YOLO COUNTY
COMMUNITY SERVICES DEPARTMENT

INITIAL STUDY / MITIGATED NEGATIVE DECLARATION

ZONE FILE # 2017-0066

TERRA-GEN DEVELOPMENT COMPANY, LLC
KING FLAT METEOROLOGICAL TOWERS
USE PERMIT

OCTOBER, 2017

Initial Environmental Study

1. **Project Title:** Zone File No. 2017-0066, King Flat Meteorological Towers Use Permit

2. **Lead Agency Name and Address:**
   Yolo County Community Services Department
   292 West Beamer Street
   Woodland, CA 95695

3. **Contact Person, Phone Number, E-Mail:**
   Eric Parfrey, Principal Planner
   (530) 666-8043
   eric.parfrey@yolocounty.org

4. **Project Locations:** Three separate properties located in the Capay Hills, ranging from east of Brooks to east of Rumsey, and between the State Route 16 and the County 85 corridors (APNs: 061-150-002, 059-180-007, and 059-090-009).

5. **Project Sponsor's Name and Address:**
   Terra-Gen Development Company, LLC
   11512 El Camino Real, Suite 370
   San Diego, CA 92130

6. **Land Owners' Names and Addresses:**

   Virginia, Philippe,and John Hammerness
   23750 County Road 15B
   Capay, CA 95607

   Hayes Survival Trust, et al
   P.O. Box 308
   Esparto, CA 95627

   James A. Bremer TR, et al
   240 N. College St.
   Woodland, CA 95695

7. **General Plan Designation(s):** Agriculture

8. **Zoning:** Agricultural Intensive (A-N) and Agricultural Extensive (A-X)

9. **Description of the Project:** See attached "Project Description" on the following pages for details

10. **Surrounding Land Uses and Setting:**

    Each of the three site is surrounded by agricultural (grazing) lands

11. **Other public agencies whose approval is required:** Yolo County Building Division.

12. Other Project Assumptions: The Initial Study assumes compliance with all applicable State, Federal, and local codes and regulations including, but not limited to, County of Yolo Improvement Standards, the California Building Code, the State Health and Safety Code, and the State Public Resources Code.

Project Description

Proposed Use Permit

The proposed project is a Use Permit to construct three 60-Meter (197 feet) tall temporary Meteorological wind towers ("Met towers"). The applicant is Terra-Gen Development Company, LLC, a subsidiary of Terra-Gen, a renewable energy company focused on geothermal, wind and solar power generation, with regional offices in San Diego.

Each Met tower would be a 60-Meter XHD NRG TalltowersTM with 3-foot by 3-foot base plates, and 24 guy wires. Lights are not required by the Federal Aviation Administration for Met towers of the height proposed, and none would be installed. Figure 1 through Figure 7 indicates the regional location of each of the three towers and Figure 8 provides a typical elevational drawing of the Met tower and associated anchor system, with a photograph of the tower.

Guy wires, with industry-recognized bird deterring reflectors, would extend up to 30 meters from the base of the Met towers at 90-degree angles and be oriented to create an "X" pattern when viewed from overhead. Each guy wire will be attached to a temporary anchor that meets the design standards of the Met tower manufacturer, based on the underlying soil conditions.

Cup anemometers and wind direction vanes would be attached at to the Met tower at various heights to measure wind speed and direction. The resulting data will be captured by a small data logger, and transmitted to Terra-Gen via by an integrated cell phone link. Each of the Met towers will be powered by a small solar cell, and battery. The Met towers will be unmanned, and aside from the tower and affixed apparatuses, no other equipment is proposed. Terra-Gen anticipates making visits to each Met tower once every three months for routine maintenance.

The proposed Met towers will collect wind speed data that can be used with other regional data to characterize the long-term resource in the area. Though the Met towers are not themselves an energy source, they are necessary to determine the feasibility of installing an energy project. The data collected will be used to assess the economic viability of proceeding with a utility-scale wind energy generation project, which would be analyzed in a separate subsequent CEQA document after a formal application had been received, as discussed below under "Potential Future Project."

The Met towers are temporary and will be decommissioned and removed from the project sites within three years of issuance of final building permit, or as determined by the Planning Commission.

Met Tower Installation

Installation and staging would occur within 100 feet of each Met tower. Two to three pickup trucks with up to five workers would drive to the sites using existing roads. Each temporary work area would be approximately 1.5 acres and constitute the total lay-down area needed for tower installation.

Terra-Gen will not require any grading or vegetation clearing; however, should small vegetation need to be cleared and/or trimmed, pruning would occur no lower than six inches above the root ball by the landowner. Any organic waste or plant debris associated with installation would be

redistributed so as not to create piles. Non-organic waste would be picked up and disposed of offsite. No other ground disturbing activities are anticipated.

The Met towers would be delivered in short sections and assembled on the ground prior to erection. Anemometers and weather vanes would be attached to the tower with horizontal arms. Guy wires would be attached to the towers and to anchors placed in the ground so as not to interfere with traffic on any trail or road. Anchors would be screw-in augurs, unless soil conditions necessitate the use of a non-standard anchor, and sunk into the ground to a depth of three to four feet.

An approximately 46-foot long gin pole and electronic winch would be used to erect the MET towers. A five-person crew would then stabilize the tower, tighten the guy wires, and install the associated electronic equipment. Preparation of each site and assembly of each tower would require approximately two full days.

Met Tower Operation, Removal and Site Clean-up

During operation of the Met towers, personnel visit each Met tower once every three months for routine maintenance. This includes checking the data logger to ensure it is functioning properly and visually inspecting guy wires and anchor points, as well as maintaining site conditions to be free from flammable brush, grass, and weeds. Each Met tower site would be accessed using existing county roads and private agricultural/farm roads.

The Met towers are temporary and would be removed. At the end of the initial lease term (unless an extension is authorized), Met towers would be removed by reversing the erection process. Restoration of each site would include removing all equipment and supplies, unscrewing ground anchors, replacing any large rocks or boulders that were moved to facilitate erection, and removing debris. No other ground disturbing activities are anticipated.

Proposed Biological Mitigation Features

Terra-Gen has proposed to install bird flight diverters on the guy wires to minimize the impact of bird strikes with the guy wires. Bird flight diverters are a common mitigation practice for overhead power lines and are becoming increasingly common for use on guy wires for communication towers and other guy-wired towers. The bird flight diverters are small coils made from a high-impact, standard PVC. The bird flight diverters will be placed approximately every fifteen feet on the outermost and innermost guy wires of each set, according to industry standards.

Additionally, Terra-Gen will conduct a monitoring program to document the presence of any avian carcasses near the base of the Met tower to determine if any bird strikes with the guy wires have occurred. Terra-Gen shall submit a Biological Monitoring Program to the Community Services Department for approval prior to the issuance of any building permits. The Program shall include quarterly (every three months) monitoring of the project site for three years (or the life of the project) by a qualified biologist hired by Terra-Gen. A report shall be prepared documenting the results of the monitoring and shall be submitted to the Community Services Department and any appropriate office of the U.S. Fish and Wildlife Service, following each quarterly monitoring session.

These features have been included as biological mitigation measures in Section IV of this IS.

Project Sites and Surrounding Location

The three proposed Met towers will be located in the Capay Hills, east of State Route 16 and west of County Road 85, within an approximately 10 mile-long area (see Figure 1).

Tower #1 is sited at approximately the 1,457-foot elevation in the southeast portion of a 390-acre parcel (APN: 061-150-002, owned by the Hammerness family) that is zoned Agricultural Extensive (A-X). The site is accessed via County Road 15B from the east and unnamed dirt roads. The site is approximately three miles northeast of Brooks (see Figures 2 and 3).

The Met Tower is located on a grassy hill in the southeast corner of the parcel. There are areas of shrubby/chaparral or forest vegetation to the north of the Met tower. The Met tower location is within an open grassy field grazed by cattle. There are no structures in the area.

Two unnamed United States Geological Survey (USGS) blue-line streams run through the parcel. The one on the west side eventually joins Cache Creek. The one on the east side eventually joins Goodnow Slough. Additionally, the parcel contains one dammed/created cattle pond and multiple unmapped ephemeral drainages that convey water along valleys and slopes. The property is under a Williamson Act.

Tower #2 is proposed at approximately the 1,774-foot elevation in the western portion of a 157-acre parcel (APN: 059-180-007, owned by Hayes Trust, Findley & Hickey) that is zoned Agricultural Extensive (A-X). The site is accessed via County Road 57 near Guinda from the east and unnamed dirt roads. The site is approximately two and one-half miles east of Guinda (see Figures 4 and 5).

The Met Tower is located on a ridgeline overlooking Jones Flat, in the western portion of the parcel. Ephemeral drainages convey water along valleys and slopes. There is one unnamed USGS blue-line stream that runs through the parcel, in the southeast corner, which eventually joins the south forks of Buckeye Creek. The Met Tower location is within hilly grassland surrounded by oak trees and shrubby/chaparral. Aerial imagery shows what could be small outbuildings approximately 0.4 mile NNE of the proposed location for Met Tower 2, on an adjacent parcel. The property is under a Williamson Act.

Tower #3 is at approximately the 1,778-foot elevation in the southeast portion of a 310-acre parcel (APN: 059-090-009, owned by Bremer) that is zoned Agricultural Extensive (A-X). The site is accessed via County Road 57 near Guinda from the east and unnamed dirt roads. The site is approximately three miles east of Rumsey (see Figures 6 and 7).

The Met Tower is located within an elevated flat in the eastern section of the parcel, in hilly grassland surrounded by oak trees and shrubby/chaparral. A residential structure is within 0.3 mile to the WSW of the site. Existing communication towers are approximately 0.15 mile to the south.

There are two unnamed USGS blue-line streams that run through and to the north of the parcel, eventually joining Petroleum Creek and Little Buckeye Creek. Additionally, the APN contains several dammed/created cattle ponds (two of which are between 0.2 and 0.3 mile of the site to the northwest and southwest) and multiple unmapped ephemeral drainages that convey water along valleys and slopes.

Potential Future Project

Following analysis of data from the Met towers, an application for a Use Permit for a large utility-scale wind project could be submitted by Terra-Gen to the Yolo County Community Services Department. If and when an application for a future project is deemed "complete" by Planning and Public Works Department, the County will initiate a separate CEQA analysis for that project, which will probably require a full Environmental Impact Report. Neither the adoption of this IS/ND nor any approval of the project studied herein represents a commitment by the County or the applicant to later carry out or approve a future wind energy project, the viability of which is dependent upon (among other things) the nature of the data that will be generated by the Met towers studied herein. In no way does approval of the current testing project authorize or entitle the applicants to proceed with any future project. Nor does this IS/ND, its potential adoption, or the approval of the Met towers project foreclose alternatives, including the "no project" alternative where applicable, or mitigation measures that would be part of the CEQA review of any such wind energy project.

For all of these reasons, environmental review of a future wind energy project that might later follow the Met towers project—depending on various factors—is premature and not required by CEQA.

FIGURE 1

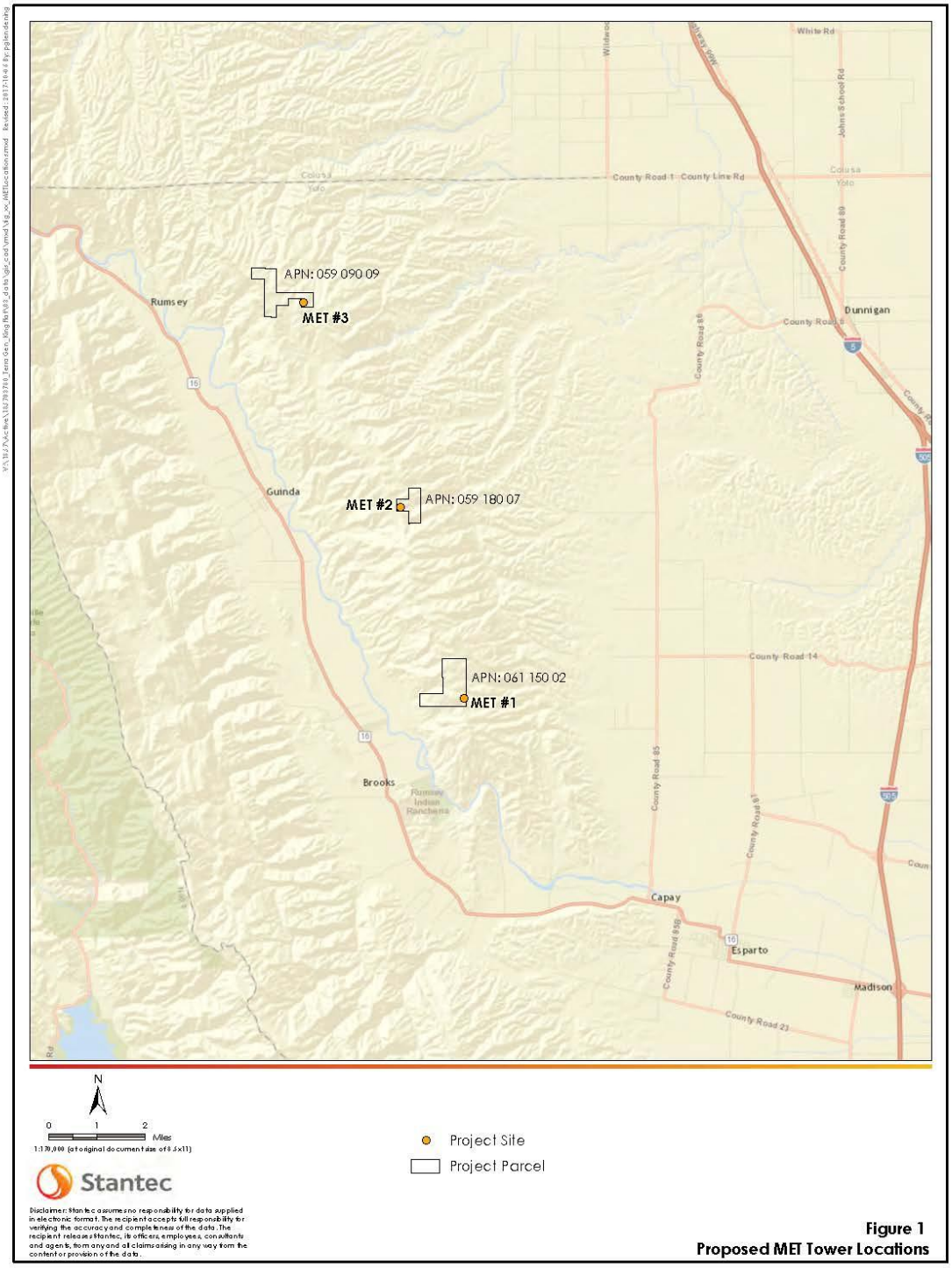

APN: 059 090 09
MET #3
APN: 059 180 07
MET #2
APN: 061 150 02
MET #1
Rumsey
Guinda
Brooks
Capay
Esparto
Madison
Dunnigan
White Rd
County Road 1
County Line Rd
County Road 14
County Road 23
N
0 1 2 Miles
1:170,000 (at original document size of 8.5x11)
Project Site
Project Parcel
Stantec
Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.
Figure 1
Proposed MET Tower Locations

FIGURE 2

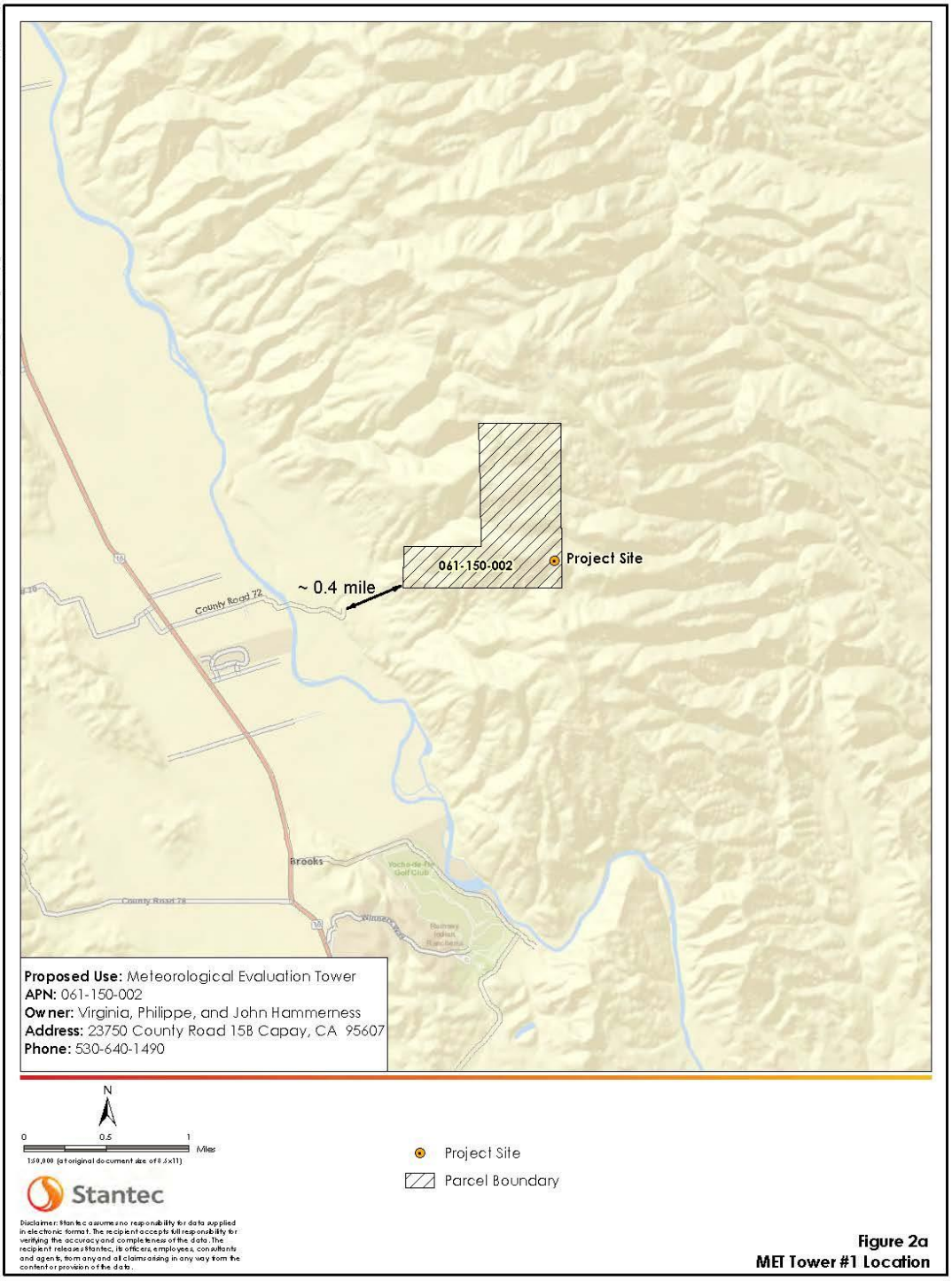

061-150-002
Project Site
~ 0.4 mile
County Road 72
Brooks
County Road 78
Proposed Use: Meteorological Evaluation Tower
APN: 061-150-002
Owner: Virginia, Philippe, and John Hammerness
Address: 23750 County Road 15B Capay, CA 95607
Phone: 530-640-1490
N
0
0.5
1
Miles
1:50,000 (at original document size of 8.5x11)
Project Site
Parcel Boundary
Stantec
Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.
Figure 2a
MET Tower #1 Location

FIGURE 3

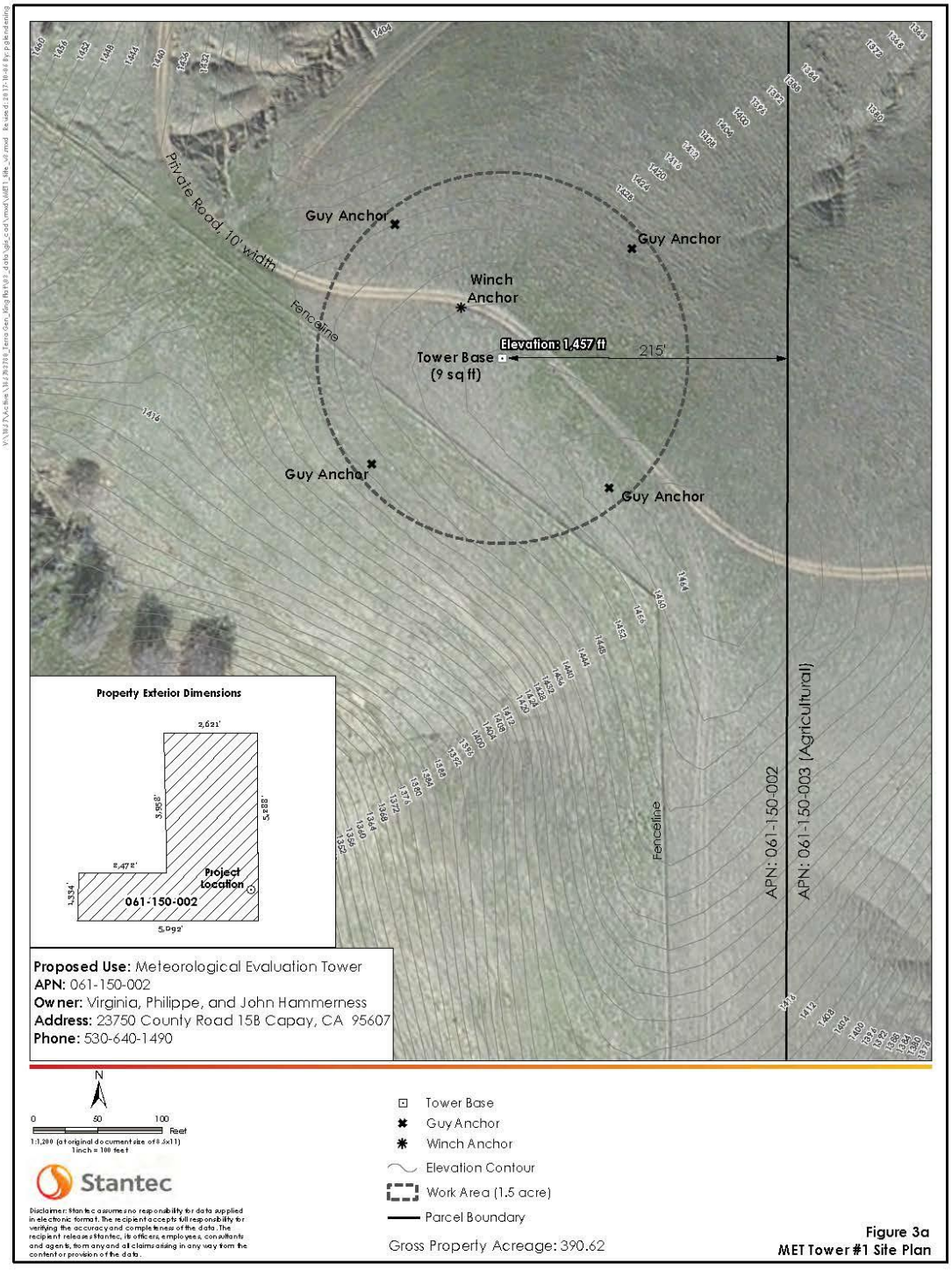

Private Road, 10' width
Fenceline
Guy Anchor
Guy Anchor
Winch Anchor
Elevation: 1,457 ft
Tower Base (9 sq ft)
215'
Guy Anchor
Guy Anchor
Fenceline
APN: 061-150-002
APN: 061-150-003 (Agricultural)
Property Exterior Dimensions
2,621'
3,958'
5,288'
2,472'
1,334'
Project Location
061-150-002
5,099'
Proposed Use: Meteorological Evaluation Tower
APN: 061-150-002
Owner: Virginia, Philippe, and John Hammerness
Address: 23750 County Road 15B Capay, CA 95607
Phone: 530-640-1490
N
0
50
100
Feet
1:1,200 (at original document size of 8.5x11)
1 inch = 100 feet
Stantec
Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.
Tower Base
Guy Anchor
Winch Anchor
Elevation Contour
Work Area (1.5 acre)
Parcel Boundary
Gross Property Acreage: 390.62
Figure 3a
MET Tower #1 Site Plan

FIGURE 4

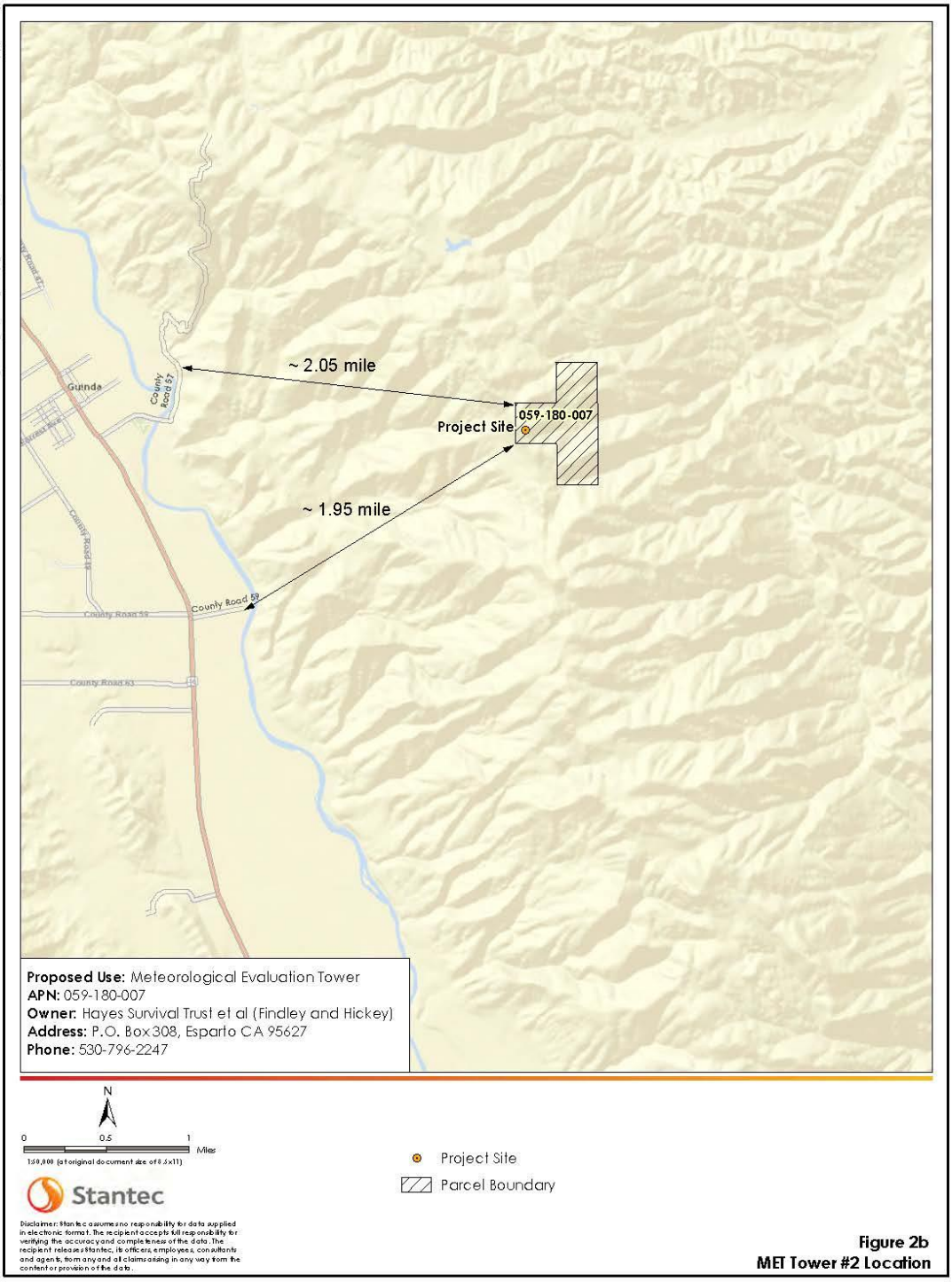


Figure 2b
MET Tower #2 Location

FIGURE 5

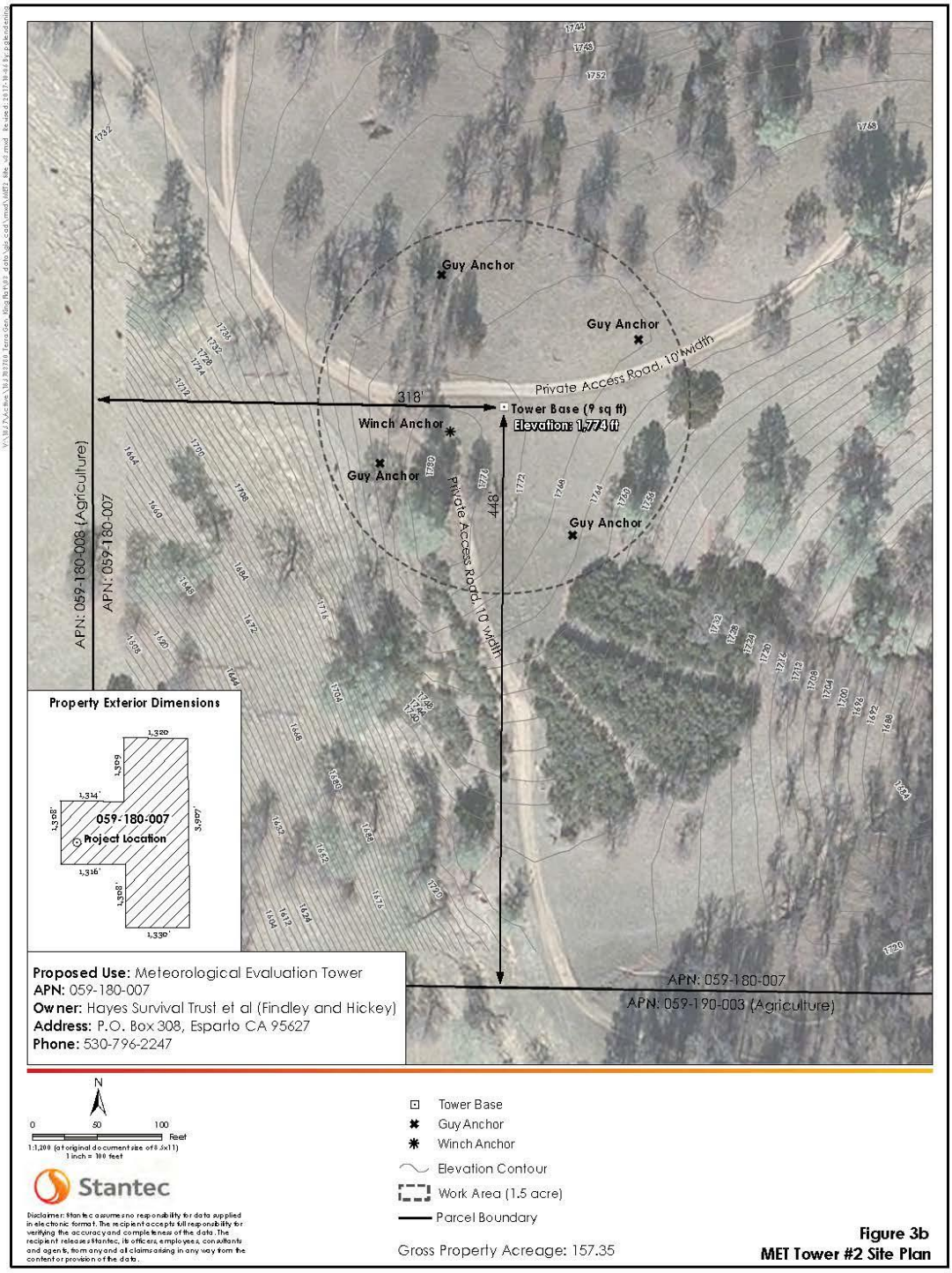

Guy Anchor
Guy Anchor
Guy Anchor
Guy Anchor
Winch Anchor
Tower Base (9 sq ft)
Elevation: 1,774 ft
318'
448'
Private Access Road, 10' Width
Private Access Road, 10' Width
APN: 059-180-008 (Agriculture)
APN: 059-180-007
APN: 059-180-007
APN: 059-190-003 (Agriculture)
Property Exterior Dimensions
1,320'
1,309'
1,314'
1,308'
059-180-007
Project Location
3,997'
1,316'
1,308'
1,330'
Proposed Use: Meteorological Evaluation Tower
APN: 059-180-007
Owner: Hayes Survival Trust et al (Findley and Hickey)
Address: P.O. Box 308, Esparto CA 95627
Phone: 530-796-2247
N
0
50
100
Feet
1:1,200 (at original document size of 8.5x11)
1 inch = 100 feet
Stantec
Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.
Tower Base
Guy Anchor
Winch Anchor
Elevation Contour
Work Area (1.5 acre)
Parcel Boundary
Gross Property Acreage: 157.35
Figure 3b
MET Tower #2 Site Plan

FIGURE 6

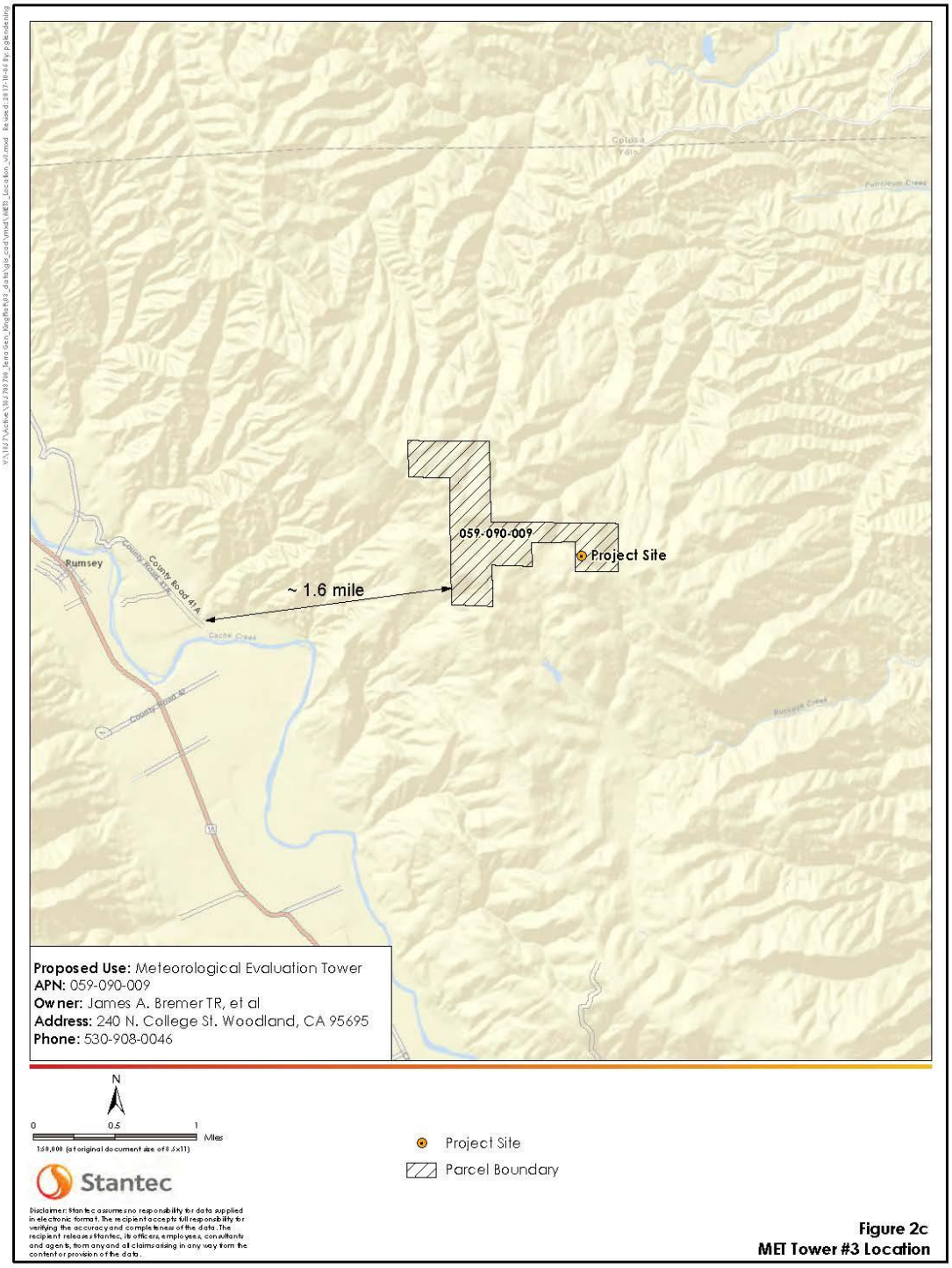

059-090-009
Project Site
~ 1.6 mile
Rumsey
County Road 41A
Cache Creek
Proposed Use: Meteorological Evaluation Tower
APN: 059-090-009
Owner: James A. Bremer TR, et al
Address: 240 N. College St. Woodland, CA 95695
Phone: 530-908-0046
N
0
0.5
1
Miles
Project Site
Parcel Boundary
Stantec
Figure 2c
MET Tower #3 Location

FIGURE 7

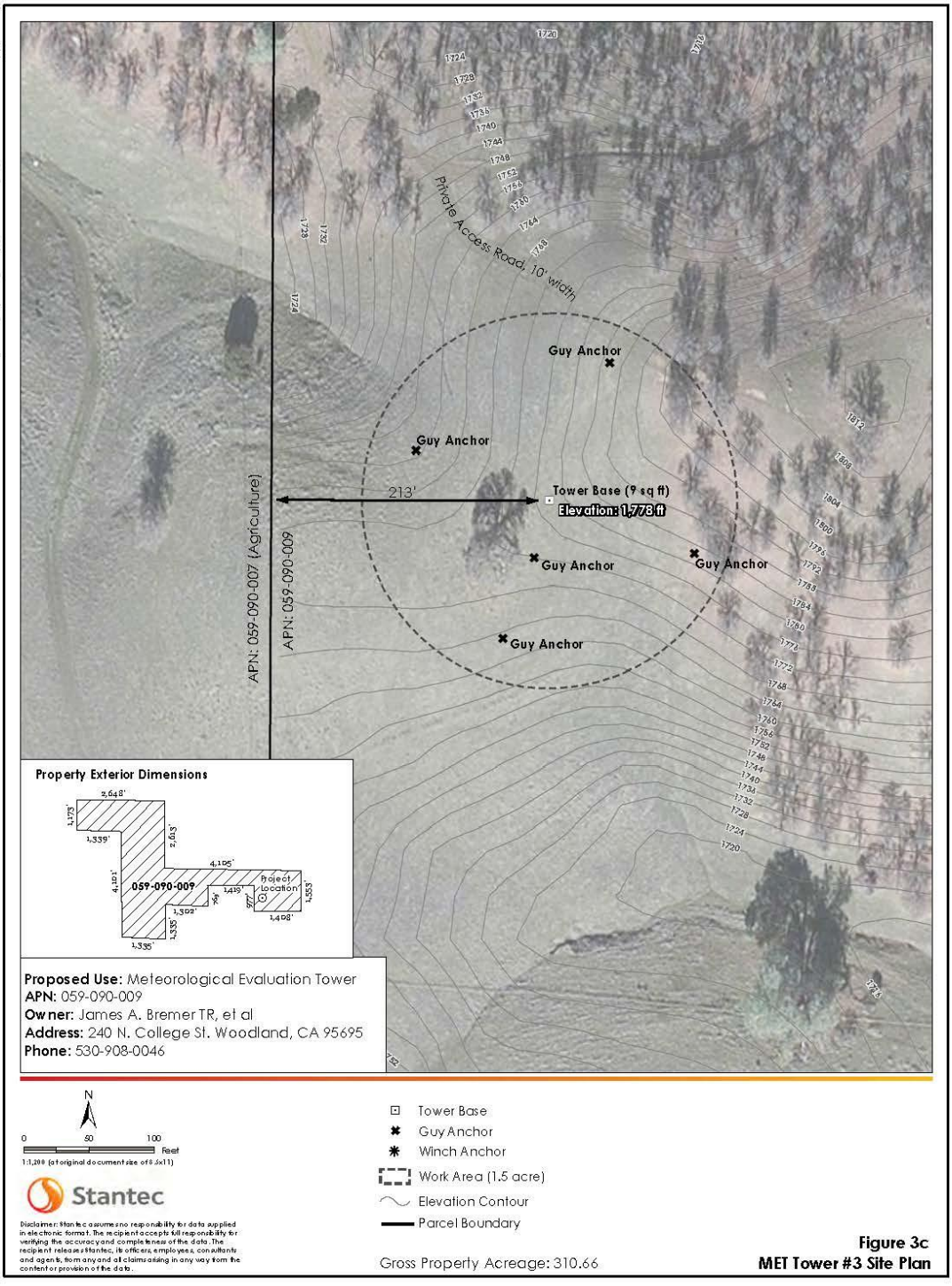
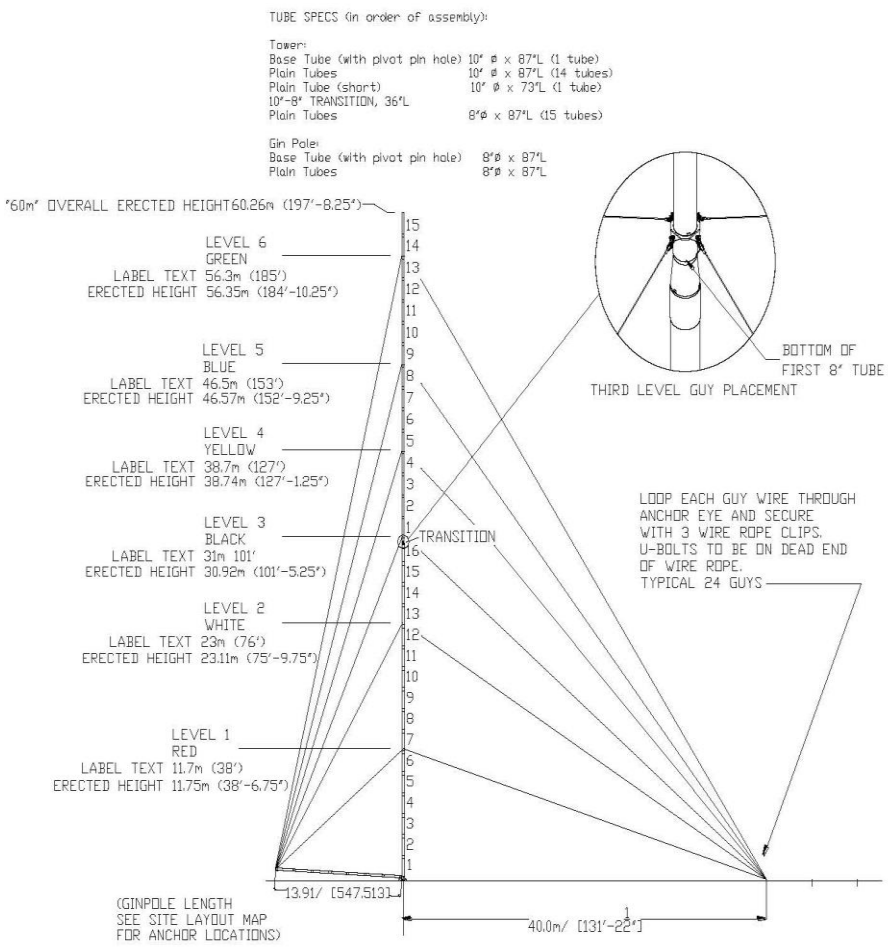

Private Access Road, 10' width
Guy Anchor
Guy Anchor
213'
Tower Base (9 sq ft)
Elevation: 1,778 ft
Guy Anchor
Guy Anchor
Guy Anchor
APN: 059-090-007 (Agriculture)
APN: 059-090-009
Property Exterior Dimensions
2,648'
1,339'
2,613'
4,105'
4,101'
059-090-009
Project Location
1,415'
1,302'
1,408'
1,335'
1,553'
Proposed Use: Meteorological Evaluation Tower
APN: 059-090-009
Owner: James A. Bremer TR, et al
Address: 240 N. College St. Woodland, CA 95695
Phone: 530-908-0046
N
0
50
100
Feet
1:1,200 (at original document size of 8.5x11)
Stantec
Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.
Tower Base
Guy Anchor
Winch Anchor
Work Area (1.5 acre)
Elevation Contour
Parcel Boundary
Gross Property Acreage: 310.66
Figure 3c
MET Tower #3 Site Plan

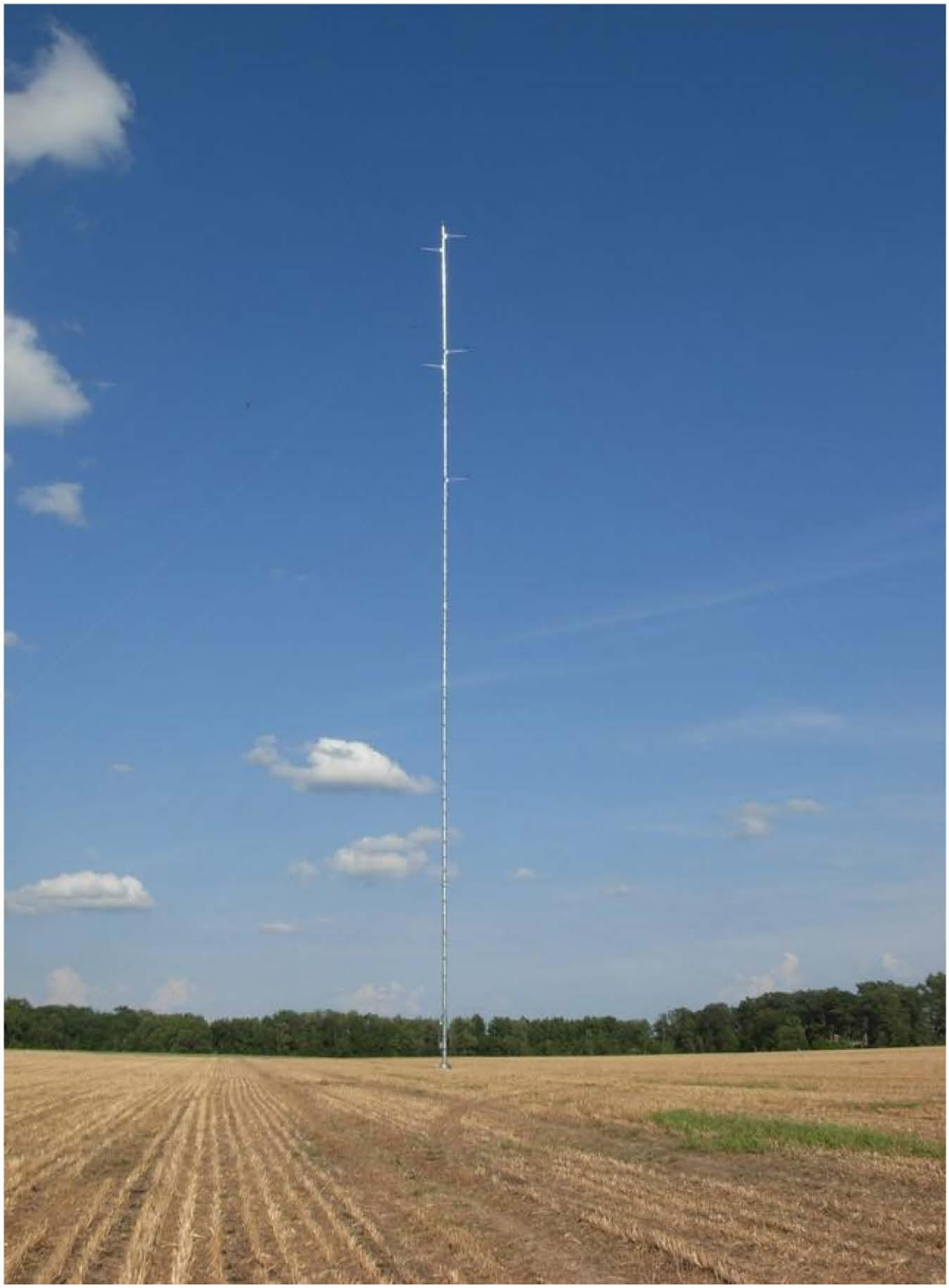
FIGURE 8

ELEVATIONAL DRAWING AND PHOTOGRAPHS OF TYPICAL MET TOWERS

60m XHD with
Single Anchor

Tower Layout





Installed 60mNRG XHD TallTower. Source: http://www.salvex.com/listings/listing_detail.cfm?aucID=182956812

Environmental Factors Potentially Affected

The environmental factors checked below could potentially be affected by this project, involving at least one impact that is still a "Potentially Significant Impact" (before any proposed mitigation measures have been adopted or before any measures have been made or agreed to by the project proponent) as indicated by the checklist on the following pages.

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

Determination

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 to 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 an impact on the environment that is "potentially significant" or "potentially significant unless mitigated" 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 the project is consistent with an adopted general plan and all potentially significant effects have been analyzed adequately in an earlier ENVIRONMENTAL IMPACT REPORT, the project is exempt from further review under the California Environmental Quality Act under the requirements of Public Resources Code section 21083.3(b) and CEQA Guidelines Section 15183.

Planner's Signature Date Planner's Printed name

Purpose of this Initial Study

This Initial Study has been prepared consistent with CEQA Guideline Section 15063, to determine if the project as described herein may have a significant effect upon the environment.

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 a lead agency 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 if 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 offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, 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. A "Less than Significant with Mitigation Incorporated" applies when the incorporation of mitigation measures has reduced an effect from a "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 XVIII, "Earlier Analyses", may be cross-referenced.)
5. A determination that a "Less Than Significant Impact" would occur is appropriate when the project could create some identifiable impact, but the impact would be less than the threshold set by a performance standard or adopted policy. The initial study should describe the impact and state why it is found to be "less than significant."
6. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration [Section 15063(c)(3)(D) of the California Government Code. Earlier analyses are discussed in Section XVIII at the end of the checklist.
7. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, when appropriate, include a reference to the page or pages where the statement is substantiated.
8. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

I.	AESTHETICS.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than significant Impact	No Impact
Would the project:					
a.	Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b.	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?	☐	☐	☒	☐
c.	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d.	Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	☐	☒

Discussion of Impacts

a) *Less Than Significant Impact.* None of the three Met towers would have a substantial effect on a scenic vista. The three proposed towers are located within an approximately 10-mile stretch of the Capay Hills area, east of the unincorporated small towns of Rumsey, Guinda, and Brooks. The three towers are located at elevations ranging from 1,457 to 1,778 feet along the relatively flat top ridge of the Capay Hills in sparsely populated areas. The closest rural residences to each of the three tower sites are located at least two to three miles away. As discussed in (c) below, the rolling hills in the vicinity of each tower provide some screening potential of the individual towers. However, the proposed towers could be visible from various agricultural and open space vantage points, as well by passing motorists on portions of State Highway 16, and on some county roads. The Met towers, however, are extremely slender in appearance (Figure 8) and would not constitute a significant visual impact on any scenic vista.

The applicant has prepared an analysis of visual impacts (Figures 9 through 11). The figures show potential visibility of the proposed Met Towers throughout the surrounding landscape in a radius of approximately five miles. These GIS-based figures reflect the Met height and topography, but do not account for existing structures or vegetation that might intervene in views. Further, given the slight structure of each Met, it is not likely that they would be discernible in views from further away than five miles.

b) *Less Than Significant Impact.* The proposal would not damage any scenic resources along a scenic highway. There are presently no highways within Yolo County that have been officially designated within the California Scenic Highway System. However, the Yolo County 2030 General Plan designates several routes in Yolo County as local scenic roadways. The nearest section of a local scenic roadway is State Route (SR) 16 in the Capay Valley, from the town of Capay to the Colusa/Lake County line. SR 16 is located approximately 2.5 to 3 miles from the three Met towers.

FIGURE 9

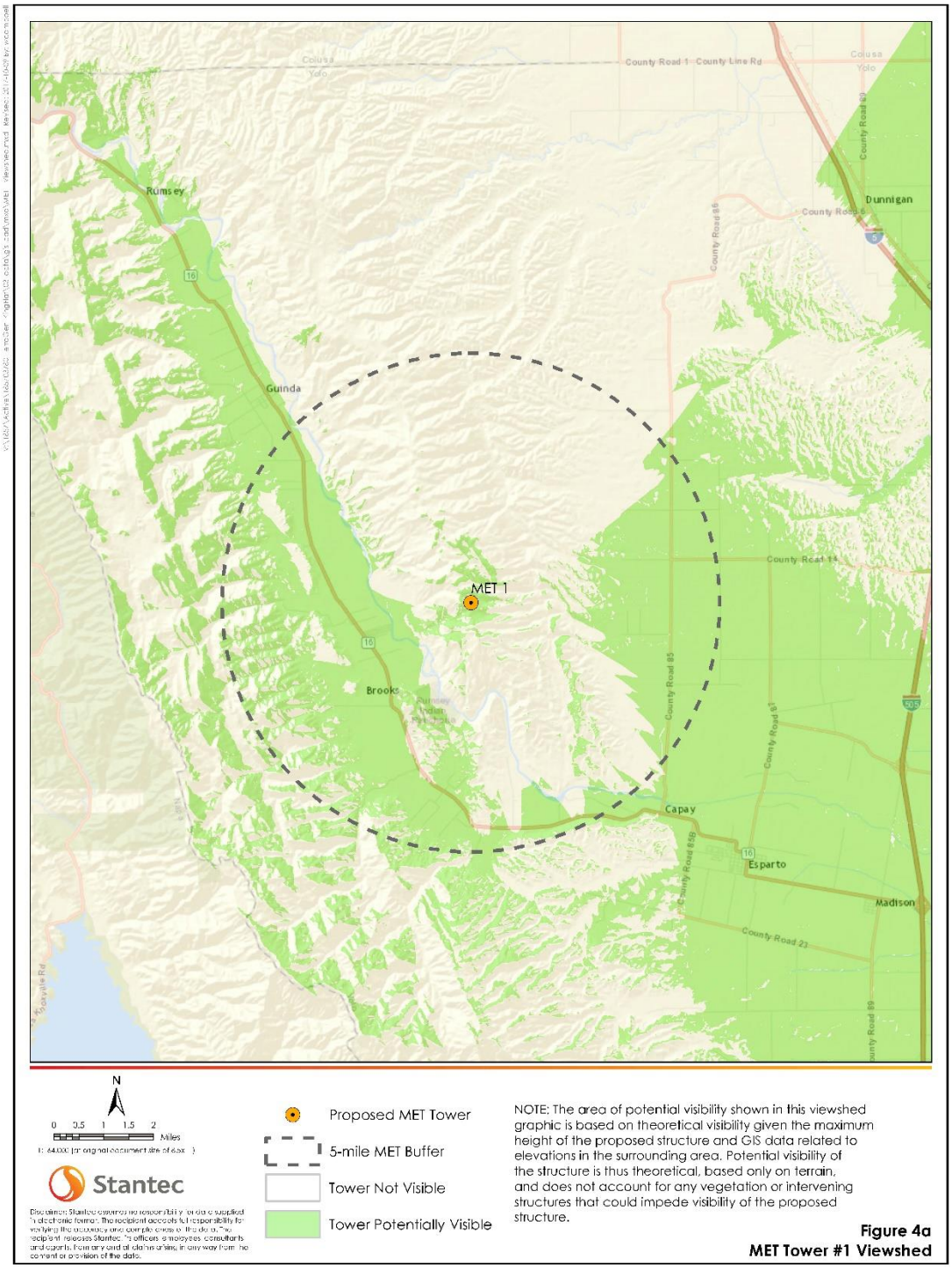

Colusa
Yolo
County Road 1 - County Line Rd
Colusa
Yolo
County Road 89
Rumsey
Dunnigan
County Road 6
County Road 86
16
5
Guinda
MET 1
County Road 14
16
Brooks
County Road 85
County Road 87
505
Capay
16
Esparto
County Road 85B
Madison
County Road 23
Knoxville Rd
County Road 89
N
0 0.5 1 1.5 2
Miles
Stantec
Proposed MET Tower
5-mile MET Buffer
Tower Not Visible
Tower Potentially Visible
NOTE: The area of potential visibility shown in this viewshed graphic is based on theoretical visibility given the maximum height of the proposed structure and GIS data related to elevations in the surrounding area. Potential visibility of the structure is thus theoretical, based only on terrain, and does not account for any vegetation or intervening structures that could impede visibility of the proposed structure.
Figure 4a
MET Tower #1 Viewshed

FIGURE 10

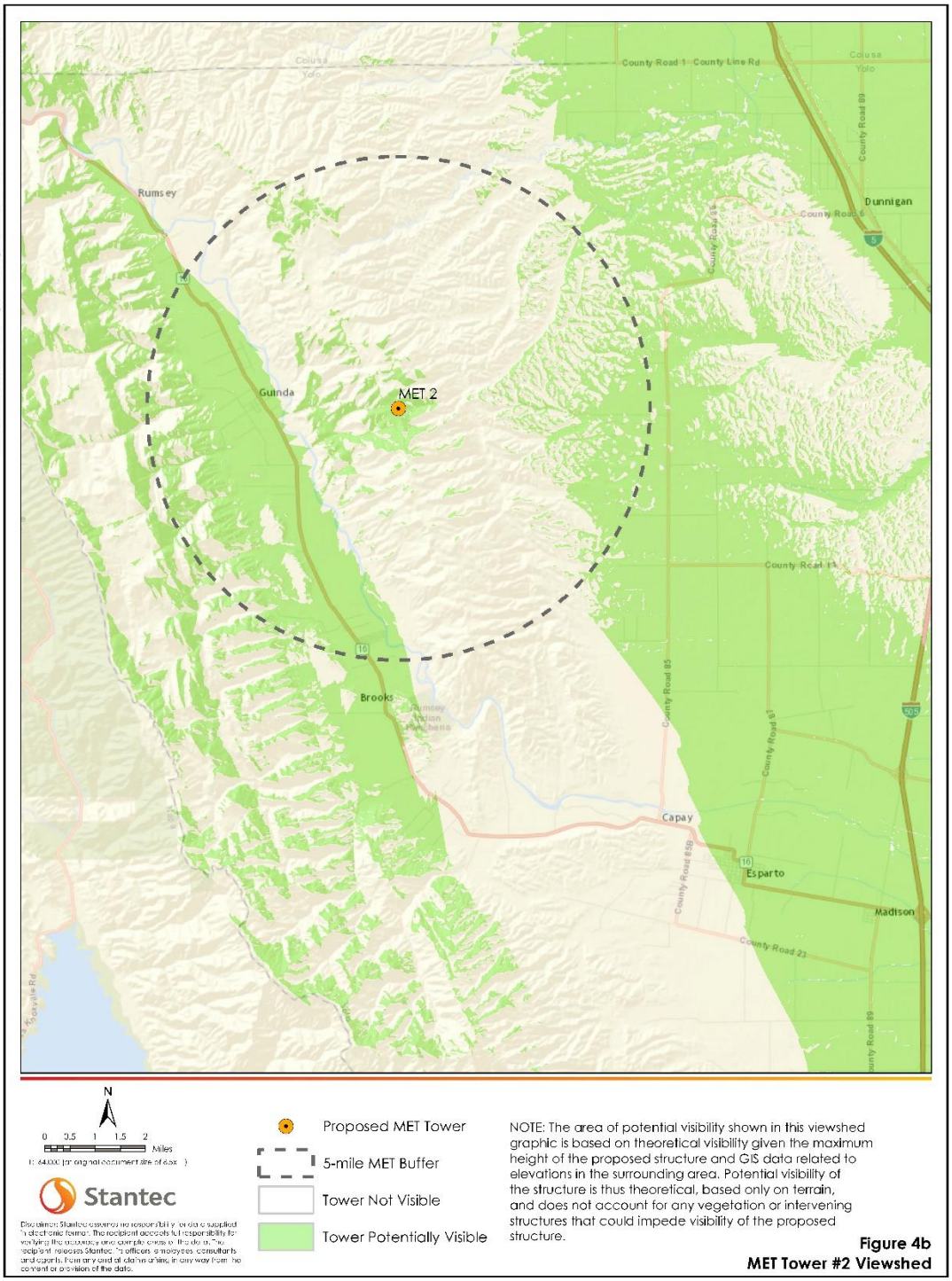


Figure 4b
MET Tower #2 Viewshed

FIGURE 11

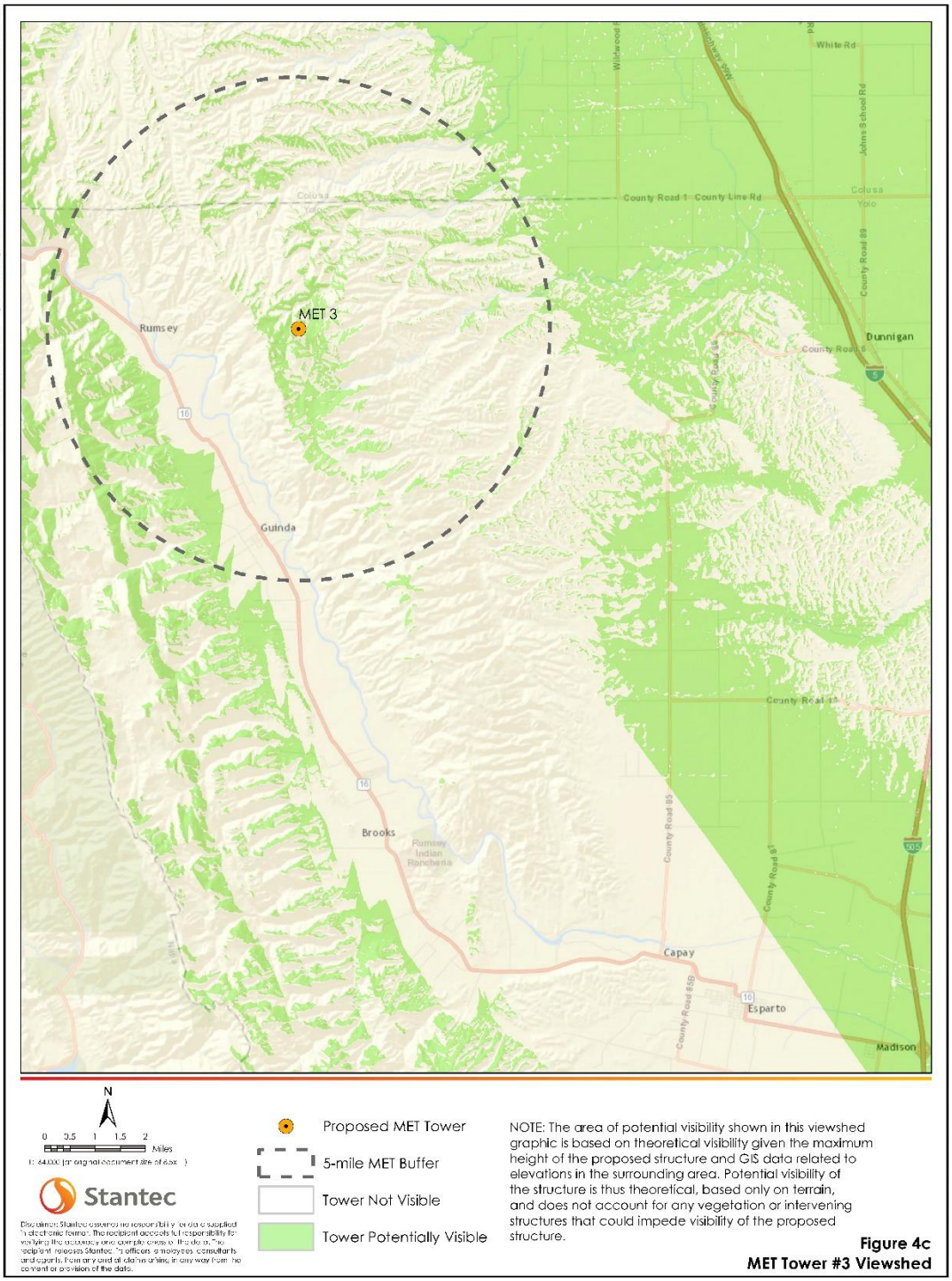


Figure 4c
MET Tower #3 Viewshed

c) *Less Than Significant Impact.* Aesthetic perceptions are subjective and the aesthetic impacts associated with this project may be perceived differently by various individuals. The applicant is not proposing to provide any special colors to make the 197-foot tall Met towers more visible, such as painting in alternating bands of aviation orange and white, which would make the towers more discernable.

The applicant, however, is proposing to install bird flight diverters as a way to minimize the potential for bird strikes with the towers and guy wires, as per industry standards. Bird flight diverters are small coil shaped devices that are secured to the guy wires to increase the visibility of the wires to diurnally active birds, including raptors and migrating birds. Although effective for mitigating bird strikes, bird flight diverters are not easily seen by people at any significant distance.

The surrounding properties are all agricultural and open space (range land and habitat vegetation) and there are only a few rural home sites in the vicinity of each tower. The rolling hills in the project area have the potential to partially screen the towers from different vantage points and provide an additional terrain feature behind the towers so they're not viewed entirely against the sky. The towers may be visible from some vantage points in the surrounding area; however, the temporary Met towers would not substantially degrade the existing visual character or quality of the sites and their surroundings.

d) *No Impact.* The proposed Met towers will not be lighted.

II.	AGRICULTURAL AND FOREST RESOURCES.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than significant Impact	No Impact
In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and the forest carbon measurement Methodology provided in the Forest Protocols adopted by the California Air Resources Board. Would the project:				
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?	☐	☐	☒	☐
b.	Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?	☐	☐	☒	☐
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526)?	☐	☐	☐	☒
d.	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e.	Involve other changes in the existing environment that, 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?	☐	☐	☐	☒

Discussion of Impacts

a) *Less Than Significant Impact.* The three project sites are designated as "Grazing Land" on maps prepared by the Farmland Mapping and Monitoring Program of the California Resources Agency. The proposed Met towers are temporary (lasting approximately three years) and will not convert the land permanently to a non-agricultural use. None of the towers will disturb crop production. The temporary structures are held in place with guy wires anchored into the earth and require no permanent foundation. Thus, after the project is decommissioned, the areas can be restored to their previous condition.

b) *Less than Significant Impact.* The Met tower sites are zoned Agricultural Extensive (A-X), All three of the parcels are enrolled in the Williamson Act. Wind energy facilities and wind testing facilities are permitted within all of the Agricultural Zones in Yolo County, in

accordance with the Wind Energy Ordinance (Yolo County Code Section 8-2.2418). The project is temporary and will not conflict with any of the existing Williamson Act contracts.

c) and d) *No Impact.* The project does not conflict with existing zoning for, or cause rezoning of, forest land and would not result in the loss of forest land or conversion of forest land to non-forest use.

e) *No Impact.* The project is consistent with the General Plan and zoning designations and does not involve any other changes that could result in the conversion of farmland to non-agricultural uses. The proposed project is for three temporary Met towers located on large ranch properties, ranging in size from 157 acres to 390 acres.

III.	AIR QUALITY.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than significant Impact	No Impact
Where applicable, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
a.	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d.	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
e.	Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

Environmental Setting

The project site is within the Yolo-Solano Air Quality Management District (YSAQMD), and the Sacramento Valley Air Basin regulates air quality conditions within Yolo County. Yolo County is classified as a non-attainment area for several air pollutants, including ozone (O_3) and particulate matter 10 microns or less in diameter (PM_{10}) for both federal and state standards, the partial non-attainment of the federal particulate matter 2.5 ($PM_{2.5}$), and is classified as a moderate maintenance area for carbon monoxide (CO) by the state.

Development projects are most likely to violate an air quality plan or standard, or contribute substantially to an existing or project air quality violation, through generation of vehicle trips.

The YSAQMD sets threshold levels for use in evaluating the significance of criteria air pollutant emissions from project-related mobile and area sources in the Handbook for Assessing and Mitigating Air Quality Impacts (YSAQMD, 2007). The handbook identifies quantitative and qualitative long-term significance thresholds for use in evaluating the significance of criteria air pollutant emissions from project-related mobile and area sources. These thresholds include:

- Reactive Organic Gases (ROG): 10 tons per year (approx. 55 pounds per day)
- Oxides of Nitrogen (NOx): 10 tons per year (approx. 55 pounds per day)
- Particulate Matter (PM_{10}): 80 pounds per day
- Carbon Monoxide (CO): Violation of State ambient air quality standard

Discussion of Impacts

a) *No Impact.* The project would not substantially conflict with or obstruct implementation of the Yolo Solano Air Quality Management District Air Quality Attainment Plan (1992), the Sacramento Area Regional Ozone Attainment Plan (1994), or the goals and objectives of the Yolo County 2030 General Plan.

b) *Less Than Significant Impact.* The Yolo-Solano Region is a non-attainment area for state particulate matter 10 microns in size (PM_{10}) and ozone standards, the federal ozone standard, and the partial non-attainment of the federal particulate matter 2.5 microns in size ($PM_{2.5}$). The project would not contribute significantly to air quality impacts, including PM_{10} and $PM_{2.5}$, since site preparation would be limited to the installation of one Met tower and guy wires for each of the six sites. Ground disturbance from construction activity will be minimal.

Construction activities, including vehicular traffic, would generate a minor temporary or short-term increase in PM_{10} and $PM_{2.5}$. Based on previous Met tower installations, the applicant anticipates that each tower can be installed in two days and decommissioned in one day. The installation crew uses two four-wheel drive pickup trucks to transport the equipment and tools to the site. For a typical installation/decommissioning, only one trip/delivery (roundtrip) to the site is expected. This impact is considered less than significant because any potentially sensitive receptors would be exposed to minor amounts of construction dust and equipment emissions for short periods of time with no long-term exposure to potentially affected groups. The project applicant would be required to comply with all standards as applied by the YSAQMD to minimize dust and other construction related pollutants. In addition, prior to building permit issuance, the applicant is required to obtain any permits as required by the YSAQMD to ensure the project complies with District regulations. Thresholds for project-related air pollutant emissions would not exceed significant levels as set forth in the 2007 YSAQMD Handbook.

c) *Less Than Significant Impact.* Effects on air quality can be divided into short-term construction-related effects and those associated with long-term aspects of the project. Short-term construction impacts are addressed in (b), above. Long-term mobile source emissions from six temporary Met towers would be negligible, including only annual maintenance visits to each site and occasional bird strike monitoring. These operational tasks would not exceed thresholds established by the YSAQMD Handbook for Assessing and Mitigating Air Quality Impacts (2007), and would not be cumulatively considerable for any non-attainment pollutant from the project. Therefore, the proposed project would not result in a cumulatively considerable net increase of any criteria pollutant.

d) and e) *No Impact.* The project sites are located in rural agricultural areas, on large ranch properties. There are no “sensitive receptors” in the vicinity of each project site. (“Sensitive receptors” refers to those segments of the population most susceptible to poor air quality, i.e. children, elderly and the sick, and to certain at-risk sensitive land uses such as schools, hospitals, parks, or residential communities.) The proposed project will not expose sensitive receptors to pollutant concentrations in excess of standards. The proposed project and associated uses would not create objectionable odors.

IV.	BIOLOGICAL RESOURCES.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than significant Impact	No Impact
Would the project:					
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 Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
c.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
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?	☐	☐	☐	☒
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f.	Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Environmental Setting

The following discussion and analysis is excerpted from the Habitat Assessment and Biological Survey Report prepared by the applicant's consultant (Stantec, 2017). The report has been peer-reviewed by Jim Estep, retained by the County.

The proposed project area includes a mix of grassland and spacious oak woodland vegetation communities grazed by cattle. In addition, the proposed project site includes transitional communities between woodland and prairie grassland types including areas of chaparral and densely grazed areas including manmade stock ponds.

Prior to conducting reconnaissance-level biological resource surveys of the three proposed Met Tower locations in the project area, Stantec Consulting Services Inc (Stantec) conducted a desktop analysis of the project area to evaluate the potential for special status species to occur within the proposed Met Tower sites and access to each

site. A search of the California Natural Diversity Data Base (CNDDB) was conducted for the proposed Met Tower locations to document known occurrences of special status species within five miles of the three Met Tower sites surveyed (Figure 12).

On September 26, 2017 and October 11, 2017, a qualified Stantec biologist conducted a reconnaissance-level biological survey within the proposed area of disturbance of the three proposed Met Tower locations. A survey of the entire proposed disturbance area at each of the proposed Met Tower sites was completed on foot to identify general habitat characteristics within each of the three proposed Met Tower locations and surrounding areas. Habitats within and adjacent to each proposed Met Tower site, including the presence of streams, wetlands, and other sensitive habitats, including potential upland habitat for the State and federally threatened California tiger salamander (*Ambystoma californiense*, CTS), were identified. Photos were taken in each cardinal direction from each of the three proposed Met Tower locations. The presence of special status plants, wildlife, as well as potential nesting habitat for raptors and other migratory birds was also documented.

The following species were identified by a search of the CNDDB within five miles of each of the proposed Met Tower locations (state and federal listing included) and are considered special status species with a known or likely presence within the project area:

- Bank swallow (*Riparia riparia*) – State: Threatened, Federal: None
- California tiger salamander (*Ambystoma californiense*) – State: Threatened, Federal: Threatened
- Swainson's hawk (*Buteo swainsoni*) – State: Threatened, Federal: None
- Townsend's big-eared bat (*Corynorinus townsendii*) – State: Species of Special Concern (SSC), Federal: None
- Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) – State: None, Federal: Threatened
- Western pond turtle (*Emys marmorata*) – State: SSC, Federal: None
- Western red bat (*Lasiurus blossevilii*) – State: SSC, Federal: None
- Western spadefoot (*Spea hammondii*) – State: SSC, Federal: None
- Adobe-lily (*Fritillaria pluriflora*) – State: CNPS 1B.2, Federal: None
- Bent-flowered fiddleneck (*Amsinckia lunaris*) – State: CNPS 1B.2, Federal: None
- Colusa layia (*Layia septentrionalis*) – State: CNPS 1B.2, Federal: None

In addition, the following special-status species have the potential to occur within the project area:

- Golden eagle (*Aguila chrysaetos*) – State: Fully Protected, Federal: None
- Prairie falcon (*Falco mexicanus*) – State: Watch List, Federal: None
- Burrowing owl (*Athene cunicularia*) – State: SSC, Federal: None

Designated Critical Habitat (DCH) for California tiger salamander has been identified to the east of the project area; however, DCH for this species is located greater than five miles from the project area. There is no DCH for any species within the project area.

Discussion of Impacts

a) *Less Than Significant Impact with Mitigation Incorporated.*

Proposed Met Tower 1

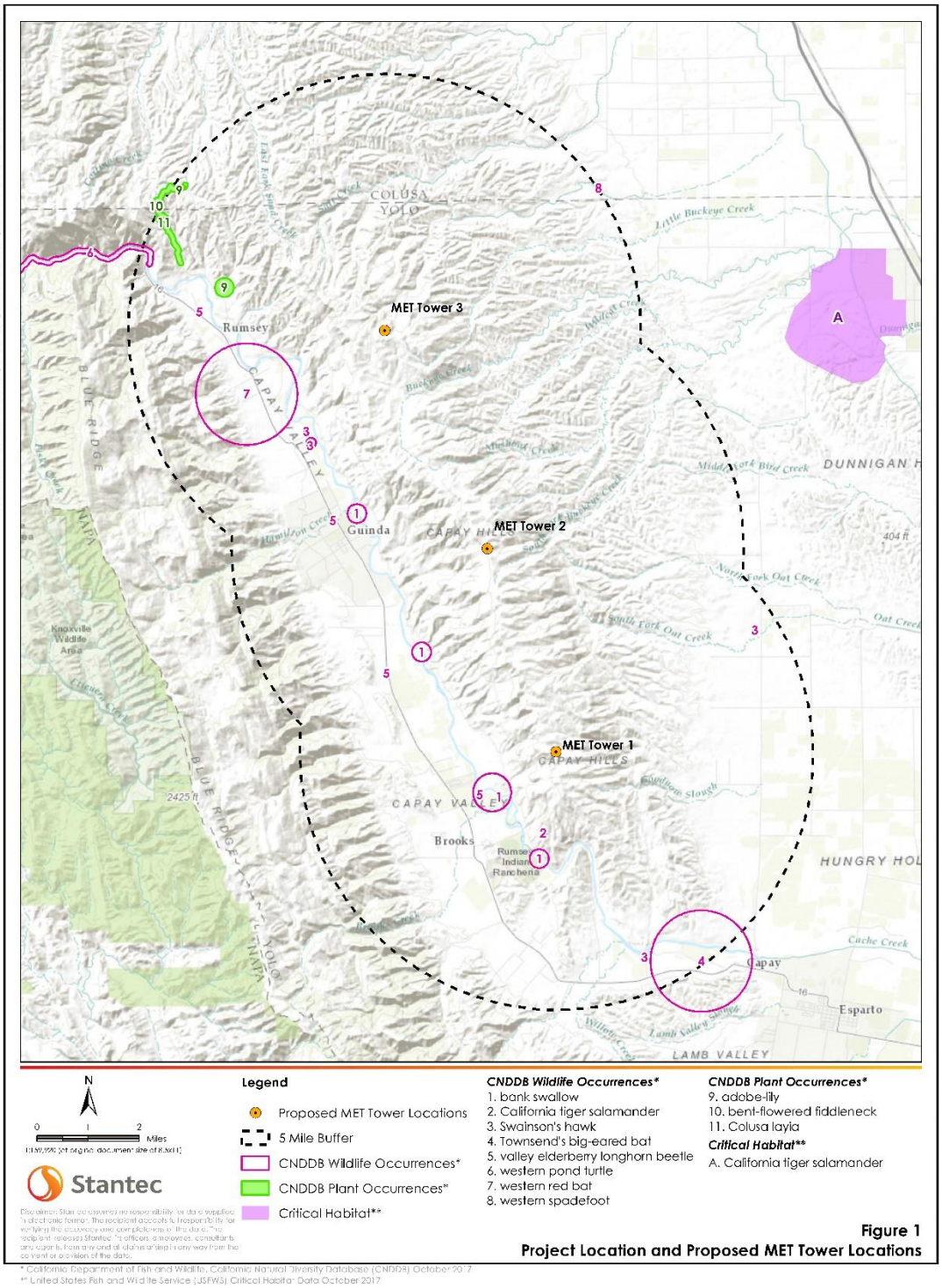
The proposed Met Tower 1 (MET 1) is located in the southern region of the King Flat proposed project area (Latitude 38.769022° N, Longitude 122.118547° W). The general habitat consists of annual grassland and rolling hills with few oak trees. The dominant vegetation species include non-native grasses including wild oat and medusahead. No special status plants were observed during the survey. In addition, no wetlands, streams, vernal pools, drainages, valley elderberry longhorn beetle (VELB) habitat, or raptor nesting habitat was observed at this proposed Met Tower location. No trees will be removed or impacted from the construction of this Met Tower. The area does include potential nesting habitat for ground nesting birds such as western meadowlark. The proposed Met Tower location is approximately 0.25 miles northwest from a stock pond, which may be potential breeding habitat for California tiger salamander (CTS). However, given the steep terrain, the tall characteristics of vegetation, lack of heavy grazing/mowing, and the lack of ground squirrel burrows, it is unlikely that CTS would inhabit/utilized with location for upland/aestivation habitat.

To reduce the potential impacts to nesting birds and raptors to less than significant, it is recommended that a pre-construction nesting bird survey be conducted if installation is to occur during nesting season (approximately February 15 through August 31) (see Mitigation Measure BIO-1, below). To avoid and minimize potential impacts to CTS, a qualified biological monitor shall be present during installation of this proposed Met Tower to ensure that no ground disturbance will take place within or directly adjacent to small mammal burrows and medium to larger soil cracks (see Mitigation Measure BIO-4, below).

Proposed Met Tower 2

The proposed Met Tower 2 (MET 2) is located in the central region of the King Flat proposed Project area (Latitude 38.82688033° N, Longitude 122.14265861° W). The general habitat at this location consists of both oak woodland and chaparral. The dominant vegetation species include blue oak, foothill pine (*Pinus sabiniana*), mazanita, chamise (*Adenostoma fasciculatum*), and non-native grasses including wild oat and medusahead. No special status plants were observed during the survey. Several oak trees (approximately 8 – 15 inches DBH) as well as a foothill pine (approximately 20 inches DBH) are located adjacent to this Met Tower location; however, no trees will be removed or impacted from the construction of this Met Tower. These trees contain potential nesting habitat for both raptors and passerines. Areas of chamise also potentially impacted by the Met Tower installation contain potential nesting habitat for low- or ground-nesting birds such as spotted towhee (*Pipilo maculatus*).

FIGURE 12


MET Tower 3
MET Tower 2
MET Tower 1
Rumsey
Guinda
Brooks
Capay
Esparto
COLUSA
YOLO
NAPA
LAKE
CAPAY VALLEY
CAPAY HILLS
BLUE RIDGE
LAMB VALLEY
HUNGRY HOL
DUNNIGAN H
Knoxville Wildlife Area
Rumsey Indian Rancheria
Little Buckeye Creek
Buckeye Creek
Hamilton Creek
Cache Creek
Willow Slough
Lamb Valley Slough
2425 ft
404 ft
N
0 1 2 Miles
Stantec
Legend
Proposed MET Tower Locations
5 Mile Buffer
CNDDB Wildlife Occurrences*
CNDDB Plant Occurrences*
Critical Habitat**
CNDDB Wildlife Occurrences*
1. bank swallow
2. California tiger salamander
3. Swainson's hawk
4. Townsend's big-eared bat
5. valley elderberry longhorn beetle
6. western pond turtle
7. western red bat
8. western spadefoot
CNDDB Plant Occurrences*
9. adobe-lily
10. bent-flowered fiddleneck
11. Colusa layia
Critical Habitat**
A. California tiger salamander
Figure 1
Project Location and Proposed MET Tower Locations
* California Department of Fish and Wildlife, California Natural Diversity Database (CNDDB) October 2017
** United States Fish and Wildlife Service (USFWS) Critical Habitat Data October 2017

No drainages, wetlands, streams, vernal pools, or VELB habitat was observed in the area. Four stock ponds, potential breeding habitat for CTS, are located within 0.25 miles of the proposed Met Tower location. There is an abundance of ground squirrel burrows and medium to larger soil cracks within the vicinity of the proposed Met Tower location, which have the potential to support aestivating CTS; however, given the steep terrain and tall nature of the vegetation between the stock ponds and the Met Tower location make it unlikely that CTS would inhabit/utilize this location for upland/aestivation habitat. In addition, a burrowing owl (*Athene cunicularia*), a California Special Species of Concern, was observed inhabiting a burrow near one of the stock ponds and could potentially use the California ground squirrel burrows within the proposed Met Tower location.

To reduce the potential impacts to nesting birds and raptors to less than significant, it is recommended that a pre-construction nesting bird survey be conducted if installation is to occur during nesting season (approximately February 15 through August 31) (see Mitigation Measure BIO-1, below). To avoid and minimize potential impacts to CTS, a qualified biological monitor shall be present during installation of this proposed Met Tower to ensure that no ground disturbance will take place within or directly adjacent to small mammal burrows and medium to larger soil cracks (see Mitigation Measure BIO-4, below).

Proposed Met Tower 3

The proposed Met Tower 3 (MET 3) is located in the northern region of the King Flat proposed Project area (Latitude 38.88899846° N, Longitude 122.17935134° W). Two radio towers are located near the proposed Met Tower location, one is approximately 650 feet to the south and the other is approximately 850 feet to the southeast. The general habitat within this proposed Met Tower site consists of annual grassland and rolling hills with blue oak (*Quercus douglasii*) and manzanita (*Arctostaphylos* sp.). The dominant vegetation species include non-native grasses including wild oat (*Avena* sp.) and medusahead (*Taeniatherum caput-medusae*), as well as other invasive species such as yellow star-thistle (*Centaurea solstitialis*). No special status plants were observed during the survey, though native forbs such as San Joaquin tarweed (*Holocarpha obconica*) were observed. A vegetated swale runs north to south within 100 feet of the proposed Met Tower location and joins an ephemeral drainage that runs east to west and is located downhill of the proposed Met Tower approximately 340 feet to the south. The vegetated swale and ephemeral drainage will be avoided during the installation of the proposed Met Tower, and therefore no impacts will occur to either feature.

Several blue oak trees ranging from 7–20 inches DBH are located adjacent to this Met Tower site. These oaks are potential nesting habitat for both raptors and passerines, and a few currently contain cavities suitable for nesting; however, these oak trees will not be removed or impacted by the construction of this Met Tower. This Met Tower location also includes potential nesting habitat for ground nesting birds such as western meadowlark (*Sturnella neglecta*). No wetlands, streams, vernal pools, or valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*, VELB) habitat was observed within the proposed Met Tower disturbance area. The proposed Met Tower location is approximately 0.25 miles east from a stock pond, which may contain potential breeding habitat for CTS. CTS are known to travel up to approximately 1.24 miles (2 kilometers) from their breeding habitat into their upland habitat to seek refuge in California ground squirrel

(*Otospermophilus beecheyi*) burrows during aestivation (CDFW and USFWS 2003). Given the moderate terrain, the patches of heavy grazing/mowing, and the low abundance of ground squirrel burrows and medium to larger soil cracks within the proposed Met Tower disturbance area, there is a low potential for CTS to inhabit/utilize this location for upland/aestivation habitat.

To reduce the potential impacts to nesting birds and raptors to less than significant, it is recommended that a pre-construction nesting bird survey be conducted if installation is to occur during nesting season (approximately February 15 through August 31) (see Mitigation Measure BIO-1, below). To avoid and minimize potential impacts to CTS, a qualified biological monitor shall be present during installation of this proposed Met Tower to ensure that no ground disturbance will take place within or directly adjacent to small mammal burrows and medium to larger soil cracks(see Mitigation Measure BIO-4, below).

Potential Project Related Impacts

Each proposed Met Tower would be secured by screw-in anchors and guy wires that attach to a monopole that rests on a base plate that is less than ten square feet. Impacts to grassland habitat surrounding each of the three proposed Met Tower sites would be minimal and temporary due to the size of the Met Tower base plate auger-type anchors. Installation of the anchors and baseplate would result in a negligible amount of ground disturbance, primarily associated with the removal of the anchors. Access to each site during construction will be on established roads; however, the final approach to each of the Met Tower sites will be through upland annual grassland. Non-native annual grasslands would be trampled during the installation process; however, these temporary impacts would not result in the loss or reduction of function of this community. Therefore, impacts on non-native annual grasslands would be less than significant.

Potential project-related impacts to special status bird and bat species could include direct mortality from Met Tower and guy wire collisions. In addition, potential direct impacts could occur to terrestrial species from construction vehicles and equipment accessing each of the Met Tower locations. Additionally, the construction of the Met Towers and guy wires could have direct impacts on ground nesting birds and CTS that are aestivating in small mammal burrows. Potential indirect impacts could result from nest abandonment resulting from excessive noise too close to active bird nests.

However, while bank swallows, golden eagles, Swainson's hawks, and burrowing owls have been documented within and adjacent to the project area, there is a very low potential for such species to collide with the Met Towers or their guy wires. These species typically avoid large structures such as Met Towers and the placement of industry-recognized bird deterring reflectors on each of the Met Towers' guy wires would further diminish the potential for collisions. In addition, bats are adept at avoiding such structures due to their echolocation ability, which allows them to navigate and avoid collisions with structures.

With the appropriate avoidance and minimization measures implemented, the potential impact to biological resources within the three proposed Met Towers locations is expected to be less than significant. The three proposed Met Tower locations are located on annual grassland dominated hilltops and away from riparian corridors. Each Met Tower location

does have a low potential to be used as upland/aestivation habitat for CTS and each contains potential habitat for a variety of nesting birds.

For Met Towers less than 200 feet tall, red, flashing lights are not required to be installed on Met Towers. Therefore, given the proposed Met Towers for this Project are less than 200 feet tall, red, flashing lights will not be installed on them and therefore, there will be no impacts to bats and nocturnal avian species from the lighting of the three proposed Met Towers.

There were no special status plants, habitat suitable for VELB, wetlands, streams, or vernal pools identified at the three proposed Met Location sites. Therefore, these resources will not be impacted by Met Tower construction or operation. However, as mentioned above, the three proposed Met Tower locations contain potential upland/aestivation habitat for CTS as well as contain potential habitat for nesting birds. In addition, proposed Met Tower locations MET 2 and MET 3 include trees, which contain potential habitat for nesting raptors. Raptor species that may be observed using the area for nesting and/or foraging include red-tailed hawk (*Buteo jamaicensis*), Swainson's hawk, American kestrel (*Falco sparverius*), golden eagle (*Aquila chrysaetos*), burrowing owl (*Athene cunicularia*), and others.

Impacts to raptors and other birds foraging habitat is considered low due to the minimal ground disturbance. The installation of each Met tower will temporarily remove roughly ten square feet of foraging habitat suitable for raptors and other birds flying in the area. Impacts to flying raptors and birds are generally avoided by siting Met Towers away from suitable nesting habitat as well as the placement of bird diverters on each guy wire for each Met Tower. At the time of each survey, no active or inactive nests were observed. In addition to a pre-construction nesting survey, the use of bird-flight diverters will further increase avoidance from potential avian collisions.

Potential upland/aestivation habitat loss for CTS resulting from the installation of each proposed Met Tower will be completely avoided. Access to each site would be via developed road with short distances of cross-country travel through annual grassland. Each proposed Met Tower location is within one or more stock ponds within 0.25 miles. During certain times of year and during rainy/wet conditions, CTS may be found travelling to and from their upland and breeding habitat and have the potential to be crushed by vehicles. During ground disturbing work, CTS have the potential to be impacted while in their underground burrows. Assuming CTS is present within the stock ponds, a qualified biological monitor should be present during work in potential upland/aestivation areas during work including any ground disturbing work.

Conclusion

With the mitigation measures implemented for nesting raptors and migratory birds and for avoidance of upland CTS habitat (ground squirrel burrows), as well as the applicant requirements to install bird diverters and implement a monitoring program, impacts to biological resources that will occur from the construction and operation of the three proposed Met Towers will be less than significant. No special status plants, habitat for VELB, wetlands, streams, or vernal pools occur within the three proposed Met Tower sites.

Mitigation Measure BIO-1: Avoid disturbance of special status bird species, nesting raptors, and other migratory birds protected under the MBTA

Trees in close proximity at two of the sites (Met 2 and Met 3) were surveyed for potential raptor nests, including potential Swainson's hawk nests. No active or inactive nests were observed during the time of the survey. In addition to guy wires being placed on each proposed Met Tower, prior to construction one of the following measures shall be implemented, depending on the specific construction timeframe, to avoid disturbance to ground, tree, and other nesting special status birds and non-special status migratory birds:

(a) If construction activities are scheduled to occur during the nesting season (approximately February 15 through August 31) pre-construction nesting surveys shall be conducted by a qualified biologist.

- *Surveys shall be conducted within the proposed Project area and all potential nesting habitat within approximately 100 feet of this area;*
- *The surveys shall be conducted within one week before initiation of construction activities at any time between February 15 and August 31. If no active nests are detected, then no additional mitigation is required; or*
- *If surveys indicate that migratory bird nests are found in any areas that would be directly affected by construction activities, a no-disturbance buffer shall be established around the site to avoid disturbance or destruction of the nest site until after the breeding season or after a wildlife biologist determines that the young have fledged (typically late June to mid-July). The extent of the buffer will be determined by a qualified wildlife biologist, and the input of CDFW and/or USFWS will depend on the status of the species, the noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. These factors should be analyzed to make an appropriate decision on buffer distances.*

(b) If construction activities begin outside the breeding season (approximately September 1 through February 14) then proposed project activities may proceed until it is determined that an active migratory bird nest would be subject to abandonment as a result of construction activities. Optimally, all necessary vegetation removal shall be conducted before the breeding season so that nesting birds would not be present in the construction area during construction activities. If any bird nests are in the proposed project area under pre-existing construction conditions, then it is assumed that they are habituated (or will habituate) to the construction activities. Under this scenario, the pre-construction survey described previously shall still be conducted on or after February 15 to identify any active nests in the vicinity. Active sites shall be monitored periodically until after the breeding season or after the young have fledged (typically late June to mid-July).

With implementation of Mitigation Measures BIO-1, BIO-2, and BIO-3, impacts to special status bird species, nesting raptors, and other migratory birds will be less than significant.

Mitigation Measure BIO-2: Install bird diverters

The applicant shall install bird flight diverters on the guy wires to minimize the impact of bird strikes with the guy wires. Bird flight diverters are a common mitigation practice for overhead power lines and are becoming increasingly common for use on guy wires for communication towers and other guy-wired towers. The bird flight diverters are small coils made from a high-impact, standard PVC. The bird flight diverters will be placed approximately every fifteen feet on the outermost and innermost guy wires of each set, according to industry standards.

With implementation of Mitigation Measures BIO-1, BIO-2, and BIO-3, impacts to special status bird species, nesting raptors, and other migratory birds will be less than significant.

Mitigation Measure BIO-3:

The applicant shall conduct a monitoring program to document the presence of any avian carcasses near the base of the Met tower to determine if any bird strikes with the guy wires have occurred. Terra-Gen shall submit a Biological Monitoring Program to the Community Services Department for approval prior to the issuance of any building permits. The Program shall include quarterly (every three months) monitoring of the project site for three years (or the life of the project) by a qualified biologist hired by Terra-Gen. A report shall be prepared documenting the results of the monitoring and shall be submitted to the Community Services Department and any appropriate office of the U.S. Fish and Wildlife Service, following each quarterly monitoring session.

With implementation of Mitigation Measures BIO-1, BIO-3, and BIO-4, impacts to special status bird species, nesting raptors, and other migratory birds will be less than significant.

Mitigation Measure BIO-4: Avoid Impacts and/or Disturbance to California Tiger Salamander and Their Habitat

The California tiger salamander, a State and Federally-threatened species, has the potential to occur within proposed project region with the closest recorded observations approximately two miles from the proposed Met Tower 1 Site location (Figure 12). Each proposed Met Tower location is within one or more stock ponds within 0.25 miles. CTS move to upland locations from their breeding ponds to seek cover in existing small mammal burrows in the late fall and early winter during the onset of rain when they are known to return to breeding ponds (USFWS 2017b). CTS may be found travelling to and from their upland and breeding habitat up to 1.24 miles and have the potential to be crushed by vehicles (CDFW and USFWS 2003). Therefore, the placement of Met Towers and their guy wires could directly impact CTS within upland small mammal burrows.

Each Met Tower site shall be monitored to ensure that the placement of the Met Tower and its guy wires avoids any existing small mammal burrows in order to avoid impacts to CTS. At each proposed Met Tower Site, a qualified biological monitor shall be present during installation and no ground disturbance shall take place where small mammal burrows occur including areas directly adjacent to small mammal burrows.

With implementation of this mitigation measure, impacts to CTS will be less than significant.

b) and c) *No Impact.* The proposed project has been designed to avoid impacts to Waters of the U.S. and Waters of the State. The three proposed Met Tower locations are located on annual grassland dominated hilltops and away from riparian corridors. A vegetated swale runs north to south within 100 feet of the proposed Met Tower 3 location and joins an ephemeral drainage that runs east to west and is located downhill of the proposed Met Tower approximately 340 feet to the south; however, construction will take place during the dry season, and therefore drainage will be avoided and will not be impacted by the proposed Met Tower.

The project would have no substantial adverse effect on any wetlands, riparian habitat, or any other sensitive natural community identified in local or regional plans, policies, or regulations.

d) *No Impact.* The biological survey indicates that none of the three Met Tower sites will 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

e) *No Impact.* The proposed project does not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

f) *No Impact.* The proposed project would not conflict with any local policies or ordinances protecting biological resources. The Yolo County Habitat Conservation Plan (HCP)/Natural Communities Conservation Plan (NCCP) is in preparation by the Yolo Wildlife Conservancy. It is not yet adopted. Thus, the project would not conflict with the provisions of any adopted HCP, NCCP, or other approved local, regional, or state habitat conservation plan.

V.	CULTURAL RESOURCES.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than significant Impact	No Impact
Would the project:					
a.	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☐	☒
b.	Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☐	☒
c.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d.	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

Environmental Setting

On October 11, 2017, conducted an archaeological pedestrian field survey of three proposed MET tower locations for the Terra-Gen King Flat MET Tower Project. This pedestrian survey covered areas that will be affected by the installation of the MET tower, winches, and guy line anchors. Each tower location was surveyed in expanding concentric circles. These circles were spaced approximately 5 meters apart, starting at the center of the tower base and extending to approximately 20 meters beyond the proposed guy line anchor locations. Trowel scrapings were occasionally employed to remove vegetation, and any areas of disturbance, including road cuts and rodent burrows, were carefully examined for evidence of cultural materials. Particular attention was paid to bedrock outcrops and to all areas adjacent to natural drainages. Nearby drainages and bedrock outcrops were also visited and examined.

MET Tower Location 1, located on the Hammerness Property, was covered in dense annual grasses, mostly wild oat. The proposed tower location was generally flat, but gently sloped down along the northern side and in the extreme southeastern portion. Soils consisted of yellowish brown sandy silt with several areas with exposed bedrock. Visibility was relatively low, as the dense, un-grazed grass was blown flat and matted across the site, leaving around <5% ground visibility. Tailings from rodent burrows along the northern side of the site were carefully examined, as was the road cut and its margins. Surface staining was observed on the soil at one location along the side of the road in the northwest quadrant of the survey area (see Figure 1). This stained area was roughly oval, measuring about 4 feet by 3 feet, parallel to the road. The source of the staining could not be identified. It appeared to be organic, but was without discernible odor or change in texture. No carbon or charcoal was identified. The staining was limited to the surface, and was easily removed by trowel. No historic or prehistoric cultural resources were identified at this proposed tower location.

MET Tower Location 2 was surveyed on October 11, 2017. Visibility was poor at only 1-2% due to thick matted grasses and star thistle. Pockets of exposed soils and burrow tailings were distributed across the site, and these were investigated for evidence of cultural resources, as were all other exposed areas. Soils consisted primarily of loose grey silt loam with sparse sub-angular cobbles. Several bedrock outcrops were present. These were highly weathered, with extensive exfoliation and some spalling. One milling feature, a

shallow/incipient cup mortar, was identified at this location. Situated on top of a southwest-facing ridge near a grey pine and several oak trees, the cup mortar was recorded as KF-S-1. No additional artifacts were identified.

Surveyed on October 11, 2017, MET Tower Location 3 is the northernmost of the original locations. Ground visibility was very poor at around 1% due to dense, matted grasses and star thistle (*Centaurea solstitialis*), but slightly better visibility was noted near the large oak tree north of the center point. Soils consisted of medium to dark brown semi-compact dry silt loam with some natural cobbles. Some of these unmodified cobbles were located alongside fragments of modern barbed wire and a single fence post remnant that was identified along a line of trees to the north of the site. No nails were observed in association with the fence fragments, and no other indications of historic or prehistoric archaeological sites were identified. A drainage located east of the tower location was also closely examined, and no midden soils or other indicators of cultural deposits were observed.

Discussion of Impacts

a) through c) *No Impact.* No historic structures or historic or prehistoric cultural materials or archaeological sites were observed in or adjacent to proposed MET Tower Locations 1 or 3. The single feature near these locations, a possibly historic-period stacked rock feature with a single wooden fence or signpost, is located approximately 150 feet outside of the work area, and does not appear to be associated with any other local features or sites. It will not be affected by tower installation.

A single bedrock milling feature, a shallow cup mortar, was identified in the area of MET Tower Location 2, along the north-south access road in the southwestern quadrant of the work area. This feature has been recorded and reported using the appropriate Department of Parks and Recreation (DPR) forms. No associated artifacts, cultural deposits, or changes in soil color or texture that may indicate buried cultural deposits have been identified in the vicinity of this feature. However, surface visibility across the site was generally low.

The access roads were not surveyed at this time, but are in generally good condition, and are regularly used and maintained by the landowners.

It is recommended a qualified archaeologist flag site KF-S-1, and the area shall be avoided by all construction work and staging equipment.

d) *Less Than Significant Impact.* No human remains are known or predicted to exist in the project areas. However, the potential exists during construction to uncover previously unidentified resources. Section 7050.5 of the California Health and Safety Code states that when human remains are discovered, no further site disturbance shall occur until the County coroner has determined that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, in the manner provided in Section 5097.98 of the Public Resources Code. If the coroner determines that the remains are not subject to his or her authority and the remains are recognized to be those of a Native American, the coroner shall contact the Native American Heritage Commission within 24 hours.

VI.	GEOLOGY AND SOILS.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than significant Impact	No Impact
Would the project:					
a.	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐
	1. 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 fault? Refer to Division of Mines and Geology Special Publication 42.				
	2. Strong seismic groundshaking?				
	3. Seismic-related ground failure, including liquefaction?				
	4. Landslides?				
b.	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
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 an onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	☒
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?	☐	☐	☒	☐
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Discussion of Impacts

a) Less Than Significant Impact:

1. The project sites are not located within an Alquist-Priolo Earthquake Fault Zone. However, the sites are located within proximity of the Dunnigan Hills Fault and within a few miles of a smaller Holocene fault. The project sites can be expected to experience moderate to strong ground shaking during future seismic events along active faults throughout Northern California or on smaller active faults located in the project vicinity. The construction of the Met towers will be required to comply with all applicable Uniform Building Code requirements.

2. Any major earthquake damage on the project sites are likely to occur from ground shaking, and seismically related ground and structural failures. Local soil conditions, such

as soil strength, thickness, density, water content, and firmness of underlying bedrock affect seismic response. Seismically induced shaking and some damage should be expected to occur during a major event but damage should be no more severe in the project area than elsewhere in the region. The Met towers will be built in accordance with Uniform Building Code requirements and will be generally flexible enough to sustain only minor structural damage from ground shaking. Therefore, people and structures would not be exposed to potential substantial adverse effects involving strong seismic ground shaking.

3. The proposed project sites are not located within close proximity to any people or structures. The towers will be located on private ranch properties located in the Capay Hills, east of the Capay Valley. Effects of liquefaction or cyclic strength degradation beneath the project vicinity during seismic events are unlikely. In the event of tower failure, no humans or structures would be affected.

4. The proposed project is for three Meteorological towers anchored by guy wires, and would not expose people or structures to potential landslides.

b) *No Impact.* Only a small area of ground disturbance is proposed for the placement of the Met towers and guy wire anchors. Substantial soil erosion or loss of topsoil is unlikely to occur.

c) *No Impact.* The project is not located on unstable geologic materials and would not have any affect on the stability of the underlying materials or on the underlying materials to potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. Onsite or off-site potential landslides, liquefaction or other cyclic strength degradation during seismic events are unlikely.

d) *Less Than Significant Impact.* The existence of substantial areas of expansive and/or corrosive soils has been documented in the project areas. The Met towers will be built in accordance with Uniform Building Code requirements and a geotechnical report, along with soil samples, will be required as part of the building permit process.

e) *No Impact.* The proposed Met towers will not be served by a septic system.

VII. GREENHOUSE GAS EMISSIONS/CLIMATE CHANGE.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b. Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒
c. Be affected by climate change impacts, e.g., sea level rise, increased wildfire dangers, diminishing snow pack and water supplies, etc.?	☐	☐	☐	☒

Environmental Setting

To date, specific thresholds of significance to evaluate impacts pertaining to GHG emissions have not been established by the Yolo Solano Air Quality Management District, the state, or the federal government. However, this absence of thresholds does not negate CEQA's mandate to evaluate all potentially significant impacts associated with the proposed project.

Yolo County has adopted General Plan policies and a Climate Action Plan (CAP) which address these issues. In order to demonstrate project-level compliance with CEQA relevant to GHG emissions and climate change impacts, applications for discretionary projects must demonstrate consistency with the General Plan and CAP. The adopted 2030 Yolo Countywide General Plan contains the following relevant policies and actions:

Policy CO-8.2: Use the development review process to achieve measurable reductions in greenhouse gas emissions.

Action CO-A117: Pursuant to the adopted Climate Action Plan (CAP), the County shall take all feasible measures to reduce its total carbon dioxide equivalent (CO2e) emissions within the unincorporated area (excluding those of other jurisdictions, e.g., UC-Davis, Yocha Dehe Wintun Nation, DQ University, school districts, special districts, reclamation districts, etc.), from 648,252 Metric tons (MT) of CO2e in 2008 to 613,651 MT of CO2e by 2020. In addition, the County shall strive to further reduce total CO2e emissions within the unincorporated area to 447,965 MT by 2030. These reductions shall be achieved through the measures and actions provided for in the adopted CAP, including those measures that address the need to adapt to climate change. (Implements Policy CO-8.1)

Action CO-A118: Pursuant to and based on the CAP, the following thresholds shall be used for determining the significance of GHG emissions and climate change impacts associated with future projects:

1) Impacts associated with GHG emissions from projects that are consistent with the General Plan and otherwise exempt from CEQA are determined to be less than significant and further CEQA analysis for this area of impact is not required.

2) Impacts associated with GHG emissions from projects that are consistent with the General Plan, fall within the assumptions of the General Plan EIR, consistent with the CAP, and not exempt from CEQA are determined to be less than significant or mitigated to a less-than-significant level, and further CEQA analysis for this area of impact is generally not required.

   To be determined consistent with the CAP, a project must demonstrate that it is included in the growth projections upon which the CAP modeling is based, and that it incorporates applicable strategies and measures from the CAP as binding and enforceable components of the project.

3) Impacts associated with GHG emissions from projects that are not consistent with the General Plan, do not fall within the assumptions of the General Plan EIR, and/or are not consistent with the CAP, and are subject to CEQA review are rebuttably presumed to be significant and further CEQA analysis is required. The applicant must demonstrate to the County's satisfaction how the project will achieve its fair share of the established targets including:

- Use of alternative design components and/or operational protocols to achieve the required GHG reductions;

- Use of real, additional, permanent, verifiable and enforceable offsets to achieve required GHG reductions. To the greatest feasible extent, offsets shall be: locally based, project relevant, and consistent with other long term goals of the County;

The project must also be able to demonstrate that it would not substantially interfere with implementation of CAP strategies, measures, or actions. (Implements Policy CO-8.5)

Discussion of Impacts

a) *Less Than Significant Impact.* The proposed project is three unmanned temporary Met towers. Aside from the few truck trips during construction and eventual decommissioning of the towers, the only vehicular traffic generated by the project would be one to two vehicle trips per year for routine maintenance purposes. Thus, the project would not generate greenhouse gas emissions that will have a significant impact on the environment.

b) *No Impact.* The proposed project would not conflict with any applicable plan, policy or regulation adopted to reduce GHG emissions, including the Yolo County Climate Action Plan or the numerous policies of Yolo County 2030 General Plan. In fact, meteorological testing for the purposes of gathering wind resource data for the implementation of a future utility scale wind generation project supports policies in the General Plan and Climate Action Plan that call for measurable reductions in GHGs through expanded capacity and reliance on renewable energy resources such as solar, wind, biomass, and others.

c) *No Impact.* The proposed temporary Met towers will not be at significant risk of wildfire dangers or diminishing snow pack or water supplies.

VII.	HAZARDS AND HAZARDOUS MATERIALS.	Potentially Significant Impact	Less than Significant 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, 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 into the environment?	☐	☐	☐	☒
c.	Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d.	Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e.	Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐
f.	Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area?	☐	☐	☒	☐
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h.	Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

Discussion of Impacts

a) and b) *No Impact.* The construction and operation of the proposed project would not result in any new hazardous emissions or materials. There will be no storage of fuel, oil, or other potentially hazardous materials. All electronic equipment will be properly disposed of or reused by the project applicant.

c) *No Impact.* See (a) and (b), above. The project sites are not located within one-quarter mile of an existing or proposed school.

d) *No Impact.* The project sites are not located on a site that is included on a list of hazardous materials sites compiled by the Yolo County Environmental Health Division-Hazardous Waste Site Files pursuant to Government Code 65962.5.

e) *Less Than Significant Impact.* The project sites are not located within an airport land use plan or within two miles of a public airport or public use airport.

However, the tower sites are in areas which may be used by crop dusting planes. The applicant has proposed and will be required to incorporate several design features to increase the conspicuity of the towers to aircraft pilots, such as crop dusters. These design features include: painting the towers in seven alternating bands of aviation orange and white, installing eight orange marker balls on the guy wires, installing a single medium-intensity, red flashing light at the top of each tower, and installing seven foot safety sleeves on the guy wire anchor points. Local aircraft sprayers registered with the County have received notice of this IS/ND and as a condition of project approval, the applicant will be required to notify aircraft sprayers registered with the County of the exact location of the proposed towers, as required by Section 8-2.2418.4(e) of the County Code.

f) *Less Than Significant Impact.* See (e), above. The project site is not located within the vicinity of any other known private airstrips.

g) *No Impact.* The project would not interfere with any adopted emergency response or evacuation plans.

h) *Less than Significant Impact.* All three tower sites are located in the Capay Hills, a wildland area with moderate fire severity, however the towers are not expected to be at risk from wildland fires. The tower locations are in rangeland areas, and the applicant will be required to remove any combustible vegetation that may occur immediately around the temporary tower sites. As a Condition of Approval, access to the sites will be required to be well marked and accessible; and all flammable material (i.e., grass) will be required to be removed around the towers. Additionally, the project sites will be unmanned and will not include any other structures other than the towers.

VIII.	HYDROLOGY AND WATER QUALITY.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than significant Impact	No Impact
Would the project:					
a.	Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in 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 that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
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 that would result in substantial erosion or siltation onsite 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 that would result in flooding onsite or off-site?	☐	☐	☒	☐
e.	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?	☐	☐	☐	☒
f.	Otherwise substantially degrade water quality?	☐	☐	☐	☒
g.	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?	☐	☐	☐	☒
h.	Place within a 100-year flood hazard area structures that would impede or redirect floodflows?	☐	☐	☐	☒
i.	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?	☐	☐	☐	☒
j.	Contribute to inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Discussion of Impacts

a) *No Impact.* The proposed tower would not discharge any pollutants into the water system, or result in any violations of existing requirements.

b) *No Impact.* The proposed towers would not affect any onsite wells and would not deplete groundwater supplies or interfere with groundwater recharge.

c) and d) *Less than Significant Impact.* The proposed locations of the three Met towers are not near any mapped watercourses.

Effects of erosion in the immediate project location are not of great concern due to the temporary nature of the project (two to three years). The anchoring of a temporary Met tower would not alter the existing drainage pattern of the creeks nor would the project contribute to excessive erosion that could result in flooding. Project impacts are expected to be less than significant. However, any future development of a permanent structure, including a wind tower, would be subject to Yolo County General Plan Policy CO-2.22 that prohibits development within a minimum of 100 feet from the top of banks for all lakes, perennial ponds, rivers, creeks, sloughs, and perennial streams. Any future project proposal to construct a tower within the project vicinity would require separate environmental review, and would be required to comply with Conservation Policy CO-2.22.

e) and f) *No Impact.* The proposed project would not modify the rate and amount of surface runoff. No additional impacts to water quality are anticipated.

g) *and* h) *No Impact.* The proposed project does not include any housing. The project sites are not located within the 100-year or 500-year floodplains.

i) *No Impact.* The project sites are not located immediately downstream of a dam or adjacent to a levee that would expose individuals to risk from flooding.

j) *No Impact.* The project areas are not located near any large bodies of water that would pose a seiche or tsunami hazard. In addition, the project sites are not located near any physical or geologic features that would produce a mudflow hazard.

IX.	**LAND USE AND PLANNING.**	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than significant Impact	No Impact
Would the project:					
a.	Physically divide an established community?	☐	☐	☐	☒
b.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Discussion of Impacts

a) *No Impact.* The project sites are located in rural agricultural areas, well outside any established community; therefore, there are no impacts to established communities.

b) *No Impact.* The proposed project would not conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. The Yolo County 2030 General Plan encourages the installation of renewable energy technologies in order to promote GHG emission reductions (Policy CO-8.5). Though the Met towers are not a renewable energy source, they are necessary to determine the feasibility of installing a large scale renewable energy (wind) project.

c) *No Impact.* The project would not conflict with the provisions of any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The Yolo County Habitat Conservation Plan (HCP)/Natural Communities Conservation Plan (NCCP) is in preparation by the Natural Heritage Program.

X.	**MINERAL RESOURCES.**	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than significant Impact	No Impact
Would the project:					
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?	☐	☐	☐	☒
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?	☐	☐	☐	☒

Discussion of Impacts

a) and b) *No impact.* The project areas have not been identified as areas of significant aggregate deposits, as classified by the State Department of Mines and Geology.

XI.	NOISE.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:					
a.	Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	☐	☐	☐	☒
b.	Expose persons to or generate excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
c.	Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d.	Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
e.	Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f.	Be located in the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion of Impacts

a) through d) *No Impact.* Yolo County has not adopted a noise ordinance which sets specific noise levels for different zoning districts or for different land uses in the unincorporated area. However, the State of California Department of Health Services developed recommended Community Noise Exposure standards, which are set forth in the State's General Plan Guidelines (2003). These standards are also included in the Yolo County 2030 Countywide General Plan and used to provide guidance for new development projects. The recommended standards provide acceptable ranges of decibel (dB) levels. The noise levels are in the context of Community Noise Equivalent Level (CNEL) measurements, which reflect an averaged noise level over a 24-hour or annual period.

The proposed project is located in rural agricultural areas and there are no sensitive receptors in the vicinity. The project sites are surrounded by agricultural uses (mostly rangeland) for several miles in each direction. The noise guidelines define 80-85 dB CNEL for outdoor noise level in agricultural areas as "normally acceptable." The proposed project includes the installation of three 197-foot high Met towers including guy wires. The towers will be unmanned and will include a solar powered battery pack. The proposed project will be located on large ranch parcels, which are surrounded by other large parcels. The proposed Met towers will not produce noise or vibration that will exceed any thresholds during the construction, operation, or decommissioning phases.

e and f) *No Impact.* The project sites are not located within an airport land use plan nor are they within two miles of a public airport, public use airport, or private airstrip.

XII.	POPULATION AND HOUSING.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than significant Impact	No Impact
Would the project:					
a.	Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☐	☒
b.	Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c.	Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion of Impacts

a) through c) *No Impact.* The proposed project is for three temporary Met towers and would not induce any population growth or displace any existing housing units or people.

XIII.	PUBLIC SERVICES.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:					
a.	Fire protection?	☐	☐	☐	☒
b.	Police protection?	☐	☐	☐	☒
c.	Schools?	☐	☐	☐	☒
d.	Parks?	☐	☐	☐	☒
e.	Other public facilities?	☐	☐	☐	☒

Discussion of Impacts

a) through e) *No Impact.* The proposed project is for three temporary Met towers and would not increase the demand for fire and police protection services, schools, parks, or other public facilities and services.

XIV.	RECREATION.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than significant Impact	No Impact
Would the project:					
a.	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?	☐	☐	☐	☒
b.	Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion of Impacts

a) and b) *No Impact.* The proposed project would not affect any existing or future recreational facilities.

XV.	TRANSPORTATION/TRAFFIC.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than significant Impact	No Impact
Would the project:					
a.	Exceed the capacity of the existing circulation system, based on an applicable measure of effectiveness (as designated in a general plan policy, ordinance, etc.), taking into account all relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	☒
b.	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
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?	☐	☐	☒	☐
d.	Substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒

XV.	TRANSPORTATION/TRAFFIC.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than significant Impact	No Impact
e.	Result in inadequate emergency access?	☐	☐	☐	☒
f.	Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

Environmental Setting

The roadway network within the unincorporated parts of the County is primarily rural in character, serving small communities and agricultural uses through a system of State freeways and highways, county roads (including arterials, collectors and local streets) and private roads. Interstate 80, Interstate 5 and Interstate 505 are the primary transportation corridors extending through the County and serve all of the County's major population centers including Davis, West Sacramento, Winters, and Woodland. The project sites would primarily be served by State Route 16 in the Capay Valley, and by rural County Roads (CR 15B for Site #1, and CR 57 for Sites #2 and #3).

Discussion of Impacts

a) and b) *No Impact.* The construction, maintenance, and decommissioning of the Met towers would generate a limited number of truck trips, including the use of two four-wheel drive pickup trucks to transport the equipment and tools to the site for installation over a two-day period. Decommissioning of the site will occur in one day. Maintenance of the project sites requires approximately one to two site visits per year. However, this would not exceed the capacity of the existing circulation system nor exceed a level of service standard for any road, including the abovementioned State Highway 16 and the county roads (CR 15B and 57).

c) *Less Than Significant Impact.* The proposed Met towers will not result in a change in air traffic patterns, including an increase in traffic levels or a change in location that results in substantial safety risks. The applicant has agreed to voluntarily incorporate several design features to increase the conspicuity of the towers to aircraft pilots. These design features include: painting the towers in seven alternating bands of aviation orange and white, installing eight orange marker balls on the guy wires, installing seven foot safety sleeves on the guy wire anchor points, and installing a medium-intensity, upward facing, red flashing light at the top of each tower.

d) *No Impact*. The proposed project does not incorporate design features that would substantially increase traffic hazards or introduce incompatible uses.

e) *No Impact.* The proposed project would not result in inadequate emergency access. Access to the subject sites is via private farm roads from various county roads.

f) *No Impact.* The proposed project would not conflict with any adopted policies, plans, or programs supporting alternative transportation.

XVI.	UTILITIES AND SERVICE SYSTEMS.	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than significant Impact	No Impact
Would the project:					
a.	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b.	Require 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?	☐	☐	☐	☒
c.	Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?	☐	☐	☐	☒
e.	Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g.	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

Discussion of Impacts

a) through g) *No Impact.* The proposed project is threex unmanned, temporary Met towers. These facilities would not create any new demand for public utilities or public service systems and would not require the construction of any new facilities.

XVII.	MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less than Significant 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?	☐	☐	☒	☐
b.	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.)	☐	☐	☐	☒
c.	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

Discussion of Impacts

a) *Less than Significant.* The conclusions of the biological survey summarized as part of this Initial Study indicate that The Met towers will have no significant effect on special status plants or wildlife species. With the mitigation measures implemented for nesting raptors and migratory birds and for avoidance of upland CTS habitat (ground squirrel burrows), as well as the applicant requirements to install bird diverters and implement a monitoring program, impacts to biological resources that will occur from the construction and operation of the three proposed Met Towers will be less than significant. As proposed and described in this Initial Study, the project will not eliminate important examples of the major periods of California history or prehistory.

b) *No Impact.* Based on the analysis provided in this Initial Study, the project will not have any potential cumulative impacts.

c) *No Impact.* Based on the analysis provided in this Initial Study, the proposed project would not result in environmental effects that could cause adverse effects on human beings, either directly or indirectly.

REFERENCES

Applicant materials prepared by Stantec Consulting Inc., 2017. County of Yolo – Major Use Permit Application King Flat Meteorological Tower Project Yolo County, California, October.

Stantec Consulting Inc., 2017. Habitat Assessment and Biological Survey Report for Proposed Meteorological Tower Sites Within the Proposed King Flat Meteorological Tower Project Site Area, Yolo County, California, October 17.

Stantec Consulting Inc., 2017. Cultural Survey Report Terra-Gen MET Tower Project, Yolo County, California, October 17.

Yolo County, 2004. Yolo County Zoning Ordinance, Title 8, Chapter 2 of the County Code, 2004, as amended.

Yolo County, 2009. 2030 Yolo Countywide General Plan.

Yolo Solano Air Quality Management District, 2007. *Handbook for Assessing and Mitigating Air Quality Impacts,* 2007.

APPENDICES

These complete reports are posted on the Yolo County Web site at http://www.yolocounty.org/Index.aspx?page=728.

Appendix A: Stantec Habitat Assessment and Biological Survey Report
Appendix B: Stantec Cultural Survey Report