 requires a soils compaction report with proposed foundation recommendations to be approved by a County structural engineer before the issuance of a building or grading permit. Additionally, as described in Response 7(a)(i), a geology report may be required for future projects located near a known fault zone. The geology report would recommend construction standards to be incorporated into future projects to address potential liquefaction or lateral spreading issues. Therefore, exposure of people or structures to potential adverse effects from seismic-related ground failure, including liquefaction and lateral spreading, as a result of implementing the proposed ordinance would be reduced to less than significant.

iv) Landslides? ☐ ☐ ☒ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located on landslide risk areas.

A landslide is the movement or flow of soil, rocks, earth, water, or debris down a slope. Seismic activity can trigger landslides, especially on steep slopes or those with slide planes that will move easily. The California Geological Survey maps potential landslide areas throughout California. These maps are updated periodically and usually in response to some geological event. If a future project developed pursuant to the proposed ordinance is not located within a designated landslide area, then no impact would occur. If the proposed project is located within a designated landslide area, the DPW will likely want to review the proposed project and may require the preparation of a geology or geotechnical report to address any concerns related to potential landslides. The geology report would recommend construction standards to be incorporated into future projects to address possible landslide issues. Therefore, the potential for adverse effects from landslides as a result of the proposed ordinance would be less than significant.

b) Result in substantial soil erosion or the loss of topsoil? ☒ ☐ ☐ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located in an area identified as having the potential for substantial soil erosion or the loss of topsoil. Utility-scale solar and wind energy systems often require large areas of land and may require a large amount of grading or other land disturbance.

For all grading permits, the County DPW requires compliance with their grading best practices manual, which includes best management practices (BMPs) for erosion control. In addition, the County's Low Impact Development (LID) Ordinance provides requirements for the management of storm runoff, which will lessen potential amounts of erosion activity resulting from stormwater. As part of the grading plan review and approval process, measures will be required to mitigate the erosion of the site per Los Angeles County Grading Code. The DPW may recommend additional measures. The proposed ordinance's potential

to result in substantial erosion or loss of topsoil will be addressed in the PEIR.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐

General Discussion

See Responses 7(a)(i)–7(a)(iii).

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located in an area identified as having the potential for expansive soil. Utility-scale solar and wind energy systems often require large areas of land and may require a large amount of grading or other land disturbance.

Expansive soils are those that change their volume depending on the presence and extent of water saturated in the soil. For all new construction, the County is required to comply with the improvement requirements identified in the 1997 Uniform Building Code, Division III, Design Standard for Design of Slab-On- Ground Foundations to Resist the Effects of Expansive Soils and Compressible Soils, which ensure suitable structure safety in areas with expansive soils. In addition, future projects developed pursuant to the proposed ordinance would be subject to the design requirements in the County Building Code, such as specific foundation design requirements. As described in Response 7(a)(i), a geology or geotechnical report may also be required. A geotechnical report would recommend construction standards to be incorporated into the future project to address any expansive soil issues. Therefore, the potential for projects implemented under the proposed ordinance to be located on expansive soil that would create substantial risks to life or property would be less than significant.

e) Have soils incapable of adequately supporting the use of onsite wastewater treatment systems where sewers are not available for the disposal of wastewater?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Wastewater generated from these facilities, if any, would be minimal, depending on whether operation and maintenance buildings are proposed. Some facilities may rely on public water and sewer for the disposal of wastewater. If public sewers are located within 200 feet of a project site, the proposed project must use the public sewer system. In this case, no on-site wastewater treatment systems (OWTS), also known as septic tanks, or alternative wastewater disposal systems would be proposed.

A future renewable energy system project could propose to discharge domestic waste to an OWTS. If an

OWTS is proposed, discharged wastewater must conform to the RWQCB's applicable standards, including the regional basin plan and the California Water Code. California Water Code, Section 13282, allows RWQCBs to authorize a local public agency to issue permits for OWTS "to ensure that systems are adequately designed, located, sized, spaced, constructed, and maintained." The County's Department of Public Health will require testing, which includes a geotechnical report and percolation testing. Therefore, future projects will have to demonstrate the presence of soils capable of adequately supporting the use of OWTS or alternative wastewater disposal systems as determined by the authorized local public agency.

Therefore, potential impacts related to soils being incapable of adequately supporting the use of OWTS or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater would be less than significant.

f) Conflict with the Hillside Management Area Ordinance (L.A. County Code, Title 22, § 22.56.215) or hillside design standards in the County General Plan Conservation and Open Space Element?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located in a designated Hillside Management Area. The proposed ordinance requires the top of a wind energy system to be located at least 50 vertical feet and 50 horizontal feet from a significant ridgeline identified in the general plan, in an applicable area or community plan, or in an applicable community standards district. Projects developed pursuant to the proposed ordinance would be required to comply with this requirement, as well as the design standards of the Hillside Management Area Ordinance and County General Plan Conservation and Open Space Element. Therefore, the proposed ordinance would not conflict with the Hillside Management Area Ordinance or the County General Plan Conservation and Open Space Element, and impacts would be less than significant.

8. GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Generate greenhouse gas (GHGs) emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐

General Discussion

GHG emissions are said to result in an increase in the Earth's average surface temperature, commonly referred to as global warming. This rise in global temperature is associated with long-term changes in precipitation, temperature, wind patterns, and other elements of the Earth's climate system, known as climate change. These changes are now broadly attributed to GHG emissions, particularly those emissions that result from the human production and use of fossil fuels. GHGs include carbon dioxide (CO_2),

methane (CH_4), halocarbons, and nitrous oxide (N_2O), among others. Human-induced GHG emissions are a result of energy production and consumption and personal vehicle use, among other sources.

Climate changes resulting from GHG emissions could produce an array of adverse environmental impacts, including water supply shortages, severe drought, increased flooding, sea-level rise, air pollution from increased formation of ground-level ozone (O_3) and particulate matter ($PM_{2.5}$, PM_{10}), ecosystem changes, increased wildfire risk, agricultural impacts, and ocean and terrestrial species impacts, among other adverse effects.

The County is currently preparing a community climate action plan (CCAP) to evaluate, track, and reduce GHG emissions in the unincorporated areas of the County. In January 2014, the County released the public review draft of the Unincorporated Los Angeles County Community Climate Action Plan 2020.[3] The final version of this document will become a component of the Air Quality Element of the Los Angeles County General Plan 2035. To reduce the impacts of climate change, the County has set a target to reduce GHG emissions from community activities in the unincorporated areas of the County by at least 11% below 2010 levels by 2020. The CCAP describes the County's plan for achieving this goal, includes specific strategy areas for each of the major emissions sectors, and provides details on the 2010 and projected 2020 emissions in the unincorporated areas (County of Los Angeles 2014, p. ES-1). Public agencies and private developers will be able to use the CCAP to comply with project-level review requirements pursuant to CEQA. It should be noted that an individual project's GHG emissions will generally not result in direct impacts under CEQA, as the climate change issue is global in nature; however, an individual project could be found to contribute to a potentially significant cumulative impact. CEQA Guidelines Section 15130(f) states that an environmental impact report (EIR) shall analyze GHG emissions resulting from a proposed project when the incremental contribution of those emissions may be cumulatively considerable.

Although the proposed ordinance would facilitate the development of renewable energy sources in place of a typical fossil-fuel-based electrical generation, resulting in long-term air quality benefits, future renewable energy systems and MET tower development would have the potential to result in emissions related to vehicle trips. Due to the brief construction period associated with the installation of small-scale renewable energy facilities and MET towers, and because traffic generated by the construction of these facilities would be relatively minor, GHG impacts as a result of construction emissions would be less than significant. Utility-scale renewable energy systems would require longer construction schedules and more construction equipment, off-site trucks hauling construction material, and worker trips. GHG emissions from these types of projects allowed pursuant to the proposed ordinance will be addressed in the PEIR.

b) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases? ☐ ☐ ☐ ☐

General Discussion

In 2006, the state passed the Global Warming Solutions Act of 2006, commonly referred to as Assembly Bill (AB) 32, which set the GHG emissions reduction goal for the State of California into law. The law requires that by 2020, state emissions must be reduced to 1990 levels by reducing GHG emissions from significant sources via regulation, market mechanisms, and other actions.

Senate Bill (SB) 375, passed in 2008, links transportation and land use planning with global warming. It

[3] County of Los Angeles. 2014. *Unincorporated Los Angeles County Community Climate Action Plan 2020*. Public Draft. January. Prepared with assistance from ICF International (ICF 027920.0.011) for the County of Los Angeles Department of Regional Planning. Accessed March 17, 2014. http://planning.lacounty.gov/ccap/draft.

requires the California Air Resources Board to set regional targets for the purpose of reducing GHG emissions from passenger vehicles. Under this law, if regions develop integrated land use, housing, and transportation plans that meet SB 375 targets, new projects in these regions can be relieved of certain review requirements under CEQA.

As described in Response 8(a), the County is currently preparing a CCAP to evaluate, track, and reduce GHG emissions in the unincorporated areas of the County. In January 2014, the County released the public review draft of the CCAP.

The County's plans and regulations support that development of renewable energy. The proposed ordinance would help facilitate the development of renewable energy within the County and assist the County to meet the goals of AB 32 and the CCAP. Impacts would therefore be less than significant. Additionally, renewable energy projects would be required to comply with the CCAP programs, once the final CCAP has been adopted..

9. HAZARDS AND HAZARDOUS MATERIALS

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, storage, production, use, or disposal of hazardous materials?	☐	☐	☒	☐

General Discussion

Hazardous materials are classified at the federal (Resources Conservation and Recovery Act (RCRA) wastes or state level (non-RCRA wastes). California defines hazardous materials as any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or future hazard to human health and safety or to the environment if released (Health and Safety Code, Section 25501(p)).

In California, the Department of Toxic Substances Control is responsible for classifying hazardous materials. Hazardous materials are commonly stored and used by a variety of businesses and residences, and are commonly encountered during construction activities. Hazardous materials are routinely used, stored, and transported in conjunction with the construction and operation of industrial and some commercial/ retail businesses, educational facilities, and hospitals. In industrial and commercial uses, hazardous materials may include petroleum products and polychlorinated biphenyls (PCBs), and in residential uses, hazardous materials may include landscaping chemicals and cleaning solvents. Hazardous materials may be stored in small quantities in buildings and structures, in aboveground storage tanks, underground storage tanks (USTs), drums, and other types of containers. Typically, USTs are used by businesses such as gasoline stations and auto mechanics. Processing, transportation, and transfer operations are other activities that have the potential to pose a risk to human health and the environment from the accidental release of hazardous materials. Regulations such as the Hazardous Materials Business Plan requirements of the Health and Safety Code, Fire Code storage and containment requirements, or other applicable regulatory requirements are intended to prevent accidental releases of hazardous substances and to minimize risks should an accident or spill occur.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Hazardous materials used during construction of temporary MET towers or renewable energy systems may include gasoline, diesel fuel, oils, lubricants, solvents, detergents, degreasers, paints, and other supplies. All hazardous materials would be transported, stored, and properly disposed of in compliance with all applicable laws and regulations. The accidental release of hazardous materials or wastes during construction activities is possible. The accidental release of hazardous materials or wastes would be promptly contained and abated in accordance with all applicable laws and regulatory requirements, and therefore would not be expected to result in a significant impact.

During the operation of future temporary MET towers or renewable energy systems, limited quantities of hazardous materials would be stored on site. Materials may include fire suppressant and transformer insulating oil. Future projects would be required to develop and implement a hazardous materials and hazardous waste management program for both construction and operational phases. Therefore, implementation of the proposed ordinance would result in less than significant impacts relative to the routine transport, storage, production, use, or disposal of hazardous materials.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials or waste into the environment?

☐ ☐ ☒ ☐

Valley Fever spores are released into the environment by any disturbance to the desert soils. Large scale disturbances caused by utility-scale energy projects have huge potential to release hazardous materials (in the form of spores) into the air, causing severe disease in both residents and solar workers. This should be labeled Potentially Significant.

General Discussion

See Response 9(a). Additionally, if lead-based paint is found during construction, the applicant would comply with County requirements and provide the Department of Public Works Building and Safety Division and the County Fire Department Health and Hazardous Materials Division with a copy of the qualifications/license of the lead-based paint abatement contractor who will perform the abatement or removal of lead-based paint. If required by the County, the applicant would prepare and submit a hazardous building materials demolition assessment and management plan to the DPW and Fire Department for review and approval to ensure compliance with all applicable federal, state, and local laws and regulations. Occupational Safety and Health Administration regulations are in place to assure that these materials are safely removed prior to or during demolition and renovation activities. Therefore, through compliance with regulations, projects developed pursuant to the proposed ordinance would result in a less than significant impact related to the release of hazardous materials, such as asbestos and lead.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of sensitive land uses?

☐ ☐ ☒ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located within one-quarter mile of an existing or proposed school and could propose the storage and handling of hazardous substances. Future project sites could include facilities listed in the EPA's Resource Conservation and Recovery Information System as a hazardous materials handler However, the proposed ordinance will not result in significant impacts to the

public or environment because all storage, handling, transport, emission, and disposal of hazardous substances will be in full compliance with local, state, and federal regulations (see Response 9(a)).

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located on a site listed in the State of California Hazardous Waste and Substances Sites List compiled pursuant to Government Code Section 65962.5.

However, the proposed ordinance will not create a significant hazard to the public or the environment because if a property is on the list, the County will not issue a building permit until any significant hazard has been reported and remediated to the satisfaction of the Department of Public Health – Environmental Health Division. Because remediation of the site will occur prior to issuance of a building permit, future projects developed pursuant to the proposed ordinance will not create a significant hazard to the public or the environment and impacts would be less than significant.

e) For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located on a site within an adopted airport land use plan or within 2 miles of a public or private airport. However, such projects would not result in hazards to airport safety or surrounding land uses because they would be evaluated by the Airport Land Use Commission. Also, if a renewable energy facility or temporary MET tower is located within the FAA Height Notification Surface due to its proximity to an airport, notice will be filed with the FAA. The applicant would complete FAA Form 7460-1 Notice of Proposed Construction or Alteration and submit the form to the FAA for review. The FAA would review the project and identify whether the project is an airspace obstruction or hazard. If not, the project would comply with the FAA Regulations, Part 77, Objects Affecting Navigable Airspace.

Lastly, the proposed ordinance includes several measures for aviation safety, as follows:

1. A utility-scale renewable energy facility shall not be located within the Runway Protection Zone of any airport, as depicted in the County's airport land use plans.
2. A utility-scale renewable energy facility shall not penetrate the imaginary surfaces (primary,

approach, transitional, horizontal, and conical surfaces) defined by the FAA Federal Aviation Regulations Part 77 to protect the use of navigable airspace.

3. A safety light that meets FAA standards shall be required for all wind towers that exceed a height of 200 feet. A safety light may be required on shorter wind towers when deemed necessary by any of the aviation-related agencies. No other lights shall be placed on such wind towers.

Therefore, projects developed pursuant to the proposed ordinance would not result in hazards to airport safety. Impacts would be less than significant.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? ☐ ☐ ☒ ☐

In January 2010, a crop duster in the Central Valley was killed when his plane hit the guy wires of a met. tower constructed for a potential wind project. This should be labeled Potentially Significant.

See Response 9(e) regarding FAA notification and aviation safety measures of the proposed ordinance.

g) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan? ☐ ☐ ☒ ☐

Fire Dept. in Kern County have reported great difficulty in fighting fires near or under wind turbines. The turbines make it impossible for air tankers to get close enough to the ground to release fire retardants. This should be labeled Potentially Significant.

General Discussion

The Office of Emergency Management (OEM) is responsible for organizing and directing the preparedness efforts of the Emergency Management Organization of Los Angeles County. The OEM is the day-to-day Los Angeles County Operational Area coordinator for the County. The emergency response plan for the unincorporated areas of the county is the Operational Area Emergency Response Plan, which is prepared by the OEM. The Operational Area Emergency Response Plan strengthens short- and long-term emergency response and recovery capability, and identifies emergency procedures and emergency management routes in the County. The County has also prepared a Local All Hazards Mitigation Plan to comply with federal law and to be eligible for disaster funding. Figure 9.7 of the Safety Element of the Draft General Plan depicts the County's fire disaster routes and Figure 9.9 depicts the County's designated disaster routes. These figures identify the routes that emergency responders are likely to take when responding to an emergency scenario, the routes that residents will be funneled toward to exit an area affected by a disaster, and the field facilities that will be used by emergency responders to coordinate their activities.

The project proposes an ordinance amending the County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located along an identified disaster route. However, such projects would not bring a substantial amount of additional people to the vicinity served by the routes or facilities. Nor would such projects block existing access routes.

Some utility-scale facilities may require fulltime employees to operate the Operation and Maintenance (O&M) buildings. Employees may include a facilities manager, engineers, technicians, mechanics, and security staff. If deemed necessary by the County a project-specific emergency response plan would be prepared and would coordinate with any existing designated disaster routes in the area and impacts would be less than significant.

h) Expose people or structures to a significant risk of loss, injury or death involving fires, because the project is located:				
i) within a Very High Fire Hazard Severity Zone (Zone 4)?	☒	☐	☐	☐
ii) within a high fire hazard area with inadequate access?	☒	☐	☐	☐
iii) within an area with inadequate water and pressure to meet fire flow standards?	☒	☐	☐	☐
iv) within proximity to land uses that have the potential for dangerous fire hazard?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located in a Very High Fire Hazard Severity Zone. Additionally, such projects may require use or storage of combustible materials, such as transformers for wind energy systems, that may be located in areas with little water supply. Impacts related to fire risk resulting from implementation of the proposed ordinance will be addressed in the PEIR.

i) Does the proposed use constitute a potentially dangerous fire hazard?	☒	☐	☐	☐

General Discussion

As indicated in Response 9(h), future projects developed pursuant to the proposed ordinance may require use or storage of combustible materials, such as transformers for wind energy systems. Impacts related to fire risk resulting from implementation of the proposed ordinance will be addressed in the PEIR.

10. HYDROLOGY AND WATER QUALITY

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐

General Discussion

The County is split between two water quality regions: the Los Angeles Region and the Lahontan Region. Each regional board prepares and maintains a basin plan that identifies water quality objectives to protect all beneficial uses of the waters of that region. The objectives detailed in the basin plans range from controlling the amount of

oxidized ammonia in inland surface water to regulating the mineral quality of groundwater. The basin plans achieve the identified water quality objectives through implementation of Waste Discharge Requirements (WDRs). These water quality objectives are achieved by employing three strategies for addressing water quality issues: control of point-source pollutants, control of nonpoint-source pollutants, and remediation of existing contamination.

Point sources of pollutants are well-defined locations at which pollutants flow into water bodies (discharges from wastewater treatment plants and industrial sources, for example). These sources are controlled through regulatory systems including permitting under California's WDRs and the National Pollutant Discharge Elimination System (NPDES) program; permits are issued by the appropriate Regional Water Quality Control Board (RWQCB) and may set discharge limitations or other discharge provisions.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area includes the entire unincorporated County. Any project developed pursuant to the proposed ordinance that would connect to a municipal wastewater system would not include any point-source discharges itself but would need to comply with all applicable wastewater treatment standards maintained by the RWQCB as part of obtaining the applicable WDR or NPDES permit. Therefore, projects developed pursuant to the proposed ordinance that connect to a municipal wastewater treatment system would not violate any water quality standards or discharge requirements related to point sources, and impacts would be less than significant.

As indicated in Response 7(e), future renewable energy systems could propose to dispose of wastewater on site through an OWTS. Such projects would include point-source discharges and would not be subject to NPDES requirements in most cases. However, these projects would be required to comply with WDRs of the State of California (Title 23 of the California Code of Regulations) and WDRs issued by the local RWQCB. Such projects would have to demonstrate compliance with these requirements in order to receive construction permits. Therefore, these projects would have no impact upon wastewater treatment requirements.

Non-point sources of pollutants are typically derived from project site runoff caused by rain or irrigation and have been classified by the EPA into the following categories: agriculture, urban runoff, construction, hydromodification, resource extraction, silviculture (forestry cultivation), and land disposal, according to the basin plan for the Los Angeles RWQCB. This type of pollution is not addressed by the same regulatory mechanisms used to control point sources. Instead, California's Nonpoint Source Management Plan describes a three-tiered approach including the voluntary use of BMPs, the regulatory enforcement of the use of BMPs, and effluent limitations. Generally speaking, each RWQCB implements the least restrictive tier until more stringent enforcement is necessary.

Projects developed pursuant to the proposed ordinance would be required to comply with the requirements of the LID Ordinance, as well as the requirements of the County's standard urban stormwater management plan (SUSMP) in order to control and minimize potentially polluted runoff. Because all projects are required to comply with these requirements in order to obtain construction permits, they would not impact any nonpoint-source requirements.

Remediation of existing pollutants emanating from the project site and accumulating in the local groundwater or nearby water bodies is conducted by the RWQCBs through a number of programs. These programs include monitoring the following:

- USTs
- Wells
- Spills

- Leaks
- Aboveground petroleum storage tanks
- U.S. Department of Defense and U.S. Department of Energy sites
- Toxic pits.

If any of these exist on any of the future project sites pursuant to the proposed ordinance, then remediation will be required before a proposed project can obtain building permits. Again, because future projects would be required to remediate any contamination emanating from the project site prior to project development, projects developed under the proposed ordinance will be compliant with the applicable remediation requirements and impacts would be less than significant.

While the water quality standards and prescriptive actions in Los Angeles Region and the Lahontan Region may differ, future projects developed pursuant to the proposed ordinance would be required to comply with all wastewater discharge requirements identified by the applicable basin plan as well as additional wastewater discharge requirements adopted by the County. Therefore, such projects would not violate any water quality requirements or WDRs as the projects would be required to comply with these standards and those of the NPDES in order to obtain construction permits. Impacts related to implementation of the proposed ordinance would be less than significant.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Temporary MET towers and small-scale renewable energy systems are not expected to use groundwater for any purposes, including irrigation, domestic, or commercial demands. Utility-scale renewable energy facilities may use groundwater for cleaning of the equipment on the site, such as wind energy system rotor blades or solar panels. The purpose of cleaning is to eliminate dust and insect buildup, which could otherwise degrade performance. Also, as indicated in the proposed ordinance, future project sites shall be watered during construction activities such as grading in order to control fugitive dust. Groundwater supply impacts as a result of implementation of the proposed ordinance will be addressed in the PEIR.

An impact to groundwater recharge would occur if implementation of the proposed ordinance would result in an increase in the amount of impervious surfaces on the project site relative to current on-site conditions, thus preventing water from infiltrating into the groundwater table over a larger area. The PEIR will address whether future projects developed pursuant to the proposed ordinance would result in a substantial increase in the amount of impervious surfaces, thus resulting in an impact to groundwater recharge.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area includes the entire unincorporated County. Future projects developed pursuant to the proposed ordinance that involve ground disturbance would be required to minimize erosion, sedimentation, and other impacts to the natural hydrology and drainage patterns of the site. Such projects would be required to submit a drainage plan showing the extent of drainage impacts that complies with all requirements to the satisfaction of the DPW. Projects would also be required to comply with the most recent County standards for addressing drainage impacts and to obtain all agency approvals.

As indicated in Response 10(a), projects would be required to comply with the requirements of the LID Ordinance and the County's SUSMP, which require site design measures, source control and/or treatment control BMPs. These measures will control erosion and sedimentation. The Los Angeles RWQCB addresses on-site drainage through its construction, industrial, and municipal permit programs. These permits require measures to minimize or prevent erosion and reduce the volume of sediments and pollutants in a project's runoff and discharges based upon the size of the project site. The specific permit(s) and measures applicable to future projects development pursuant to the proposed ordinance will be determined in consultation with the DPW. The drainage plan and required permits would ensure future projects developed pursuant to the proposed ordinance would not result in impacts related to substantial erosion or siltation on or off site.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area includes the entire unincorporated County. Future projects developed pursuant to the proposed ordinance that involve ground disturbance would be required to minimize erosion, sedimentation, or other impacts to the natural hydrology and drainage patterns of the site. Such projects would be required to submit a drainage plan showing the extent of drainage impacts that complies with all requirements to the satisfaction of the DPW. The projects would also be required to comply with the most recent County standards for addressing drainage impacts and to obtain all agency approvals.

As indicated in Response 10(a), projects would be required to comply with the requirements of the LID Ordinance and the County's SUSMP, which require site design measures, source control BMPs, and/or treatment control BMPs. These measures will help mitigate drainage impacts. The Los Angeles RWQCB addresses on-site drainage through its construction, industrial, and municipal permit programs. The specific permit(s) and measures applicable to future project development pursuant to the proposed ordinance will be determined in consultation with the DPW. The drainage plan and required permits would ensure that future projects developed pursuant to the proposed ordinance would not result in significant impacts related to substantial erosion or siltation on or off site.

e) Add water features or create conditions in which standing water can accumulate that could increase	☐	☐	☐	☒

habitat for mosquitoes and other vectors that transmit diseases such as the West Nile virus and result in increased pesticide use?

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Future renewable energy projects developed pursuant to the proposed ordinance would not include water features or create conditions in which standing water can accumulate. Therefore, implementation of the proposed ordinance would not increase habitat for mosquitoes and other vectors that transmit diseases and would not result in increased pesticide use; no impact would occur.

f) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? ☐ ☐ ☒ ☐

General Discussion

Construction of impervious surfaces such as roads and driveways reduces the amount of rainfall that can infiltrate the ground surface and move to the subsurface. As a result, the volume of surface water runoff increases within a watershed; subsequently, artificial conveyances such as gutters, storm pipes, and natural channel improvements to accommodate additional volume accelerate the rate of flow of water in the watershed. This higher volume of faster-moving surface water runoff within a watershed results in a higher probability and increased severity of flooding within a watershed, if facilities are not adequately maintained or constructed to carry peak flow capacity.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Future renewable energy projects developed pursuant to the proposed ordinance may result in the development of impervious surfaces, such as access roads, that could contribute to runoff water. However, as indicated in Response 10(a), projects would be required to comply with the requirements of the LID Ordinance and the County's SUSMP, which require site design measures, source control BMPs, and/or treatment control BMPs. These measures will help mitigate drainage impacts and control runoff. Stormwater runoff is also regulated by the NPDES permit and the County's Stormwater Ordinance. The drainage plan and required permits would ensure that future projects developed pursuant to the proposed ordinance would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant.

g) Generate construction or post-construction runoff that would violate applicable stormwater NPDES permits or otherwise significantly affect surface water or groundwater quality? ☐ ☐ ☒ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. For any

future renewable energy projects developed pursuant to the proposed ordinance that are subject to the NPDES Construction General Permit, the applicant must file permit registration documents including a notice of intent and a stormwater pollution prevention plan. Because such projects must comply with the requirements of the NPDES program related to construction runoff, impacts would be less than significant.

h) Conflict with the Los Angeles County Low Impact Development Ordinance (L.A. County Code, Title 12, Ch. 12.84 and Title 22, Ch. 22.52)?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Future renewable energy projects developed pursuant to the proposed ordinance are required to comply with the requirements of the County's LID Ordinance. Therefore, implementation of the proposed ordinance would not conflict with the County's LID Ordinance and impacts would be less than significant.

i) Result in point or nonpoint source pollutant discharges into State Water Resources Control Board-designated Areas of Special Biological Significance?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project does not involve the development of an industrial facility that would discharge its waste directly into the waters of or near an Area of Special Biological Significance or into a watercourse or water body that ultimately empties into said waters, which would result in significant impacts. Nor would the project generate a significant volume of nonpoint-source pollutants, such as if the entire project site were developed with impervious surfaces and all runoff was allowed to leave the site and eventually reach the Area of Special Biological Significance. Since future projects developed pursuant to the proposed ordinance would adhere to the County's LID Ordinance and would not result in a substantial amount of nonpoint sources of pollutants, impacts would be less than significant.

j) Use onsite wastewater treatment systems in areas with known geological limitations (e.g. high groundwater) or in close proximity to surface water (including, but not limited to, streams, lakes, and drainage course)?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. As indicated in Response 7(e), wastewater generated from these facilities, if any, would be minimal, depending on whether operation and maintenance buildings are proposed. If a future renewable energy system project proposes to discharge domestic waste to an OWTS, then the DPW and the Department of Public Health would determine whether or not the site is capable of supporting such a system from a geotechnical and public health perspective. The location of nearby water bodies, watercourses, and drainage courses would be identified and if any wastewater released on the project site may emerge in these waters of the United States the project would be subject to an NPDES permit.

Additionally, any discharged wastewater must conform to the RWQCB's applicable standards, including the regional basin plan and the California Water Code. California Water Code, Section 13282, allows RWQCBs to authorize a local public agency to issue permits for OWTS "to ensure that systems are adequately designed, located, sized, spaced, constructed, and maintained." Therefore, impacts would be less than significant.

k) Otherwise substantially degrade water quality?	☐	☐	☒	☐

General Discussion

Refer to Responses 10(a), 10(f), and 10(i).

l) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, or within a floodway or floodplain?	☐	☐	☐	☒

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project does not involve housing and therefore will have no impact.

m) Place structures, which would impede or redirect flood flows, within a 100-year flood hazard area, floodway, or floodplain?	☐	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area includes the entire unincorporated County. Therefore, facilities developed pursuant to the proposed ordinance may be located in areas identified as being 100-year flood hazard areas. However, these facilities would not place structures, access roads, or other improvements that would impede or redirect flood flows because, pursuant to the proposed ordinance, existing topography and watercourses shall be retained or restored to preexisting conditions following construction and during operations except for drainage features specifically designed to mitigate drainage impacts. All projects that involve ground-mounted components or ground disturbance would be required to submit a drainage plan that complies with all requirements to the satisfaction of the DPW showing the extent of drainage impacts, comply with the most recent County standards for addressing drainage impacts, and obtain all agency approvals. Therefore, impacts would be less than significant.

n) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area includes the entire unincorporated County. Therefore, facilities developed

pursuant to the proposed ordinance may be located in a dam inundation area as mapped in accordance with California Government Code Section 8589.5. However, these facilities would not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam. Potential impacts will be addressed in the PEIR.

o) Place structures in areas subject to inundation by seiche, tsunami, or mudflow?	☒	☐	☐	☐

General Discussion

A seiche is the sudden oscillation of water that occurs in an enclosed, landlocked body of water due to wind, earthquake, or other factors. A tsunami is an unusually large wave or set of waves that is triggered in most cases by a seaquake or an underwater volcanic eruption. A mudflow is flow consisting predominantly of earthen materials/soil and water.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area includes the entire unincorporated County. Therefore, facilities developed pursuant to the proposed ordinance may be located in a dam inundation area, potential tsunami inundation zone, or landslide zone. Potential impacts will be addressed in the PEIR.

11. LAND USE AND PLANNING

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
Would the project:				
a) Physically divide an established community?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The temporary influx of construction personnel, equipment, and vehicles; increased construction activity, including vegetation removal and grading; and the generation of dust during construction of renewable energy facilities would potentially cause disruptions in communities, if not carefully managed. Additionally, utility-scale renewable energy facilities may include access roads and utility lines that would potentially physically divide any established community. These potential impacts will be addressed in the PEIR.

b) Be inconsistent with the applicable County plans for the subject property including, but not limited to, the General Plan, specific plans, local coastal plans, area plans, and community/neighborhood plans?	☐	☐	☐	☒

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The

project is consistent with the applicable goals and policies of the General Plan (1980). Such policies include:

> Policy No. 2 of the Conservation and Open Space Element, "Support the conservation of energy and encourage the development and utilization of new energy sources including geothermal, thermal waste, solar, wind and ocean-related sources" (General Plan, Pg. II-26).
> Policy No. 3 of the Conservation and Open Space Element, " Promote the use of solar energy to the maximum extent possible" (General Plan, Pg. II-26).
>
> Policy No. II-15 of the Conservation and Open Space Element Recommended Action Plan, "Support stronger tax and cost-saving incentives to encourage greater use of alternative energy sources such as solar energy and wind power " (General Plan, Pg. VIII-39).

All other supporting plans must be consistent with the General Plan and where renewable energy development is mentioned in such plans, they too are supportive of renewable energy development. Therefore, no impact would occur.

c) Be inconsistent with the County zoning ordinance as applicable to the subject property? ☐ ☐ ☐ ☒

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Any facilities developed pursuant to the proposed ordinance must comply with the underlying zoning. If a future project incorporates a zone change, then the project would be consistent with the zoning after the change, if approved; therefore, no impact would occur.

d) Conflict with Hillside Management criteria, Significant Ecological Areas conformance criteria, or other applicable land use criteria? ☐ ☐ ☒ ☐

This should be labeled Potentially Significant. SEAs are the home of many threatened species that would be impacted by adjacent construction of expanses of solar panels and/or wind turbines. Please see attached article documenting bird kills solar installations due both to "lake effects" and solar flux.

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Any facilities developed pursuant to the proposed ordinance must comply with the Hillside Management criteria, SEA criteria, and other applicable land use criteria. Additionally, as indicated in Response 7(f), the proposed ordinance requires the top of a wind energy system to be located at least 50 vertical feet and 50 horizontal feet from a significant ridgeline identified in the general plan, in an applicable area or community plan, or in an applicable community standards district. Therefore, the proposed ordinance would not conflict with the Hillside Management Area Ordinance, SEA conformance criteria, or other applicable land use criteria, and impacts would be less than significant.

12. MINERAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☒	☐	☐	☐

General Discussion

Mineral resources are commercially viable aggregate or mineral deposits, such as sand, gravel, oil, and other valuable minerals. The County depends on the State of California's Geological Survey (State Department of Conservation, Division of Mines and Geology) to identify deposits of regionally significant aggregate resources. These clusters or belts of mineral deposits are designated as Mineral Resources Zones (MRZ-2s). Presently, there are four major MRZ-2 zones designated in the County: the Little Rock Creek Fan, Soledad Production Area, Sun Valley Production Area, and Irwindale Production Area.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located on land designated as MRZ-2. Potential impacts will be addressed in the PEIR.

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☒	☐	☐	☐

General Discussion

See Response 12(a).

13. NOISE

Would the project result in:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Exposure of persons to, or generation of, noise levels in excess of standards established in the County General Plan or noise ordinance (Los Angeles County Code, Title 12, Chapter 12.08), or applicable standards of other agencies?	☒	☐	☐	☐

General Discussion

Noise levels are regulated by the County's Noise Control Ordinance. The ordinance defines terms, identifies noise zones, and provides standards for interior and exterior noise and hours for noise regulation. County Code Section 12.12 provides additional regulation of construction noise. The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Development of these facilities may impact the existing noise levels within the vicinity of the project. The PEIR will analyze the potential noise impacts from both construction and operation phases of future renewable energy systems that could be implemented under the proposed ordinance.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐

General Discussion

See Response 13(a). The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Development of these facilities may impact the existing noise levels within the vicinity of the projects and may result in the generation of excessive ground-borne vibration or ground-borne noise levels. The PEIR will analyze the potential noise impacts from both construction and operation phases of future renewable energy systems that could be implemented under the proposed ordinance.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from parking areas?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Development of these facilities may impact the existing noise levels within the vicinity of the projects and may lead to a substantial permanent increase in ambient noise. As indicated in Response 13(a), the PEIR will analyze the potential noise impacts that may result from both construction and operation phases of future renewable energy systems that could be implemented under the proposed ordinance.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, including noise from amplified sound systems?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The operation of these facilities would not involve any uses that may create substantial temporary or periodic increase in ambient noise levels, including but not limited to extractive industry; outdoor commercial or industrial uses that involve crushing, cutting, drilling, grinding, or blasting or raw materials; truck depots, transfer stations, or delivery areas; or outdoor sound systems. However, construction noise may create temporary increases in

ambient noise levels. A further assessment of these potential impacts will be addressed in the PEIR.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located on a site within an adopted airport land use plan or within 2 miles of a public or private airport. The PEIR will analyze the potential noise impacts that may result from both construction and operation phases of future renewable energy systems that could be implemented under the proposed ordinance.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, future temporary MET towers or renewable energy systems may be located within the vicinity of a private airstrip. The PEIR will analyze the potential noise impacts that may result from both construction and operation phases of future renewable energy systems that could be implemented under the proposed ordinance.

14. POPULATION AND HOUSING

Would the project:	***Potentially Significant Impact***	***Less Than Significant Impact with Mitigation Incorporated***	***Less Than Significant Impact***	***No Impact***
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance would not induce substantial population growth in an area because it does not propose any physical or regulatory change that would remove a restriction or encourage

population growth in an area, including but not limited to the following: new or extended infrastructure or public facilities; new commercial or industrial facilities; large-scale residential development; or accelerated conversion of homes to commercial or multiple-family use. The proposed ordinance also does not propose regulatory changes including general plan amendments, specific plan amendments, zone reclassifications, or sewer or water annexations; or Local Agency Formation Commission annexation actions. Additionally, these amendments do not increase density or intensity of land use that is inconsistent with the general plan. Impacts as a result of implementation of the proposed ordinance would be less than significant.

b) Displace substantial numbers of existing housing, especially affordable housing, necessitating the construction of replacement housing elsewhere? ☐ ☐ ☒ ☐

This should be labeled Potentially Significant. Examples abound throughout the nation and in Canada of rural families being forced to flee their homes due to negative impact of noise and flicker from wind turbines.

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance would allow renewable energy systems and temporary MET towers in various zones subject to standards and limitations. These facilities are often accessory to residential uses. For example, small-scale roof-mounted renewable energy systems may provide energy to homes. Implementation of the proposed ordinance would not displace or cause the demolition of existing housing; impacts would be less than significant.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? ☐ ☐ ☒ ☐

Should be labeled Potentially Significant - please see note above.

General Discussion

See Response 14(b). Facilities that would be developed pursuant to the proposed ordinance are unlikely to displace housing and therefore would not displace a substantial number of people or necessitate the construction of replacement housing elsewhere. Additionally, construction of these facilities would not cause the relocation of people. Impacts from implementation of the proposed ordinance would be less than significant.

d) Cumulatively exceed official regional or local population projections? ☐ ☐ ☒ ☐

General Discussion

The Los Angeles County General Plan and Housing Element uses population, household, and employment projections from a growth forecast that is developed from the Southern California Association of Governments (SCAG) 2008 Regional Transportation Plan. The population projections and household projections for unincorporated County are organized by the eight SCAG subregions. SCAG has established the County's Regional Housing Needs Assessment allocation at 57,176 units.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. As indicated in Response 14(a), the proposed ordinance would not induce substantial population growth in any area. Additionally, with such high population projections, it is unlikely that the proposed ordinance combined with the growth from other projects would induce substantial population growth that would exceed the County's population projections. Impacts would be less than significant.

15. PUBLIC SERVICES

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Would the project create capacity or service level problems, or result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. As facilities are developed pursuant to the proposed ordinance, a direct increase in demand for fire protection services may occur during construction because of increased activity, higher amounts of fuel on the sites, and a greater number of ignition sources on the sites. Similarly, an increase in the risk of wildland fire would occur during decommissioning of any facilities, when there is increased activity and additional ignition sources on the sites. For example, potential ignition sources during construction and decommissioning of utility-scale renewable energy facilities include chainsaws, wood chippers, grinders, torches, earthmoving equipment, and other vehicles that could create sparks, be a source of heat, or leak flammable materials, as well as dynamite and blasting materials, compost piles, and human activities and waste that would increase the possibility of fire. Construction- and decommissioning-related accidents could result in the need for fire protection services.

During operation and maintenance, sources of ignition at renewable energy facility sites are expected to decrease considerably from existing and construction conditions due to the reduced fuels on the site. Equipment that presents ignition sources during operation may include transformers, capacitors, electric transmission lines, the operations and maintenance building, the substation, vehicles, and small gas- or electric-powered hand tools. All this equipment represents a risk of sparking or igniting nearby fuels when combined with vegetation, wildlife, vandals, and/or high wind conditions. Inverters, solar panels, and trackers represent potential ignition sources that are considered to have a low likelihood of causing fires.

An indirect increase in demand for fire protection services could occur where a project causes an increase in population, which could then result in increases in fire emergency service calls. Of the employees required during construction and decommissioning, few, if any, are expected to temporarily relocate to the area. During operation, utility-scale projects may require small numbers of employees at the sites to control operations and maintenance activities. The permanent addition of employees (and their families) to the area is not expected to result in a long-term, indirect increase in emergency services calls such that an increase in fire protection services or facilities would be needed.

The PEIR will further address potential impacts to fire protection services or facilities as a result of implementation of the proposed ordinance.

Sheriff protection? ☐ ☐ ☒ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The development of small-scale renewable energy systems and temporary MET facilities would not result in an increase in permanent residents that would require additional sheriff protection. Utility-scale renewable energy systems may require small numbers of employees, who may relocate to the area with their families. This slight increase of residents in the area is not expected to substantially increase the number of sheriff protection service calls such that new or expanded sheriff facilities or staff would be required to maintain acceptable service ratios and response times. Impacts would be less than significant.

Schools? ☐ ☐ ☒ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project does not include housing and therefore would not directly cause an increase in population that would require new or expanded schools. The development of small-scale renewable energy systems and temporary MET facilities would not result in an increase in permanent residents that would indirectly impact school service levels. Utility-scale renewable energy systems may require small numbers of employees, who may relocate to the area with their families. This slight increase of residents in the area is not expected to substantially increase the number of students such that new or expanded schools would be required. Impacts resulting from implementation of the proposed ordinance would be less than significant.

Parks? ☐ ☐ ☒ ☐

Should be labeled Potentially Significant. Damage to viewshed caused by solar and wind installations is particularly damaging to parks, such as the Antelope Valley California Poppy Reserve, visited because of its worldwide fame as a scenic resource.

General Discussion

Parks within the County are operated and maintained by the Department of Parks and Recreation. As of 2010, there were approximately 153 recreational facilities managed by the Department of Parks and Recreation, totaling approximately 65,528 acres of recreation and open space. The County General Plan, Regional Recreation Areas Plan, provides the standard for the allocation of parkland in the unincorporated county. This standard is 4 acres of local parkland per 1,000 residents, and 6 acres of regional parkland per 1,000 residents.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project does not include housing and therefore would not directly cause an increase in population that would require new or expanded parks. The development of small-scale renewable energy systems and temporary MET facilities would not result in an increase in permanent residents that would indirectly impact parks. Utility-scale renewable energy systems may require small numbers of employees, who may relocate to the area with their families. This slight increase of employees or residents in the area is not expected to substantially increase the use of existing park facilities; impacts would be less than significant.

Libraries? ☐ ☐ ☒ ☐

General Discussion

Library services are provided by the County of Los Angeles Public Library. There are approximately 84 libraries operated by the County, with roughly 7.5 million volumes in their book collections. The County of Los Angeles Public Library is a special district and is primarily funded by property taxes, but other funding mechanisms include a Mello-Roos Community Facilities District, developer impact fees, developer agreements, and a voter-approved special tax.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project does not include housing and therefore would not directly cause an increase in population that would require new or expanded libraries. The development of small-scale renewable energy systems and temporary MET facilities would not result in an increase in permanent residents that would indirectly impact libraries. Utility-scale renewable energy systems may require small numbers of employees, who may relocate to the area with their families. This slight increase of employees or residents in the area is not expected to substantially increase the use of existing libraries; therefore, impacts would be less than significant.

Other public facilities? ☐ ☐ ☒ ☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Because the project does not include housing and would result in a minimal increase in employees, and therefore possibly permanent residents, in an area, no other public facilities would be impacted. Impacts would be less than significant.

16. RECREATION

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐

Absolutely should be labeled Potentially Significant. Please see note above under Parks.

General Discussion

See Response 15(a). The project does not include housing and therefore would not directly cause an increase in population that would increase the use of parks or other recreational facilities. The development of small-scale renewable energy systems and temporary MET facilities would not result in an increase in permanent residents that would indirectly impact parks or recreational facilities. Utility-scale renewable energy systems may require small numbers of employees, who may relocate to the area with their families. This slight increase of employees or residents in the area is not expected to substantially increase the use of existing parks or other recreational facilities.

b) Does the project include neighborhood and regional parks or other recreational facilities or require the construction or expansion of such facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance does not include the construction or expansion of parks or other recreational facilities; therefore, no impact would occur.

c) Would the project interfere with regional open space connectivity?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The proposed ordinance would allow renewable energy systems and temporary MET towers in various zones subject to standards and limitations. With the exception of structure-mounted, small-scale solar systems for buildings such as visitor centers or restrooms, these facilities are not allowed within areas zoned for open space. However, it should be noted that wind energy systems, as allowed under the proposed ordinance, require open space to harness high wind resource potential. Therefore, they are generally located near ridgelines or hillside areas, or in open areas. This potential impact will be further addressed in the PEIR.

17. TRANSPORTATION/TRAFFIC

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Small-scale renewable energy systems and temporary MET towers are expected to result in less than 1 average daily traffic (ADT) for a typical project. Utility-scale renewable energy facilities may result in a significant increase in traffic during construction. While associated traffic is not expected to conflict with an applicable plan, ordinance, or policy

measuring the effectiveness of the County's circulation system, the PEIR will address this potential conflict in further detail.

b) Conflict with an applicable congestion management program (CMP), including, but not limited to, level of service standards and travel demand measures, or other standards established by the CMP for designated roads or highways?	☒	☐	☐	☐

General Discussion

The County's Metropolitan Transportation Authority administers the County's CMP. The CMP is a tool used to link land use decisions with their impact to the regional transportation system. For the purposes of the CMP, 160 intersections in the County have been identified for monitoring along with 81 key freeway segments. Furthermore, 133 bus routes and Metro Rail and Metrolink corridors are also monitored by the CMP.

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County. Therefore, facilities developed pursuant to the proposed ordinance may be located near an intersection or road segment monitored by the CMP. Small-scale renewable energy systems and temporary MET towers are expected to result in less than 1 ADT for a typical project and would not result in conflicts with the CMP. Utility-scale renewable energy facilities may result in significant increases in traffic during construction. While construction-associated traffic is not expected to conflict with the CMP, the PEIR will address this potential conflict in further detail.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The main compatibility concerns related to the protection of airport traffic patterns are related to airspace obstructions (e.g., building height, antennas) and hazards to flight (e.g., wildlife attractants, distracting lighting, or glare). The project area consists of the entire unincorporated County; therefore, projects may be located within an Airport Influence Area or within 2 miles of a public airport. The proposed ordinance would allow for the development of wind energy systems that may be located within the safety zone for an airport. The ordinance includes specific measures for aviation safety, such as safety lighting to meet FAA standards for towers over 200 feet, and alternating bands of aviation orange and white paint required for wind towers less than 200 feet. Additionally, the proposed ordinance would prohibit utility-scale renewable energy facilities within the Runway Protection Zone of any airport, and would prohibit such facilities from penetrating the imaginary surfaces defined by the FAA to protect the use of navigable airspace. Because the proposed ordinance includes these specific aviation safety measures and because future projects developed pursuant to the proposed ordinance that may impact air traffic would be routed to the FAA for consultation (refer to Response 9(e)), impacts would be less than significant.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project would not alter traffic patterns or roadway design; place incompatible uses (e.g., farm equipment) on existing roadways; or create or place curves, slopes, or walls that impede adequate sight distance on roads. If necessary, all road improvements would be constructed according to County standards and would require consultation with the County's DPW. Impacts from implementation of the proposed ordinance would be less than significant.

e) Result in inadequate emergency access?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Any facilities developed pursuant to the ordinance that may result in inadequate emergency access—for example, by causing emergency vehicles to detour during construction activities—would require review by the County's Fire Department. Necessary measures to ensure adequate emergency access would be required by the County's Fire Department; therefore, impacts would be less than significant.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. The project area consists of the entire unincorporated County; therefore, facilities developed pursuant to the proposed ordinance may be located within a designated Transit Oriented District or along a corridor designated for bicycle infrastructure improvements. However, all projects are required to consult with the DPW, if necessary, and are required to comply with all policies, plans, and programs regarding public transit, bicycle, or pedestrian facilities. Therefore, no impact would occur.

18. UTILITIES AND SERVICE SYSTEMS

Would the project:	*Potentially Significant Impact*	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impac t*
a) Exceed wastewater treatment requirements of either the Los Angeles or Lahontan Regional Water Quality Control Boards?	☐	☐	☒	☐

General Discussion

See Response 10(a). Future projects developed pursuant to the proposed ordinance would be required to comply with all wastewater discharge requirements identified by the applicable basin plan as well as additional wastewater discharge requirements adopted by Los Angeles County. Therefore, such projects would not violate any water quality or WDRs as the projects would be required to comply with these standards and those of the NPDES in order to obtain construction permits. Impacts would be less than significant.

b) Create water or wastewater system capacity problems, or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒

General Discussion

See Response 10(a) and (b). Facilities developed pursuant to the proposed ordinance would not require construction of a water or wastewater treatment facility. Utility-scale renewable energy systems may require an OWTS, which would result in no impact because any wastewater generated by the facility would not be routed through a municipal wastewater treatment system.

c) Create drainage system capacity problems, or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

General Discussion

See Response 10(f).

d) Have sufficient reliable water supplies available to serve the project demands from existing entitlements and resources, considering existing and projected water demands from other land uses?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Temporary MET towers and small-scale renewable energy systems are not expected to use water for any purpose, including irrigation, domestic, or commercial demands. Utility-scale renewable energy facilities may use water for cleaning of the equipment on the site, such as wind energy system rotor blades or solar panels. The purpose of cleaning is to eliminate dust and insect buildup, which could otherwise degrade performance. Also, as indicated in the proposed ordinance, future project sites shall be watered during construction activities such as grading in order to control fugitive dust. Potential water supply impacts as a result of implementation of the proposed ordinance will be addressed in the PEIR.

e) Create energy utility (electricity, natural gas, propane) system capacity problems, or result in the construction of new energy facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☒	☐	☐	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. These facilities, particularly utility-scale renewable energy systems, may require transmission infrastructure upgrades and/or expansions to infrastructure that could cause significant environmental effects. These potential impacts will be addressed in the PEIR.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐

General Discussion

The project proposes an ordinance amending County Code Title 22 to establish regulations for the development of small-scale renewable energy systems, utility-scale renewable energy facilities, and temporary MET towers. Small-scale renewable energy systems and temporary MET towers would not generate solid waste. Utility-scale renewable energy systems may generate minimal solid waste during operation and maintenance activities. The amount would not place a burden on the existing permitted capacity of any landfill within the County; therefore, impacts would be less than significant.

g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

General Discussion

See Response 18(f). The Los Angeles County Integrated Waste Management Plan, which is compiled by the interagency Integrated Waste Management Task Force and updated annually, has identified landfills with sufficient disposal capacity for the next 15 years, assuming current growth and development patterns remain the same. In addition to the projections of the Integrated Waste Management Plan, all projects must comply with other documents required by the California Integrated Waste Management Act of 1989 (AB 939). The proposed ordinance would comply with federal, state, and local statutes and regulations related to solid waste; therefore, impacts would be less than significant.

19. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	*Less Than Significant Impact with Mitigation Incorporated*	*Less Than Significant Impact*	*No Impact*
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐

General Discussion

Pursuant to the instructions for evaluating environmental impacts in this Initial Study, the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory was considered in the response to each question in Sections 4 and 5 of this form. As discussed in the responses in Sections 4 and 5, the project may impact biological and cultural resources, respectively. A PEIR is being prepared to analyze the potential impacts to both biological and cultural resources. Should significant impacts be identified, mitigation measures will be provided.

b) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	☒	☐	☐	☐

General Discussion

As indicated in this Initial Study, the proposed ordinance would help facilitate the development of renewable energy within the County and assist the County to meet the long-term goals of AB 32 and the CCAP. However, the development of projects pursuant to the proposed ordinance may potentially impact long-term goals, including but not limited to, the preservation of biological resources, scenic resources, and cultural resources. This issue will be further addressed in the PEIR. .

c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☒	☐	☐	☐

General Discussion

Pursuant to the instructions for evaluating environmental impacts in this Initial Study, the potential for adverse cumulative effects was considered in the response to each question in Sections 1 through 18 of this form. The cumulative effect of the proposed ordinance will be analyzed in the PEIR. Preliminarily, cumulative impacts from aesthetics, agriculture and forest, air quality, biological resources, cultural resources, hazards and hazardous materials, noise, and utilities and service systems may result. Cumulative impacts will be discussed in the Cumulative Impacts section of the PEIR.

d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

General Discussion

In the evaluation of environmental impacts in this Initial Study, the potential for adverse direct or indirect impacts to human beings was considered in the response to certain questions in Sections 1, Aesthetics; 3, Air Quality; 7, Geology and Soils; 9, Hazards and Hazardous Materials; 10, Hydrology and Water Quality; 13, Noise; 14, Population and Housing; and 17, Transportation and Traffic. Potential impacts to human beings will be evaluated in the PEIR.

The Antelope Valley IBA:

Los Angeles County's *Globally Important Bird Area*

California's Globally Important Bird Areas Need Special Consideration

Worldwide, a coalition of organizations has identified over 8,000 IBAs or Important Bird Areas. The purpose of the IBA Program is to set "science-based" priorities for habitat conservation to "promote positive action to safeguard vital bird habitats." According to the Audubon's IBA website, "IBA inventories provide a scientifically defensible method for prioritizing conservation activities and allocating limited conservation dollars to ensure the maximum benefit to birds."

IBAs are discussed in current DRECP documents. Not referenced however is the subset of these 8,000 sites has been given the higher status of "Globally Important Bird Areas." These 424 worldwide sites have special status due to "global conservation concern."

One of these 424 areas is in Los Angeles County, in the Western Antelope Valley. This site, **the *Antelope Valley Important Bird Area*** *provides breeding, foraging and nesting habitat for Swainson's Hawk, Golden and Bald Eagles, Northern Harriers, Burrowing Owls, Le Conte's Thrasher, Tricolored Blackbirds and other sensitive species* including the California Condor.

Tragically, with no safeguards in place, the Antelope Valley IBA is being overrun by alternative energy development pushed by corporations rushing to plant their giant footprint on this land ahead of the implementation of regulation that would likely impede their projects.

The Antelope Valley IBA, rimmed by the Angeles Forest, the Tehachapi Mountains and year-round wetlands along the San Andreas Fault, is already home to AV Solar Ranch I, projected to be one of the largest solar plants in the world. A number of other projects, both large and small are also in various stages of completion

Fortunately, due to the diligence of local citizens, there are areas of this Globally Important Bird Area where birds are already protected: the world famous **Antelope Valley California Poppy Reserve State Park, nearby Ripley Desert Woodland State Park** and three other areas protected by both LA County and private conservancies.

To avoid the unintended consequence of further hastening species decline caused by alternative energy development, policies must be in place to protect the avian life of areas already set aside for protection due to their importance as *globally significant habitat.* In this quest, we respectfully suggest the following be included in the DRECP process:

California IBAs that are among the group of 424 sites worldwide that have been elevated to “globally” important status should have special attention when designating areas as “do not develop” or “high conflict” in regard to alternative energy development

These sites should be evaluated to **identify existing protected habitat** within the IBA boundaries. Land adjacent to these protected areas should then be designated as “do not develop” to take full advantage of existing protected spaces to provide connectivity, protection of migration routes and large areas of contiguous habitat for nesting, breeding and foraging for sensitive species.

In this manner, land in high biological value areas such as the Antelope Valley Globally Important Bird Area that is adjacent to existing protected habitat will be given the special status that it should have.

With these protections in place alternative energy development can then be directed away from these areas and avoid the unintended consequence of speeding the decline of sensitive species in the quest to reduce fossil fuel emissions.

More information about Globally Important Bird Areas can be found at

http://web4.audubon.org/bird/iba/

Solar

Federal Lab Offers Grim Look at Solar Harm to Wildlife (http://www.kcet.org/news/rewire/solar/federal-report-details-solar-harm-to-wildlife.html)

by **Chris Clarke**
on April 8, 2014 1:20 PM

Yellow-rumped warbler with solar flux damage to feathers | Photo: National Fish and Wildlife Forensics Laboratory

A report just made public by the U.S. Fish and Wildlife Service documents a disturbing amount of bird injuries at three large California desert solar power plants, and says that there are no easy fixes to the issue.

The report, compiled by the USFWS's National Fish and Wildlife Forensics Laboratory, describes the results of examinations of 233 carcasses of birds found at the Ivanpah Solar Electric Generating System (ISEGS) south of Las Vegas, the Desert Sunlight facility near Joshua Tree National Park, and the Genesis Solar project west of Blythe in Riverside County.

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The **occasionally gruesome report** indicates that injuries from concentrated solar flux and from impact with mirrors or photovoltaic panels constitute the two largest solar facility threats to wild birds, and suggests that the limited scope of carcass surveys at solar projects may be obscuring the true magnitude of bird mortalities they cause.

Story Continues Below

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ISEGS is a 392-megawatt concentrating solar power tower facility operated by NRG Energy for partners BrightSource Energy and Google. NextEra Energy Resources owns both the Genesis Solar project, a 250-megawatt parabolic trough concentrating solar project, and Desert Sunlight, a 550-megawatt photovoltaic project being built by First Solar. The report thus examines one of each of the main technology types used in large desert solar projects.

Of the bird carcasses studied, significantly more than half came from one project: 141 out of the 233 carcasses examined by the National Fish and Wildlife Forensics Laboratory team came from ISEGS. Two thirds of the remainder, or 61, came from Desert Sunlight, with 31 provided by the operators of the Genesis Solar project.

Those proportions may or may not represent each project's relative risk to wildlife: the majority of the carcasses provided were "incidental" finds, discovered as workers were performing other tasks. And it's worth noting that the number of birds examined from Genesis Solar totaled less than **half the number of carcasses project owner NextEra told the CEC it found on the site in August 2013**.

But taking the numbers at face value, the report's authors conclude that Desert Sunlight may pose the greatest risk of the three projects to water birds, and that ISEGS, the only project of the three to use solar power tower technology, constitutes a unique threat to wildlife due to the highly concentrated solar energy -- "solar flux" -- around its boilers.

A third cause of death among the birds studied, predation by other animals, likely results from birds having been injured or stranded at the facilities by solar flux, impact trauma, or other injuries, where opportunistic meat-eaters such as ravens, coyotes, or desert kit foxes then take advantage of the easy prey.

The black bands on this peregrine falcon's feathers absorbed more energy from the solar flux, and were thus more badly damaged. | Photo: National Fish and Wildlife Forensics Laboratory

The ISEGS solar flux portion of the National Fish and Wildlife Forensics Lab report is notably striking, even distressing. 47 of the 141 bird carcasses provided the lab by ISEGS showed clear signs of solar flux injury, with feather damage ranging from singeing to charring, and a few instances of skin burns.

Also distressing, though for different reasons: the authors mention that ISEGS' owners have failed to provide them with information on the project's solar flux operating temperatures "despite repeated requests," forcing them to compile data from other sources.

One bird not examined by the lab, but which the authors cite as evidence that current carcass search strategies may be woefully inadequate, was a bird of prey that flew through the zone of solar flux at ISEGS during an October inspection by USFWS :

> *Forensic Lab staff observed a falcon or falcon-like bird with a plume of smoke arising from the tail as it passed through the flux field. Immediately after encountering the flux, the bird exhibited a controlled loss of stability and altitude but was able to cross the perimeter fence before landing. The bird could not be further located following a brief search... As demonstrated by the falcon, injured birds (particularly larger birds), may be ambulatory enough to glide or walk over the property line indicating a need to include adjacent land in carcass searches.*

Damage to feathers that impedes flight generally means the bird in question can't feed, escape predators, or regulate its body temperature, say the authors.

One other description of the scene at ISEGS during that October visit is especially chilling, and confirms **ReWire's speculation** that ISEGS may function as a huge "ecological trap" endangering an entiire food chain:

> *OLE [USFWS Office of Law Enforcement staff] observed large numbers of insect carcasses throughout*

> *the Ivanpah site during their visit. In some places there were hundreds upon hundreds of butterflies (including monarchs, Danaus plexippus) and dragonfly carcasses. Some showed singeing, and many appeared to have just fallen from the sky. Careful observation with binoculars showed the insects were active in the bright area around the boiler at the top of the tower. It was deduced that the solar flux creates such a bright light that it is brighter than the surrounding daylight. Insects were attracted to the light and could be seen actively flying the height of the tower. Birds were also observed feeding on the insects. At times birds flew into the solar flux and ignited.*

The authors suggest that ISEGS and other proposed power tower facilities may have a "significant impact on monarch populations in the desert southwest."

The report also offers a bit of grisly jargon used by ISEGS workers to describe the effect of the solar flux on wildlife that flies into it:

> *Ivanpah employees and OLE staff noticed that close to the periphery of the tower and within the reflected solar field area, streams of smoke rise when an object crosses the solar flux fields aimed at the tower. Ivanpah employees used the term "streamers" to characterize this occurrence.*
>
> *When OLE staff visited the Ivanpah Solar plant, we observed many streamer events. It is claimed that these events represent the combustion of loose debris, or insects. Although some of the events are likely that, there were instances in which the amount of smoke produced by the ignition could only be explained by a larger flammable biomass such as a bird. Indeed OLE staff observed birds entering the solar flux and igniting, consequently becoming a streamer.*
>
> *OLE staff observed an average of one streamer event every two minutes.*

The authors recommend a number of measures at the different facilities to lessen mortalities, including netting off evaporation ponds at Desert Sunlight to discourage water birds from landing there. Also suggested: clearing all vegetation inside the fenceline at Ivanpah to reduce the attractiveness of the site to predators, who might be attracted to the presence of disabled birds and themselves fall prey to solar flux injures or other harms.

The report may well have ramifications beyond the three power plants examined: the California Energy Commission will soon be considering whether to proceed with the Palen Solar Electric Generating System, a much larger version of Ivanpah proposed for the Chuckwalla Valley in Riverside County. That project's backers have agreed to provide avian mortality data from Ivanpah to use as a way to assess Palen's likely damage to wildlife, a main concern of the CEC's when it proposed to deny the project late last year.

Solar

Water Birds Turning Up Dead at Solar Projects in the Desert (http://www.kcet.org/news/rewire/solar/water-birds-turning-up-dead-at-solar-projects-in-desert.html)

by **Chris Clarke**
on July 17, 2013 4:30 PM

A bufflehead, a duck generally found in open water, discovered between two rows of mirrors 25 miles from the nearest open water at the Genesis solar project | Photo: Genesis Solar

[**This story has been updated**.] Big desert solar installations have a problem: They seem to be imperiling water birds. A ReWire investigation has revealed that since mid-March, two large industrial solar power plants in California's remote, arid desert may have killed or injured more than 20 birds commonly associated with lakes or wetlands rather than the open desert surrounding the projects.

Story Continues Below

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The two facilities in Riverside County are the 550-megawatt Desert Sunlight Solar Farm being built near Eagle Mountain by First Solar for owners NextEra Energy Resources, GE Energy Financial Services, and Sumitomo Corporation of America, and the 250-megawatt Genesis Solar Energy Project being built by NextEra about 25 miles west of Blythe. According to compliance documents builders of the two projects have filed with the California Energy Commission (CEC), as well as personal communication with solar developer press representatives, water birds accounted for about half of at least 37 reported incidents of bird injury or mortality at the two projects.

The water birds killed and injured range in species from **yellow-headed blackbirds,** which tend to congregate in the vegetation that surrounds ponds and streams, to the once-critically endangered brown pelican whose lifestyle involves fishing by diving into open water.

[**UPDATE**: after we went to press, ReWire learned that the toll also includes two individuals of the dramatic wading bird species great blue heron. Details **here**.]

Other water birds found dead or injured by biologists at the two projects include eared, western, and pied-billed grebes, the duck species surf scoter, red breasted merganser and bufflehead, the dramatic-looking black-crowned night heron, double-crested cormorants, American coots, and the federally Endangered Yuma clapper rail (**as we reported last week**).

Other birds reported dead or injured at the two facilities in that time period include warblers, goldfinches, a common raven, and a barn owl.

In addition, representatives from First Solar and NextEra have told ReWire of a few incidents not yet included in compliance reports, including deaths of three juvenile brown pelicans and a black-crowned night heron at Desert Sunlight, and another brown pelican found July 10 at the Genesis project.

Most of the mortalities were discovered by project biologists or other staff, and consisted of finding carcasses in varying stages of decay. At least one bird, the red-breasted merganser found in April at Desert Sunlight, was alive when discovered but died shortly after. In addition to the birds listed as injured or killed, the compliance records note a number of birds finding their way into fenced and netted areas or discovered in some distress on the sites, but released apparently no worse for wear.

Construction projects of any nature pose threats to birds, both during construction and after. That's evidenced by the fact that residential and commercial buildings, communications towers, and other human artifacts take

an astounding toll of bird injuries and mortalities. **According to the American Bird Conservancy,** as many as a billion birds die each year due to collisions with glass windows, another 200 million or so from collisions with power lines and communications towers, and about 380 million from collisions with vehicles or other roadway hazards.

So facilities like Desert Sunlight and Genesis that incorporate power lines, thought to account for at least some of the small bird deaths recorded, and roadways that bring construction traffic into areas where there hadn't been much traffic before, are likely to see consequent bird mortality.

And both companies have assured ReWire that the incidents distress them, and that they're working with appropriate agencies to minimize the deaths. A statement sent along by Desert Sunlight spokesperson Ashley Hudgens confirming the deaths of the juvenile pelicans and night heron, for instance, stresses the company's efforts:

> *In recent weeks biologists at Desert Sunlight Solar Farm found three juvenile Brown Pelicans and a Black-crowned Night-heron. Biologists alerted the Bureau of Land Management, the California Department of Fish and Wildlife, and the U.S. Fish and Wildlife Service. Desert Sunlight is cooperating with the agencies and will work with them on next steps.*
>
> *Unfortunately it is common for birds, especially juveniles, to become exhausted or die if they stray outside of their migratory path. Biologists are examining regional flyways and migratory patterns for more information.*
>
> *Project biologists also recover injured or exhausted birds so they can be safely released or transported to rehabilitation centers.*
>
> *Desert Sunlight takes the health of native and protected wildlife and plant species very seriously. Biologists are on site daily to ensure that wildlife and plants are protected during the construction process.*

NextEra's Steve Stengel expressed similar concerns in an email.

No one wants to kill birds unnecessarily, and the companies' efforts to mitigate and reduce the toll are laudable. But what explains the astonishing percentage of water birds injured at these hyper-arid sites?

Scientists haven't weighed in on what might account for a disproportionate number of bird kills at solar facilities: the topic is very new. But as ReWire mentioned in covering the Yuma clapper rail mortality on July 10, it seems very likely that reflections from solar facilities' infrastructure, including photovoltaic panels and mirrors, may well be attracting birds in flight across the open desert, who mistake the broad reflective surfaces for water.

Here's a 2008 photo of the Nevada Solar One project to illustrate what we mean:

Nevada Solar One glare | Photo: **e pants**/Flickr/**Creative Commons License**

With millions of years of evolutionary experience telling birds that broad expanses of glare and reflectivity on the ground mean "water," it's not hard to figure out why water birds might veer miles out of their way to head for solar facilities. Both photovoltaic solar panels, as used at Desert Sunlight, and mirrors like Genesis uses pose that reflective glare attractant.

It may be that photovoltaic arrays resemble lakes more closely than do mirrors, at least to the eyes of birds. Light reflecting off non-metallic surfaces tends to become polarized. Both water and the semiconducting surfaces of photovoltaic panels are non-metallic, which means the glare from one might well resemble the glare from the other if birds are sensitive to light polarization, which **many are.**

The California desert is part of the **Pacific Flyway,** one of four major bird migration corridors in North America. Historically, lakes in arid and semi-arid parts of the west were important rest and refueling stops for long-distance migrants. In the last two centuries human activity has altered, displaced, or dried up many of the lakes and wetlands migrating birds once depended on as they traveled the Pacific Flyway, and remaining rest stops such as the Salton Sea, the Great Salt Lake, or even smaller sites like the artificial Lake Tamarisk in the western Chuckwalla Valley of Riverside County are crucial, widely separated oases in the desert section of the Flyway.

Add reflective areas that resemble water to the mix, and you have a recipe for avian deaths by the hundreds as unsuspecting, tired migrating birds try to come in for a water landing on fields of solar panels and mirrors.

And with thousands of acres of those solar panels and mirrors due to be added to the migration corridor between the Colorado River and the Coachella Valley as Palen, Blythe, and McCoy solar projects come

online, the issue of water bird deaths promises to become far more pressing than it already is.

ReWire will be tracking this issue as it develops.

Appended below is a list of bird deaths and injuries at Desert Sunlight and Genesis of which ReWire is aware. Water birds are indicated by an asterisk (*). Other solar projects aren't included only because we haven't looked at them yet. Some birds injured since May and June will not have been formally reported. Some injuries and fatalities will not have been recorded by project biologists, as injured birds may leave the scene undetected to expire elsewhere from their wounds.

- Genesis, March 13, lesser goldfinch
- Genesis, March 19, lesser goldfinch
- Genesis, March 28, bufflehead* found between mirrors
- Desert Sunlight, April 3 eared grebe*
- Desert Sunlight, April 15 surf scoter*
- Genesis, April 17, black-throated grey warbler
- Genesis, April 17, house wren
- Genesis, April 17, orange-crowned warbler
- Desert Sunlight, April 18 great-tailed grackle
- Desert Sunlight, Week of April 21 red breasted merganser* found live on site, died in transport prior to release.
- Genesis, April 25, barn owl injured, taken to rehab
- Genesis, May 1, pied-billed grebe* (in evap pond netting)
- Genesis, May 1, eared grebe* injured, to rehab
- Desert Sunlight, May 6 double crested cormorant*
- Desert Sunlight, May 8 Yuma clapper rail*
- Genesis, May 8, Wilson's warbler (poss. line strike)
- Genesis, May 14, yellow-headed blackbird* injured, taken to rehab
- Genesis, May 15, hermit thrush (bulldozer)
- Genesis, May 16, Wilson's warbler
- Genesis, May 16, Townsends warbler
- Genesis, May 16, unidentified bird
- Genesis, May 22, western grebe* injured, taken to rehab
- Genesis, May 22, yellow warbler
- Genesis, May 23, warbler, species unknown
- Genesis, May 24, unidentified sparrow
- Genesis, May 30, American coot*
- Desert Sunlight, June 4 common loon*

- Desert Sunlight, June 5 eared grebe*
- Desert Sunlight, June 5 western grebe*
- Desert Sunlight, June 5 western grebe* live, released after consultation.
- Desert Sunlight, June 6 American coot*
- Desert Sunlight, June 6 double crested cormorant*
- Desert Sunlight, June 9 Common raven
- Genesis, June 10, brown pelican* injured, sent to rehab
- Desert Sunlight, June 19 hummingbird (species not mentioned)
- Genesis, July 10, brown pelican*
- Desert Sunlight, July 10 brown pelican*
- Desert Sunlight, July 11 brown pelican*
- Desert Sunlight, July 13 brown pelican*
- Desert Sunlight, July 15 black-crowned night heron*

Solar | Concentrating Solar

April Was Bad Month for Birds at Ivanpah Solar (http://www.kcet.org/news/rewire/solar/concentrating-solar/april-was-bad-month-for-birds-at-ivanpah-solar.html)

by **Chris Clarke**
on May 26, 2014 12:30 PM

An American kestrel. This tiny raptor is falling prey to solar flux injuries at Ivanpah | Photo: **Nathan Rupert**/Flickr/**Creative Commons License**

The April stats are in for reported bird deaths at the Ivanpah solar power plant in the California desert, and it's bad news: 97 birds were found killed or mortally injured between April 1 and 29 at the nearly 4,000-acre plant in San Bernardino County south of Las Vegas.

That's a record number of reported deaths for the facility, though the increase may be at least partly a statistical artifact: sources tell ReWire that biologists from the U.S. Geological Survey (USGS) w

Like

throughout April investigating wildlife mortality on the premises, likely leading to more stringent searches for injured wildlife.

But those searches still covered just 20 percent of the facility, meaning that one could reasonably extrapolate that total bird mortalities for April could be five times the official count. And that's not taking into account injured birds that land outside the fence, or are eaten by scavengers before survey crews can find them.

Story Continues Below

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The Ivanpah Solar Electric Generating System generates electrical power by focusing solar energy on boilers atop three power towers, using tens of thousands of billboard-sized independently targetable mirrors called "heliostats." As ReWire has reported extensively over the past couple years, that concentrated "solar flux" poses a significant risk of injury to wildlife that flies through it, and may possibly *entice* wildlife by attracting clouds of insects with its bright glow.

As a result of mounting concern over the new technology's effects on wildlife, federal and state agencies have been casting a watchful eye on Ivanpah's bright light, hence those USGS boots on the ground resulting in more aggressive monitoring of mortalities.

That stepped-up surveying seems to be reflected in the records of how each bird was found: of the 100 dead or injured birds reported in the facility's Monthly Compliance Report to the California Energy Commission for April, just 14 were "incidental" finds, or birds noticed as plant workers performed other duties. Incidental finds made up a far greater percentage of reported mortalities in previous months.

There's also the fact that after a slow start, with the plant **at least partly offline** for many weeks even after its formal opening, April saw a ramping up of energy production from the plant -- and thus more solar flux to pose a threat to wildlife.

Of the 100 birds reported, two -- an American Kestrel and a white-throated swift, both suffering burn injuries from the pllant's concentrated solar flux -- were sent still alive to a rehab facility, while a third, a Brewer's sparrow seen colliding with one of the plant's mirrored heliostats, apparently recovered and flew off into the desert. The remaining 97 birds were either found dead or died soon after discovery.

We've included a full list of the affected species at the end of this post. Seventeen of the birds killed in April were warblers, 12 of them yellow-rumped warblers. Mortalities also included 18 hummingbirds of at least five different species, one having been too badly decomposed for certain identification. Mourning doves were well represented in the death toll, with 10 mortalities. At least four species of swallow (again, some were

unidentifiable) and four sparrow species are represented on the April mortality list, as were three American kestrels not counting the one sent still-alive to rehab.

Surveyors found partial remains of both an American coot and a bird in the heron and egret family on the site on April 15. Though the remains were too sparse to pinpoint the species of the heron, the presence of water birds on the site indicates that Ivanpah isn't immune from the **fake lake effect** that troubles other desert solar facilities.

Forty-nine of the birds were reported as showing signs of scorching, singeing, or melting of feathers consistent with exposure to the plant's concentrated solar flux. A dozen showed obvious signs that they'd collided with heliostats, some having left visible smudges on the mirrors. The remainder were listed with unknown causes of death.

April's bird mortality is unlikely to be considered welcome news for proponents of the Palen Solar Electric Generating System in eastern Riverside County, the design of which would resemble Ivanpah's but on a considerably larger scale. The California Energy Commission decided Thursday to reopen evidentiary hearings on the project's possible effect on wildlife, among other issues, and the mounting losses of wildlife at Palen's smaller sibling Ivanpah may not bode well for the proposed project.

That reopened evidentiary hearing is set to take place early in July, which means there will be at least one more Monthly Compliance Report on Ivanpah in the CEC's hands by then.

Bird species killed or injured at Ivanpah Solar in April 2014:

- American Kestrel (*Falco sparverius*), 3 mortalities, 1 injury
- Anna's Hummingbird (*Calypte anna*), 2 mortalities
- Barn Swallow (*Hirundo rustica*), 1 mortality
- Black-Throated Sparrow (*Amphispiza bilineata*), 1 mortality
- Brewer's Blackbird (*Euphagus cyanocephalus*), 3 mortalities
- Brewer's Sparrow (*Spizella breweri*), 2 mortalities, 1 injury
- Broad-Tailed Hummingbird (*Selasphorus platycercus*), 1 mortality
- Calliope Hummingbird (*Selasphorus calliope*), 2 mortalities
- Cliff Swallow (*Petrochelidon pyrrhonota*), 1 mortality
- Costa's Hummingbird (*Calypte costae*), 7 mortalities
- Eurasian Collared-Dove St(*reptopelia decaocto*), 1 mortality
- Hermit Warbler (*Dendroica occidentalis*), 1 mortality
- Horned Lark (*Eremophila alpestris*), 4 mortalities
- House Finch (*Carpodacus mexicanus*), 2 mortalities
- Lincoln's Sparrow (*Melospiza lincolnii*), 2 mortalities
- Loggerhead Shrike (*Lanius ludovicianus*), 2 mortalities
- Mourning Dove (*Zenaida macroura*), 10 mortalities
- Nashville Warbler (*Vermivora ruficapilla*), 1 mortality

- Rock Dove (*Columba livia*), 1 mortality
- Rufous Hummingbird (*Selasphorus rufus*), 4 mortalities
- Townsend's Warbler (*Dendroica townsendi*), 1 mortality
- Tree Swallow (*Tachycineta bicolor*), 3 mortalities
- Unknown Ardeidae species Unknown, 1 mortality
- Unknown Hummingbird (*Trochilidae*) species, 2 mortalities
- Unknown Swallow (*Hirundinidae* species), 2 mortalities
- Unknown Swallow (*Tachycineta* species), 1 mortality
- Unknown Warbler, 1 mortality
- Unknown, 9 mortalities
- Violet Green Swallow (*Tachycineta thalassina*), 2 mortalities
- Western Meadowlark (*Sturnella neglecta*), 4 mortalities
- White-Crowned Sparrow (*Zonotrichia leucophrys*), 5 mortalities
- White-Throated Swift (*Aeronautes saxatalis*), 1 mortality, 1 injury
- Wilson's Warbler (*Cardellina pusilla*), 1 mortality
- Yellow-rumped Warbler (*Dendroica coronata*), 12 mortalities

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
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RECEIVED
JUN 04 2014
BY:

May 27, 2014

Thuy Hua
Los Angeles County Department of Regional Planning
320 W. Temple Street, 13th Floor
Los Angeles, CA 90012

Notice of Preparation of a CEQA Document for the
Los Angeles County Renewable Energy Ordinance Project

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The SCAQMD staff's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the draft CEQA document. Please send the SCAQMD a copy of the Draft EIR upon its completion. Note that copies of the Draft EIR that are submitted to the State Clearinghouse are not forwarded to the SCAQMD. Please forward a copy of the Draft EIR directly to SCAQMD at the address in our letterhead. **In addition, please send with the draft EIR all appendices or technical documents related to the air quality and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files. These include original emission calculation spreadsheets and modeling files (not Adobe PDF files). Without all files and supporting air quality documentation, the SCAQMD will be unable to complete its review of the air quality analysis in a timely manner. Any delays in providing all supporting air quality documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis

The SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the SCAQMD's Subscription Services Department by calling (909) 396-3720. More recent guidance developed since this Handbook was published is also available on SCAQMD's website here: www.aqmd.gov/ceqa/hdbk.html. SCAQMD staff also recommends that the lead agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. CalEEMod is the only software model maintained by the California Air Pollution Control Officers Association (CAPCOA) and replaces the now outdated URBEMIS. This model is available free of charge at: www.caleemod.com.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the analysis.

The SCAQMD has also developed both regional and localized significance thresholds. The SCAQMD staff requests that the lead agency quantify criteria pollutant emissions and compare the results to the recommended regional significance thresholds found here: http://www.aqmd.gov/ceqa/handbook/signthres.pdf. In addition to analyzing regional air quality impacts, the SCAQMD staff recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LST's can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore,

when preparing the air quality analysis for the proposed project, it is recommended that the lead agency perform a localized analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/ceqa/handbook/LST/LST.html.

In the event that the proposed project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the lead agency perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("*Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*") can be found at: http://www.aqmd.gov/ceqa/handbook/mobile_toxic/mobile_toxic.html. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.

In addition, guidance on siting incompatible land uses (such as placing homes near freeways) can be found in the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Perspective*, which can be found at the following internet address: http://www.arb.ca.gov/ch/handbook.pdf. CARB's Land Use Handbook is a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process.

Mitigation Measures

In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate these impacts. Pursuant to state CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed. Several resources are available to assist the Lead Agency with identifying possible mitigation measures for the project, including:

- Chapter 11 of the SCAQMD *CEQA Air Quality Handbook*
- SCAQMD's CEQA web pages at: www.aqmd.gov/ceqa/handbook/mitigation/MM_intro.html
- CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures* available here: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.
- SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook for controlling construction-related emissions
- Other measures to reduce air quality impacts from land use projects can be found in the SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. This document can be found at the following internet address: http://www.aqmd.gov/prdas/aqguide/aqguide.html.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling the SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the SCAQMD's webpage (http://www.aqmd.gov).

The SCAQMD staff is available to work with the Lead Agency to ensure that project emissions are accurately evaluated and mitigated where feasible. If you have any questions regarding this letter, please contact me at imacmillan@aqmd.gov or call me at (909) 396-3244.

Sincerely,

Edward Eckerle

Ed Eckerle
Program Supervisor
Planning, Rule Development & Area Sources

LAC140506-06
Control Number

Three Points-Liebre Mountain Town Council
P.O. Box 76
Lake Hughes, CA 93532

4 June 2014

SENT VIA EMAIL

Planner Ms. Thuy Hua
Los Angeles County Department of Regional Planning
320 West Temple Street 13th Floor
Los Angeles, CA 90012
Email: thua@planning.lacounty.gov

Subject: Notice of Preparation, Los Angeles County Regional Planning Renewable Energy Ordinance

Dear Ms. Hua

On behalf of our Town Council, I am writing in response to the Notice of Preparation (NOP) for the proposed Renewable Energy Ordinance (REO) that will apply to all unicorporated areas of Los Angeles County. I begin by stating that it may be difficult to completely ascertain all impacts to applicable areas while the REO is still in draft form and subject to change. This may not be fair to respondents attempting to comment and essentially trying to hit a moving target.

As ever, our Council seeks to preserve our rural community atmosphere, our viewshed, SEAs and highly biotic places, and protect our residents from encroachment of unsuitable development and resultant impacts.

I start by asking why reviewing agencies do not include: the Coastal Commission, since utility-scale and small scale renewable energy (RE) has the potential to affect viewshed in coastal areas; National Parks, due to the presence of Santa Monica Mountains National Recreation Area (National Park Service); Resource Conservation District of Santa Monica Mountains Area; State Department of Parks and Recreation, who, in our area, oversees the Poppy Reserve SP, Saddleback Buttes SP, the Antelope Valley Indian Museum SHP, Arthur B. Ripley Desert Woodland SP, and many in other parts of the county, also potentially affected by the proposed REO.

Aesthetics--Scenic resources have not been completely identified and codified in zoning and ordinance in other planning documents as yet unapproved. The NOP recognizes the county-wide nature of the REO, and suggests several measures intended to reduce impacts to scenic areas and assumes these measures will adequately address destruction of viewshed. Please explore *how* these measures will make utility-scale RE visually pleasing, since wind turbines can be seen for many miles. A study by the Argonne Laboratory states: "The facilities were found to be visible to the unaided eye at >36 mi (58 km) under optimal viewing conditions, with turbine blade movement often visible at 24 mi (39 km). Under favorable viewing conditions, the wind facilities were judged to be major foci of visual attention at up to 12 mi (19 km) and

were likely to be noticed by casual observers at >23 mi (37 km). A conservative interpretation suggests that for such facilities, an appropriate radius for visual impact analyses would be 30 mi (48 km), that the facilities would be unlikely to be missed by casual observers at distances of up to 20 mi (32 km), and that the facilities could be major sources of visual contrast at distances of up to 10 mi (16 km)." There are several locations in the Antelope Valley where visual effects of industrial solar and wind projects can be seen.

Even though the Scenic Highway Element was not codified, the GP expects proper evaluation of development in designated scenic areas, and includes even "proposed" scenic highways (GP, Scenic Highways, III-54). The Land Use Element details design review for Scenic Highways, in part, stating,"The proposed development should be designed to create a consistent visual relationship with urrounding development with the natural terrain and vegetation," and "structures and landscaping should complement and enhance scenic views" (GP, III-54).

"The project should protect the visual quality of highly scenic areas and views from scenic highways, roads, trails and key vantage points" (GP, Resource Protection, III-72).

The Rural Outdoor Lighting Ordinance defines usage to limit nighttime glare and light intrusion into dark skies. The ordinance is supeceded by the Federal Aviation Administration's requirement for aviation lighting on towers 200 feet and taller. The NOP statement that "Mandatory compliance for all new building permits ensures that future projects under the proposed ordinance, in combination with all past, present, and future projects, will not contribute to a cumulatively considerable impact. Therefore, compliance with the County's Rural Outdoor Lighting District Ordinance and lighting requirements of the proposed ordinance ensures that the project will not create a significant new source of substantial light that would adversely affect daytime or nighttime views in the area, on a project or cumulative level." Considerable impacts result from aviation lighting. Explain *how* the Rural Outdoor Lighting Ordinance protects night skies from flashing red beacons on towers 200 feet and taller, and *how* this is not a significant or cummulativeimpact.

Glare from solar panels appears like water at some distances, and has reportedly caused the death of endangered migratory birds seeking water. Glare also affects viewshed to residents nearby.

Agriculture/Forest—Again we request that agricultural lands require a zone change to "Industrial Zone." Just because the zone allows for electrical generating systems does not mean the use is compatible for such industrial uses and should be continued.

We believe watershed zones should be excluded from zones available to RE development, and any projects that would be allowed with a CUP, could produce significant impacts.

Air Quality—The less than significant impacts listed for air quality should not be judged by whether or not the Antelope Valley reaches attainment of particulate matter on a daily basis. What should be considered, is whether the ordinance will contribute to increases in air quality issues. At this time, no best management plans, or adherance to Rule 403, the AVAQMD's dust control standards, has been able to control fugitive dust. We think this is a problem that results in great potential impacts to residents in the AV. Cummulative effects from multiple projects across thousands of acres should be discussed; this is not a "less than significant impact" as noted.

Dilution of pollutants like dust do not occur within one-quarter mile. Wind-driven dust storms cross the AV

for miles. Sensitive receptors should be considered much more distant than one-quarter mile. This is a significant impact and implementation of the proposed ordinance *would* expose sensitive populations to excessive levels of air pollutants.

Biological Resources—Concerning the protection of water resources, just because permitting agencies review a project, or "notification" is made, does not mean there will not be substantial impacts. Quite often projects are approved that destroy existing resources and attempt to replace them at some other location. There can be significant impacts to water resources, vernal pools, etc.

Energy—Actually there may be significant impact produced by the development of renewable energy projects that require large tracts of land. Recent research reveals that desert environments perform CO2 sequestration through plants and soil organisms and microorganisms. Destruction of land by said projects will contribute to the increase of greenhouse gases. This should be considered "significant."

Geology and Soils—Seismic shaking could cause disruption of electrical wiring or cause transformer buildings or wind turbines to shift off their foundations, with the high risk of fire. Areas subject to liquifaction should be presumed to cause the same danger. What happens to 50 storey wind turbines in seismic events? Falling structural components could result in fire and and hazardous material spill, possibly igniting and polluting surface and ground water."

Landslide could result in significant impacts to the community from mountainous, heavily graded roads, affecting watersheds and residents in proximity to projects.

The Hillside Management Plan does not address or approve 5o storey structures in hillside areas. This is the equivalent of placing a skyscraper on a 25% slope. This may be a conflict with with the REO.

Greenhouse Gas Emissions--"Climate changes resulting from GHG emissions could produce an array of adverse environmental impacts, including water supply shortages, severe drought, increased flooding, sea-level rise, air pollution from increased formation of ground-level ozone (O_3) and particulate matter ($PM_{2.5}$, PM_{10}), ecosystem changes, increased wildfire risk, agricultural impacts, and ocean and terrestrial species impacts, among other adverse effects." Well, several of these will result from the destruction of thousands of acres of Antelope Valley Audubon Important Bird Area, agricultural areas, particulate matter-fugitive dust pollution, and increased wilfire risk.

No Check box marked for **b) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?**

Hazards and Hazardous Materials—Release of hazardous chemicals is quite possible during normal operations and could have significant impacts when turbines may contain 500 gallons of petroleum-based fluids, and transformers house hundreds of gallons of dialectric oil. Potential to cause pollution and a hazardous waste cleanup. What if a site is abandoned? Is there requirement for insurance or superfund cleanup? Who oversees compliance responsibility? Lack of oversight is common; what guarantee do we have materials are safely handled, and who is ultimately responsible for cleanup that could affect water, air, and soil quality and safety?

Project specific emergency plans may be inadequate in protecting residents from emergency occurences. Fire departments are often many miles away in rural areas, and may need four-wheel drive in some situations to access turbines or solar arrays. Significant impact is indicated.

Projects have the possibility to alter streambeds and watercourses and could have significant impact downsite with deposition of water and silt.

Thousands of acres of solar panels represent "rooftops," essentially impervious surfaces, themselves. This poses a significant impact for drainage and possible flooding to roadways and adjacent properties during heavy rain events. County approved building in Quartz Hill cause serious flooding for years with "approved" drainage plans required for permits.

Land Use and Planning—Inconsistencies with the General Plan and the Antelope Valley Areawide Plan are indicated. "Scattered throughout the Antelope Valley are a wide variety of very low density, rural villages which are worthy of protection. Each is uniquely identifiable from its surroundings. Their residents express a sense of community pride and local identity. . . it is important to sustain these areas as unique, low-density "living environments" (AVAP 1986, Community Recognition, Section III-1).

The GP in its Land Use Section/Scenic Highways, III-55 states, "Commercial or industrial uses should be conducted entirely within closed buildings, except for restaurants, recreational uses and gasoline service stations."

(AVAP 1986, Community Recognition, Section III-1). Policy statements in the AVAP seek to "Promote air quality that is compatible with health, well-being, and enjoyment of life. The public nuisance, property and vegetative damage, and deterioration of aesthetic qualities that result from air pollution contaminants should be prevented to the greatest degree possible"(Policy Statements, Natural Resources, V-17, Number 140).

Several points were voiced and are worthy of exploration in the PEIR. Ground water adjudication, Urban heat island effect from solar facilities, Important Bird Areas, edge effects to public and private conservation lands, and finally, what would a build-out of Renewable Energy Projects look like and what effects would they have on the Antelope Valley and the County-wide?

Respectfully,

Susan Zahnter
Vice President