# FINAL ENVIRONMENTAL IMPACT REPORT MODIFICATIONS TO EXISTING (YEAR 2005) CONDITIONAL USE PERMITS – ALTAMONT WINDS INC. (AWI)

**PREPARED FOR:**

County of Alameda
224 W. Winton Avenue, Room 111
Hayward, CA 94544
Contact: Sandra Rivera
510.670.5400

**PREPARED BY:**

ICF International
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Sacramento, CA 95814
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916.737.3000

**State Clearinghouse #2012062060**
**July 2013**

ICF International. 2013. Final Environmental Impact Report, Modifications to Existing (Year 2005) Conditional Use Permits – Altamont Winds Inc. (AWI). July. (ICF 00277.12.) Sacramento, CA. Prepared for County of Alameda, CA.

# Contents

# Tables



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# Acronyms and Abbreviations

| | |
|---|---|
| APWRA | Altamont Pass Wind Resource Area |
| AWI | Altamont Winds Inc. |
| AWPPS | Avian Wildlife Protection Program and Schedule |
| BUOW | burrowing owl |
| CCR | California Code of Regulations |
| CCWD | Contra Costa Water District |
| CDFW | California Department of Fish and Wildlife |
| CEQA | California Environmental Quality Act |
| CESA | California Endangered Species Act |
| CFR | Code of Federal Regulations |
| CUP | conditional use permits |
| dB | decibel |
| EACCS | East Alameda County Conservation Strategy |
| EBZA | East County Board of Zoning Adjustments |
| EIR | environmental impact report |
| ITP | incidental take permit |
| kW | kilowatt |
| LARPD | Livermore Area Recreation and Park District |
| MM | mitigation measures |
| MMRP | mitigation monitoring and reporting program |
| MT | monitoring team |
| MW | megawatt |
| NOP | notice of preparation |
| PRC | California Public Resources Code |
| SRC | Scientific Review Committee |
| USFWS | U.S. Fish and Wildlife Service |

# Chapter 1
# Introduction

This document, together with the draft EIR for the Altamont Winds Inc.'s (AWI) Permit Modification Project circulated in March 2013, constitutes the final environmental impact report (EIR) for the AWI Permit Modification Project in Alameda County. This final EIR has been prepared pursuant to the California Environmental Quality Act (CEQA) and the State CEQA Guidelines (14 California Code of Regulations [CCR] 15000 et seq.). CEQA requires that state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before taking action on those projects (California Public Resources Code [PRC] 21000 et seq.). This final EIR addresses the environmental effects of AWI's requested modifications to existing conditional use permits (CUPs) governing their operations in the Alameda County portion of the Altamont Pass Wind Resource Area (APWRA).

## Purpose and Format of Final EIR

An EIR is an informational document used in state, regional, and local planning and decision-making processes to meet the requirements of CEQA. The purpose of an EIR is to analyze the environmental impacts of the proposed project, to indicate ways to reduce or avoid potential environmental damage of the proposed project, and to identify feasible alternatives. CEQA requires that each public agency mitigate or avoid the significant environmental effects of projects it approves or implements whenever feasible. It is not the purpose of the EIR to recommend either approval or denial of a project. The EIR must disclose environmental effects, including those that cannot be avoided; growth-inducing effects; effects found not to be significant; and significant cumulative impacts of all past, present, and reasonably anticipated future projects. This final EIR has been prepared to meet the requirements of CEQA and the State CEQA Guidelines. As such, it will serve as a decision-making aid for Alameda County's consideration of AWI's requested CUP modifications. In addition, the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) are trustee and responsible agencies, and may choose to use this EIR to inform their decisions related to project compliance with the federal Migratory Bird Treaty Act (16 U.S. Code § 703 *et seq.*) and Bald and Golden Eagle Protection Act (16 U.S. Code § 668-668d), and the California Fish and Game Code, respectively.

To meet the requirements of CEQA and the State CEQA Guidelines, the final EIR incorporates the draft EIR, which was circulated separately in March 2013, by reference, and includes the public and agency comments received during the public review period on the draft EIR, as well as responses to those comments, and edits and clarifications to the draft EIR text as outlined below. Copies of the draft EIR and final EIRs are available for viewing at the Alameda County website (www.acgov.org/cda/planning—select "Pending Land Use Projects" and "Current Development Projects"), and at the website of the Altamont Pass Scientific Review Committee (www.altamontsrc.org). Copies of the draft and final EIR documents are also available during normal business hours (8:30 a.m. to 5:00 p.m.), Monday through Friday, at the Alameda County Community Development Agency, Planning Department, located at 224 West Winton Avenue, Room 111, Hayward, California, 94544.

# Opportunities for Public Involvement

CEQA does not require formal hearings at any stage of the environmental review process (State CEQA Guidelines Section 15202[a]). However, it does encourage "wide public involvement, formal and informal…in order to receive and evaluate public reactions to environmental issues" (State CEQA Guidelines Section 15201). CEQA requires the lead agency for a proposed project, after completion of a draft EIR, to consult with and obtain comments from public agencies with legal jurisdiction governing a proposed project and provide the general public with the opportunity to comment on the draft EIR. Public involvement in this project's CEQA process was achieved as described below.

## Notice of Preparation and Public Scoping Meeting

The County, as lead agency, circulated a notice of preparation (NOP) of a draft EIR (SCH # 2012062060) for the proposed project on May 31, 2012. The NOP was distributed for a 30-day comment period that was extended to July 2, 2012. In addition, the County held a public scoping meeting in Dublin on June 21, 2012, to solicit input on the scope and focus of the EIR. Comments received on the NOP and during the public scoping meeting were considered in the preparation of the EIR.

## Draft EIR Public Review and Hearing

The County prepared and circulated a draft EIR incorporating public and agency responses to the NOP. The draft EIR was circulated for review and comment by appropriate agencies, as well as organizations and individuals who have requested notification, from March 8, 2013 to April 19, 2013. The County presented the draft EIR to the Scientific Review Committee (SRC) for comment at the SRC's March 25, 2013 meeting and held a public hearing in Pleasanton on March 28, 2013 to obtain public, organization, and agency comments on the draft EIR. The comments received during the draft EIR public review period are included in this final EIR.

# Contents and Organization of the Final EIR

Under CEQA and the State CEQA Guidelines, the lead agency is also required to respond to significant environmental points raised during the review and consultation process. The contents and organization of this final EIR are intended to meet the requirements of CEQA and the State CEQA Guidelines (Section 15132), which require a final EIR to consist of a revision of the draft EIR; comments and recommendations received on the draft EIR; a list of persons, organizations, and public agencies commenting on the draft EIR; and the responses of the lead agency to significant environmental points raised in the review and consultation process.

This final EIR includes the following chapters.

- Chapter 1, *Introduction*, describes the intent of the final EIR, summarizes the opportunities for public involvement to date, and outlines the contents of the final EIR.
- Chapter 2, *Comments*, provides a list of, and includes the written comments of, all agencies, organizations, and individuals that commented on the draft EIR as well as comments made on the draft EIR during the March 28, 2013 public hearing. Each comment letter is presented

with brackets that divide it into individual comments. Each letter is labeled according to the type of commenter (agency, organization, or individual), followed by the letter number and comment number. For example, comments in the first agency letter are numbered A1-1, A1-2, A1-3, and so on. Comments made at the public hearing are labeled with PH followed by the comment number (PH-1, PH-2, and so on).

- Chapter 3, *Responses to Comments*, includes the written responses to all written and verbal comments of agencies, organizations, and individuals presented in Chapter 2. Responses are grouped by comment letter and number, corresponding to the numbering system used in Chapter 2. If the topic of one response relates closely to another, the text provides the reader with a cross-reference to the relevant comments and responses.

- Chapter 4, *Draft EIR Errata*, contains changes made to the text of the draft EIR in response to comments received during the public review period, or for purposes of clarification or correction. Changes to the draft EIR text are shown by ~~strikethrough~~ of text that has been deleted and <u>underlining</u> of new text that has been inserted. The revisions contain clarifications and corrections that have been identified, either through public comments or by the County, since publication of the draft EIR. The text revisions do not result in substantive changes to either the analyses or conclusions presented in the draft EIR.

- Appendix A, *Final Mitigation Monitoring and Reporting Program*, indicates the mitigation measures to be incorporated by the County and specifies the implementation and monitoring responsibilities for each of those measures.

# Chapter 2
# Comments

During the public review period for the project from March 8, 2013 to April 19, 2013, the County received a total of 10 comment letters from agencies, organizations, and individuals. The Scientific Review Committee provided oral consensus comments, as well as comments from individual members, during their March 25, 2013 meeting. Additional oral comments were received from organizations and members of the public, as well as members of the Alameda County East County Board of Zoning Adjustments (EBZA), at the public hearing held on March 28, 2013.

In accordance with Section 15088 of the State CEQA Guidelines, the County has evaluated the comments received on the draft EIR for AWI's requested CUP modifications, and has prepared written responses to these comments. This chapter contains copies of the comments received during the public review process, with each letter and comment numbered as follows. Each commenter was assigned a category: A for agency, O for organization, I for individual, and PH for oral comments made at the March 28, 2013 public hearing. Each commenter was then assigned a number, in chronological order. For example, the first agency letter is A1 and the second agency letter is A2, the first organization letter is O1 and the second organization letter is O2. Within each letter, the comments are delineated and numbered sequentially, with the first comment in letter A1 being numbered A1-1, followed by A1-2, A1-3, and so on. Likewise, the comments in letter A2 begin with A2-1 and proceed in numerical order.

Chapter 3, *Responses to Comments*, provides the County's written responses to each of the comments shown in this chapter.

## List of Agencies, Organizations, and Persons Commenting on the Draft EIR

The County received comments on the draft EIR from the following agencies, organizations, and individuals. Each commenter is listed below, along with a corresponding letter number, which corresponds to the comment letters in this chapter and to the responses to comments provided in Chapter 3.

| Letter Number | Commenter | Date |
|---|---|---|
| **Agencies** | | |
| A1 | Douglas Bell, East Bay Regional Park District | April 8, 2013 |
| A2 | Timothy Barry, Livermore Area Recreation and Park District | April 11, 2013 |
| A3 | Mark Seedall, Contra Costa Water District | April 12, 2013 |
| A4 | Alexandra Pitts/Heather Beeler, United States Fish and Wildlife Service | April 19, 2013 |
| A5 | Scott Wilson, California Department of Fish and Wildlife | April 19, 2013 |
| **Organizations** | | |
| O1 | Scientific Review Committee , Consensus Comments | March 25, 2013 |
| O2 | Richard Cimino, Alameda County Ohlone Audubon Society | March 27, 2013 |
| O3 | Michael Lynes, Golden Gate Audubon Society/Bob Power, Santa Clara Valley Audubon Society | April 19, 2013 |
| O4 | Andrew Roth, Altamont Winds, Inc. | April 19, 2013 |
| **Individuals** | | |
| I1 | Joanna Burger, Scientific Review Committee | March 25, 2013 |
| I2 | Jim Estep, Scientific Review Committee | March 25, 2013 |
| I3 | Sue Orloff, Scientific Review Committee | March 25, 2013 |
| I4 | Julie Yee, Scientific Review Committee | March 25, 2013 |
| I5 | Unidentified Scientific Review Committee Members | March 25, 2013 |
| I6 | Alan Ragsdale, Dyer Road Resident | March 28, 2013 |
| I7 | Robert Cooper, Dyer Road Resident | March 31, 2013 |
| **Public Hearing** | | |
| PH | East County Board of Zoning Adjustments Meeting Minutes | March 28, 2013 |

# Written Comments

The County received the following written comments on the draft EIR for AWI's requested conditional use permit modifications.

# Written Comments—Agencies

East Bay Regional Park District

Healthy Parks Healthy People

2950 PERALTA OAKS COURT P.O. BOX 5381 OAKLAND CALIFORNIA 94605-0381 T: 1-888-EBPARKS F: 510-569-4319 TDD: 510-633-0460 WWW.EBPARKS.ORG

**A1**

April 8, 2013

Sandra Rivera, Assistant Planning Director
ATTN: AWI Permit Modification EIR
Alameda County Community Development Agency
224 W. Winton Avenue, Suite 110
Hayward, CA 94544

Re: Comments on the Draft Environmental Impact Report for Modifications to Existing (Year 2005) Conditional Use Permits – Altamont Winds, Inc.

Dear Ms. Rivera:

I wish to submit the following comments on the Draft Environmental Impact Report for Modifications to Existing (Year 2005) Conditional Use Permits – Altamont Winds, Inc.

**Impact BIO-1: Potential to cause a substantial adverse effect, either directly or through habitat modifications, on special-status species (Significant; Significant and unavoidable for avian species).** A1-1

The Draft EIR for the Proposed Project includes continued operation of 828 existing wind turbines through December 2015 with no phased decommissioning of turbines and elimination of the winter shutdown periods. Alternatives 1-3 propose continued seasonal shutdowns, no phased decommissioning and permanent shutdown dates of 2015, 2016 and 2018, respectively. The proposed project and its three alternatives will increase energy production from a renewable source, a laudable goal, but at the expense of increased avian mortalities.

According to the Draft EIR, the Proposed Project will result in approximately 60% more avian fatalities over baseline, e.g. the "No Project" alternative. Table 3.2-5 lists the numbers of additional fatalities for each of the four focal species: American kestrel (34-38); burrowing owl (33-55), red-tailed hawk (22-34) and golden eagle (5-7). Increasing avian fatality rates over the existing baseline conditions for these species (and many others) is problematic. This is especially critical for the golden eagle. The current infrastructure of the Altamont Pass Wind Resource Area (APWRA) represents a population sink for the local breeding population of golden eagles (Hunt 2002, and Hunt and Hunt 2006). The proposed project would take 4.6-6.5 additional golden eagles per year. The proposed Alternatives 1-3 will also result in additional take of golden eagles ranging from 1 to 16.6 eagles per year (see Table 4-2). Any additional golden eagle mortality in the APWRA at this point is unacceptable, given the uncertainty surrounding its population stability. A1-2

**Mitigation Measure BIO-17: Mitigate for the loss of Individual Golden Eagles by Retrofitting Facilities**

A1-3

Retrofitting power poles, although recommended by the U.S. Fish & Wildlife Service as a mitigation measure, does not address impacts to the local population of golden eagles and does not adequately mitigate for losses of golden eagles. The USF&WS measure recommends that poles should be outfitted within 160 miles of a project site. For the Proposed Project, this would include large swaths of the Central Valley, where few golden eagles occur and thus few eagles would benefit from Mitigation Measure BIO-17. It would not mitigate losses to the local population, defined by Hunt (2002) as those breeding territories within 30 km of the APWRA. In addition, the measure calculates the number of poles to be outfitted to mitigate annual, above baseline, golden eagle losses caused by implementing Alternative 1 (one eagle) and not the higher losses (4.6 to 6.5 eagles; Table 4-2) caused by the Proposed Project. Finally, the BIO-17 does not address mitigation for cumulative losses of golden eagles caused by the Proposed Project.

A1-4

A1-5

The Proposed Project and its Alternatives 1-3 will result in additional take of golden eagles above the current CUP baseline conditions, e.g. the No Project alternative. The US Fish & Wildlife Service now strongly recommends that all projects which could result in take of bald or golden eagles should apply for an eagle take permit from the Service (http://www.fws.gov/migratorybirds/mbpermits/regulations/regulations.html) to insure adequate mitigation and compensation, and to protect project owners from violations of the Bald and Golden Eagle Protection Act. The Draft EIR should address this new regulatory option.

A1-6

**General Comments on the Project**

Numerous public and private entities are engaged in research to lessen impacts to golden eagles and other species in the APWRA, especially through repowering (see Smallwood and Neher 2009, 2010, Smallwood et al. 2009a, 2009b, 2009c, Smallwood et al. 2010). Repowering may be the only alternative to significantly reduce take of birds in the APWRA (Bell and Smallwood 2011). Rather than changing existing CUP conditions for the Project to prolong the operation of the current infrastructure, effort should be directed towards repowering. Given the Project's significant impacts to avian resources, the only acceptable project listed in the draft EIR is the No Project alternative.

A1-7

A1-8

Thank you for this opportunity to comment on the Draft Environmental Impact Report for Modifications to Existing (Year 2005) Conditional Use Permits – Altamont Winds, Inc.

Sincerely yours,

Douglas A. Bell

Douglas A. Bell, Ph.D.
Wildlife Program Manager

**References**


Bell, D. A. and K.S. Smallwood. 2010. Birds of prey remain at risk. Science 330: 913.

Hunt, W. G. 2002. Golden eagles in a perilous landscape: Predicting the effects of mitigation for wind turbine blade-strike mortality. P500-02-043F. Consultant Report to California Energy Commission, Sacramento, California.

Hunt, G. and T. Hunt. 2006. The Trend of Golden Eagle Territory Occupancy in the Vicinity of the Altamont Pass Wind Resource Area: 2005 Survey. California Energy Commission, PIER Energy-Related Environmental Research. CEC-500-2006-056.

Smallwood, K. S., and L. Neher. 2009. Map-Based Repowering of the Altamont Pass Wind Resource Area Based on Burrowing Owl Burrows, Raptor Flights, and Collisions with Wind Turbines. Final Report to the California Energy Commission, Public Interest Energy Research – Environmental Area, Contract No. CEC-500-2009-065. Sacramento, California. 63 pp. http://www.energy.ca.gov/2009publications/CEC-500-2009-065/CEC-500-2009-065.PDF

Smallwood, K.S. and L. Neher. 2010. SRC-P162. Siting repowered wind turbines to minimize raptor collisions at Tres Vaqueros Wind Project, Contra Costa County, California: Draft Report to the east Bay Regional Park District. Altamont Scientific Review Committee Report P162 (www.altamontsrc.org/alt_doc/p162).

Smallwood, K. S., C. G. Thelander, M. L. Morrison and L. M. Rugge. 2007. Burrowing owl mortality in the Altamont Pass Wind Resource Area. Journal of Wildlife Management 71:1513-1524.

Smallwood, K. S., L. Neher, and D. A. Bell. 2009a. Map-based repowering and reorganization of a wind resource area to minimize burrowing owl and other bird fatalities. Energies 2009(2):915-943. http://www.mdpi.com/1996-1073/2/4/915

Smallwood, K. S., L. Rugge, and M. L. Morrison. 2009b. Influence of Behavior on Bird Mortality in Wind Energy Developments: The Altamont Pass Wind Resource Area, California. Journal of Wildlife Management 73:1082-1098.

Smallwood, K. S., L. Neher, D. Bell, J. DiDonato, B. Karas, S. Snyder, and S. Lopez. 2009c. Range Management Practices to Reduce Wind Turbine Impacts on Burrowing Owls and Other Raptors in the Altamont Pass Wind Resource Area,

California. Final Report to the California Energy Commission, Public Interest Energy Research – Environmental Area, Contract No. CEC-500-2008-080. Sacramento, California. 183 pp.
http://www.energy.ca.gov/2008publications/CEC-500-2008-080/CEC-500-2008-080.PDF

Smallwood, K. S., D. Bell, S. A. Snyder and J. DiDonato. 2010. Novel scavenger removal trials increase estimates of wind turbine-caused avian fatality rates. Journal of Wildlife Management 74:1089-1097.

A2

Livermore Area
Recreation & Park District
*An independent special district*

4444 East Ave., Livermore, CA 94550-5053
(925) 373-5700 • www.larpd.dst.ca.us

**General Manager**
Timothy J. Barry

April 11, 2013

Sandra Rivera, Assistant Planning Director
ATTN: AWI Permit Modification EIR
Alameda County Community Development Agency
224 West Winton Avenue, Room 111
Hayward, California 94544

Dear Ms. Rivera,

Thank you for the Notice of Availability of a Draft Environmental Impact Report for Modifications to Existing (Year 2005) Conditional Use Permits- Altamont Winds Inc., dated March 6, 2013. The Livermore Area Recreation and Park District (LARPD) owns a section of park property (Brushy Peak) that is adjacent to the windmills in question. A2-1

Our objection to this proposed change is the removal of the winter seasonal shutdown requirement. The windmills are currently shut down between November 1 through February 15 to minimize raptor strikes, as this is the time when raptors are migrating and moving around to new sites in this raptor-dense area and throughout the Bay Area. The draft EIR states (on page 3.2-31) that should this alteration in the project (and the project as a whole) be allowed, it will result in a 60% increase in avian fatalities. As managers of a preserve located squarely in the project area, we take strong opposition to the removal of the winter shutdown requirement. A2-2

As for the removal of the phased decommissioning requirement, we have slightly less of a concern. As shown on pages ES-2 and 3, Alternative 1 would be the most environmentally sound option and, therefore, this is the option we support. We also support, to a lesser degree, Alternative 2. We do not support the other alternatives as they would allow these older and deadlier windmills to keep operating longer, resulting in more avian deaths. A2-3 A2-4 A2-5

Sincerely,

Timothy J. Barry
General Manager

CONTRA COSTA
WATER DISTRICT

1331 Concord Avenue
P.O. Box H2O
Concord, CA 94524
(925) 688-8000 FAX (925) 688-8122
www.ccwater.com

A3



April 12, 2013

***VIA email: sandra.rivera@acgov.org***
***Hard Copy to Follow***

Ms. Sandra Rivera, Assistant Planning Director
ATTN: AWI Permit Modification EIR
Alameda County Community Development Agency
224 W. Winton Ave., Suite 110
Hayward, CA 94544

**Subject: Receipt of Request for Comments on a Draft EIR on the Proposed Modifications to the Conditional Use Permit on the Altamont Winds Project (File No. PLN 2011-00102)**

Dear Ms. Rivera:

The Contra Costa Water District (CCWD) is in receipt of request for comments on a Draft Environmental Impact Report (EIR) dated March 6, 2013 on the proposed conditional use permit modifications for the Altamont Winds (AWI) Project. The proposed project involves changes to the project conditional use permit related to operational and decommissioning schedules for the site's 828 existing wind turbines. Noted also is that these turbines are also intermixed with turbines not owned by AWI. Decommissioning consists of removing all the existing turbines owned by AWI. A3-1

CCWD's concerns are mainly focused on the potential impact of the decommissioning the existing turbines with a consequent potential adverse effect on CCWD conservation property in the Altamont Winds project area. These areas are sensitive to potential biological impacts. Projects proposed in the vicinity must be consistent with the mitigation requirements of the conservation areas. Attached is a map showing CCWD conservation property. A3-2

The applicant needs to advise CCWD if its project activities would take place on CCWD conservation property. If so, CCWD permission must first be obtained.

Sandra Rivera
AWI Permit Modification EIR
Alameda County Community Development Agency
April 12, 2013

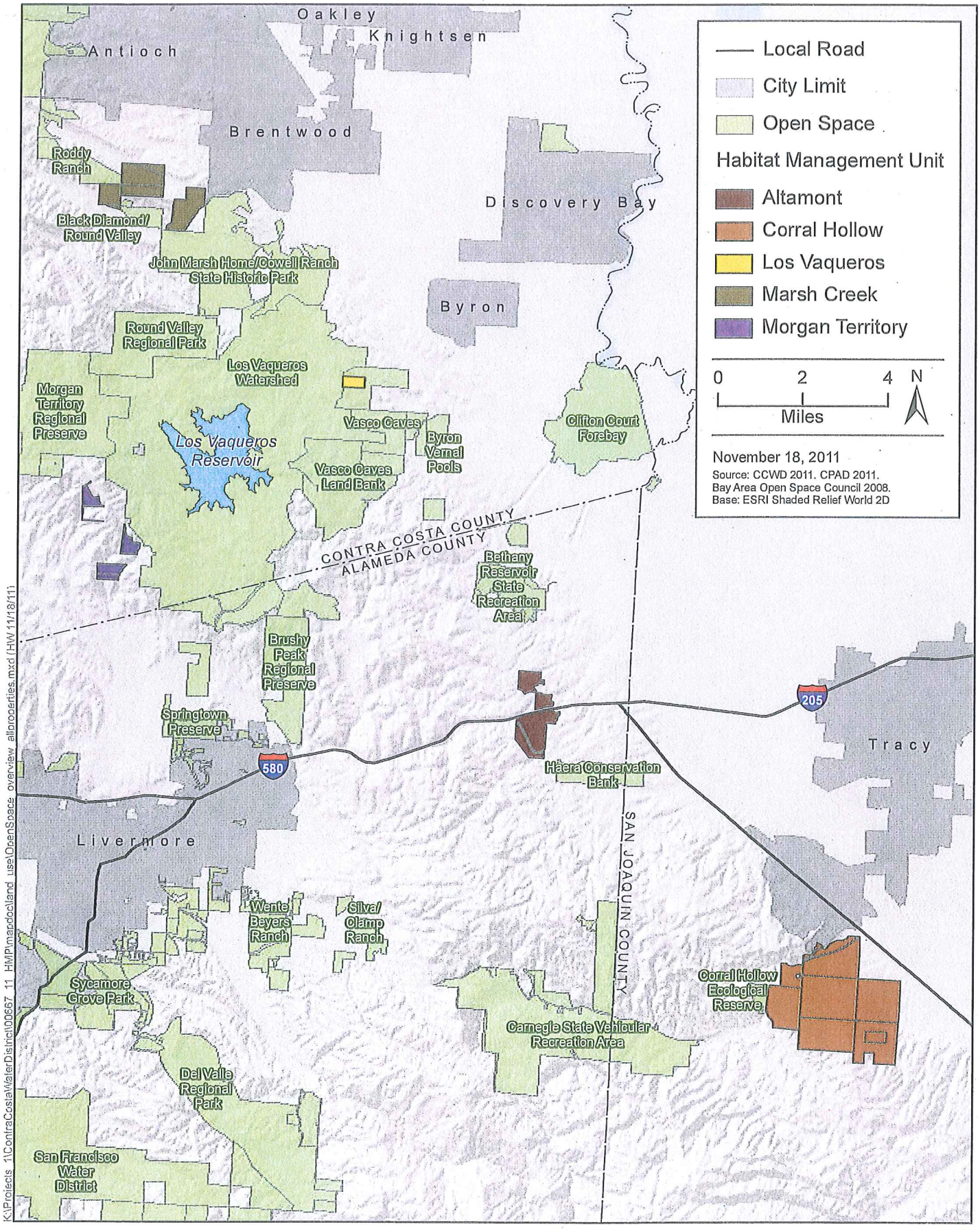
Please contact me at CCWD (925) 688-8119 should you have further questions.

Sincerely,

Mark A. Seedall

Mark A. Seedall
Principal Planner

MAS/jmt/rlr

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ICF INTERNATIONAL

**Los Vaqueros Expansion Project**
**Open Space Near Habitat Management Units**

A4

# United States Department of the Interior

FISH AND WILDLIFE SERVICE
Pacific Southwest Region
2800 Cottage Way, Suite W-2606
Sacramento, California 95825

In Response Reply To:
FWS/R8/MB -SP

APR 19 2013

Mrs. Sandra Rivera
County of Alameda
244 W. Winton Avenue, Room 111
Hayward, CA 94544

Dear Mrs. Rivera:

The U.S. Fish and Wildlife Service (Service) has reviewed the Draft Environmental Impact Report (DEIR) for the Modifications to Existing (Year 2005) Conditional Use Permits (Project) for the Altamont Winds Inc. (AWI). Our review is in the context of our legal mandate and trust responsibility to maintain healthy migratory bird populations for the benefit of the American public pursuant to the Migratory Bird Treaty Act Migratory Bird Treaty Act (16 U.S.C. § 703 et seq.; MBTA) and the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d; BGEPA). A4-1

The Migratory Bird Treaty Act (16 U.S.C. § 703 et seq.; MBTA) prohibits the taking, killing, possession, transportation and importation of migratory birds, their eggs, parts, and nests, except when authorized by the Department of Interior. Because MBTA does not provide a specific mechanism to permit "incidental" take, it is important for proponents to work proactively with the Service to avoid and minimize take. While MBTA has no provision for allowing an "incidental" take, it must be recognized that some birds may be killed at renewable energy developments even if all reasonable measures to avoid it are implemented. A4-2

The Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d; BGEPA) further protects eagles from "take", where take is defined as to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, disturb individuals, their nests and eggs. "Disturb" was defined in 2007 (72 FR 31132) as "to agitate or bother a bald or golden eagle to a degree that causes…injury to an eagle, reduced productivity, or nest abandonment…" In 2009, two new permit rules were created for eagles. 50 CFR 22.26 can authorize limited take of bald (*Haliaeetus leucocephalus*) and golden eagles (*Aquila chrysaetos*) when the take is associated with, but not the purpose of an otherwise lawful activity, and cannot practicably be avoided. A4-3

The DEIR states that "AWI is requesting modification of the existing CUPs to alter the schedule for permanent shutdown of existing wind turbines in the APWRA [and] removal of the winter seasonal shutdown requirement." The DEIR Project Alternative 1, also identified as the Environmentally Superior Alternative, offers the proposal of continued seasonal shutdowns. The existing CUPs require AWI to permanently cease operations and remove 10% of 920 turbines by 2009, another 25% by September 30, 2013, an additional 50% by September 30, 2015, and the A4-4

remaining 15% of turbines by September 30, 2018. In addition the existing CUPs require winter seasonal shutdown. AWI currently has removed 10% of the 920 operating turbines leaving 828 turbines operating in the APWRA. Based on a quantitative analysis of impacts presented in the EIR, it is clear that Alternative 1 will result in the reduced numbers of avian deaths caused by wind turbine operation. A4-4 cont.

The Service recommends that Alameda County continue the CUP requirement of a seasonal shutdown in light of the best available science and recent Altamont Scientific Review Committee (SRC) deliberations. The 3.5 months of seasonal shutdown during the winter period have been shown to be an effective method to reduce avian fatality for golden eagles and for the red-tailed hawk, (ICF, 2013). We also recommend the retention of the current required schedule, as described above, for AWI's permanent shutdown of existing wind turbines. A4-5 A4-6

As eagles have been identified as being at risk throughout the Altamont Pass Wind Resource Area, we strongly encourage AWI to refer to the Service's Eagle Conservation Plan Guidance (Service 2012) and to apply for an eagle take permit. The Service regards voluntary adherence and early communication (which includes sharing records such as results of studies, audits, monitoring, avian and bat protection plans (ABPPs) and other useful documents) as evidence of due care with respect to avoiding, minimizing, and mitigating significant adverse impacts to species protected under the MBTA and BGEPA. The removal of turbines and seasonal shutdowns provide a viable opportunity to minimize and mitigate impacts to eagles and other migratory birds in the project area. Conversely, failure to remove hazardous turbines and failure to continue seasonal shutdowns demonstrates a lack of due care. A4-7

In conclusion, the Service recommends Alameda County select Alternative 1 which continue to implement winter shut downs and require the schedule for AWI's permanent shutdown of existing wind turbines to be retained. A4-8

For additional information or if you have any questions, please contact Ms. Heather Beeler at Heather_Beeler@fws.gov or 916/414-6651.

Sincerely,

Deputy Regional Director

cc: William Condon, California Department of Fish and Wildlife, Renewable Energy Branch
Jill Birchell, U.S. Fish and Wildlife Service, Office of Law Enforcement

References:

ICF. 2013. Altamont Pass Wind Resource Area Bird Fatality Study, Bird Years, 2005-2011. Alameda Community Development Agency. M96

U.S. Fish and Wildlife Service, January 2012. Eagle Conservation Plan Guidance, Module 1 – Land-based Wind Energy

State of California – The Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Bay Delta Region
7329 Silverado Trail
Napa, CA 94558
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www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

A5

April 19, 2013

Mrs. Sandra Rivera
County of Alameda
244 W. Winton Avenue, Room 111
Hayward, CA 94544
sandra.rivera@acgov.org

Dear Mrs. Rivera:

Subject: Modifications to Existing (Year 2005) Conditional Use Permits – Altamont Winds Inc., Draft Environmental Impact Report, SCH #2012062060, Alameda County

The California Department of Fish and Wildlife (CDFW) has reviewed the draft Environmental Impact Report (EIR) for the Modifications to Existing (Year 2005) Conditional Use Permits (Project) for the Altamont Winds Inc. (AWI).

**Project Location and Description**

A5-1

The proposed 14,196-acre Project area is located in the Alameda County portion of the Altamont Pass Wind Resource Area (APWRA) in the Altamont Hills of eastern Alameda and Contra Costa counties in Northern California. The Project is within about 22 square miles of the 75-square-mile APWRA.

The Project is requesting modifications to the existing Conditional Use Permits (CUP) to alter the schedule for permanent shutdown of existing wind turbines in the APWRA. The Project consists of the continued operation of the existing turbines with a combined generation capacity of 85.8MW through December 2015, removal of the winter seasonal shutdown requirement, and decommissioning of the existing turbines and AWI's share of related APWRA infrastructure by September 2018.

The existing CUPs require AWI to permanently cease operations and remove 10% of 920 turbines by 2009, another 25% by September 30, 2013, an additional 50% by September 30, 2015, and the remaining 15% of turbines by September 30, 2018. In addition the existing CUPs require winter seasonal shutdown. AWI currently has removed 10% of the 920 operating turbines leaving 828 turbines operating in the APWRA.

**Department Jurisdiction**

A5-2

Trustee Agency Authority: CDFW is a Trustee Agency with responsibility under the California Environmental Quality Act (CEQA) for commenting on projects that could impact plant and wildlife resources. Pursuant to Fish and Game Code Section 1802, CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native

plants, and the habitat necessary for biologically sustainable populations of those species. As a Trustee Agency for fish and wildlife resources, CDFW is responsible for providing, as available, biological expertise to review and comment upon environmental documents and impacts arising from project activities, as those terms are used under CEQA (Division 13 [commencing with Section 21000] of the Public Resources Code). A5-2 cont.

Responsible Agency Authority: CDFW has regulatory authority over projects that could result in the "take" (Fish and Game Code § 86) of any species listed by the State as threatened or endangered, pursuant to Fish and Game Code Section 2050. If the Project could result in the "take" of any species listed as threatened or endangered under the California Endangered Species Act (CESA), CDFW may need to issue an Incidental Take Permit (ITP) for the Project. CEQA requires a Mandatory Finding of Significance if a project is likely to substantially impact threatened or endangered species (Sections 21001{c}, 21083, Guidelines Sections 15380, 15064, 15065). Impacts must be avoided or mitigated to less-than-significant levels unless the CEQA Lead Agency makes and supports a Statement of Overriding Consideration (SOC). The CEQA Lead Agency's SOC does not eliminate the Project proponent's obligation to comply with Fish and Game Code Section 2050.

Bird Protection: CDFW has jurisdiction over actions which may result in the disturbance or destruction of active nest sites or the unauthorized "take" of birds. Fish and Game Code sections that protect birds, their eggs and nests include, sections 3503 (regarding unlawful "take," possession or needless destruction of the nest or eggs of any bird), 3503.5 (regarding the "take," possession or destruction of any birds-of-prey or their nests or eggs), and 3513 (regarding unlawful "take" of any migratory non-game bird). In the event vegetation removal is planned, it is recommended that appropriate avoidance and minimization measures for raptors and other nesting birds potentially present in the Project site vicinity be addressed in the finalized CEQA document. A5-3

**Biological Resources**

The Project has the potential to impact state-listed species such as the federally and state threatened California tiger salamander (*Ambystoma californiense*), the federally endangered and state threatened San Joaquin kit fox (*Vulpes macrotis mutica*), the federally and state threatened Alameda whipsnake (*Masticophis lateralis euryxanthus*), and the following state species of special concern: western pond turtle (*Emys marmorata*), western burrowing owl (*Athene cunicularia*), and American badger (*Taxidea taxus*). The Project is within federally designated critical habitat for Alameda whipsnake (*Masticophis lateralis euryxanthus*), longhorn fairy shrimp (*Branchinecta longiantenna*), and California red-legged frog (*Rana aurora draytonii*). A5-4

Please be advised that a CESA ITP would be warranted if the Project has the potential to result in take of species of plants or animals listed under CESA. The Project area includes locations known to be inhabited by species listed as either threatened or endangered under both the federal Endangered Species Act and CESA. Issuance of a CESA Permit is subject to CEQA; therefore, a CEQA document supporting the issuance of a CESA ITP would need A5-5

to specify impacts, mitigation measures, and a mitigation monitoring and reporting program. CDFW recommends early consultation if the Project will impact CESA listed species (see CEQA Guidelines, Section 15380). More information about the CESA permitting process can be found on the CDFW website at http://www.dfg.ca.gov/habcon/cesa/. A5-5 cont.

The decommissioning and restoration activities described within the draft EIR include removing concrete footing to a 3-foot depth, removing gravel, filling any holes or trenches with native soil and reseeding, use of small mobile cranes, forklifts, flatbed trucks, excavators with a jackhammer and bucket, and extensive grading for recontouring and road decommissioning. These activities are likely to result in "take" of California tiger salamander and Alameda whipsnake and an ITP is warranted. CDFW recommends that the Project obtain an ITP for California tiger salamander and Alameda whipsnake. A5-6

*Mitigation Measure BIO-1*

BIO-1 states that "Grading will be restricted to the minimum area necessary around each turbine to accomplish the restoration goals." Please be advised that grading within habitat of the California tiger salamander is likely to result in "take". A5-7

*Mitigation Measure BIO-2*

BIO-2 states "a Grassland Restoration Plan will be developed in coordination with CDFW;" however, the impacts associated with the remediation plan proposed will result in ground disturbance and much of the Project footprint is within the immediate or dispersal habitat of several special-status species. CDFW recommends stronger, well derived, site-specific biological standards for the restoration of grassland plant communities. rather than the criteria "the restoration will be considered successful if no bare areas larger than 250 square feet are present, the site contains a mixture of native and non-native plant species, and no invasive species (unless they are already present in the surrounding area) are present." CDFW recommends the criteria be restated to "the restoration will be considered successful if the percent cover for the restored areas is 70% absolute cover of the planted/seeded species compared to the reference sites percent absolute cover. No more than 5% relative cover of the vegetation in the restoration areas shall consist of species designated as invasive plants in Cal-IPC's California Invasive Plant Inventory Database (http://www.cal-ipc.org)". A5-8

CDFW is available to provide further assistance in the preparation of a Grassland Restoration Plan and we recommend the Grassland Restoration Plan be developed with our coordination and subject to CDFW approval. Please see the final paragraph for agency contact information. A5-9

In the interim, CDFW recommends the following elements be included in the Grassland Restoration Plan: A5-10

> AWI shall pre-designate each restoration area for establishment of a specific native vegetation community, based on slope, aspect, hydrological conditions, and adjacent native vegetation. The seed mix for each restoration site shall be tailored to achieve the species composition of the pre-designated vegetation community. The

distribution of vegetation communities within the restoration area shall be roughly proportional to any native vegetation communities impacted. Following restoration, the species composition of the restoration site(s) shall closely match that of the reference site(s). A5-10 cont.

Seed mixes shall be tailored to closely match that of the reference site(s) and should include native species sourced within the Project or within 50 miles of the Project Area.

To the maximum extent feasible, topsoil shall be salvaged from within on-site work areas prior to construction. Imported fill soils shall be limited to weed-free topsoil similar in texture, chemical composition and pH to soils found at the reference site. Pre-project mapping and surveys should focus on invasive species presence in the current footprint and rigorous measures should be proposed to prevent introduction of new invasive species and prevent the spread of areas with existing invasions.

AWI shall be responsible for monitoring and maintaining the restored areas for a minimum of three years and until success criteria have been met.

Gravel shall be removed from restored areas.

Reclaimed roads shall be restored in such a way as to permanently prevent vehicular travel.

*Mitigation Measure BIO-3* A5-11

BIO-3 states that "a qualified biologist (as determined by Alameda County) will conduct field surveys within decommissioning work areas and the immediately adjacent areas to determine the potential presence of habitat for special-status plant and wildlife species. AWI will submit a report documenting the survey results to Alameda County for review and approval, prior to conducting any decommissioning activities" and that "the report will outline where additional species and/or habitat-specific mitigation measures (as required under Mitigation Measures BIO-4 through BIO-15) are required." The draft EIR must first determine and disclose the impacts and then present biological mitigation measures, such as avoidance, minimization, and potential habitat compensation, in order to conclude that the impacts have been mitigated to less than significant levels. Currently this measure states that the surveys will disclose any impacts after project approval and/or immediately prior to construction.

The draft EIR should include measures which mitigate the impacts to state-listed species to levels less-than-significant. The draft EIR currently defers development of a full impact assessment for special-status species to a report submitted in consultation with the Lead Agency after Project approval and prior to construction. CDFW does not believe the avoidance and minimization measures included in the draft EIR are adequate to fully mitigate for impacts to species listed pursuant to CESA. In order for CDFW to provide mitigation measures to fully mitigate the impacts to state-listed species, a complete impact assessment must be provided and should be included in the CEQA document. As stated

above, issuance of a CESA Permit is subject to CEQA documentation; therefore, a CEQA document supporting the issuance of a CESA ITP should specify impacts, mitigation measures, and a mitigation monitoring and reporting program. A5-11 cont.

*Mitigation Measure BIO-6* A5-12

BIO-6 states that "The botanists will conduct floristic surveys that follow the CDFW botanical survey guidelines." CDFW recommends that specific protocols and methods be disclosed in order for CDFW to assess if the timing and the methodologies are appropriate to the species and habitat present, as well as to provide adequate information to inform the restoration goals.

*Mitigation Measure BIO-9* A5-13

BIO-9 states that "If individuals are found, work will not begin until they (*California tiger salamander, red-legged frog, and foothill yellow-legged frog*) are moved out of the decommissioning and reclamation activities zone to a USFWS/CDFW-approved relocation site" The draft EIR also states that "a qualified biologist possessing a valid ESA Section 10(a)(1)(A) permit or who is USFWS approved under an active biological opinion, will be contracted to trap and move California tiger salamanders… if individuals of these species are found onsite (including animals trapped in a trench) and cannot or do not move offsite on their own." The relocation activities described in BIO-9 are a form of "take" pursuant to Fish and Game Code
§ 86 and an ITP would be warranted.

CDFW recommends the following avoidance measures be included in order to minimize impacts to California tiger salamander, red-legged frog, and foothill yellow-legged frog:

> Ground disturbing activities shall be limited to dry weather between April 15 and October 31. No work shall occur during wet weather. Wet weather is defined as when there has been ¼-inch of rain in a 24-hour period. Ground disturbing activities halted due to wet weather may resume when precipitation ceases and the National Weather Service
> 72 hour weather forecast indicates a 30% or less chance of precipitation. No work shall occur during a dry-out period of 48 hours after the above referenced wet weather.
>
> All project activity shall terminate 30 minutes before sunset and shall not resume until
> 30 minutes after sunrise during the migration/active season from November 1 to June 15. Sunrise and sunset times are established by the U.S. Naval Observatory Astronomical Applications Department for the geographic area where the project is located.

> To prevent inadvertent entrapment of the Covered Species during construction all excavated, steep-walled holes or trenches more than 6-inches deep will be provided with one or more escape ramps constructed of earth fill or wooden planks and will be inspected by a qualified biologist prior to being filled.
>
> Habitat of similar or better quality shall be permanently protected and managed for the listed species.

A5-13 cont.

Additional minimization, avoidance and mitigation measures may be necessary in order to mitigate to less than significant levels but CDFW is unable to determine the extent of Project impacts because a detailed impact assessment has been deferred until after Project approval (BIO-3).

A5-14

*Mitigation Measure BIO-10*

A5-15

The project as proposed is within habitat of Alameda whipsnake and decommissioning and reclamation activities have the potential to result in take. CDFW recommends an ITP is secured prior to conducting the decommissioning and reclamation activities.

In addition to the measures in BIO-10, CDFW recommends the following measure is included in order to minimize impacts to Alameda whipsnake:

> Vegetation shall be removed prior to grading. Prior to clearing and grubbing operations, the qualified biologist shall clearly mark vegetation within the Project area that shall be avoided. Vegetation outside the Project area shall not be removed. Where possible hand tools (e.g., trimmer, chain saw, etc.) shall be used to trim or remove vegetation. All vegetation removal shall be monitored by the qualified biologist to minimize impacts to the whipsnake.

Additional minimization and avoidance and mitigation measures may be necessary in order to mitigate to less than significant levels but CDFW is unable to determine the extent of impact because a detailed impact assessment has been deferred until after Project approval (BIO-3).

A5-16

*Mitigation Measure BIO-12*

A5-17

BIO-12 states that preconstruction surveys are to take place no more than 30 days before the beginning of ground disturbance and that the written results will be submitted to USFWS within one week of the completion of the surveys prior to ground disturbance. CDFW recommends that surveys done for the San Joaquin kit fox follow the *USFWS San Joaquin Kit Fox Survey Protocol for the Northern Range, 1999*. If results from these surveys indicate the presence of kit fox CDFW recommends an ITP is secured prior to conducting the decommissioning and reclamation activities.

**Seasonal Shutdown Exemption**

A5-18

The draft EIR requests "modification of the existing CUPs to lift the requirements to shut down turbines during the winter months." The draft EIR Project Alternative 1 offers the

proposal of continued seasonal shutdowns. CDFW requests the Lead Agency continue the CUP requirement of a seasonal shutdown in light of the best available science and recent Scientific Review Committee (SRC) deliberations. The 3.5 months of seasonal shutdown during the winter period have been shown to be an effective method to reduce avian fatality for fully protected Golden eagles and for the red-tailed hawk, a migratory raptor species (ICF, 2013). A5-18 cont.

Removal of the seasonal shutdown requirements would be inconsistent with the current Conditional Use Permit requirements of the settling parties. Although settling and non-settling parties have different requirements as outlined in their respective Avian Wildlife Protection Program & Schedule, each schedule provides comparable requirements to achieve a reduction in avian mortalities. CDFW does not support removal of the seasonal shutdown requirement and recommends the draft EIR be modified to retain the seasonal shutdown requirement.

Thank you for the opportunity to provide input on the draft EIR on this renewable energy project. CDFW supports the development of renewable energy resources for projects which are in compliance with the existing state and federal laws and acts and when measures are implemented which effectively avoid or minimize impacts to native species and their habitats and sufficiently mitigate for unavoidable impacts to ensure they do not preclude conservation of these biological resources. A5-19

If you have any questions, please contact Ms. Danielle Roach, Environmental Scientist, at Danielle.Roach@wildlife.ca.gov or (707) 944-5571; or Mr. Craig Weightman, Senior Environmental Scientist, at Craig.Weightman@wildlife.ca.gov or (707) 944-5577.

Sincerely,

Scott Wilson
Acting Regional Manager
Bay Delta Region

cc: State Clearinghouse
Stephanie Jentsch, U.S. Fish and Wildlife Service
Heather Beeler, U.S. Fish and Wildlife Service
Danielle Roach, California Department of Fish and Wildlife – Bay Delta Region
Craig Weightman, California Department of Fish and Wildlife – Bay Delta Region
Stuart Itoga, California Department of Fish and Wildlife – Renewable Energy Branch
William Condon, California Department of Fish and Wildlife – Renewable Energy Branch

**References**

ICF. 2013. Altamont Pass Wind Resource Area Bird Fatality Study, Bird Years, 2005-2011. Alameda Community Development Agency. M96.

S. Morey. 2000. California Wildlife Habitat Relationship System, Wildlife Task Group; Coast Horned Lizard California Department of Fish and Game, Sacramento, California; R029.

Smallwood, K Shawn, Lee A. Neher, Douglas A. Bell, Joseph E DiDonato, Brian R. Karas, Sara A. Snyder, and Salvador R. Lopez. 2008. Range Management Practices to Reduce Wind Turbine Impacts on Burrowing Owls and Other Raptors in the Alatamont Pass Wind Resource Area, California. California Energy Commission, PIER Energy Related Environmental Research Program. CEC 500 2008 080.

Smallwood, K. Shawn, and B. Karas. 2009. Avian and bat fatality rates at old-generation and re-powered wind turbines in California. The Journal of Wildlife Management 73:1062-1071.

# Written Comments—Organizations

# SRC Comments on AWI Draft Environmental Impact Report to Modify Conditional Use Permits

**Alameda County APWRA Scientific Review Committee**

## I. SRC Consensus Input

The Alameda County Scientific Review Committee (SRC) considered the Draft Environmental Impact Report for AWI's proposed CUP modifications (P263_AWI CUP Mods DEIR) at its March 2013 meeting. Alameda County (in P264_Alameda County Memo on Questions for AWI DEIR Review) had asked the SRC to provide input on the report's methodology, assumptions and proposed mitigations. A presentation on the draft Report was provided by ICF (P267_ICF AWI DEIR Presentation Slides).

**The SRC reached consensus agreement on the following input:**

- Monitoring Team data includes winter shutdown, so the impact of the project would actually be higher. Include a disclaimer and consider changing the analysis so that it includes winter shutdown months as an operating month in the analysis. O1-1
- Given that fatality trends are at or about 45%, removing seasonal shutdown as a management action can't be justified at this point. The SRC also agrees with the report's conclusion that the proposed project would have a significant impact. O1-2
- The report should explore or discuss other mitigations, such as hazardous turbine removals and US Fish and Wildlife Service mitigations for golden eagles. O1-3

## II. Comments by Individual SRC Members

Comments submitted by individual members of the Alameda County Scientific Review Committee (SRC) follow. These comments are individual and do not reflect the opinion of the entire Committee. Commenters are listed in alphabetical order.

**Joanna Burger**
**Jim Estep**
**Sue Orloff**
**Julie Yee**

## Joanna Burger

Sandy's Questions to the SRC

METHODOLOGY

**O2**

**From:** Singh, Nilma, CDA
**To:** Rivera, Sandra, CDA; Young, Andrew, CDA
**Subject:** FW: Submission to the public record; East County Board of Zoning meeting March 28th 2013
**Date:** Wednesday, March 27, 2013 9:51:27 AM

Fyi
I have printed copy for the board)

**From:** richard cimino [mailto:yellowbilledtours@gmail.com]
**Sent:** Wednesday, March 27, 2013 9:45 AM
**To:** Singh, Nilma, CDA; Doug Bell; Shawn Smallwood; richard s. cimino
**Subject:** Submission to the public record; East County Board of Zoning meeting March 28th 2013

March 27, 2013
Dear Nilma Singh,
Please submit my letter to the East County Board of Zoning Adjustments (ECBZA) opposing the AWI Permit Modification item 9, which is on the March 28 meeting agenda.
Unfortunately I am out of the area on March 28, 2013.

Dear Commissioners

The Alameda County Ohlone Audubon Society with 400 members is opposed to granting AWI permit modification request. O2-1
We base our opposition to the AWI request per the results of yesterday's ( March 26, 2013 ) Altamont Pass Wind Resources Area Scientific Review Committee ( ***included below item 3 , eleven lines of comments***)
I submit to you the minutes and final comments from the Altamont Pass Wind Resource Area Scientific Review Committee for your consideration to deny a 12 month operational permit to AWI.
The Ohlone Audubon Society membership opposes the AWI request due to the continued death to Golden Eagles and other raptors, as well as countless song bird species by the operation of AWI Turbines.
Per the SRC item 3, lines 8 -11 O2-2

***"removing seasonal shutdown as a management action can't be justified at this point. The SRC also agrees with the report's conclusion that the proposed project would have a significant impact.***
***? The report should explore or discuss other mitigations, such as hazardous turbine removals and US Fish and Wildlife Service mitigations for golden eagles."***
The winter shut down was instituted due to the exceptional large number of raptors and Golden Eagles deaths. There was such concern by the scientific community then and still today that there is little knowledge on the source of the birds APWRA Turbine's are killing. Are these local resident Eagles and raptors ? Or is the APWRA killing traditional migrating winter birds from across the northern hemisphere ?
This year 2013, the East Bay Regional Parks has begun a Golden Eagle nesting survey to determine just how low the Alameda County Golden Eagle resident population has been reduced. O2-3
This survey is being conducted by Douglas A. Bell, PH. D. Wildlife Program Manager Planning, Stewardship & GIS Services, EBRP. The survey is staffed by local Alameda County citizens and nationally respected Ornithologist's.
In addition the Audubon Eastern Alameda County Christmas Bird Count (December each year) is reporting year after year decreasing raptors and Golden Eagle numbers.
Also for you to consider is the fact that the California Attorneys Generals Office APWRA

O2-3

Repowering agreement at completion requires a five year study period and a two year review by the Scientific Review Board to consider if repowering has achieved its goals. Repowering is only two years into its retro-fit. There five more years of this process to be accomplished. A premature granting of a 12 moth operation permit can skew the findings and the certification of repowering effort.
The Ohlone Audubon urges the ECBZA to be patient and give the process of repowering and the EBRP population survey time to conclude its findings.
Respectfully Yours
Rich Cimino,
Eastern Alameda County Conservation Chair Ohlone Society

***Today's Topics:***

***1. Altamont SRC March 25, 2013 Meeting Outcomes (altamontsrcannounce_altamontsrc.org@altamontsrc.org)***

***----------***

***Message: 1***
***Date: Tue, 26 Mar 2013 16:43:30 +0000***
***From: altamontsrcannounce_altamontsrc.org@altamontsrc.org***
***Subject: [AltamontSRC Announce] Altamont SRC March 25, 2013 Meeting Outcomes***
***To: "altamontsrcannounce_altamontsrc.org@altamontsrc.org" <altamontsrcannounce_altamontsrc.org@altamontsrc.org>***
***Message-ID: <EC580CA7B97CA348857268B37081A5C607608051@e2k10mbx01.saclink.csus.edu>***
***Content-Type: text/plain; charset="us-ascii"***

***Altamont Pass Wind Resource Area Scientific Review Committee:***
***Key Outcomes***
***March 2013 Meeting***

***The Altamont Pass Scientific Review Committee (SRC) met in Oakland on March 25, 2013. The following summarizes action items and SRC recommendations from the meeting.***

***1. 2005-2011 Bird Fatality Report***
***The SRC reviewed the Monitoring Team's draft bird fatality report incorporating data from the 2011 bird year (Oct. 1, 2011-Sept. 30, 2012).***

***The Monitoring Team will be conducting a database audit.***

***The SRC agreed to the recommended additional next steps:***

***? Mike Morrison will join Julie Yee on the SRC Analysis Subcommittee;***
***? The Analysis Subcommittee will review the Monitoring Team's analytical framework; and***
***? The final report will incorporate the outcomes from the audit and Analysis Subcommittee review.***

***Separate from the final report, the SRC asked the Analysis Subcommittee to broadly consider Shawn Smallwood's March 2013 fatality analysis.***

***2. Seasonal Shutdown***
***SRC Member Julie Yee presented the framework for her seasonal shutdown models.***

***The SRC agreed that the model has value as an approach to potentially identify a seasonal shutdown signal.***

***The SRC agreed that Julie will include bird use as a variable in her model runs. She will pursue inclusion of other variables as time and resources permit:***
***? Whether fatalities spike when shutdown turbines are turned on***
***? Underlying seasonal effects***
***? Geographic variation at the BLOB level***
***? Whether or not blades are locked down when the turbine is not operating and***
***? Differences in megawatts***

***3. SRC Input on AWI Proposed CUP Modifications Draft Environmental Impact Report***
***The SRC reviewed the Draft Environmental Impact Report for AWI's proposed CUP modifications. Alameda County has asked the SRC to provide input on the report's methodology, assumptions and proposed mitigations.***

***The SRC agreed on the following consensus input:***
***? Monitoring Team data includes winter shutdown, so the impact of the project would actually be higher. Include a disclaimer and consider changing the analysis so that it includes winter shutdown months as an operating month in the analysis.***
***? Given that fatality trends are at or about 45%, removing seasonal shutdown as a management action can't be justified at this point. The SRC also agrees with the report's conclusion that the proposed project would have a significant impact.***
***? The report should explore or discuss other mitigations, such as hazardous turbine removals and US Fish and Wildlife Service mitigations for golden eagles.***

_
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Golden Gate
Audubon Society

Santa Clara Valley
Audubon Society

O3

April 19, 2013

Via Email and US Mail
Sandra Rivera, Asst. Planning Director
ATTN: AWI Permit Modification EIR
Alameda County Community Development Agency
224 W. Winton Avenue, Suite 110
Hayward, CA 94544

RE: Comments on the Draft Environmental Impact Report, Modifications to Existing (Year 2005) Conditional Use Permits – Altamont Winds, Inc. (AWI)

Dear Sandra:

These comments are submitted on behalf of the Golden Gate Audubon Society and the Santa Clara Valley Audubon Society (collectively, "Audubon") regarding the above-referenced Draft Environmental Impact Report (DEIR). As discussed further below, the DEIR is deficient because it does not adequately describe the project or its conflicts with state and federal laws, includes incomplete, vague and otherwise inadequate review of biological and cumulative impacts, and lacks adequate mitigation for the significant environmental impacts that will inevitably arise from any of the proposed alternatives. O3-1

For more than a decade, the Audubon chapters have been heavily involved in community oversight and engagement in wind turbine operations and their unfortunate and severe environmental impacts. Our chapters, along with the Mt. Diablo, Ohlone, and Marin Audubon chapters and Californians for Renewable Energy (CARE), challenged the County's reissuance of permits without environmental review and subsequently negotiated the 2007 settlement with three wind companies, of which AWI, Inc. (AWI) was not a party. Members of the Audubon chapters use and enjoy the Altamont Pass and actively bird watch, photograph and engage in other recreational activities in the APWRA. We are deeply concerned about the outcome of this project, especially given its potential to increase avian and bat mortality and further complicate monitoring, adaptive management, and repowering in the Altamont Pass.

## I. OVERVIEW OF COMMENTS

The DEIR is deficient on several levels. First, it fails to adequately describe the project. Second, it inadequately explains conflicts with existing laws and policies. Third, it's assessment of biological impacts is incomplete and inadequate and lacks adequate mitigation measures. Fourth, it fails to adequately assess the alternatives. Fifth, it inadequately assesses cumulative impacts. O3-2

This letter begins with a brief discussion of the applicable legal standards. While the DEIR touches on the applicable laws, it inadequately describes them and the conflicts created with existing laws and policies by this project.

The primary focus of our comments is on the inadequacy of the review of biological impacts. This includes not only impacts to the focal raptor species (golden eagle, red-tailed hawk, American kestrel, and burrowing owl), but also other species of bird and bats. Among its many deficiencies, the DEIR is particularly notable for its failure to discuss impacts or mitigation measures for impacts to bats. O3-2 cont.

The letter will also focus on the negative policy implications arising from the proposed project. In all, approval of the project under any alternative other than the No Project Alternative would constitute a serious policy lapse for the County. It would weaken protections for birds at a time when measures to reduce avian mortality appear to have been successful. It would disincentivize other companies that are working to repower their holdings in the Altamont. Finally, it invites substantial conflict between stakeholders, the likes of which have not been seen since the active litigation of nearly a decade ago.

## II. Legal Background

O3-3

### A. The California Environmental Quality Act

The California Environmental Quality Act, Pub. Resources Code §§ 21000 *et seq*. (CEQA) is intended to ensure that decision makers and the public are fully informed about the potential significant environmental impacts resulting from a proposed project. CEQA Guidelines § 15002(a)(1). "It is now well established that the provisions of CEQA are to be broadly interpreted in order to afford full protection of the environment." *Mount Sutro Defense Committee v. Regents of University of California* (1978) 77 Cal.App.3d 20, 35. The Legislature requires that CEQA be interpreted and implemented in "such manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language.'" (*Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 390 (*Laurel Heights*) (citations omitted)) Where significant impacts cannot be mitigated, CEQA prohibits the approval of actions that are in violation of other laws. Pub. Res. Code § 21002.1(c).[1]

CEQA requires preparation of an EIR when a project will have a significant environment and further requires measures to avoid or mitigate significant impacts whenever feasible. Pub. Res. Code §§ 21002.1, 21061, 21080(a); Cal. Code Regs. tit. 14, § 15002(a)(3). The EIR is the "heart of CEQA" and intended to ensure the Legislature's mandate that the state "take all action

[1] Specifically, Pub. Res. Code § 21002.1(c) states:

> If economic, social, or other conditions make it infeasible to mitigate one or more significant effects on the environment of a project, the project may nonetheless be carried out or approved at the discretion of a public agency if the *project is otherwise permissible under applicable laws and regulations.*

(emphasis added). Because operations which will kill protected bird species are intrinsic to the project, the project is not "otherwise permissible" under the laws and regulations discussed in this letter.

necessary to protect, rehabilitate, and enhance the environmental quality of the state." *Laurel Heights*, at 390 (internal quotations omitted). CEQA requires that a "special emphasis should be placed on environmental resources that are rare or unique to that regional and would be affected by the project." CEQA Guidelines § 15125(c); *Bozung v. Local Agency Formation Comm'n* (1975) 13 Cal.3d 263, 283. O3-3 cont.

The EIR acts as an "alarm bell" to alert the public and officials to potential changes in the environment before reaching "ecological points of no return." *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810; *see also Mount Sutro Defense Committee*, 77 Cal.App.3d at 34 (holding that environmental impacts must be considered at a planning stage where "genuine flexibility remains.") The EIR must contain facts and analysis, not just bare conclusions (*Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 568) and disclose all potentially significant adverse environmental impacts of a project. Pub.Res. Code § 21100(b)(1); CEQA Guidelines § 15126(a).

"A major function of an EIR 'is to ensure that all reasonable alternatives to proposed projects are thoroughly assessed by the responsible official.'" *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 25 713, 735 (citation omitted); *see also* Pub. Res. Code, § 21002.1, subd. (a) [purpose of EIR includes identifying alternatives to the project] The "reasonableness" of alternatives is assessed in part on their financial and physical feasibility. Pub. Res.s Code § 21061.1)

The EIR must include an analysis of cumulative impacts where a project's individual effects are ""cumulatively considerable." Pub. Res. Code § 21083(b)(2); Cal. Code Regs, tit. 14, § 15130(a). "Cumulatively considerable" means "the incremental effects of an individual projects are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects." Pub. Res. Code § 21083(b)(2); Cal. Code. Regs. tit. 14 § 15065(a)(a).

### B. The Migratory Bird Act

O3-4

The federal Migratory Bird Treaty Act (MBTA), 16 U.S.C. § 703 makes it "unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill . . . any migratory bird . . . ." The MBTA is a "comprehensive statutory prohibition" against the killing of migratory nongame birds. *Andrus v. Allard*, 444 U.S. 51, 59-60 (1979). 50 C.F.R. § 10.13 lists species protected by the MBTA and includes all North American eagles, hawks, falcons and owls, including the golden eagle, red-tailed hawk, American kestrel, and burrowing owl, which occur at Altamont Pass and which are killed by wind turbine operations there.

The MBTA is a strict liability statute, requiring no proof of intent to kill or harm the birds. *U.S. v. Corrow*, 119 F.3d 796, 805 (10th Cir. 1997); *U.S. v. Moon Lake Electric Ass'n*, 45 F.Supp.2d 1070, 1073-74 (D. Colo. 1999). A violation of the MBTA occurs each time a wind

turbine—or other activity arising from wind operations—kills or harms a migratory bird in the Altamont Pass. O3-4 cont.

### C. The Bald & Golden Eagle Protection Act O3-5

The federal Bald & Golden Eagle Protection Act (BGEPA), 16 U.S.C. § 668(a) makes it a criminal offense for anyone to "knowingly, or with wanton disregard for the consequences of his act take . . . in any manner . . . any golden eagle . . . ." Like the MBTA, the BGEPA is a "sweepingly framed probation" against take of protected eagles. *See Andrus v. Allard*, 444 U.S. at 56; *see also U.S. v. Hugs*, 109 F.3 1375, 1378 (9th Cir. 1997) (finding that "protection of bald and golden eagles serves a compelling government interest"); *U.S. v. Jim*, 888 F.Supp. 1058, 1063 (D. Ore. 1995) (holding that "the BGEPA is promotion a compelling interest in protecting the declining numbers of golden eagles."). A "take" includes "shooting, shooting at, poisoning, capturing, trapping, collecting, molesting, disturbing, wounding or killing a golden or bald eagle. 16 U.S.C. § 668(c)

While the U.S. Fish & Wildlife Service has initiated a process for considering the issuance of take permits for golden eagles, no permits have yet been issued and wind turbines that kill golden eagles are doing so in violation of the BGEPA. Notably, the DEIR provides no basis for a finding that the County can legally permit operations that it knows will violate the BGEPA.

### D. The California Fish & Game Code O3-6

Fish & Game Code § 2000 states that "[i]t is unlawful to take any bird, mammal, fish, reptile, or amphibian except as provided in this code or regulations made pursuant hereto." A "take" includes killing an animal, even if it occurs unintentionally in the course of an industrial or mechanical process. Fish & Game Code § 86; *Dept. of Fish and Game v. Anderson-Cottonwood Irrigation Dist.*, 8 Cal.App.4th 1554, 1558, 1560, 1562, 1568 (1998) (finding that fishing killed by irrigation pumps "incidental to lawful irrigation activity" were "taken" within the meaning of Fish & Game Code § 86). The DEIR fails to mention Section 2000's blanket prohibition or how the project can proceed in compliance with it. Additional provisions of the Fish & Game code apply specifically to the birds affected by this project.

Under the California Constitution, a county lacks power to override state law and the public trust. While a county can issue its own ordinances and regulations, if they conflict with state law, they are preempted and void. *See Sherwin-Williams Co. v. City of Los Angeles*, 4 Cal.4th 893, 897 (1993) In this case, because modified Alameda County's CUPs would be in significant conflict several state (and federal) laws, they would be preempted by those laws and rendered void. The entire operation under the purported permits would be illegal. O3-7

### 1. Fully Protected Species

O3-8

California Fish & Game Code § 3511(a)(a) states "[n]o provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected bird, and no permits or licenses heretofore issued shall have any force or effect for that purpose." Section 3511(b)(7) identifies the golden eagle as a fully protected bird species in California.

California Penal Code Sections 597(c), (d) and (e)(2) makes it a felony and authorizes a fine of up to $20,000 for the intentional maiming, mutilation, or torture of any bird species listed as fully protected under Fish & Game Code § 3511. Issues of a permit for the operations of turbines the County and the operator know will maim, mutilate, or kill a golden eagle at some time during the life of the operation constitutes an intentional act, and therefore violates CPC § 597. The DEIR does not discuss how the County can permit activity it knows will result in criminal behavior.

### 2. Other Fish & Game Code Provisions

O3-9

Fish & Game Code § 3503.5 prohibits the taking or destruction of eagles, hawks, falcons and owls. Section 3800(a) also states "[a]ll birds occurring naturally in California that are not resident game birds, migratory game birds, or fully protected birds are nongame birds. It is unlawful to take any nongame bird except as provided in this code or in accordance with regulations of the commission . . . ." Several species that are killed by turbines in the Altamont Pass, including golden eagles, red-tailed hawks, burrowing owls, and American kestrels are "nongame birds" within the meaning of the Fish & Game Code.

O3-10

Fish & Game Code § 3513 prohibits the killing of any nongame bird that is also protected by the federal MBTA. The Code states that "[i]t is unlawful to take or possess any migratory nongame bird as designated in the [MBTA] or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the [MBTA]". To date, there have been no regulatory exceptions to the MBTA or Fish & Game Code § 3513 granted for the killing of golden eagles, red-tailed hawks, American kestrels, or other nongame migratory species killed by wind operations at the Altamont Pass. The DEIR fails to discuss the project's conflict with this section of the code.

O3-11

Fish & Game Code § 12000(a) makes any violation of the Fish & Game Code and its regulations criminal offense, that that "[e]xcept as provided otherwise in this code, any violation of this code, or or any rule, regulation, or order made or adopted under this code, is a misdemeanor." Thus, at a minimum, wind operators are *knowingly* committing misdemeanor offenses with the killing of each migratory and fully protected bird killed by their turbines. The DEIR fails to even mention these historic and ongoing criminal violations or discuss how the County can legally proceed to permit activity it knows will result in illegal behavior.

### E. The Public Trust Doctrine

O3-12

California wildlife are protected as part of the public trust. *People v. Truckee Lumber Co.*, 116 Cal. 397, 399 (1987) (holding that "fish within our waters constitute the most important constituent of that species of property commonly designated as wild game, the general right and ownership of which is the people of the state.") The California Supreme Court has held that members of the public can assert a public trust cause of action directly against those who are harming public trust resources. *See National Audubon Society v. Superior Court*, 33 Cal.3d 419, 431 n11 (1983);*Marks v. Whitney*, 6 Cal.3d 251, 261-62 (1971) In *National Audubon Society v. Superior Court*, the California Supreme Court held that the National Audubon Society had standing to sue the Los Angeles Dept. of Water & Power for its dewatering of Mono Lake and the subsequent killing of wildlife there. *National Audubon Society v. Superior Court*, 33 Cal.3d at 431 n11. In *Marks v. Whitney*, the California Supreme Court upheld a citizen's right to sue another citizen for an alleged infringement upon the public trust. *Marks v. Whitney*, 6 Cal.3d at 260-261.

More recently, the California Court of Appeal held that members of the public can—at a minimum—bring public trust actions against the agencies responsible for the resources at issue. Notably, the DEIR does not discuss the public trust issue or the potential liability for the County and for the project applicant. Again, the DEIR fails to discuss this conflict or how the County can permit what it knows will be a significant taking of public trust resources (i.e., wildlife, including fully protected raptors).

## III. THE DEIR IS INADEQUATE AND VIOLATES CEQA.

O3-13

### A. The Project Description Is Inadequate.

#### 1. The DEIR's Discussion of Removal Requirements for Phased Decommissioning is Inadequate.

The DEIR states that AWI was required to remove 10% of its 920 turbines (i.e., 92 turbines) in 2009. DEIR, at 2-1. However, Audubon is informed and believes that AWI received credit for certain turbine removals that already occurred due to machine breakdowns and that AWI did not actually remove 92 turbines in 2009 as the DEIR leads the reader to believe. The DEIR should be revised to explain how many of AWI's turbines were actually removed in 2009, how many prior removals or shutdowns were credited to AWI, and whether the process by which any credits were assessed. Where feasible, the DEIR should state the actual number of turbines to be removed (as opposed to percentages, which can confuse the reader) and identify the specific turbines slated for removal. If credits are allotted, the DEIR should also explain that process.

The DEIR states that AWI is required to remove an additional 25% of the original 920 turbines (or 230 turbines) by September 30, 2013. *Id*. The DEIR should be revised to identify any credits that would be assessed to AWI for turbines that were already shutdown for any

O3-14

reason. The only way to ensure informed decision making is for the DEIR to identify each individual turbine that is to be taken down under the current regime and, where appropriate, identify how credits were assessed. If feasible, the same should be done for the additional 50% of the turbines (460 turbines) slated for shutdown in September 2015. O3-14 cont.

**2. The DEIR Inadequately Describes Decommissioning Activities.** O3-15

The DEIR is vague in describing how decommissioning will occur. First, the DEIR identifies that "other", unnamed regulatory requirements may change the decommissioning schedule or activities. DEIR, at 2-2. Specifically, the DEIR states that some decommissioning will be incomplete and will leave foundations or other features in place. DEIR, at 2-2. The DEIR also does not describe the impacts, if any, of abandon turbine foundations or leaving roads unreclaimed. The DEIR also vaguely describes the potential removal of AWI's share of "jointly owned ancillary windfarm components" without identify potential impacts that may arise from or as a consequence of such activity. *See id*., at 2-3.

**3. The DEIR's Descriptions of Project Need, Goals, and Objectives Are Vague and Incomplete.** O3-16

The DEIR states that the project is needed "to meet the ever-increasing demand of society and consumers for electricity from clean, renewable, and economically viable power sources."[2] DEIR, at 2.4, 4-1, etc.. While the DEIR cites to California's aggressive renewable energy goals, it notably fails to describe the tiny short-term gain garnered to renewable generation garnered by this project. Moreover, since the "no-action" alternative provides for the continued operation of the turbines until 2018, there is no net gain in power generation derived from this project under either Alternative 1 or Alternative 2. Thus, *there is no need for the project at all*, at least in so far as meeting California's renewable power generation goals by 2020.

Even the only real benefit of the project—maximizing applicant's financial gain—is shrouded in equivocation. The Project Goal section states that the project aims "to maximize electricity generation . . . and enhance economic opportunity and efficiency for potential repowering of the applicant's turbine assets." Yet, nothing in the DEIR supports the conclusion that the project will "enhance" the applicant's repowering efforts. The project applicant has made no real effort to even begin planning repowering efforts and has instead dangled the illusory promise of repowering while jockeying to squeeze more profit out of its operations by reducing necessary mitigation measures and the phased decommissioning. O3-18

For years, AWI has claimed that it is working on repowering, only to continually fail to provide any plan. Moreover, AWI has not provided any evidence that it needs the proposed

[2] The DEIR repeats the claims that AWI's power generation is "clean" throughout the DEIR. See, e.g., DEIR 2-4, 2-5, etc. The DEIR's qualifier of AWI's project as "clean" is biased and suspect; AWI's activities result in the knowing and willful illegal killing of birds protected by the MBTA, BGEPA, and Cal. Fish & Game Code. Illegal activity rarely qualifies as "clean". The DEIR would at least retain a somewhat better veneer of impartiality if it removed such promotional qualifiers. O3-17

action to repower. Finally, even if AWI's need were demonstrated, it would not provide the basis for a finding of overriding considerations, as discussed further below. The lack of evidence to support the Project Goal's claim indicates that the modification of the permits would be nothing more than a favor to AWI to maximize profits and avoid implementing protections for migratory and protected birds that AWI already agreed to in its prior permit modifications. O3-18 cont.

The Project Objectives also include very broad, promotional and specious claims. First, the DEIR claims the project will "[c]ontribute to domestic energy security and California's Renewable Energy Resources Program . . . ." DEIR, at 2-5. The miniscule additional generation derived from either the action Alternatives hardly constitutes a meaningful "contribution" to California's renewable portfolio. O3-19

Perhaps most specious is the objective to "[p]rovide significant benefits to human health, wildlife, and climate by reducing climate change/global warming-causing pollutants, reducing water usage, and by displacing toxic emissions produced by fossil fuel-fired power plants." DEIR, at 2-5. Again, nothing in the DEIR supports the claims that any of AWI's activities—let alone the tiny net, short-term power generation derived from Alternative 1 or 2—in any way "provides significant benefits" to human health, wildlife, or efforts to reduce the occurrence of climate-changing pollutants. In fact, the DEIR's concession that additional local wildlife—which are already heavily impacts by windfarm activities in the APWRA—demonstrates that this objective is at best aspirational and at worst, cynical promises intended to lead the County to make unsupported findings of overriding considerations. O3-20

Finally, the DEIR provides no information to support the objective that the project will "[c]ontinue to contribute substantially to Alameda County's economy . . ." While this objective has no direct bearing on potential environmental impacts, it appears calculated to seed a finding of overriding considerations that will be necessary to approve the CUP modifications. At a minimum, the County should require evidence of such a "substantial" contribution before taking AWI's claims as presented. O3-21

**B. The DEIR Fails to Adequately Assess Impacts to Biological Resources.** O3-22

The DEIR's analysis of impacts to biological resources suffers from poor data collection and analysis, inadequate descriptions of impacts, and under-developed mitigation measures. For example, the DEIR acknowledges that it failed to conduct surveys for special status species. It also fails to include any worthwhile information about bats, which prevents a meaningful analysis of impacts.

Perhaps most notably, the DEIR lacks adequate mitigation measures. Measures should include the use of up-to-date technology and practices, including the use of radar and adjustments to cut-in speeds now used commonly at other wind farms. The DEIR acknowledges that "[i]n limited cases, a [BGEPA take] permit may authorize the physical take of eagles, but only if *every* precaution is taken first to avoid physical take." DEIR, at 3.2-2. Notably, the DEIR O3-23

does not propose "every" feasible precaution to avoid take (e.g., radar, individual biological monitors, altering cut-in speeds, etc.). O3-23 cont.

**1. Mitigation Measure BIO-1 Is Vague, Inadequate, and Unenforceable.** O3-24

Mitigation Measure BIO-1 provides a laundry list of activities that the project applicant will purportedly take in order to ensure that impacts to sensitive biological resources will be minimized or avoided. DEIR, 3.2-19, 20. None of the promised measures are assured of implementation without (1) a qualified biologist actively monitoring implementation of BIO-1 and (2) transparent reporting (i.e., publicly available) to the County for each activity (e.g., training, audits of practices in the field, etc.).

Moreover, BIO-1 should include a measure to ensure that activities do not occur that disrupt burrowing owls or destroy active burrowing owl burrows, especially during the breeding season. A violation of an active burrowing owl burrow constitutes a violation of the MBTA and the Cal. Fish & Game Code. It also constitutes a significant negative impact that could be feasibly avoided. Destruction of other birds nests also constitutes a violation of the MBTA. Therefore, any activities that occur during the bird breeding season can only proceed if (1) biological surveys for nesting birds are conducted within seven days of initiation of activities, (2)a biological monitor is on site to ensure activities are not destroying birds' nests or killing young or adult birds, (3) the biological monitor is granted authority to stop work that poses an impending threat to breeding birds or chicks, and (4) compliance with these steps is documented and made publicly available. O3-25

**2. Mitigation Measure BIO-3 is Inadequate.** O3-26

MM BIO-3 provides for preconstruction surveys by a qualified biologist. DEIR, at 3.2-21. The mitigation measure is inadequate in part because it does not limit the amount of time for the survey to occur before construction proceeds. Animals may move into the area in a matter of days. Surveys should be made no more than fourteen days (at the most) before construction begins.

**3. Impact BIO-4 Is Erroneous.** O3-27

MM BIO-4 finds that the potential to interfere substantially with movement of native resident wildlife species or impede the use of native wildlife nursery sites is "less than significant." First, the impact will result in the illegal killing of birds protected by state and federal laws; an impact in violation of other laws cannot be considered "insignificant."

Second, we do not understand for the DEIR drafters can reach this conclusion in good faith: the Altamont Pass is a major migratory route and a breeding site for golden eagle, burrowing owl, and many other species that are negatively affected by wind turbine operations. Implementation of the proposed project or either Alternative 1 or 2 will undoubtedly kill more birds, but the DEIR's own reckoning. *See, e.g.*, DEIR, at 3.2-26 (which also notes that the O3-28

proposed project would undoubtedly kill even more red-tailed hawks because they winter in the AWPRA in larger numbers). Certainly death constitutes an impediment to the movement and breeding efforts of native wildlife. For the DEIR to dismiss this without even proposing a mitigation measure renders the DEIR even more inadequate. O3-28 cont.

Third, the DEIR's dismissal of the impact as insignificant, in part, because it is "temporary" is unavailing and unsupported. As the DEIR's own analysis demonstrates, the proposed project or Alternatives 1 or 2 will result in more deaths of protected species. The purported temporary nature of the impact does not render it less than significant. O3-29

**4. Mitigation Measure BIO-15 Is Inadequate.** O3-30

MM BIO-15 purports to avoid disturbance to nesting and migratory raptors. The establishment of the 500-foot buffer around the proposed does not appear to be based on any scientific evidence for adequacy. DEIR, at 3.2-27, 28. The DEIR should establish a minimum buffer around nests of at least 100 meters, not 50-feet. *Id*.

The County acknowledges that it has worked for years to reduce the significant impacts to birds, especially raptors. DEIR, at 3.2-32. It also acknowledges that the impacts from the proposed project would be significant and unavoidable. O3-31

The DEIR errs in concluding that because seasonal shutdowns are "the most viable mitigation strategy", other mitigation measures need not be implemented. However, there are many other mitigation measures, including the use of radar and adjusting cut-in speeds, that were not assessed by the DEIR. It should be revised to include these as additional mitigation measures. O3-32

**5. Mitigation Measure BIO-17 Is Inadequate** O3-33

MM BIO-17 is an inadequate attempt to mitigate for the loss of birds killed by AWI's raptors. It focuses only on golden eagles; AWI should be required to compensate the public for every illegal kill of birds from which the company profits. Moreover, the mitigation measure sets several parameters that will result in disputes and controversy over whether AWI is actually required to compensate for a suspected loss. We note that the proposed amount of $217,500 is a tiny fraction of AWI's likely profits under the proposed action and hardly begins to compensate the public for the long term impacts of its illegal takings of birds and bats.

**E. The DEIR Fails to Adequately Assess Alternatives** O3-34

**1. The "No-Project"' Alternative Is the Environmentally Superior Alternative.**

The DIER is fatally flawed in part because of its determination—against all reason and even facts set forth in the DEIR itself—that Alternative 1 is the Environmentally Superior

Alternative rather than the No Project Alternative. The CEQA Guidelines require that if the No Project alternative is the environmentally superior alternative, then the EIR must also identify one of the project alternatives that is also superior (here, Alternative 1). As written now, the DEIR leads the reader to believe that Alternative 1 is the only Environmentally Superior Alternative. O3-34 cont.

The DEIR concedes that the Alternative 1 will result in a higher mortality rate for birds (and likely bats) in the project area. DEIR, at 4-20 (stating that expected avian mortality for the No Project Alternative will be 1,056.4-1,153.0 vs. Alternative 1, which will be 1,167.1-1,273.77).[3] Again, the killings of the affected birds are illegal and no permit can be issued for their take. The baseline rate of mortality is bad enough, but to increase mortality just to marginally improve the profit of a single company is unacceptable. Notably, the analysis fails to even discuss mortality to bats. O3-35

Moreover, the proposed project and Alternatives 1 or 2 will negatively affect monitoring and mitigation efforts in the Altamont Pass. The Alameda County Scientific Review Committee (SRC) recommended against any by the "no-action" alternative in part because it unnecessarily complicates monitoring efforts. Monitoring is intrinsically tied to adaptive management efforts in the AWPRA and is already an extremely complicated and controversial endeavor. The further confusion contributed by the Alternatives or the proposed action will hinder monitor and adaptive management, and therefore increase the likelihood of additional environmental impacts. O3-37

The DEIR concludes that "Alternative 1 would have less-severe impacts on both avian wildlife and noise associated with increase wind turbine." DEIR, at 4-20. The DEIR also states that "Alternative 1 would have the fewest environmental impacts and would therefore be considered the environmentally superior alternative." Yet, even Table 4-3 demonstrates that this is patently false. The DEIR should be amended to state that "the No Project Alternative would have the fewest environmental impacts . . . ." O3-38

To the extent that the DEIR concludes that Alternative 1 is the environmentally superior alternative among those that would amend the CUPs, the DEIR should be amended to include a statement along the lines that "the No Project Alternative would have less-severe impacts on both avian wildlife and noise generation than any of the other Alternatives, including Alternative 1." As written now, the DEIR leads the reader to conclude that Alternative 1 is environmentally superior even to the No Project Alternative. O3-39

[3] Audubon questions the accuracy of the DEIR's mortality estimates and believes that the mortality would be significantly greater under either the proposed project or Alternatives 1, 2, or 3 as opposed to the No Project Alternative. O3-36

### 2. The DEIR Fails to Assess Impacts to Ongoing Monitoring and Mitigation Efforts Arising from Alternatives 1 or 2.

O3-40

The DEIR's discussion of alternatives utterly fails to discuss the additional complications that will arise in ongoing monitoring and adaptive management efforts if the proposed project or Alternative 1 or 2 were to be selected. *See*, *e.g.*, DEIR, at 4-8, 16. The County and interested stakeholders have spent years and millions of dollars in developing monitoring and adaptive management measures in the APWRA. At a minimum, the DEIR should be amended to consider the impacts to avian mortality monitoring and reduction efforts.[4]

## D. The DEIR Fails to Adequately Assess Cumulative Impacts.

O3-41

Avian and bat mortality in the APWRA is a tragic story of cumulative impacts and regulatory indifference. It is not a single turbine or even a single project, but thousands of turbines over decades that have illegally killed tens of thousands of birds. Alameda County is responsible for having permitted the installation of the original turbines without adequate environmental review or mitigation measures.

The DEIR correctly concludes that the proposed project would result in a "significant cumulative contribution" to ongoing avian mortality. DEIR, at 5-5. The DEIR fails, however, to also point out that Alternatives 1, 2 and 3 would also result in significant cumulative contributions to avian mortality. Moreover, once again, the DEIR utterly fails to consider cumulative impacts to bats.

O3-42

Audubon also strongly disagrees with the DEIR's finding that there would not be a cumulatively significant contribution to Impact BIO-4, which the DEIR erroneously determined was "less than significant." *See* DEIR, at 5-9. As discussed above, Impact BIO-4 should find that there would be a significant and unavoidable impact from any of the action Alternatives. Its failure to do so—and its failure to find a cumulative impact—renders the DEIR further deficient.

O3-43

The DEIR also fails to consider the cumulative impacts of other aspects of the proposed project or alternatives. First, as discussed above, the DEIR fails to consider the negative effects linked to disruption of monitoring and adaptive management efforts. Second, the DEIR states that AWI will remove its share of "jointly owned ancillary windfarm components in the APWRA." DEIR, at 2-3. The DEIR does not state whether or how those ancillary components will be replace. Presumably, the replacement of such components—a necessary consequence of the proposed action or either Alternative—would result in further environmental impacts that are not assessed in the DEIR.

[4] We also note that the County would be unfairly favoring AWI by providing the amended CUPs and unfairly placing a burden on other wind companies that have been participating in the monitoring and adaptive management efforts in good faith. Those companies have also invested significantly in supporting monitoring efforts, turbine removal and other adaptive management measures, and repowering. By doing AWI the favor of lifting the 2005 restrictions, the County would be undermining the good faith effort by the other companies and disincentivizing future support for monitoring, mitigation, and repowering.

O3-40 cont.

## IV. THERE IS NO ADEQUATE BASIS FOR A FINDING OF OVERRIDING CONSIDERATIONS.

O3-44

CEQA requires that prior to approval, the lead agency

> shall not decide to approve or carry out a project for which an EIR was prepared unless either
>
> > (1) The approved project will not have a significant effect on the environment, or
> > (2) The agency has
> >
> > > (A) Eliminated or substantially lessened all significant effects on the on the environmental where feasible . . ., and
> > >
> > > (B) Determined that any remaining significant effects on the environment found to be unavoidable under Section 15091 are acceptable due to overriding concerns as described in Section 15093.

CEQA Guidelines § 15092. Section 15093 of the Guidelines states that significant and unavoidable impacts can only be found "acceptable" if they are outweighed specific economic, legal, social technological and other benefits of the proposed project . . . ."

As an initial matter, the County cannot demonstrate that it has "eliminated or substantially lessened all significant impacts" related to this project or the alternatives. The DEIR is bereft of meaningful mitigation measures, including the use of radar to detect birds and bats, altering cut-in speeds, or the use of human observers (as has been done in other wind projects). All of these measures are certain feasible, but not even discuss in the DEIR.

While the DEIR is not intended to set forth the "economic, legal, social, technological, and other benefits of the proposed project" for the purposes of a later finding of overriding considerations, it certainly lays the ground work by alleging several purported benefits in the Project Objectives. Notably, the DEIR is bereft of any evidence to support any of those purported benefits, especially as compared to the No Project Alternative.

## V. CONCLUSION

O3-45

In the end, the selection of any alternative other than the No Project Alternative represents a significant step backward for a County that is responsible for the unmitigated deaths of thousands of raptors over the past thirty years. This entire proposal and process is simply a favor for AWI, which has consistently refused to work in good faith with either the regulators or other stake holders in the APWRA. Should the County proceed with this inadequate DEIR and should it ultimately approve the project by invoking a finding of overriding considerations, it

will have rolled back the progress of recent years in developing a cooperative process for reducing avian mortality and developing a wind industry in the APWRA that is economically and ecologically sustainable. O3-45 cont.

Thank you for your consideration of our comments. If you would like to discuss this matter further, please do not hesitate to contact Michael Lynes at (510) 843-9912 or mlynes@goldengateaudubon.org

Respectfully submitted,

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Executive Director
Golden Gate Audubon Society

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Altamont Winds Inc.

19 April 2013

Sandra Rivera, Assistant Planning Director
ATTN: AWI Permit Modification EIR
Alameda County Community Development Agency
224 W. Winton Avenue, Suite 110
Hayward, CA 94544

**Subject: Altamont Winds Inc. comments on the AWI Permit Modification Draft Environmental Impact Report**

Dear Ms. Rivera,

Altamont Winds Inc. (**"AWI")** appreciates the opportunity to provide comments on the Draft Environmental Impact Report (**"DEIR"**) for certain permit modifications. This comment letter provides specific comments on several sections of the DEIR, as enumerated below, as well as comments on the requested Conditional Use Permit (**"CUP"**) modifications generally.

The DEIR associated with AWI's request to modify its existing CUPs inaccurately assesses some of the major issues discussed in the report. AWI requests that the County reanalyze certain key issues of the DEIR in light of the specifics of the proposed project. O4-1

**Chapter 2 – Project Description** O4-2

**1. The DEIR uses inconsistent and sometimes confusing terminology when referencing the size of the Proposed Project.** The terms "study area" and "project area" are used interchangeably throughout the document, which can be confusing and misleading. The "study area" should define that 14,196 acre area comprising the parcels covered by all CUPs that AWI currently holds or may hold in the future. The "project area" is limited to AWI's existing project facilities, which encompasses 233 acres out of the 14,196 acres, as shown in Table 2-3. The project area does not and will not span the entire 14,196 acres. Furthermore, it is anticipated that within the "project area", only a maximum of 91 acres is expected to be disturbed during the foundation removal and site restoration process as part of decommissioning. Therefore, references to the "study area" and the "project area" should be clarified and made consistent throughout the document accordingly. (See e.g., Section 2.3.2)

**2. The current CUPs do not require turbine removal within one year of decommissioning.** The first sentence in the third paragraph on page 2-3 states that turbine dismantling and removal would occur within 1 year of decommissioning "as required by the current CUP." This is a factually inaccurate statement. There is no established time frame in the CUPs that O4-3


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requires AWI to restore the site. Rather, AWI is given a "reasonable time" to conduct site restoration according to the CUPs. The paragraph should be revised as follows: O4-3 cont.

"Dismantling and removing wind turbines from their foundations can be done year round as it is part of the ongoing maintenance practice of all wind operators. However, there may be seasonal restrictions on ground disturbing activities, particularly for foundation removal and site restoration. Such activities may be limited to the dry season, which in an average year is estimated to be approximately 185 days. Therefore, in total, turbine removal and foundation reclamation and site restoration will take up to two years after permanent shutdown of the wind turbines, in accordance with existing agreements between landowners and AWI."

**3. The decommissioning schedule provided in the DEIR is inaccurate.** Section 2.1.3.2 states that the decommissioning activities are estimated to take up to 1 year and 2 months. Dismantling and removing one wind turbine from its foundation is estimated to take approximately 1 day per turbine removal work crew. Up to three turbine foundation/footing removals and associated reclamation can be done in 1 day per crew. Therefore, it is estimated that removal of the remaining 828 wind turbines and removal and reclamation of the 920 turbine foundations will occur within 2 years of operational shutdown. O4-4

**4. Correct the mislabeling in Figure 2-2.** In the legend of Figure 2-2, the label associated with the green dot should read "WTs Potentially Received from ESI by AWI." The turbines currently shown as green dots are not currently AWI assets but may be in the future depending upon discussions with ESI/Green Ridge Power (an unaffiliated wind farm operator in Altamont Pass) regarding assets in the Altamont Pass. O4-5

With regards to this potential asset exchange, it would be helpful to include the following statements: "As a result of ongoing negotiations with another wind farm operator in the APWRA [Altamont Pass Wind Resource Area] involving future repowering plans, AWI may receive wind turbines outside of the project area in exchange for an equal number of AWI-owned wind turbines from within the project area. This exchange scenario is not expected to have any effect on the impacts analyses and determinations contained in this report."

**Chapter 3.1 – Air Quality** O4-6

**1. Operating Altamont Pass wind turbines provides regional benefits to human and avian health.** Under Inhalable Particulate Matter (**"PM"**), on page 3.1-4, it should be further noted that, based on the McCubbin and Sovacool study, the amount of inhalable PM removed from the regional atmosphere by the combined Altamont Pass wind farms is enough to avoid more than 60 premature human deaths, 40 heart attacks, 54 cases of acute bronchitis, and anywhere from hundreds to thousands of cases of respiratory symptoms and asthma. Reduced PM exposure over that same period was also predicted to reduce avian mortality by between 1,200 and 8,400 birds.

**2. The DEIR must recognize the additional greenhouse gas ("GHG") offsets resulting from ongoing operation of Altamont Pass wind turbines.** In section 3.1.5.2 Greenhouse Gases, it should be noted that there would be no adverse impacts to GHG emissions resulting from operating the wind turbines under any project alternative. In addition, the current 85.8 MW project could be expected to offset 109,248 tons of CO2, 0.44 tons of sulfur oxides, and 45 metric tons of nitrous oxide and each year the facility is kept in operation (McCubbin and Sovacool 2011). O4-7


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**3. The decommissioning schedule must be revised to reflect two distinct activities, turbine removal and foundation removal/site restoration.** The decommissioning schedule provided in Table 3.1-7 incorrectly assumes that turbine removal and foundation removal/site reclamation would occur simultaneously. Turbine and tower (not foundation) removal will be performed separately from foundation removal and site reclamation. For clarity, this table should include two distinct tasks, turbine removal and foundation removal/site reclamation. O4-8

Dismantling and removing one wind turbine (and tower) can be done in one day with one turbine removal crew. It is anticipated that this will be done throughout the year since this would not involve any ground disturbing activities. In Year 1, assuming two turbine removal crews will be removing 2 turbines per day, up to 490 turbines will be removed from their foundations. In Year 2, the remaining 338 turbines will be removed. With regard to foundation removal and site reclamation, it is assumed that three foundations can be removed per day using one foundation removal crew. Therefore, 460 foundation removals and reclamations per year is a feasible rate.

In addition, because a total of three crews (two crews to conduct turbine removal and one crew to conduct foundation removal), not four, will be conducting decommissioning activities, the daily criteria pollutant emissions associated with decommissioning in Table 3.1-10 should be revised accordingly.

**Chapter 3.2 – Biological Resources – Avian Impacts** O4-9

The EIR analysis of impacts on avian species is incomplete and, at times, misleading. Using imprecise techniques without sufficient explanation or context, the EIR draws conclusions that will not adequately inform decision-making bodies of the specific impacts of the proposed project. Please consider the following:

**1. Annual fatality rates should only be based only on 2008-2010 monitoring results, not on data collected earlier.** The avian impacts analysis contained in Section 3.2.3.5 and referenced elsewhere throughout the DEIR, bases findings on avian fatality rates determined by the Monitoring Team (**"MT"**). As written, the EIR includes two sets of fatality rate data, one from 2005-2010, the other from 2008-2010. However, only the 2008-2010 data should be considered and used in the avian impacts analysis. O4-10

Figures that include data prior to 2009 represent fatality rates occurring prior to the removal of more than one hundred turbines determined to be disproportionately hazardous. Therefore, fatality rates taken from data prior to the 2009 removal period will include the subset of turbines with the highest fatality rate. Because these hazardous turbines will not be reinstalled as part of the proposed project, only that data which most accurately reflects the project going forward should be utilized.

The difference in the average rates from these two time periods is significant. For example, the average burrowing owl fatality rate using the 2008-2010 rates is 0.425. Under the 2005-2010 data, that figure is 0.721, nearly double. Rates derived from pre-2009 data would thus exaggerate impacts of the project going forward, and such confusing and misleading data should not be utilized in this analysis.

**2. Replace the flawed, hypothetical model used to estimate avian impacts with one that uses more accurate, historical capacity factors.** The DEIR avian impact analysis should include an estimation of avian fatalities based on a calculation that takes into account actual turbine operating time. This methodology would be similar to the air quality analysis conducted in the DEIR. O4-11


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The DEIR estimates fatalities by multiplying two numbers: the estimated fatality rate and the aggregate "nameplate capacity." The estimated fatality rate is based on data collected by the monitoring team, and represents the number of avian fatalities estimated to occur in a given year for each megawatt of actual (not "aggregate") nameplate capacity. "Aggregate nameplate capacity" – the derivation of which is not explained in the DEIR (see paragraph 3 of this section of this letter below) – is an invention of the EIR authors and purports to add up the capacity rating of turbines in a given month for the duration of the project or project alternative. This method of estimating avian impacts is flawed for several reasons, as discussed below and in subsequent sections of this letter.

O4-11 cont.

A better design would be to base an estimation of avian fatalities on the capacity factor of the operating turbines in a given month. A common metric in wind energy analytics, capacity factor is the ratio, usually expressed as a percentage, of actual energy output over a period of time, to the potential energy output if it were possible to operate at full rated output (nameplate capacity) over that same period of time. The capacity factor takes into account the fact that a wind farm is not continuously in operation and may sit idle for hours or days at a time, primarily due to insufficient wind speeds due to climatic conditions. This value is useful because capacity factors provide an indication of how often a given turbine's blades will actually be in rotation. To obtain an estimate of avian fatalities that so reflects real-world monthly wind operating variations, one would calculate the product of the monthly installed capacity and the capacity factor, normalize that product to the average total nameplate capacity for the year, then multiply that figure by the given fatality rate.

This methodology is clearly superior to that contained in the DEIR, because it would take into account the percentage of time in a given month that the turbines are actually in operation (i.e., with blades rotating), rather than a straight average of megawatt capacity where all turbines are assumed to operate at full capacity for all hours of the day for all months. As such, a capacity factor-based model more accurately allocates fatalities into the months in which they are likely to occur. It also lessens an upward bias in winter months caused by counting – for the proposed project only – wintertime, non-turbine-related fatalities already included in the fatality rate figures.

In fact, the DEIR utilizes a capacity factor-based model to predict the amount of energy the project will produce, and by extension the amount of greenhouses gases that would be offset by the project and the various alternatives (see analysis beginning on page 3.1-19). The results of this analysis, shown in Tables 3.1-12 and 4-3, show that the proposed project will produce only approximately 7% more energy than the baseline No Project Alternative, dramatically less the 66% increase predicted by the DEIR avian impact model. Also under this method, Alternative 1 is shown to be <u>less impactful</u> than the baseline No Project Alternative. (See Paragraphs 4 and 5 of the Alternatives Analysis section of this comment letter below for additional discussion of how the avian impacts analysis relates to the Alternatives Analysis.)

The DEIR authors do not discuss why the method they use is preferable to a capacity factor-based method, nor do they distinguish why the capacity factor method was the best method for determining energy produced and greenhouse gas offsets, but not the best method to determine avian impacts. Both greenhouse gas offsets and avian impacts are directly related to capacity factor.

**3. Provide a more detailed explanation of the methodology to estimate avian fatalities.** O4-12

The DEIR estimates avian impacts using a hypothetical modeling methodology invented purely for the purposes of this DEIR. Despite its novelty and importance in the EIR, this methodology


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is never clearly explained, walked through, or otherwise illustrated. This is a major deficiency of this DEIR. Noting AWI's reservations about the accuracy of this methodology and the superiority of a capacity factor-based model, if DEIR methodology is to be used it must be more fully illustrated and explained.

O4-12 cont.

It is unusual and unhelpful not to provide a detailed walk through of the method by which the DEIR authors draw several important conclusions, and this makes it difficult for the public and decision makers to determine if there are any flaws in the DEIR's conclusions. For example, it appears that there may be a mistake in the calculations for the No Project Alternative. We believe that "aggregate nameplate capacity" was derived by taking the total nameplate capacity of the project in a given month, dividing that number by 12 for each month, then summing the result for all months of the project. This gives the figures contained in Table 4-1 for the proposed project, and Alternatives 1, 2 and 3. However, the total for the No Project Alternative given in Table 4-1 is too low if this method is used. The correct "aggregate nameplate capacity" for the No Project Alternative, using the method discussed here, would be 124.7 MW, not 116.5. This change would have a significant impact on the relative impacts of some project alternatives, reducing the difference in avian impacts between the No Project Alternative and Alternative 1 to 3% from 10%. This change would also reduce estimated golden eagle fatalities to 0.2 – 0.3 from 0.7 – 1.0, obviating the need for Mitigation Measure BIO-17.

O4-13

**4. Include discussion of the shortcomings of DEIR's method of estimating avian fatalities, particularly as to how it relates to the effect of the winter seasonal shutdown.** Notwithstanding AWI's reservations about the accuracy of the DEIR's avian impacts methodology, the shortcomings of the method used must be discussed. Estimates that contain significant uncertainty should not be presented as unassailable fact.

O4-14

The most obvious defect of the methodology used to estimate avian impacts in the EIR is that it exaggerates the impact of operating during the County-mandated winter seasonal shutdown. Because the analysis incorrectly assumes that the wind farm operates at capacity year round, it assumes turbines would be operating at the same intensity during the winter, when there are few windy days, as they would in the summer, when windy days are commonplace. Winter operations account for approximately 6% of AWI's annual production, yet the EIR concludes that avian fatalities would increase by 50% if AWI operated during the winter. There is no evidence that an increase in 6% in wind energy production for 2.5 winter seasons will cause a 50% increase in avian fatalities.

We recommend the following text be added to the discussion of Operational Changes in Section 3.2.3.5: "The above methodology assumes that turbines will operate in the winter at the same rate as in the summer. During the winter months in the APWRA, however, there are significantly fewer days with winds sufficient for operating wind turbines, compared with other months of the year. As a result, turbines will be in operation for a relatively small portion of the 3.5-month winter season, as compared with other months of the year. This analysis makes no adjustment for time spent in operation in a given month, and, therefore, avian impacts in the winter will be exaggerated."

Additionally, the DEIR's "nameplate capacity" figures used here may further exaggerate the effect of the winter seasonal shutdown because the fatalities per MW rates in Table 3.2-4 and Table 3.2-5 were derived from a facility that shuts down in the winter. This means that the fatality rates listed already take into account any benefit of the winter seasonal shutdown. If the aggregate "nameplate capacity" multiplier used to assess the effect of the proposed project with seasonal shutdown (i.e., Alternative 1 or Mitigation Measure BIO-16) inserts zero megawatts of operating capacity for winter months during which the project may be shutdown, then any

O4-15


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positive effect of the winter shutdown is double counted. This has the effect of making the seasonal shutdown appear more beneficial than it actually is, while making operations in the winter (for the proposed project) appear more impactful than they actually are. O4-15 cont.

As further evidence that the fatality figures presented in the DEIR are inflated, analysis of the unadjusted fatality data for AWI's turbines reveals a 71% reduction in focal species fatalities since 2007, the peak of recorded fatalities in the APWRA. O4-16

**5. Mitigation Measure BIO-16 should be removed.** In light of the above, the benefit of the winter shutdown is likely overstated in the data presented in the DEIR. When avian impacts are analyzed using the more accurate capacity factor model, the effect of the winter shutdown is shown to be as low as a 7% reduction in cumulative impact on all bird species over more than 2 years. O4-17

Additionally, the DEIR provides no evidence that a winter seasonal shutdown is an effective means of reducing avian fatalities. The reports produced by the monitoring team have shown that the winter shutdown may have an adverse effect on certain bird species, particularly the burrowing owl, because larger birds of prey utilize the inactive turbines as perches from which to hunt burrowing owls. Unadjusted fatality data for AWI's turbines shows that focal species fatalities do not decrease significantly when the turbines are shut off. Indeed, January, a month during which no turbines have operated for at least 60 days, shows one of the highest incidences of focal species fatalities. (See graph at Exhibit A).

Perhaps most importantly, however, in proposing Mitigation Measure BIO-16, the DEIR fails to consider the self-mitigating benefits of this renewable energy project. The project will continue to offset harmful pollutants, resulting in significant benefits to the regional environment, wildlife, and human health; yet pollutant offsets are not considered in the context of avian impacts. Using data from a recent study of the Altamont Pass wind farms, **Altamont wind farms prevent regional bird deaths by reducing inhalable particulate air pollution and by reducing the production of greenhouse gases.** Considering also the additional benefits to human health and other wildlife, there is a net benefit to operating the wind farm that must be recognized. By not recognizing the self-mitigating properties of this project, the EIR proposes unwarranted mitigation measures that impose unreasonable operational and financial burdens on the project applicant. O4-18

**6. Mitigation Measure BIO-17 should be removed.** If Mitigation Measure BIO-16, which requires winter shutdown of all wind turbines, is recommended, then Mitigation Measure BIO-17 is unnecessary and should be removed.

Under the more appropriate impacts analysis based on capacity factor, the proposed project with winter shutdown (i.e., Alternative 1 and Mitigation Measure BIO-16) is likely less impactful than the baseline No Project Alternative. This is evident from the DEIR's air quality analysis, the results of which demonstrate that the No Project Alternative produces more energy, and thus is likely to be more impactful, than Alternative 1 (see Tables 4-3 and 3.1-12). (See Paragraphs 4 and 5 of the Alternatives Analysis section of this comment letter below for additional discussion of this point.) There should be no mitigation for a less impactful alternative. O4-19

Even using the DEIR's method of analyzing avian impacts, there may be an arithmetic mistake in the DEIR's calculation of impacts resulting from the No Project Alternative, as discussed in Paragraph 3 of this letter above. If, in fact, "aggregate nameplate capacity" was derived by taking the total nameplate capacity of the project in a given month, dividing that number by 12 for each month, then summing the result for all months of the project, then the aggregate O4-20


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"nameplate capacity" of the No Project Alternative is 124.7 MW, not 116.5. The increase in the number of golden eagle fatalities would thus be between 0.2 and 0.3 birds total. This is an insufficient basis to require Mitigation Measure BIO-17. O4-20 cont.

**7. Additional text should be added to Section 3.2.3.5 to include the wildlife benefits of wind energy generally and the project specifically.** The DEIR fails to consider the self-mitigating benefits of this renewable energy project when determining appropriate mitigation measures. Renewable wind energy offsets harmful pollutants/emissions, resulting in significant benefits to the environment, wildlife, and human health; yet the DEIR does not consider pollutant offsets in the context of avian impacts. According to findings made in a recent study of the Altamont Pass wind farms, **Altamont wind farms prevent bird deaths by reducing air pollution**, and reduced inhalable particulate matter benefits local bird populations in particular**.** Considering also the additional benefits to human health and other wildlife, there is a net benefit to operating the wind farm that must be recognized. By not recognizing the self-mitigating properties of this project, the DEIR proposes unwarranted mitigation measures that impose unreasonable operational and financial burdens on the project applicant. O4-21

We recommend the following text be added to Section 3.2.3.5:

"The operation of wind turbines also results in the offset (reduction) of GHG emissions and inhalable particulate matter by replacing electricity that would otherwise be produced by conventional, non-renewable sources, such as local natural gas power plants. Conventional power plants are a major source of GHG emissions and toxic particulate matter. One study analyzed and estimated the theoretical impact of these pollutants that would be produced by conventional power plants near the project area in the event the Altamont Pass wind farms were not operating. This study estimated that, over the past 20 years, the combined 580 MW APWRA wind farms offset air pollution to avoid between 33,000 and 57,000 premature bird deaths (McCubbin and Sovacool 2011).

"According to the data presented in this same study, AWI's 85.8 MW project alone could be expected to offset 109,248 tons of $CO_2$, 0.44 tons of sulfur oxides, 45 metric tons of nitrous oxide, and 5 tons of fine particulate matter each year the facility is kept in operation (McCubbin and Sovacool 2011). Using these figures and assuming the climate benefits of AWI's wind farm projects are proportional to other Altamont Pass wind projects, the proposed project is expected to save 337 birds per year due to reduced particulate matter and greenhouse gas emissions. Thirty-six bird deaths per year, on average, would be avoided locally due to reduced particulate matter emissions alone."

**Chapter 3.2 – Biological Resources – Decommissioning And Terrestrial Species Impacts** O4-22

Upon permanent shut down of its turbines, AWI will be removing turbines and their foundations, a process known as decommissioning, returning the project site to a more natural condition. As written, the DEIR requires a number of costly, redundant, and overly broad mitigation measures for perceived impacts resulting from the decommissioning process. Despite their questionable efficacy, implementation of the suggested mitigation measures would be unduly expensive, rendering decommissioning unnecessarily costly.

This problem arises because the portions of the DEIR dealing with decommissioning misrepresent the proposed project and fail to take into account the specific attributes of the project and the project site. Specifically: O4-23


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> The DEIR accords insufficient value to the fact that **decommissioning provides a net benefit to the environment** because it will return disturbed areas to a more natural state. It should be noted that decommissioning activities directly support the goals and objectives of the East Alameda County Conservation Strategy because there will be a net increase in grassland resulting from foundation removal and site restoration. O4-23 cont.

> The DEIR fails to consider that **decommissioning activities will occur entirely within the existing project footprint on already-developed land**, on existing graveled roads and turbine pads where habitat does NOT exist. No currently undeveloped areas will be dug up, trampled, or otherwise disturbed. The DEIR makes the statement that the land has "largely reverted to a 'natural' state," (Section 3.2.3.5, internal quotes in original) yet this finding is not supported by the analysis or any evidence. Although the site may have reached stasis since the wind turbines were originally installed, the roads and turbine sites cannot be considered natural. These roads are frequently traversed by wind operators, landowners, ranchers, hunters electric utility crews, avian monitors, and others. As a result, there is a fair amount of activity in and around the turbine sites to suggest that the immediate area around the turbine foundations is not suitable for special status species. O4-24

> The DEIR analysis does not take into account the fact that **decommissioning is an end-of-project-life endeavor, not a profit-generating exercise**. The costs of mitigation for decommissioning activities will not be recouped from future operating revenues, as would be the the case for new construction projects for which these mitigation measures were designed. Alameda County must ensure that the decommissioning process is not encumbered by mitigation measures that make project decommissioning cost prohibitive. O4-25

Based on the information above, AWI recommends the following changes to the EIR: O4-26

**1. Mitigation Measure BIO-1 is sufficient to mitigate any impact on sensitive biological resources, keeping impacts on special-status species and habitat to a less than significant level.** The remaining mitigation measures included in the DEIR are inappropriate for the planned decommissioning activities. All decommissioning activities will be temporary and will occur on already disturbed land. The general measures prescribed in Mitigation Measure BIO-1 will be sufficient to ensure that special-status species' habitat will be avoided and left undisturbed and that any potential impacts will be minimized.

**2. Mitigation measures that call for a full-time, on-site biological monitor during decommissioning activities should be removed because they are unnecessary and cost-prohibitive.** Mitigation Measure BIO-5 requires periodic monitoring of decommissions activities. Because work will only be performed on already-disturbed surfaces, it is highly unlikely that that any special-status plants or species will be present in work areas. In the event terrestrial species may be present in or transit through a work area, it would be more beneficial to train work crews to inspect for and identify the presence of the animal(s) and temporarily cease work accordingly. Therefore, mitigation measure BIO-5 should be replaced with training aimed at educating work crews on how to inspect for the presence of special status species in work areas, as well as on whom to contact in order to properly handle or relocate any special status species encountered.

**3. Remove mitigation measures requiring floristic surveys of the project area.** Mitigation Measure BIO-6 and Mitigation Measure BIO-7 are unnecessary and should be removed from the DEIR. This project area comprises only already-disturbed areas, and reclamation activities will occur entirely on and within surfaces that are either compacted, graveled or otherwise impervious and which do not now and cannot reasonably support plant life, particularly special-


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status plants. Additionally, those requirements set forth in Mitigation Measure BIO-1 are sufficient to protect against damage to vegetation occurring near a work area. Thus Mitigation Measure BIO-6 and Mitigation Measure BIO-7 are duplicative and unnecessary. O4-26 cont.

**Chapter 3.3 – Noise**

**1. There will be no noise impacts resulting from the project, and therefore Impact NOISE-1 should be revised to Less Than Significant and no additional mitigation measures are required.** Under the proposed CUP modifications, the level of wind turbine noise will be maintained at the existing level until December 31, 2015, and therefore any nearby residences will be exposed only to the existing level of wind turbine noise for the remaining life of the project, after which all wind turbines will be permanently shut down. Therefore, turbine sound levels under the proposed CUP modifications will not exceed the baseline levels for current operations, and the EIR should determine that noise impacts resulting from the proposed permit modifications are less than significant. O4-27

Indeed, the DEIR recognizes that changes in the turbine shutdown schedule will not cause an increase in noise impact. The second paragraph of Section 3.3.4.3 states, "turbines operating on days when they are currently prohibited from operating would not generate more noise than on days where they are currently allowed to operate. In other words, baseline conditions (i.e., existing conditions) would not be exceeded by the continuous operation of the existing turbines. As such, the action of operating a turbine on a day that is currently not permitted would not result in a significant impact."

The DEIR nevertheless determines that the proposed CUP modifications will result in a significant noise impact. It reaches this conclusion by surmising that an individual wind turbine could cause excessive levels of noise due to aging or lack of maintenance, which could result from being "allowed to operate longer than planned under the current CUP." This assumption is significantly flawed for three reasons, and it is not a sufficient basis for finding a significant impact.

First, the DEIR authors assert that aging of turbine equipment will lead to significantly noisier operations within the relatively short timeframe of the CUP modifications. This is entirely speculative, and there is certainly no evidence or analysis to support this assumption.

Second, the DEIR assumes that a specific turbine must have "aged" into an excessively noisy condition as a result of the proposed CUP modifications. However, it is impossible to draw this conclusion, because it is impossible to determine which turbines are operating longer as a result of the proposed CUP modifications. Under the current CUPs, AWI is given discretion as to which turbines to remove at each phase of decommissioning. Turbines will be selected based on a number of factors, and it is not yet known which turbines will be removed. Therefore, it could never be said with certainty that a given turbine exposing residences to increased noise levels is operating "longer than planned" only because of the proposed modifications in the CUPs. In other words, a specific turbine or small group of turbines believed to be noisy due to age, would, in all likelihood, have continued to operate under the CUPs currently in place through 2018, well beyond the shutdown date required under the proposed modifications. It must be noted that 138 wind turbines will shut down 3 years earlier as a result of the proposed CUP modifications.

Third, as discussed further in Paragraph 2 below, AWI inspects, maintains, repairs, and rebuilds our wind turbines on a daily basis. If any wind turbine shows excessive wear, we rebuild the wind turbine in our shop facility with new and reconditioned parts, including bearings, gears, and


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lubricants, to bring the turbine back to its original operating conditions and sound/noise levels. Any wind turbine found to be unusually noisy can easily be repaired to its original standard/condition. O4-27 cont.

For all of the above reasons, a determination of a less than significant impact must be made and no further mitigation measures should be required.

**2. In addition to the above, Mitigation Measure NOISE-1 is superfluous because the existing CUP language regarding noise issues and AWI's maintenance practices already addresses uncharacteristically noisy turbines.** Mitigation Measure NOISE-1 requires that AWI repair or remove turbines that have been determined to increase the daily Ldn value at a residence by more than 5 dB. This mitigation measure is already required in the existing CUPs and is a part of AWI's ongoing maintenance practices. As a result, AWI must already proactively address noise issues, and it will continue to do so. Inclusion of this additional mitigation measure is duplicative and unnecessary. O4-28

Similarly, the preemptive acoustic study requirement prescribed in Mitigation Measure NOISE-1 is entirely unnecessary and provides no discernible benefit. Such a study would provide no indication of the cause of an unpermitted increase in noise levels (i.e., whether the noise increase was due to "aging" that is related to the turbines operating for longer than originally planned). Further, if an uncharacteristically noisy turbine were identified, AWI would repair that turbine as necessary, as it does for all turbines in its fleet as part of normal operations and maintenance activities.

**3. Mitigation Measure NOISE-1 should be amended so that it applies only to residences in existence prior to the installation of nearby wind turbines.** Notwithstanding our suggested deletion of this mitigation measure, Mitigation Measure NOISE-1 should be amended to clarify that only those residences that were in existence prior to installation of the nearby turbines are subject to the mitigation provision, as indicated in the East County Area Plan, the Alameda County Noise Ordinance, and the existing CUP conditions concerning noise. O4-29

The following underlined text should be inserted into the first sentence of Mitigation Measure NOISE-1, as follows: "Within 60 days of project approval, the applicant will retain a qualified acoustic consultant to conduct a noise monitoring survey to quantify existing noise conditions at residential receptors <u>in existence at the time the original permit was issued</u> located within 500 feet of an operating turbine."

**4. Revise Impact NOISE-2 to reflect accurate number of crews and schedule for decommissioning activities.** Under Impact NOISE-2, the decommissioning activities must be further clarified. The last sentence under the first bullet, beginning with "Using four crews . . . ." should be revised to the following: "With two turbine removal crews working each day, it is estimated that the remaining 828 turbines would be removed within two years." O4-30

After the bullet points discussing tower footing removal and site reclamation, the following sentence should be added to clarify the estimated time it would take to complete this work: "Assuming one foundation reclamation crew would be removing and reclaiming 3 tower footings (at least 185 days per year for such ground disturbing activities) per working day, it is estimated that such activities would take up to two years."

**<u>Chapter 4 – Alternatives Analysis</u>** O4-31


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**1. Under the No Project Alternative, wind turbines need only be shut down and removed from service, not physically removed from the site, by the shutdown dates set forth in the CUPs.** The second paragraph of Section 4.5.2.1 states that "AWI would need to not only shut down, but remove, a precise number of turbines by the [phased decommissioning] dates specified in the CUPs." The CUP language regarding the phased shutdown dates, however, has never been interpreted or enforced in this manner for AWI or any other wind company operating in the APWRA, and it is thus inappropriate for the DEIR to assert that this is the case. To avoid confusion and misinformation, AWI recommends this entire paragraph be deleted. O4-31 cont.

**2. Decommissioning is a temporary, short-term impact for all project alternatives.** In the last sentence of the first paragraph under Impact BIO-1 in Section 4.5.2.1, the short-term impacts associated with decommissioning will be up to two years, not 1 year and 2 months. The text should be revised accordingly, as discussed in Paragraph 2 of the section of this letter regarding the DEIR Project Description. O4-32

**3. The derived nameplate capacity, shown in Table 4-1, is incongruent with the actual nameplate capacity.** As discussed earlier in this letter (see paragraphs 2, 3, and 4 of the section on Avian Impacts), the DEIR's methodology for determining aggregate "nameplate capacity" is never explained. These derived nameplate capacities are not the actual nameplate capacity of AWI's project and therefore, the figures shown in Table 4-1 are confusing. The actual nameplate capacity of AWI's existing project is 85.8 MW, which represents the maximum output rating of AWI's existing wind turbines. O4-33

Presenting these derived nameplate capacities as factual, as opposed to contrived, is not only confusing, but also misleading. The derived "nameplate capacities" in Table 4-1 seem to be used – although no clear explanation of the method used is provided – to calculate avian fatalities and perhaps noise impacts. Utilizing contrived nameplate capacities calls into question the validity of the impact assessment presented in the DEIR, particularly when a different, more accurate metric was used to analyze air quality impacts and no explanation is offered to justify the divergence. AWI recommends using the known, historical capacity factors as the appropriate metric in analyzing project impacts that are dependent on turbine operating time. Please see paragraph 2 of the Avian Impacts section of this letter for more detailed discussion of the benefits of a capacity factor-based method of impacts analysis.

**4. In Table 4-3, the use of different methodologies to calculate avian mortality, air quality benefits and noise impacts leads to illogical results.** Although the methods used for determining impacts in the DEIR are, for the most part, unexplained, it appears the DEIR authors utilized one method to assess avian and noise impacts, and a different method to assess air quality benefits (greenhouse gas offsets) across the project and project alternatives. The DEIR never explains why two differing methodologies were utilized despite the obvious similarity shared across these three key impacts, i.e., that greenhouse gas offsets, avian impacts, and noise, are all directly related to the amount of time the turbines' blades are in rotation. An analysis that takes into account the actual time a wind farm is in operation, as opposed to sitting idle, is therefore an appropriate metric for all three key impacts analyses. However, the DEIR only uses this metric to assess greenhouse gas offsets, and does not use this method of analysis to assess avian and noise impacts. This results in an overstatement of avian and noise impacts, while making the more accurate greenhouse gas reduction figures seem, in comparison, modest. O4-34

This incongruence is clear in the comparison of alternatives presented in Table 4-3. In the first row of the table, AQ (Air Quality), Alternative 1 is less impactful than the No Project Alternative. This indicates that Alternative 1 produces less energy than the No Project Alternative, indicating


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further that the wind farm in Alternative 1 operated for less time than the wind farm in the No Project Alternative. Yet, according to the second and third rows of Table 4-3, the avian impacts and noise impacts are greater under Alternative 1 than the No Project Alternative, despite the evidence in row 1 that the wind farm in Alternative 1 will operate for less time. The DEIR makes no attempt to explain this counterintuitive result. This is a serious deficiency of the DEIR. The avian and noise impacts should be reanalyzed using an historic capacity factor, which accounts for time in operation.

O4-34 cont.

**5. Alternative 1 is less impactful than the No Project Alternative.** On the basis of the DEIR's air quality analysis, as summarized in Table 4-3, it is reasonable to conclude that Alternative 1 is less impactful than the No Project Alternative for the three key impact determinations, air quality, avian impacts, and noise.

O4-35

As discussed in Paragraph 4 above, and also at Paragraph 2 of the Avian Impacts section of this comment letter, a wind farm is not continuously in operation and may sit idle for hours or days at a time, primarily due to insufficient wind speeds resulting from climatic conditions. When a turbine's blades are not spinning, that turbine is not producing energy and offsetting greenhouse gases, is not making any noise, and it is presumably less harmful to birds.[1] Because the Air Quality analysis is the only analysis performed in the DEIR that accounts for time in operation, and because air quality, noise, and avian impacts are all directly related to time in operation, the relative degree of impact among the project and the various alternatives should be the same for air quality, avian impacts, and noise impacts.

The DEIR should thus conclude and explicitly state that Alternative 1 is less impactful than the No Project Alternative.

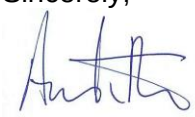
**Chapter 5 – Required CEQA Analyses**

O4-36

**1. The Summit Wind Project must be included as one of the Altamont Pass Repowering Project in this section and in Table 5-1.** The following provides a brief project description: "AWI proposes the Summit Wind Project, a 95 MW wind repowering project, to be constructed on lands in the APWRA currently occupied by existing wind facilities. The Summit Wind Project would repower the existing wind energy facility by decommissioning all existing wind turbines on the site and replacing them with up to 59 new, larger wind turbines. The Project would continue transmitting energy from the site to the regional power grid."

Thank you for your consideration. Please contact us if you have any further questions.

Sincerely,



Andrew Roth, General Counsel
Altamont Winds Inc.

[1] The relationship between rotating turbine blades and avian impacts is the basis upon which the winter seasonal shutdown is based, and thus it is presumed for purposes of this section.

O4-36 cont.


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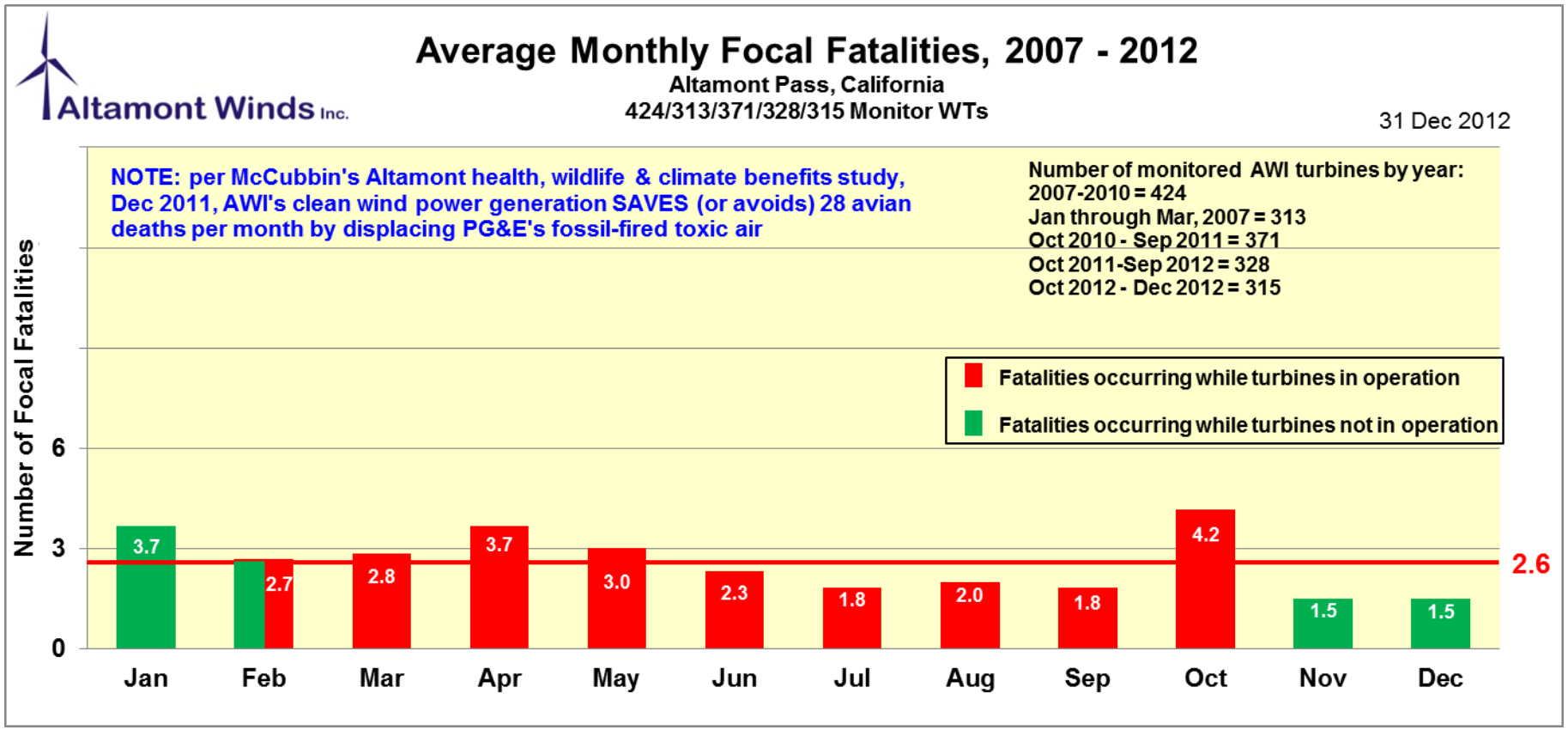
**Exhibit A**
**AWI Average Monthly Focal Species Fatalities (unadjusted)**





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# Written Comments—Individuals

# SRC Comments on AWI Draft Environmental Impact Report to Modify Conditional Use Permits

**Alameda County APWRA Scientific Review Committee**

## I. SRC Consensus Input

The Alameda County Scientific Review Committee (SRC) considered the Draft Environmental Impact Report for AWI's proposed CUP modifications (P263_AWI CUP Mods DEIR) at its March 2013 meeting. Alameda County (in P264_Alameda County Memo on Questions for AWI DEIR Review) had asked the SRC to provide input on the report's methodology, assumptions and proposed mitigations. A presentation on the draft Report was provided by ICF (P267_ICF AWI DEIR Presentation Slides).

**The SRC reached consensus agreement on the following input:**

- Monitoring Team data includes winter shutdown, so the impact of the project would actually be higher. Include a disclaimer and consider changing the analysis so that it includes winter shutdown months as an operating month in the analysis.
- Given that fatality trends are at or about 45%, removing seasonal shutdown as a management action can't be justified at this point. The SRC also agrees with the report's conclusion that the proposed project would have a significant impact.
- The report should explore or discuss other mitigations, such as hazardous turbine removals and US Fish and Wildlife Service mitigations for golden eagles.

## II. Comments by Individual SRC Members

Comments submitted by individual members of the Alameda County Scientific Review Committee (SRC) follow. These comments are individual and do not reflect the opinion of the entire Committee. Commenters are listed in alphabetical order.

**Joanna Burger**
**Jim Estep**
**Sue Orloff**
**Julie Yee**

## Joanna Burger

Sandy's Questions to the SRC

METHODOLOGY

The methodology used by AWI is based on the methodology used by the monitoring team, as modified by the SRC over the years. They also use the same methodology for determining fatalities. It was difficult, however, to determine the time period for baseline data and for projections (i.e. the tables were not clear). The projections seem high, and AWI needs to clarify both the methods for the fatalities and the numbers in the tables. The methodology may well by in line with that used by the Monitoring Team, but it needs more clarification. Tables should be in the same format as the Monitoring Team. I1-1

ASSUMPTIONS

The assumptions are in line with those made by the Monitoring Team and the SRC, and thus will allow for comparisons and evaluations. I1-2

MITIGATIONS

They seem to be proposing a seasonal shutdown and Golden Eagle Mortality. I remain concerned about removal of HRT, as this would reduce continued mortality at these high risk turbines. Removal of HRTs has been an important factor in the Altamont in reducing avian mortality. This method has involved extensive input from the SRC and others to target those turbines that continue to cause mortality in the four focal species. The county should consider including this as a mitigation. I1-3

The seasonal shutdown should be continued (and indeed it is, through a mitigation rather than as a proposed project). Why is this mitigation, rather than a continued operation. More details on the seasonal shutdown should be provided. I1-4

I am wondering why other potential off-site mitigations are not considered to reduce eagle mortality. As stated in their document, mortality of focal species will not be fully mitigated by their measures. It is unclear why a Statement of Overriding Consideration should be approved by the County. I1-5

## Jim Estep

The following comments respond generally to the three questions from P264 and several additional comments regarding the biological impact analysis and mitigation.

*1. Methodology: What are the SRC's thoughts on the methodology used in the DEIR for analyzing impacts to avian biological resources?* I2-1

The methodology uses data derived from the monitoring program, which is appropriate. The selected baseline also seems appropriate. Differences in avian mortality between the baseline and the proposed project are based on a projection of fatalities using the standard fatalities/MW/year resulting in a range of cumulative fatality totals for the proposed

project, which can then be compared with the baseline totals. However, while the approach is straightforward and appears to provide a reasonably valid comparison, the cumulative totals for the proposed project in Tables 3.2-4 and 3.2-5 seem inaccurate. They appear to be based on an approximately 2-year cumulative total, which is consistent with the second sentence in the last paragraph on page 3.2-31, which indicates that the remaining operational period used in the calculation was 2 years. But if the proposed project includes an operational period through December 2015, then that would indicate an operational period of closer to 3 years from the time of the EIR analysis. Projecting the cumulative total to December 2015 would increase the number of fatalities for the proposed project and the difference in estimated mortality between the baseline and the proposed project. I2-1 cont.

*2. Assumptions: What is the SRC's perspective on DEIR assumptions in relation to avian biological resources?* I2-2

The impact assumptions seem O.K.

*3. Mitigations: What is the SRC's assessment of the appropriateness of the avian-related on- and off-site mitigations set out in the draft document?* I2-3

There are only two mitigations related to avian mortality, 1) Bio-16, which implements the seasonal shutdown, and Bio-17, which addresses golden eagle mortality through retrofitting of offsite electrical facilities.

It is unclear why the proposed project removes the seasonal shutdown requirement only to have it reinstated as a mitigation for the proposed project. It would seem clearer if the proposed project simply included the seasonal shutdown. Then the only element of the proposed project would be the temporal differences in operation and decommissioning.

While this would be inconsistent with the proposed project's goal of maintaining 85.8 MW of operational capacity, the other potential mitigation that has been demonstrated to reduce mortality would be to do additional removal of HRT turbines. Other than repowering, seasonal shutdown and turbine removal are the only management measures that have been recommended by the SRC that appear to successfully reduce fatalities. The EIR analysis also appears to acknowledge the lack of suitable on-site measures that would potentially mitigate the increased mortality as a result of the proposed project. However, because seasonal shutdown is proposed as a mitigation, which is in conflict with the proposed project description, it would seem that including additional HRT removal would also be similarly acceptable (notwithstanding the obvious costs constraints) even though it is inconsistent with the proposed operational capacity goal.

Retrofitting offsite electrical facilities to offset golden eagle mortality may be a reasonable mitigation, but it should be recalculated, as indicated above, based on a more accurate operational period. I2-4

On Page 3.2-32 the document indicates the various measures recommended by the USFWS to reduce avian mortality through compensatory mitigation. Of these, only retrofitting existing offsite electrical facilities is proposed. Since the combined effect of BIO-16 and BIO-17 do not mitigate the additional mortality resulting from project implementation to a less-than-significant level, and thus requiring Alameda County to issue a Statement of Overriding Consideration in order to approve the project, it is unclear why these other mitigations are not also employed or at least considered. I2-5

Overall, as the document indicates, the proposed project would substantially increase avian mortality during the operational period compared with the baseline and proposed mitigation is insufficient to fully mitigate the impact. Thus the CEQA determination is significant and unavoidable. I agree with this determination. I2-6

*Other Comments*

Page 3.2-19: Special-Status Wildlife I2-7

This section provides only a brief summary of the potential impacts to special-status wildlife species. As a result, the uniformed reader has insufficient information on the life history, status, and occurrence and distribution of these species in the APWRA to successfully analyze the adequacy of the mitigation measures. Some of these species, such as the California tiger salamander and California red-legged frog, both listed species, have unique life histories that can result in uncertain and complex strategies for impact avoidance.

Further, the last two sentences in this paragraph suggest that while impacts on state and federally listed species can result in take, the mitigation measures that follow would successfully avoid impacts such that they would be considered less-than-significant. This suggests then that no take would occur through implementation of the mitigation measures. While it may be possible to minimize the potential for take, given the life histories of California tiger salamander and California red-legged frog, complete avoidance of take is never a certainty and thus a less-than-significant CEQA determination can be potentially problematic.

Mitigation Measure BIO-9: Avoid Disturbance to California Tiger Salamander, California Red-legged Frog, and Foothill Yellow-legged Frog. The description of this measure seems incomplete. The first sentence indicates that where habitat for these species is found near proposed work areas, AMMs would be implemented. However, the term “near” is undefined. The APWRA supports some of the largest known populations of CTS and CRLF. Both inhabit aquatic habitats as well as upland habitats that can be quite distant from their aquatic breeding sites. In the case of CTS, mass movements can occur during rain events with animals using somewhat traditional but poorly defined movement corridors. Upland hibernaculae occur in grassland habitats that are nearly impossible to detect, but these sites and associated movement corridors may be generally identifiable to some extent by topographic and site conditions. Impacts, including take, I2-8

of these species can potentially occur over a fairly broad area. Due to their life history and distribution throughout the APWRA, it is difficult at best to ensure that impacts are avoided during ground disturbing activities, but perhaps some additional language in the measure that indicates more clearly the extent of effort that would be undertaken to avoid impacts would minimize the uncertainty. I2-8 cont.

Mitigation Measure BIO-14: Avoid Disturbance of Burrowing Owl. The third and fourth bullets indicate a breeding season that doesn't begin until March 15. Burrowing owls begin their breeding season earlier than this. I would use a breeding season of February 1 through September 1. I2-9

Mitigation Measure BIO-15: Avoid Disturbance to Nesting Migratory Birds and Raptors – second bullet on page 3.2-28. The measure indicates that no-activity zones will be established to protect nesting birds during the breeding season. While a minimum of 50-feet is provided, the measure otherwise will rely on a variety of species and site-specific factors to determine the buffer width. I agree that the buffer should be based on species and site-specific factors; however, instead of providing a only a minimum width, a range of possible buffer widths should be provided (e.g., 50 to 1,000 feet) to indicate the range of no-activity buffers that may be used. I2-10

## Sue Orloff

**Mitigation Measure Bio– 9**: Avoid Disturbance of California Tiger Salamander, California Red-Legged Frog, and Foothill Yellow-Legged Frog. I3-1

**First bullet**: "A qualified biologist will conduct preconstruction surveys prior to ground-disturbing activities associated with decommissioning. If individuals are found, work will not begin until they are moved out of the decommissioning and reclamation activities zones to a USFWS/CDFW-approved relocation site." (page 3.2-24)

Comment:
This requirement does not make sense given the biology and natural history of these species. For example, California tiger salamanders (CTS) spend the majority of their lives in small mammal burrows within upland habitat and only migrate to and from the breeding ponds during the rainy season. CTS typically spend up to four to five years in their upland burrows before they reach sexual maturity and migrate to the breeding ponds for the first time (Trenham et al. 2000). It would be highly unlikely that biologists would find CTS above the ground during diurnal preconstruction surveys. Even when conducting night surveys during rain events, only a small percentage of the population can be found at the burrow entrances (Orloff 2011).

I suggest the following measures to truly attempt to minimize or avoid take of CTS. I3-2

1. For work areas within 2 km of potential breeding ponds, a qualified biologist should excavate potential CTS burrows (e.g., ground squirrel, gopher and other small mammal burrows) that could be disturbed by trenching/digging or other ground disturbing activities during decommissioning. This should include all potential burrows within 25 ft of ground disturbance. I3-2 cont.

2. As an alternative to the above measure, install a passive relocation system using wooden ramps with barrier fencing (Orloff 2011, pers. data) around all work areas (i.e., turbine rows) within 2 km from potential breeding ponds. Installation should preferably be completed prior to next winter (< November 2013), which would allow three years of breeding cohorts to safely leave the areas of impact while preventing them from reentry. This method is preferable to excavating burrows, particularly if the work areas are in close proximity to potential breeding ponds. Trenham and Shaffer (2005) found that 50-95% of adult CTS were between 150 to 620 m from the breeding pond, respectively. Orloff (2011) found large numbers of CTS over 800 m from the closest breeding ponds. Although CTS have been found over 2 km from breeding ponds, these occurrences involved relatively few individuals.

3. Use construction mats in the work areas to reduce the potential for collapsing burrows by heavy equipment used for trenching/digging.

These above measures are also appropriate from CRLF. I3-3

**Forth bullet**: "Work crews or onsite biological monitor will inspect open trenches in the morning and evening for trapped amphibians." (page 3.2-24) I3-4

Comment: Inspections should include all potential cover objects as well, not just open trenches. When migrating to or from breeding ponds during or after rain events, CTS and CRLF can hide under or against cover objects (e.g., construction equipment) if suitable burrows are not found during the night.

**Sixth bullet**: "Work will be avoided within suitable habitat during rain events or within 48 hours following a rain event (defined as more than 0.25 inch of rain within a 24 hour period)." (page 3.2-24) I3-5

Comment: Once rain saturates the ground, it does not take much rain to initiate CTS movement (pers. data). I would change the rain amounts to 0.1 inch within a 24 hour period before work begins or 0.25 inch within a 48 hour period.

**Mitigation Measure BIO - 12:** Avoid Disturbance of San Joaquin Kit Fox. I3-6

**First bullet**: "…….. The status of the den as defined by USFWS should also be determined and recorded. Dens will be classified in one of the following four den status categories." (page 3.2-25)

I3-6 cont.

Comment: In the northern part of the kit foxes range, active kit fox dens typically do not show distinctive signs of prior use (Orloff et al. 1986). Also, ground squirrel pellets are often found at kit fox dens and there is overlap in size between ground squirrel burrows and kit fox dens. Even natal dens are not obvious until late in the breeding season. Consequently, biologists often have difficulty distinguishing between ground squirrel burrows, potential dens, known dens, and natal dens. The best way to determine if a den is active is to use tracking medium for a few days at the den entrances.

My comments on birds were orally presented at the SRC meeting on March 25th.

I3-7

**References**

Orloff, S., F. Hall, and L. Spiegel. 1986. Distribution and habitat requirements of the San Joaquin kit fox in the northern extreme of their range. Trans. West. Sect. Wildl. Soc. 22: 60–70.

Orloff, S. G. 2011. Movement patterns and migration distances in an upland population of California tiger salamander (*Ambystoma californiense*). Herpetological Conservation and Biology 6(2):266–276.

Trenham, P.C. and H.B. Shaffer. 2005. Amphibian upland habitat use and its consequences for viability. Ecological Applications 15:1158-1168.

Trenham, P.C., H.B. Shaffer, W.D. Koenig, and M.R. Stromberg. 2000. Life history and demographic variation in the California tiger salamander (*Ambystoma californiense*). Copeia 2000(2): 365-377.

## Julie Yee

Table 4-1 (page 4-4) summarizes the (nameplate) MW capacity under the proposed projects and various alternatives. Since MW capacity changes over time, with removal of turbines, then MW cannot be summarized by a single value. What appears to actually be reported is MW-year (as was presented at the March SRC meeting). The methodology in the DEIR doesn't make sense as it is currently worded, and confuses other statements in the report (see for example p. 3.2-15).

I4-1

I performed calculations to see whether Table 4-1 values might actually be MW-years (this was before the SRC meeting). I got an almost exact match, and by the way noticed that the MW-years excluded seasonal shutdown months. In order to estimate the number of fatalities under various project alternatives, those values were then multiplied by fatality rates (fatalities per MW per year) reported in the APWRA monitoring report (ICF International 2012). While this methodology is intuitive, it was not clear just by reading the narrative, and should be made clearer. I4-2

The methodology leads to an issue pointed by the SRC consensus input, and I have further thoughts/recommendations about that. The APWRA fatality rates are based on year-round data, including winter shutdown months and any fatalities found during the shutdown period. Therefore a more reasonable estimate of projected fatalities would be based on MW-years that include seasonal shutdown months, for the No Project Alternative, and Alternatives 1 through 3. This alternative method involves a simple adjustment to the MW-years, and should provide a more realistic estimate of fatalities under the project Alternatives. I4-3

Unfortunately for the comparison, the APWRA fatality rates are not applicable to the Proposed Project, which proposes that turbines be allowed to operate year-round. In other words, the fatality rates would be biased low for that project. One may still multiply the fatality rates to the Proposed Project MW-years, but cautiously interpret the products because they represent lower bound estimates. If the low estimate turns out to be higher than other project alternative estimates, then this could still be a useful comparison, even if AWI generates proportionally less power in the winter months. I4-4

Any additional assumptions, having to do with the removal order of different turbine sizes should also be made clear. The CUPs stipulate that certain numbers of turbines should be removed by certain dates, regardless of MW, but the estimated fatalities are based on MW-years. Thus, the estimates can vary depending on whether the largest turbines are assumed to be removed first or last or somewhere in between. I4-5

The overall methodology, while intuitive (and I only say that because I repeated the calculation while guessing at the details and got nearly identical results), is not without other issues. For example, there are seasonal differences in fatalities, and MW-years are not evenly distributed across seasons, due to mid-year changes in MW capacity. Additional arguments could be made based on variations due to other factors, such as annual variation in bird use and abundance, types of turbine removals, and actual operating time. An exact accounting would require more information or more assumptions, which I don't necessarily think is reasonable. But I do believe the pitfalls should be recognized. I4-6

On another topic, the analysis in the DEIR is based on a list of special-status species, which does not appear to be presented in the report. Specifically, the first paragraph under Special-Status Wildlife on page 3.2-11 refers to a list of species in Table 3.2-2, but there is no such table (nor in the Tables list at the front of the report). The same is true for Special-Status Plants on page 3.2-10. There are similar references to these tables I4-7

elsewhere, and I suspect the tables must have existed in an earlier version. They should be included in the current version. I4-7 cont.

**III. DRAFT Summary of SRC Comments on DEIR at March 2013 Meeting.**
**NOTE: This draft summary prepared by CCP has not yet been reviewed by SRC members. It is included in order to provide information on other SRC individual comments provided orally. These are individual comments and do not reflect the opinion of the entire committee.**

**SRC Discussion of the DEIR**

SRC members had the following comments:

- An SRC member said the report was well-written and balanced. I5-1
- If the seasonal shutdown is deemed as an effective way to reduce mortality, removing the seasonal shutdown may violate laws such as the Bald and Golden Eagle Protection Act. I5-2
- Since the avian impact was concluded as significant and unavoidable, additional mitigation measures should be explored that might further decrease the impact. The report should explain the mitigation options' feasibility/infeasibility. If a measure's effectiveness cannot be quantified, conduct a qualitative analysis. I5-3
- Mitigation Measure BIO-17 requires retrofitting 29 utility poles to mitigate loss of individual golden eagles (based on a US Fish and Wildlife Service recommendation of 29 utility poles for each eagle). One SRC member questioned whether retrofitting 29 utility poles would be adequate in mitigating loss of individual golden eagles, and said mitigation should occur on site. I5-4
    - Brad Schafer of ICF said USFWS has a protocol for handling what they define as the local population, which would require mitigation within an area 160 miles of the proposed project.
- One SRC member requested that ICF clearly state in the report that the No Project Alternative did have the least significant environmental impact compared to the other options. I5-5

**From:** Rivera, Sandra, CDA
**To:** "AL Yahoo"
**Subject:** RE: Alameda County public review of Wind Power use permit
**Date:** Friday, March 29, 2013 9:54:00 AM

Alan,
Thank you for your comments. We will add this to the record and will respond to comments in the Final Environmental Impact Report or through the project permit conditions as appropriate.
Best Regards,
Sandi

**Sandra Rivera** | Asst. Dep. Director | 510.670.5400| 510.670.6526 (direct) | sandra.rivera@acgov.org
**ALAMEDA COUNTY PLANNING DEPARTMENT** | 224 W. Winton Ave., Rm 111, Hayward 94544



**From:** AL Yahoo [mailto:al.ragsdale@yahoo.com]
**Sent:** Thursday, March 28, 2013 6:55 PM
**To:** Rivera, Sandra, CDA
**Subject:** Alameda County public review of Wind Power use permit

Sandra,

Sadly I was unable to make today's (3/28/2013 @ 1:30 pm) AWI permit meeting. Can I add these comments to the public record?

1) The seasonal shutdown was designed to protect migrating birds. There is no compelling need to change that during the last few years of the CUP. Is there new data to show the shutdown is not needed? I6-1

2) If the phased removal is waved, what assurance does the Alameda County (and it taxpayers) have that AWI will remain financially solvent and fund the removal of the wind generators and supporting infrastructure, once the CUP has expired? I6-2

3) Thirty of the 35 wind generators visible from my backyard are missing their covers. One cover is laying in the field behind our house, and it has been there for years. The missing covers allow more gear noise to emanate from the generators, making then even nosier. In my opinion it also makes them more of an eye-sore. These actions strike me as a company that is not concerned with their impact to the local residents. Given that, why should be bear additional impacts of the altered CUP? I6-3

Alan Ragsdale
3932 Dyer Rd
Livermore, Ca 94551

To: Alameda County Community Development Agency, Planning Dept.
From: Robert Cooper, Dyer Rd. Resident
Subject: Input to AWI's DEIR
Date: 3/31/13

AWI windmills have killed birds around Dyer Rd. for over 23 years. It is time to stop. AWI's DEIR should be rejected! I7-1

Currently, AWI operates its windmills according to the existing CUP/EIR and a legal settlement turning the windmills off from November 1 to February 15 each year. From April 1, 2013 to September 30, 2018 under the current CUP/EIR, AWI will operate its windmills for a total of 18,653 windmill-months. (A windmill-month is one windmill running for one month.)

| Period | Months | Current EIR Windmills | On or Off | Windmill-Months |
|---|---|---|---|---|
| 2013 April - Sept | 6 | 828 | 1 | 4968 |
| 2013 Oct | 1 | 598 | 1 | 598 |
| 2013 Nov - 2014 Feb 15 | 3.5 | 598 | 0 | 0 |
| 2014 Feb 15 - Sept | 7.5 | 598 | 1 | 4485 |
| 2014 Oct | 1 | 598 | 1 | 598 |
| 2014 Nov - 2015 Feb 15 | 3.5 | 598 | 0 | 0 |
| 2015 Feb 15 - Sept | 7.5 | 598 | 1 | 4485 |
| 2015 Oct | 1 | 138 | 1 | 138 |
| 2015 Nov - 2016 Feb 15 | 3.5 | 138 | 0 | 0 |
| 2016 Feb 15 - Sept | 7.5 | 138 | 1 | 1035 |
| 2016 Oct | 1 | 138 | 1 | 138 |
| 2016 Nov - 2017 Feb 15 | 3.5 | 138 | 0 | 0 |
| 2017 Feb 15 - Sept | 7.5 | 138 | 1 | 1035 |
| 2017 Oct | 1 | 138 | 1 | 138 |
| 2017 Nov - 2018 Feb 15 | 3.5 | 138 | 0 | 0 |
| 2018 Feb 15 - Sept | 7.5 | 138 | 1 | 1035 |
| | 66 | | | 18653 |

The Draft EIR proposes to run 828 windmills for 33 months from April 2013 to December 2015 for a total of 27,324 windmill-months. In particular, it will operate 828 windmills during the winter months when the bird population increases.

| Period | Months | Draft EIR Windmills | On or Off | Windmill-Months |
|---|---|---|---|---|
| 2013 April - 2015 Dec | 33 | 828 | 1 | 27324 |

AWI's DEIR wants to run its windmills 50% more windmill-months than its current CUP/EIR, reneging on its agreement with the county. AWI's DEIR wants to run its windmills during November 1 to February 15, reneging on its out of court settlement.

Making the assumption that the number of bird kills is proportional to the number of windmills running, the DEIR will kill at least 50% more birds, probably much more because they will be running during the migration season, unlike the current CUP/EIR. I7-2

In September 2012, AWI's windmill broke a golden eagle's wing. The eagle was subsequently euthanized. There is currently a juvenile golden eagle in the Dyer Rd. area. I want this eagle to have a better chance to become an adult. There is currently a pair of adult eagles also in the area. I want these birds to have a better chance of raising young. I7-3

AWI's DEIR should be rejected! I7-4

On a related subject, when AWI decommissions its windmills, it should be required to remove the cement supports of the currently generation of windmills and also remove the cement supports of the previous generation of windmills which are still present. I7-5

# Public Hearing Comments

*The following transcript is a condensed version of the East County Board of Zoning Adjustments Hearing, March 28, 2013. The hearing was recorded, and then later, semi-transcribed. Therefore, this record is incomplete and not wholly accurate. Changes made to the original transcript include listing commenters and their affiliations and more clearly identifying each throughout as well as minor typo corrections. Brackets indicate the "best guess" as to what was said in the recording.*

COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT REPORT
MODIFICATIONS TO EXISTING (YEAR 2005)
CONDITIONAL USE PERMITS – ALTAMONT WINDS INC. (AWI)

Semi-transcription (approx. 98% accurate) from the East County Board of Zoning Adjustments Hearing, March 28, 2013 – Regular Calendar, Item 7, 1:30 p.m., Pleasanton Council Chambers.

**Sandra Rivera, County Planner**

**Andrew Young, County Planner**

**William Fleishhacker, County Counsel**

**Susan Swift, ICF International (ICF)**

**Andrew Roth, Altamont Winds, Inc. (AWI)**

**William Damon, Altamont Winds, Inc. (AWI)**

**Mary Lim, Altamont Winds, Inc. (AWI)**

**Douglas Bell, East Bay Regional Park District (EBRPD)**

**Bob Cooper, Interested Individual**

**Michael Lynes, Audubon Society**

**Nanette Leuschel, Ralph Properties II**

**Larry Gosselin, East Bay Zoning Authority (EBZA)**

**Jon Harvey, East Bay Zoning Authority (EBZA)**

**Andrew Young, County** introduces the EIR

**Andrew Roth, AWI**: (@ 1:59:30 on recording) - Will be submitting written comments on the EIR but we wish to summarize and conceptualize what we are asking for in the EIR. We are proposing a revised shutdown timeline and that it's going to shorten the remaining life of the project, with phased shut down from about five years to two years running at current capacity. So we are requesting a shorter time line but we will be running more turbines. We're not asking for a unique timeline. The shorter time line will bring us in line with other operators. Other operators have negotiated this timeline. We are behind schedule in that, but it's nothing new. PH-1

We also chose this 2015 timeline in consultation with the County. Because we believed at the time that that would give us time to repower by 2015. In this way it would preserve the spirit of the 2005 CUPs by incentivizing repowering. However those 2005 approvals and incentives did not recognize the economic realities of repowering, In particular how difficult it is to sell power in the down market conditions. So the 2005 incentives may be dis-incentivizing repowering, by requiring shutdowns too soon and too quickly. These conditions could push the company into insolvency. We fund the repowering through our operating revenue. If we don't have revenue from operations then it's very difficult for us to repower.

The other modification we are requesting is to eliminate the winter seasonal shutdown, From November 1 to the middle of February. We don't feel there is a lot of justification for continuing the seasonal shutdown for the next two years, assuming the first modification goes through. The reason being that the scientific analysis of the winter seasonal shutdown is inconclusive. There's some evidence that it's benefitting some species. But with the increase in intensity and comprehensiveness of the winter shutdown In the past seven years there hasn't been a commensurate decrease in avian mortalities for all species. In fact some indications are it might be harming some species due to increased predation by the larger raptors. It's not as beneficial as some people have made it out to be. And even in the winter you do find avian mortality. PH-1 cont.

Also not running in the winter doesn't allow the benefit of wind farms to occur such as the billions of pounds of air pollution [emissions]. If we are not running, electricity is being produced somewhere else, and in this area of California it is probably a fossil fuel burning plant. And the winter seasonal shutdown is about 6% of the revenue of the company.

**Larry Gosselin, EBZA**: You're addressing issues that are not raised in the EIR, correct? You said that the benefits of the wintertime seasonal shutdown is in dispute or you don't agree.

**Andrew Roth, AWI**: EIR points out some of the findings that have been made by the scientific community that the seasonal shut down benefits some species, and it may not benefit all species or it may harm some species. I think the last report called it a “common sense benefit” in that if you're not running turbines you're less likely to harm birds, but that’s not exactly a scientific conclusion. PH-2

**Larry Gosselin, EBZA**: So you're not in dispute with the information that is presented in the EIR, correct? And you don’t believe any new information is required?

**Andrew Roth, AWI**: I am certain that the EIR took its information from the annual fatality reports that come out – but those are not conclusive. I’m not disputing necessarily what’s in the EIR – it’s not scientific. PH-3

**Jon Harvey, EBZA** – are you suggesting that one of the alternatives should exclude seasonal shutdowns? Notes that all the alternatives continue the seasonal shutdown.

**Andrew Roth, AWI**: That was a decision made in consultation with the County, knowing that this is a disputed issue. An extended timeline with operations in the winter – we didn’t think that was as feasible as an alternative, politically-speaking, so we chose not to pursue that as an alternative. PH-4

**William Fleishhacker, County Counsel**: But the proposal is to end the wintertime seasonal shutdown – it is there as the proposal.

**Jon Harvey, EBZA**: Yes, I just noticed that the only variable in the alternatives was the date of the permanent shutdown. There wasn’t an on or off variable for the seasonal shutdown.

Planning staff **Sandra Rivera, County**: We considered all the variations, and what was more likely for the project was to continue the seasonal shutdowns.

**William Fleishhacker, County Counsel**: And alternatives are supposed to be devised to have less significant impacts.

[etc.]

(@ 2:08:20) **Larry Gosselin, EBZA**: Is it the role of the EIR to address those disputes about the baseline?

**William Damon, AWI**: I’m with Altamont Winds as well. The whole point of this is repowering. We are proposing modifications with this permit. But it all gets down to repowering, and all of

the stakeholders agree that that's where everyone needs to go. I'd like to provide a little background on why we're doing this. We're in a small company privately-owned and based in Alameda County. We have less than 50 employees. And compared to other wind companies based in the Altamont we are small, contained and local. We're physically located in Alameda County, even though our mailing address is in Tracy, in San Joaquin county, that is only for the convenience of the postal service. We are physically located in Alameda County and pay taxes in Alameda County - Most of our employees reside in Alameda County, [etc.] PH-5

The point of this is that Repowering is a very complicated, complex process, and requires a lot of money. Where do we get the money we only get the money from our current operations in Altamont Pass we don't get the money from any other source, , from investors, public shareholders or anything like that. It only comes from our operational revenue in Alameda County.

So the current permits work like this at a certain date as shown in the presentation we have to shut down certain percentages of our turbines. Which are large amount, and in 2013, we have to shut down an additional 25%. If we do that we are not going to have the money we need to continue this Repowering process. Just imagine if your personal income was cut 25%. How would you survive? You have to take drastic action. And as Andrew Roth said we're not sure we're going to survive that. We have been working with county staff since July of 2011 trying to say how do we deal with this situation, we are different, all of our funding comes from here. The other operators are headquartered in other states, they have multiple operations, and can rely on funds from other sources. But in our particular situation we are very constrained and limited in what we can do.

So with the conditional use permits as they stand now the concept is if we shut down 25% in 2013, we would immediately Repower 25% thereafter, and the revenue stream would continue. But that's not the situation now. We are not going to be able to Repower in 2013 25% of our turbines. So we are going to lose that 25% of our revenue, to continue to fund our operations. So that is what is behind what we're trying to do.

In terms of Repowering, that is very complex and complicated. Just to give you an example of the challenges that we didn't anticipate is that PGE who is the logical entity to buy our power has now said that they will not and cannot negotiate bilateral power agreements with anybody, including us. And the only way to get them to agree to buy power is through a bidding process – a public bidding process. And we now have to compete against all other renewable energy sources -- wind projects, solar projects, geothermal projects, et cetera. It reduces our chances of getting a contract in a timely fashion. And it has been difficult. We have made three bids so far. One was not successful; we have two more that are open. We're waiting to hear from them. So that's a hurdle we didn't expect. PG&E is also saying in their RFPs – request for proposals – that they really don't need power until 2017. So we're going out to other entities who might buy power from us. And this is taking time and money and that's the story there. The other thing is that the land leases from the property owners in the Altamont has taken much longer than we thought. We started in January of 2011. And are still going on that. We've made a lot of progress, but we have not finished yet. Any questions?

**Larry Gosselin, EBZA** – do you consider the EIR complete for the purposes of your company? Does it represent the issues that you think it should?

**William Damon, AWI**: Complete? It is. We will have some written comments, about some of the methodology and the numbers. But in general [it is complete]. PH-6

**Jon Harvey, EBZA**: when and where did this scoping meeting take place? Staff: it was July of last year 2012. It was a separate meeting; I think we had two attendees – Darryl [Sweet] and [Joanie Stewart] – Eric [Sweet] wasn't able to make it.

**Jon Harvey, EBZA**: did the alternatives get fixed then, and can an alternative be added now? **Andrew Young, County**: it would be pretty fixed now. It might require recirculation of the EIR to add an alternative at this point. **Sandra Rivera, County**: I would point out that under the current permits they have to remove 25% of their turbines by September of this year, so we are trying to help with this process to get to consideration of their permit modifications by then.

**Larry Gosselin, EBZA**: Our permit modifications would not be necessarily limited to these alternatives, would they? **William Fleishhacker, County Counsel**: just because an alternative is not analyzed does not mean the project that is ultimately approved has to match the proposal. However, in order to approve something different you have to show that the analysis in the EIR shows [the impacts] are not more significant than addressed in the EIR. If you can argue that the alternative picked has a less significant impact or a less-than-significant cumulative impact you could also approve that but you would have to provide some evidence of that. **Larry Gosselin, EBZA**: that evidence could come from hearings, is that correct? Counsel – yes.

(@2:19:44) **Mary Lim, AWI**: Also with the Altamont Winds, Inc. We also wanted to highlight some of the things we've done with respect to avian mortality. Since 2005 we have spent $11.5 million, which have included winter seasonal shutdown, which accounts for approximately 6% of annual revenue or about $800,000. We also fund the intensive monitoring program, and we have also funded the SRC which oversees that program. In addition when we sat down 10% of our turbines in 2009, we shut down what had been considered the more hazardous turbines. Outside of that, repowering projects in the APWRA have relieved pressure on avian mortality in the area and has been concluded in the December 2012 SRC report, that the goal of 50% reduction in avian mortalities had been met. And we recognize that CEQA only focuses on the impacts of the proposed project. However, we do want to highlight the benefits of wind energy as overriding considerations to those impacts. The Altamont Pass Wind Resource Area has in total offset 21 billion pounds of air pollutant emissions over the past 20 years. And this includes 61,000 pounds of inhalable fine particulate matter each year which is the type of air pollution that impacts human and wildlife in the region. This leads to dozens of heart attacks avoided, hundreds of asthma attacks avoided. Based on that we estimate approximately 300 birds saved each year. Questions? PH-7

**Larry Gosselin, EBZA**: I've heard this before how windpower affects avian mortality, has the Scientific Review Committee taken a position? Or are they evaluating just the direct impacts of the towers? Staff: they are tasked with evaluating the direct impacts and they are tasked with balancing the wind energy together with the impacts. **Larry Gosselin, EBZA**: so with that being the case if any of that becomes relevant to us in the decision-making process, we're just going to have to [take that into consideration]. PH-8

**Douglas Bell, EBRPD**: I am the Wildlife Program Manager for the East Bay Regional Park District.-Year to address the specific biological impacts that are outlined in the Draft EIR. The EBRPD Wildlife Department is very concerned with the increase in avian mortalities across the board that this project will elicit. Specifically in the document itself it says there will be a 60% increase in avian mortalities across all species. And that is due to the increased energy output that is [associated] with the operation of the turbines in a more intensive period prior to the final shutdown. The increased mortality rates includes the four focal species including the American PH-9

kestrel, burrowing owl, red-tailed hawk and golden eagle. Those are significant impacts. We are especially concerned about the golden eagle. PH-9 cont.

The work by the Hunts – Grainger Hunt and Associates that have been produced for the California Energy Commission and that have been published in various Commission documents, clearly indicates that the Altamont Pass represents a population sink to golden eagle infrastructure. (?) So the last thing we need is increased mortality rates or a ramping up of mortality rates of golden eagles in the area. These increased mortality rates especially concerning the golden eagle, have not been adequately addressed in the Draft EIR. The potential for outfitting poles, that was the only mitigation measure proposed specifically for golden eagle and has been recommended by the Fish And Wildlife Service still does not get at the root issue of how much mitigation that would represent for local populations of golden eagles. We're concerned about that level of mitigation that is fielded and being inadequately addressed. PH-10

There's another issue the Fish and Wildlife Service now recognizes not just for Repowering projects but for all wind projects, in the operating companies that are heading in that direction or changing operating conditions, they] must apply for a take permit for golden eagles or bald eagles and that is not address the Draft EIR. In sum, we feel that this increase energy output or production that will result in increased mortality rates has not been adequately mitigated. It admits there are significant impacts but it has not been adequately addressed in the EIR.

**Larry Gosselin, EBZA**: is it just the mitigation strategies that you believe need to be addressed, or do you believe the EIR needs to address issues regarding the significance of projecting mortality. **Douglas Bell, EBRPD**: yes to both essentially the project itself and alternatives 1, 2 and 3, all point out that there are additional impacts, additional mortality rates, so those have not been sufficiently addressed. Staff: will you be providing written comments? **Douglas Bell, EBRPD**: Yes. Staff: we would like to point out that we have present one of the principal authors of the EIR, Susan Swift, from ICF International, and a wildlife biologist, Angela Alcala, to answer questions on the EIR and in particular on the biological analysis. PH-11

**Bob Cooper**: Thank you for the presentation on the Draft EIR. I thought you were going to propose operation until 2018, but I appreciate your assurance that that was [only] for financial reasons. PH-12

I live on Dyer Road. The windmills are directly west of me. I am very uncomfortable with the avian kills. This was brought home when a neighbor called last November, and said she had seen a golden eagle whacked by a windmill behind her property. We were actually able to catch it and put it in a dog cage. Unfortunately it had been too long, and the injury was too infected for the bird to be saved. It was a learning process for us, but I am very uncomfortable with doing away with the shut off of the windmills from November 1 to February 1. I would prefer they stay off during that period of time.

I did take a walk upon that ridge. I walked by 57 windmills. These things are old. I took a picture of old number 49. It had been twisted by the wind until one of its supports gave way. There is other evidence that the equipment is old. I understand from the EIR that it will have more avian kills, but will get rid of the old equipment sooner. The power cables are badly deteriorated, and badly twisted. A lot of the transformers are rusting and leaking. It is time to move on. Terminate the operation of the second generation wind turbines and move on to repowering of the third generation or more advanced windmills, to reduce avian kills. PH-13

One issue in decommissioning is, US Windpower, that originally put in these second generation models, did not remove the supports from the first generation of windmills, that were installed in 1982. I would hope the Board would direct AWI to remove the current supports for the second generation windmills and the supports that are still there from the first generation. PH-14

As I said, I would prefer the windmills continue to be turned off from November 1 to February 1 and hopefully, come to an end for this generation of windmills. PH-15

(@2:32:45) **Jon Harvey, EBZA**: I haven't been able to find in the Draft EIR where it discusses the seasonal shutdown and the impacts of the seasonal shutdowns. Could someone point that section out to me? Page 2-1 mentions the subject, but... **Susan Swift, ICF**: Page 2-1 is just project description – there are no project evaluations there. But, for instance, see Biological Resources. **William Fleishhacker, County Counsel**: while you are looking, you can look at the chart for projected number of fatalities under different [aspects of] the project. Of course, a part of the project is the removal of the seasonal shutdowns, so it doesn't address that portion specifically. **Sandra Rivera, County**: It's generally considered part of the project; it isn't an alternative. PH-16

**Jon Harvey, EBZA**: It's not an alternative, so it must say somewhere why it's not an alternative. **Susan Swift, ICF** – it's not an alternative [because it is part of the project]. **Andrew Young, County**: Actually, Alternative 1 compares [or allows them to be compared] the Project where the seasonal shutdown is eliminated. It provides for comparison of conditions between [with and without the shutdowns]. **Jon Harvey, EBZA**: yes, but I was just looking for someone to point me to the text. **Susan Swift, ICF**: there are pages and pages of mitigation measures – it is hard to find things... PH-17

**Jon Harvey, EBZA**: They're asking for two things: They want to continue to operate in the winter; and do away with the phased decommissioning. I see all kinds of stuff about the phased decommissioning, but... **William Fleishhacker, County Counsel**: what do you mean by "all kinds of stuff"?

**Jon Harvey, EBZA**: So there's three alternatives – five years – or ending in 2015, -16 or -18. But the proposed project is "we want to do X" – it doesn't say what are the impacts of doing X. **William Fleishhacker, County Counsel**: Look at the 1st, 2nd, 3rd, and 4th columns, the difference in fatalities, comparing the baseline – and the baseline is with the seasonal shutdown – plus the other things, added to the project – which include the seasonal shutdowns. It doesn't separate out that portion, [but] it does include it as part of the methodology. PH-18

**Andrew Young, County**: If you look at the 3rd and 5th columns, does that look right to you? [general discussion - ] **Susan Swift, ICF**: You can say that the biologist when they did the analysis did not separate out the winter seasonal shutdown entirely as separate from the project. It was considered as part of the project. **Andrew Young, County**: If you look at – compare – the 2nd and 5th columns, you see the real difference there. Such as with the [American] Kestrel. **William Fleishhacker, County Counsel**: yes, because the only difference between the 2nd and the 5th [columns] is the seasonal shutdowns. Is that the comparison you're looking for? **Jon Harvey, EBZA**: Yep. **William Fleishhacker, County Counsel**: There may not be a column showing the differential there but you can do it yourself.

**Jon Harvey, EBZA**: is there some discussion somewhere in the EIR that make some qualitative statement about the comparison of the two columns? PH-19

**Susan Swift, ICF**: the paragraph directly above it states that "as indicated in Table 3.2-5, under the proposed project, approximately 60% more fatalities of all species would be expected to occur when compared to the baseline conditions." So the baseline conditions does include the wintertime seasonal shutdowns. **Jon Harvey, EBZA** – ok, so due in *part* to the seasonal shutdowns. So do you have a sense for how much of a part it plays? Vs. the decommissioning? **Susan Swift, ICF**: that is something that generated a lot of discussion because I don't think anybody really knew the answer when we started.

**Sandra Rivera, County**: there have been reports that looked at the effectiveness of the winter seasonal shutdown in the Monitoring Team reports; and that report is not reflected in here; I guess we could add it as an appendix. But there are reports that do discuss the seasonal shutdown, [and indicate] that because of the sample size, and many activities have been occurring in terms of wind turbine removals, turbines being shut down, that they [Monitoring Team] look at the annual fatality rate. So they know that *that* actually -- the combination of management measures have gotten to a certain percentage, of a certain reduction [in mortality]. So that's what they were looking at in terms of measures. And of course they're still in discussions about looking at models to see whether or not they are able to parse out the effectiveness [of measures] - specifically for wintertime shutdown. But they do think there's a signal; they haven't been able to measure it yet. With different species they show it by month - fatalities. So for instance winter seasonal shutdown seems to benefit red-tailed hawks, and the larger raptors such as golden eagle, but doesn't seem to benefit burrowing owl or American kestrel. So the issue has been predation for the smaller raptors for during the winter seasonal shut down in terms of their higher mortality. There still having that discussion in terms of making that association but that seems to be what the data is pointing towards. But that's not discussed in the EIR.

**Larry Gosselin, EBZA**: that speaks to a lot of ambiguity in what comes to us as facts in the EIR – we have pliable (?) numbers. **Susan Swift, ICF**: Well, it is a bit of a moving target – the information keeps evolving and changing but at some point you have to say you're going with the information from this stage. **Jon Harvey, EBZA**: I understand that, but second of all what you said to clarify that point isn't included in here – that you're committing to numbers that are a moving target. **Sandra Rivera, County**: the assumptions are laid out in the EIR.

Michael Lynes. I'm the Executive Director of the Golden Gate Audubon Society, and I'm here on behalf of the five Audubon chapters, that litigated about the CUP's in 2004 and settled in 2006 and remained very active in advocating for the birds in the Altamont. A couple of things. One we will provide substantive written comments to follow. I just want to point out some of the overall problems with the EIR. Also I need to talk about the context, particularly as they were raised by AWI. And some of that information goes to whether there will be a finding, of overriding considerations down the road. PH-20

One of the things that is very clear is that there will be significant impacts if any of the proposals is other than the no project alternative would occur. That means that a finding of overriding consideration would have to be passed. And the financial condition of the company is not an overriding consideration in CEQA. The circumstances it talks about are broader, about public benefit. And the particular benefits they are talking about are not well-documented.

I'll focus first on our problems with the EIR. It covers three major areas. One there are several conclusions which you have discussed already, that there seem to be assumptions made about providing the background information or evidence to support those assumptions. And so we hope in the Final EIR we will have more of that information so that more informed decision- PH-21

making can be made. So we can understand what the numbers we're looking at are, and what are the assumptions made about certain impacts. PH-21 cont.

And as Doug Bell mentioned and I will repeat those, there were a lot of concerns about the analysis of impacts to biological resources. And it is my understanding that this is something the SRC brought up as well. You may want to mock us as those crazy bird people at the Audubon; I hope you'll take to heart what the SRC has to say about those issues. And that includes whether the analysis of impacts should be higher in the EIR than they actually are. PH-22

And one of the other problems we have with the EIR is there's not enough emphasis on compliance with applicable laws. It's not an issue we necessarily have to get in to now, but if there's a lot of conflict related to the EIR, I think this should be raised. The fact is that every time one of these turbines kills, for example, a golden eagle, it is a violation of the Bald and Golden Eagle Protection Act, a violation of the Migratory Bird Treaty Act, a violation of the California Fish and Game Code – it is against the law. There are no permits and the county cannot issue a permit for those killings. And yet they continue to permit it. That's a pretty significant legal problem. We've all kind of swept it under the rug to keep moving forward. We would like to at least see a more frank analysis in the EIR about this legal problem. PH-23

We also don't think there was adequate analysis for the cumulative impacts. This again goes to the amount of supporting information in the EIR about assessing [impacts]. We all know there is a finding of a reduction of 50% due to Repowering and other mitigation measures, which we applaud - we are very happy to see that progress. But we're concerned that the cumulative impacts analysis for the proposed project does not really look at all this from the factors that are in the Altamont. One of our big concerns is that it while it would ultimately be bad policy to approve this EIR and to approve the CUP [modifications], is that it essentially rewards AWI for not being forward-thinking enough. AWI made the deal that it made for the CUPs back in 2005, and it basically doesn't want to lie in the bed that it made. PH-24

It was one of the negotiating parties for many many months. It won many concessions. It was a hard negotiator and at the end it walked away because it did want to be covered by the Settlement Agreement. It did not want to contribute financially in the settlement, and instead went to the county and sought CUP modifications that closely matched some of those [conditions] in the Settlement. But it was always something of an outlier to do that by itself and for many years the different settling parties worked together on conservation planning and many other issues. AWI, on many occasions, not in good faith, partnered, and they were a lot of stringent disagreements. We've had conflicts with each of the wind companies, because we have a different perspective, and we understand that. For example we settled with NextEra in 2010 to change their CUPs to move forward with Repowering, to really try to take a step forward, with sustainable wind energy which Audubon thinks is important, while reducing the environmental impacts. AWI has come to us and dangled that carrot in front of us, and we spent a lot of time with them on these plans, and each time they pull away. It's not just as it's also the AG's Office – it's really not a good faith effort to work with people across the table. It makes a suspicious about what you this really is. Are we going to modify the permits and in 2015 comes around are they going to ask for another modification? Unfortunately we have no trust in how they're going to behave. PH-25

Overall I think it's a step backwards. We all believe that under this scenario there will be additional impacts, and we just got to a 50% reduction [in avian mortality]. And it was a lot of work to get there. It's a real testament to the work that the county has done and the wind companies have done. It's been a difficult partnership but it's been successful in reaching that PH-26

50% goal. And what this represents is, essentially a special favor to one company, it's a step back and it results in more mortality, not less. I would ask you to look at this as you go forward in the coming months and look at the EIR. Thanks for your time. PH-26 cont.

**Larry Gosselin, EBZA** (@2:47:40): How long have you been following the process in Alameda County – you personally? Lynes: I've been with GG Audubon since 2008, and I'm the conservation director and primarily responsible. **Larry Gosselin, EBZA** - and you were able to get up to speed fairly quickly on what had happened before 2008? Lynes: I am relying on information from my predecessors. **Larry Gosselin, EBZA**: You've commented on the Draft EIR, and on the conditions that may come forward in the future. To give you some background, two of the three of us were involved with the permits back then. We wanted to have an adaptive management strategy that would allow flexibility. As we consider permits in the future that come forward, reflecting back on that adaptive management strategy, the success of it, and changes that could be made – could be helpful, but that's independent of the EIR.

My experience with responses to comments, is that the comments tend to be of a broader scope, and the responses tend to be relatively short. So if you could frame your comments with that perspective that would be great. Lynes – for the comments we submit, right? **Larry Gosselin, EBZA** Yes. Recognizing that you're not going to get a long response. So make lots of comments.

Nanette Loeschel: (@2:49:40) I've been following this a long time, but my comments today are basically on the Alternatives section. I wanted to start with, however, because I'm a little confused, as people are talking about increased mortality, because I think we've already reached the 50 percent [reduction] using the adaptive management plan. So how will continued operation of the 828 turbines increase mortality? It's a question – I don't understand. But maybe that can be addressed in the Final EIR. I'd also like to preface [my remarks] and [repeat] a preceding comments, that you don't put benefits [of a project] in an EIR. I would say I see benefits in a lot of EIRs. So it's possible to put benefits in the EIR. PH-27

Now we can get into my comments, which are primarily on climate change. I know you have along with avian mortality, worked on this for ten years, and I am here to support that concept, of giving equal time to the benefits of reducing greenhouse gas emissions. In particular I'd like to see the EIR beefed up in section 4.5.3.1. Basically, it say here that - alternative 3, the greatest offset of GHGs would occur under alternative 3, but yet the EIR concludes that alternative 1 is the environmentally superior alternative, based on quantitative analysis of impacts in the document – which I couldn't really find per se, for saying that alternative 1 would have the fewest environmental impacts, and would therefore be considered the environmentally superior alternative. I have to assume that conclusion is based on the prior sentence, which is the most critical issue, is the number of avian deaths, and not the reducing greenhouse gases. PH-8

So I would love to see a beef-up of the quantitative analysis, that compares those two things – that beefs up the greenhouse gas emissions as a credible issue, and the operation of the turbines, and the benefit to climate change. Thank you.

**Larry Gosselin, EBZA**: Does anyone of the staff know the definition of a significant impact – just off the top of your head? Just wondering... **William Fleishhacker, County Counsel**: I don't know if there's a definition, but for every impact, it's a different threshold. The agency has to determine what that threshold is – the significance for any given impact. And just to clarify one thing – the reason that existing operations – the change [that is being requested to existing operations] would have more impact, is that the assumption is that they would be removing PH-29

turbines. And on the subject of the benefits, there is nothing wrong with including the benefits, it's just that the purpose of CEQA is to analyze environmental impacts of the proposal, not to analyze the benefits of it. Whether it's better or not is certainly relevant to the decision-making, whether or not to approve a project.

Gough: Well, as I said, we are not taking any action on this item. **Sandra Rivera, County**: Would the members of the BZA like to make any additional comments at this time?

**Jon Harvey, EBZA**: I would just like to elaborate on what I was saying earlier. It was helpful for you to point out to me those two columns in the table. Basically, there's an order of magnitude difference between column two and column five, which is where probably most of the discussion [rests]. PH-30

**Larry Gosselin, EBZA**: I have a comment. On page 4-4, there's Table 4-1, and it refers to nameplate capacity. And I missed the definition of what "nameplate capacity" is. **Sandra Rivera, County**: it's what each turbine is designed to produce [in megawatts]. **Larry Gosselin, EBZA**: So that's cumulative? If its per turbine... **Sandra Rivera, County**: it's a summary table. **Larry Gosselin, EBZA**: So its potential maximum power produced – is that correct? **Sandra Rivera, County**: maybe AWI can answer, if you can produce more than is what's on the nameplate... **William Damon, AWI**: it's an industry standard for how you rate the turbine. PH-31

**Larry Gosselin, EBZA**: So what the table is trying to represent, is that these three alternatives – these are comparative figures for the potential maximum power production from all the turbines. **William Damon, AWI**: it's the marketing number – the nameplate. **Larry Gosselin, EBZA**: Now, there's a question that I want to try to get my head around a bit... PH-32

**Andrew Roth, AWI**: Can I just point out on the Table on page 4-4, those nameplate capacity figures – quote-unquote nameplate capacity figures - are not the nameplate capacity of the project, but that's a number created by the authors of the EIR that tries to quantify [impacts]. It's something we will be commenting on, the numbers on page 4-4 are *derived* in some ways from the nameplate capacity of the project, which is a theoretical maximum of what the project could produce. It was an attempt by the authors of the EIR, to show the differences in the operating intensity among the different alternatives, but they're not nameplate capacity. We have a problem with the way some of these numbers were derived, and the results that you get by tying these numbers to the fatality rate. **Larry Gosselin, EBZA**: But these numbers are relatively only to one another in this table. **Andrew Roth, AWI**: Yes. And even then, we have some dispute with their relative magnitudes. PH-33

**Larry Gosselin, EBZA**: Okay. I've now figured out why this was a concern for me. If we now go to page 4-20 on Table 4-3, if we look at the air quality figure for the project, and compare it to the air quality figure for alternative 2, and then look at the nameplate capacity numbers, there doesn't seem to be a synchronization, which I would expect. So what that gets me to is the foundation of data that came forward from these tables. I know this is confusing. Do you understand my point? PH-34

**Susan Swift, ICF**: We'll have to go back to the air quality specialist and look at that. **Larry Gosselin, EBZA**: but you get my point? **Susan Swift, ICF**: Yes. **Larry Gosselin, EBZA**: Well, I'd be happy to look at volumes and volumes of reports, but no one will want to listen to me, when I'm done with this. But it gets to a foundational issue, and I don't know how to address this. If we have discrepancies like this, and were working just of final tables, it creates a concern for me about the validity of those tables and future decision-making process.

**Staff/Beatty**: Just clarify that written comments must be received by April 19, 5:00 p.m.

# Chapter 3
# Responses to Comments

This chapter presents the County's responses, in compliance with State CEQA Guidelines Section 15088(a), to the comments received on the draft EIR (see Chapter 2, *Comments*). Where appropriate, draft EIR text changes associated with individual responses are described, referenced, and included in Chapter 4, *Draft EIR Errata*. These responses consist of clarifications, amplifications, or insignificant modifications to the draft EIR, as allowable by State CEQA Guidelines Section 15088.5(b). The responses do not significantly alter the project, do not change the significance conclusions of the draft EIR, and do not result in a conclusion that the project would result in significantly greater environmental impacts.

# Responses to Agency Comment Letters

The responses to agency comment letters are presented below. Numbering of responses corresponds to the numbering of letters and individual comments in Chapter 2, *Comments*.

## Responses to Comment Letter A1 – East Bay Regional Park District

### Response to Comment A1-1

The commenter summarizes the proposed project and alternatives considered, and makes a general comment on the proposed project, to which subsequent specific comments are addressed. No response is necessary.

### Response to Comment A1-2

The commenter expresses the opinion that any activity resulting in additional golden eagle mortality is unacceptable. The commenter's concerns will be forwarded to the decision makers for consideration.

### Response to Comment A1-3

The U.S. Fish and Wildlife Service (USFWS) considers the "local area population" for the purposes of their golden eagle management as the natal dispersal distance. They have determined that a majority of golden eagles disperse within 140 miles of their natal site (about 88 km). Because the USFWS has primary responsibility and regulatory authority over the management of golden eagles, the County's analysis uses the same terminology when defining the local area population. The USFWS Draft Guidance recommends retrofitting hazardous electrical poles within the local area population as a method to offset eagle mortality. However, it is acknowledged that such mitigation would only be effective if the retrofitted poles were located in an area with existing golden eagles that are at risk for electrocution. Mitigation measure BIO-17 has been revised to clarify that the mitigation must be conducted within the local area population in an area with electrocution risks to eagles, which, it is acknowledged, could best be described on the basis of the Hunt research as occurring within 30 km (48.27 miles) of the APWRA. Areas within the Central Valley would generally not pose an electrocution risk to golden eagles and would therefore not be suitable mitigation areas.

**Response to Comment A1-4**

As discussed on pages 3.2-14 to -15 of the draft EIR, the County has identified an appropriate baseline to which the proposed project and alternatives are compared. For the purposes of the draft EIR, the County has determined that the baseline is the same as the No Project Alternative in this particular instance. Mitigation Measure BIO-17 states "Although the baseline fatality rate is higher, this mitigation measure addresses the impacts of the proposed project (with mitigation), which is approximately one additional eagle fatality." The County's authority to require mitigation is limited to the impacts of the proposed project, considering baseline conditions and the implementation of other mitigation measures.

**Response to Comment A1-5**

The significant and unavoidable impacts on golden eagle identified in the draft EIR (pages 3.2-31 to -32, as an extension of impact BIO-1 on page 3.2-18) were estimated on a statistical basis in comparison to baseline conditions. Mitigation measure BIO-17 is not intended to mitigate for cumulative losses of golden eagles, but is instead meant to be proportional to the specific estimated impact of the project, compared to the baseline, on golden eagle mortality in statistical terms. Additionally, although the USFWS' recommended pole-retrofitting rate used in Mitigation Measure BIO-17 is designed to maintain stable or increasing populations of golden eagles, there is uncertainty with respect to its success, the County has concluded that impacts on avian species, including golden eagles, are significant and unavoidable at a project and a cumulative level.

**Response to Comment A1-6**

A summary of the Bald and Golden Eagle Protection Act, including a description of the programmatic eagle permit process, is included on page 3.2-2 of the draft EIR. The USFWS has regulatory authority under the Eagle Act.

**Response to Comment A1-7**

The commenter expresses support of repowering rather than modification of the CUPs as proposed. The proposed project would not prolong operation of the existing wind farm facilities but would instead require them to be completely removed from service three years earlier than presently required, which would be more conducive to repowering. No additional response is necessary. The commenter's opinion will be forwarded to the decision makers for consideration.

**Response to Comment A1-8**

The commenter expresses support of the No Project Alternative to minimize impacts on avian resources. No response is necessary. The commenter's opinion will be forwarded to the decision makers for consideration.

## Responses to Comment Letter A2 – Livermore Area Recreation and Park District

**Response to Comment A2-1**

The commenter identifies the LARPD property located near the proposed project facilities. Brushy Peak Reserve abuts the western boundary of the project area.

**Response to Comment A2-2**

The commenter objects to the proposed removal of the winter seasonal shutdown requirements. The draft EIR proposes as mitigation measure BIO-16 that the seasonal shutdown be continued. The commenter's opinion will be forwarded to the decision makers for consideration.

**Response to Comment A2-3**

The commenter indicates less concern for the proposed removal of phased decommissioning than removal of the winter seasonal shutdown, and expresses a preference for Alternative 1. The commenter's opinions will be forwarded to the decision makers for consideration.

**Response to Comment A2-4**

The commenter indicates support of Alternative 2 to a lesser degree than support of Alternative 1. No change to the EIR is necessary. The commenter's opinion will be forwarded to the decision makers.

**Response to Comment A2-5**

The commenter indicates opposition to alternatives that would allow older wind turbines to operate longer than Alternative 1 or Alternative 2. No change to the EIR is necessary. The commenter's opinion will be forwarded to the decision makers.

## Responses to Comment Letter A3 – Contra Costa Water District

**Response to Comment A3-1**

The commenter summarizes the proposed project. No response is necessary.

**Response to Comment A3-2**

The commenter requests that mitigation measures are consistent with CCWD mitigation measures. CCWD has recently purchased land along Altamont Pass Road to establish as a conservation area for their project impacts. An existing substation on the CCWD property receives power from APWRA turbines and CCWD requests notification if access to that property is required. The property does not fall within the project area and no access is anticipated.

## Responses to Comment Letter A4 – United States Fish and Wildlife Service

**Response to Comment A4-1**

The commenter describes the context in which the USFWS is required to review the draft EIR. The County acknowledges the USFWS' responsibility related to the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.

**Response to Comment A4-2**

The commenter summarizes the Migratory Bird Treaty Act (MBTA) and states that some birds may be killed at renewable energy developments even with implementation of all reasonable mitigation measures. The County acknowledges that the project could result in violations of the MBTA, similar

to past and ongoing operations under the existing conditional use permits. No additional response is necessary.

**Response to Comment A4-3**

The commenter summarizes the Bald and Golden Eagle Protection Act and indicates that limited take of bald and golden eagles can be authorized under 50 CFR 22.26. No additional response is required.

**Response to Comment A4-4**

The commenter summarizes the components of the proposed project and Alternative 1, and indicates that Alternative 1 would result in fewer avian deaths due to turbine operation than would the proposed project. The comment that Alternative 1 would result in reduced avian deaths is consistent with the analysis of alternatives in the draft EIR (see page 4-20).

**Response to Comment A4-5**

The commenter recommends continuing the winter seasonal shutdown as an effective approach to reducing avian fatalities. Continuation of the WSSD is identified as Mitigation Measure BIO-16 in the draft EIR. The commenter's opinion will be forwarded to the decision makers for consideration.

**Response to Comment A4-6**

The commenter recommends retention of the existing decommissioning schedule. The commenter's opinion will be forwarded to the decision makers for consideration.

**Response to Comment A4-7**

The commenter indicates that the applicant should apply for an eagle take permit. The commenter also states that failure to minimize avian impacts through hazardous turbine removal and continuation of seasonal shutdowns demonstrates a lack of due care by the applicant. Section 3.2.1.1 of the draft EIR describes the Bald and Golden Eagle Protection Act and the associated take permit process. The comment will be forwarded to the decision maker for consideration.

**Response to Comment A4-8**

The commenter expresses support of Alternative 1 with retention of the existing decommissioning schedule. It is assumed that the commenter means the preference is for the No Project Alternative (retaining the schedule for removal of turbines as currently provided for by the existing CUPs), but that there is secondary preference for Alternative 1 (the project as proposed with the seasonal shutdown). The commenter's opinion will be forwarded to the decision makers for consideration.

## Responses to Comment Letter A5 – California Department of Fish and Wildlife

**Response to Comment A5-1**

The commenter summarizes the proposed project. No response is necessary.

**Response to Comment A5-2**

The commenter identifies the authority under which the California Department of Fish and Wildlife bears responsibilities related to the proposed project. The County acknowledges the commenter's

role as a trustee agency, and that a statement of overriding consideration does not alter the applicants' obligations as to the Fish and Game Codes.

**Response to Comment A5-3**

The commenter is correct regarding the CDFW's jurisdiction over incidental "take" of birds, which is discussed in Section 3.2.1.2 of the draft EIR. The draft EIR identifies mitigation measures (MMs) to address potential impacts on nesting birds and raptors associated with decommissioning, including MM BIO-1 (General Protection Measures), MM BIO-2 (Restore Grasslands), MM BIO-3 (Preconstruction Special-Status Species Surveys to identify Sensitive Habitats and Resources), MM BIO-4 (Flagging or Barrier Fencing to Protect Sensitive Resources), MM BIO-14 (BUOW Avoidance and Minimization Measures), and MM BIO-15 (Migratory Bird and Raptor Avoidance and Minimization Measures). In particular, MMs BIO-3 and BIO-15 provide avoidance and minimization strategies specifically to avoid adverse impacts on nesting birds at the time that any vegetation removal occurs.

**Response to Comment A5-4**

These state and federally listed species and critical habitat are discussed as occurring or potentially occurring in the study area (Tables 3.2-1 and 3.2-2). These tables were inadvertently left out of the draft EIR and have been added to the final EIR in Chapter 4, *Draft EIR Errata*. The draft EIR indicated on page 3.2-19 that the project would have significant adverse effects on the species named in the comment, effects which could violate state and federal law (CESA and ESA). Inclusion of these erroneously omitted tables does not affect any of the impact conclusions in the EIR. No additional response is required.

**Response to Comment A5-5**

The EIR acknowledges that state-listed species are known to be present in the study area; Sections 3.2.1.1 and 3.2.1.2 indicate the project applicant's responsibility for consulting with USFWS and CDFW and for obtaining incidental take permits where appropriate and necessary. Clarification has been added to the end of the special-status wildlife discussion in Section 3.2.3.5 on page 3.2-19 and to the CESA discussion under Section 3.2.1, *Regulatory Setting*, on page 3.2-5. This clarification does not affect any of the impact conclusions in the EIR. See responses to comment A5-2 and A5-3; the implementation of Mitigation Measures BIO-3 and BIO-15 is anticipated to ensure adequate avoidance and minimization measures.

If site-specific studies at the time of reclamation yield evidence of potential take of plants or animals protected by CESA, procedures mandated by CESA would be required by the CDFW.

**Response to Comment A5-6**

Please see response to comment A5-5.

**Response to Comment A5-7**

The last sentence on draft EIR page 3.2-18 states: "...if a special-status species is present within the designated work area, the species could be adversely affected (individual plants could be removed or wildlife species harmed or killed)." In addition, please see response to comment A5-5 regarding take.

**Response to Comment A5-8**

The recommended replacement text has been added to Mitigation Measure BIO-2. Addition of this text does not affect any of the impact conclusions in the EIR.

**Response to Comment A5-9**

Mitigation Measure BIO-2 states, "in coordination with CDFW." The text, "subject to CDFW approval," along with CDFW contact information, has been added to Mitigation Measure BIO-2. Addition of this text does not affect any of the impact conclusions in the EIR.

**Response to Comment A5-10**

Mitigation Measure BIO-2 has been reconfigured to incorporate the commenter's requested changes. Reconfiguration of this text does not affect any of the impact conclusions in the EIR.

**Response to Comment A5-11**

The EIR assumes that all grassland in the study area is potential habitat for special-status species identified in Tables 3.2-1 and 3.2-2. Mitigation Measure BIO-3 would be conducted within 3 years of decommissioning activities to identify if habitat elements (i.e., burrows) are present and if avoidance measures are required for particular remediation sites.

The EIR does disclose the impacts, which assume that habitat for all special-status species is present at all sites. In addition, text has been added to Section 3.2.3.3, *Impact Assumptions*, to clarify this. The report described in Mitigation Measure BIO-3 is not intended to provide impacts but rather to identify the location and description of habitats within specific remediation areas and where specific avoidance measures are applicable. If remediation does not happen for 5 years, species could move into an area they currently do not occupy (i.e., burrowing owl).

Mitigation measures identified in the EIR are consistent with measures identified in the EACCS and approved by CDFW to avoid and minimize temporary effects on special-status species. These measures are intended to avoid and minimize impacts but would not eliminate them because ground disturbance is required as part of the proposed project. The avoidance and minimization measures, along with grassland restoration, would reduce these potential impacts to less-than-significant levels. The decommissioning/remediation component of this project is equivalent to conducting restoration for these species, since it would return the existing disturbed habitat to native habitat. Although compensation is not proposed for project impacts, the project itself would result in a net gain of habitat (removal of turbine foundations and restoration of graveled areas providing a habitat lift) for the species. This should meet the fully mitigated standard under CESA, but that would be determined during the process required under Section 2081 of the California Fish and Game Code.

**Response to Comment A5-12**

Mitigation Measure BIO-6, as written, requires the applicant to conduct the floristic surveys according to CDFW botanical survey guidelines. The botanical survey guidelines, prepared by CDFW, already outline the protocols and methods for conducting surveys, including the survey extent, field survey methods, how to consider timing and number of visits, guidelines for visiting reference sites, and requirements for reporting and data collection.

**Response to Comment A5-13**

Please see response to comment A5-5 and text added to Mitigation Measure BIO-9. Mitigation Measure BIO-9 has been modified to reflect requested changes.

Because all of the potential terrestrial impacts identified in the EIR are part of project remediation and are temporary, no net loss of habitat would occur. As proposed, remediation areas would be restored to grassland habitat, resulting in a gain of habitat, or habitat lift.

**Response to Comment A5-14**

Please see response to comment A5-11.

**Response to Comment A5-15**

Please see response to comment A5-5. The following text has been added to Mitigation Measure BIO-10 and all other listed species mitigation measures for clarification: "These measures are consistent with the EACCS and are in addition to any conservation measures or conditions of approval identified in applicable project permits (i.e., incidental take permits under CESA and/or ESA)." In addition, the requested vegetation-removal text has been added to Mitigation Measure BIO-10. These clarifications do not affect any of the impact conclusions in the EIR.

**Response to Comment A5-16**

Although a detailed assessment of the remediation sites has not been completed, the EIR assumes that the species could be present. The mitigation, consistent with the EACCS that was developed with CDFW input, would be implemented regardless of specific survey results. Text was added to Impact BIO-1 (see Chapter 4, *Draft EIR Errata*) to clarify. This clarification does not affect any of the impact conclusions in the EIR.

**Response to Comment A5-17**

Please see response to comment A5-5. The commenter's suggested text has been added to Mitigation Measure BIO-12. An ITP requirement has not been added to the preconstruction survey and the related avoidance and minimization elements of BIO-12, because an ITP is acknowledged as a potential requirement established by the EACCS. The permit would be obtained prior to conducting the preconstruction survey.

**Response to Comment A5-18**

The commenter objects to the proposed removal of the winter seasonal shutdown requirements and recommends the EIR be modified to retain the seasonal shutdown requirement. The proposed removal of winter seasonal shutdown requirements constitutes part of the proposed project; however, the draft EIR proposes as Mitigation Measure BIO-16 that the seasonal shutdown be continued. It should also be noted that evaluation of a project component does not constitute approval of that component. The EIR considers three alternatives (Alternative 1, Alternative 2, and Alternative 3) and the No Project Alternative, all of which retain the seasonal shutdown requirement. No change to the EIR is necessary and no additional response is required.

**Response to Comment A5-19**

The commenter expresses support of renewable energy projects that avoid or minimize effects on native species and their habitats.

# Responses to Organization Comments

The responses to organizations' comment letters are presented below. Numbering of responses corresponds to the numbering of letters and individual comments in Chapter 2, *Comments*.

## Responses to Comment Letter O1 – Scientific Review Committee (Consensus Comments)

### Response to Comment O1-1

The discussion associated with Mitigation Measure BIO-15 of the EIR has been changed to explain the bias in the rate. Tables 3.2-4 and 3.2-5 have also been footnoted accordingly.

The methodology was not changed in the draft EIR, but the suggested alternative calculations were completed for the purpose of comparison. Please see response to comment I4-3 for further detail.

### Response to Comment O1-2

The comment indicates support for continuation of seasonal shutdown and agrees with the EIR's impact determination.

### Response to Comment O1-3

Please see response to comment O2-2.

## Responses to Comment Letter O2 – Ohlone Audubon Society

### Response to Comment O2-1

The commenter expresses opposition to the proposed project due to avian mortality concerns. The commenter's opinion will be forwarded to the decision makers for consideration.

### Response to Comment O2-2

The County is responding to a permit modification request from the applicant to eliminate the seasonal shutdown requirement. As discussed on page 3.2-35 of the draft EIR, the County has assessed the potential impacts on avian species and has determined that seasonal shutdowns are a valid method of reducing avian fatalities. Consequently, the draft EIR includes Mitigation Measure BIO-16 which would require the applicant to implement the seasonal shutdowns as part of the proposed project. Additionally, the draft EIR includes Mitigation Measure BIO-17, which requires mitigation for the loss of golden eagles consistent with current USFWS guidelines. The County has also responded to the SRC's recommendation to consider hazardous turbine removals as another mitigation option to reduce avian fatalities. See response to comment I2-3.

### Response to Comment O2-3

The County has prepared the draft EIR in response to the request from the applicant to modify their existing use permits, and has an obligation to respond to the request in a timely manner. The proposed project would not lengthen the number of years the applicant could operate their turbines and would in fact shorten the remaining operational period from 2018 to 2015. Therefore, the County does not believe that the proposed project is inconsistent with future repowering efforts.

## Responses to Comment Letter O3 – Golden Gate Audubon Society/Santa Clara Valley Audubon Society

### Response to Comment O3-1

This comment is a summary of more specific comments below and an outline of the Audubon Society's background relative to wind farm facilities. The commenter expresses the opinion that the EIR is deficient for the reasons listed in the commenter's subsequent comments. Please see more specific responses to comments O3-22 through O3-30, O3-32 through O3-37, and O3-40 through O3-43 below.

### Response to Comment O3-2

This is a summary of specific comments. Responses to specific comments from this commenter are provided below as follows. Please see responses to comments O3-16 through O3-20 regarding the Project Description, responses to comments O3-5 through O3-10 regarding laws and policy conflicts, and responses to comments O3-23 through O3-32 and O3-42 through O3-44 regarding biological assessment and mitigation. Responses to comments O3-34 through O3-41 and O3-45 address the commenter's concerns regarding alternatives, and response to comment O3-41 addresses cumulative impacts.

### Response to Comment O3-3

The commenter outlines the intent of CEQA, the relationship of an EIR and its impacts and mitigations to the decision-making process, and the consideration of additional factors by decision makers. Please see responses to comment O3-44 below regarding the Statement of Overriding Considerations. Also, please see response to comment O3-23 regarding consideration of feasible versus experimental mitigation measures.

### Response to Comment O3-4

The commenter describes the federal Migratory Bird Treaty Act. This is not a comment on the adequacy of the EIR. No change to the EIR is necessary.

### Response to Comment O3-5

The commenter describes the federal Bald and Golden Eagle Protection Act. Federal permits are obtained independent of the County's evaluation or approval of a project. No change to the EIR or additional response is necessary.

### Response to Comment O3-6

The County understands and acknowledges that the project could result in takings contrary to the Fish and Game Code, similar to past and continuing operations under the existing conditional use permits. The County believes, based on the court case cited by the commenter (*Department of Fish and Game v. Anderson-Cottonwood Irrigation District*), that this comment relates to applicability of Section 2080 of the California Fish and Game Code. The commenter cites the date of this court case as 1992; however our review indicates the date of the court case cited as 1998. Regardless of the date of the court case, the County acknowledges that California Fish and Game Code Section 2080 applies to species listed under the California Endangered Species Act, as described on page 3.2-4 of the draft EIR.

**Response to Comment O3-7**

This is a comment on the project and the County's jurisdiction rather than the EIR. See response to comment O3-6 above. No additional response is necessary. The comment will be forwarded to the decision makers for consideration.

**Response to Comment O3-8**

This is a comment on the project and the County's jurisdiction rather than the EIR. Section 3.2, *Biological Resources*, of the EIR does discuss the applicability of the California Fish and Game Code to the proposed project. See response to comment O3-6 above. No further response is necessary. The comment will be forwarded to the decision makers for consideration.

**Response to Comment O3-9**

The commenter quotes Sections 3503.5 and 3800(a) of the California Fish and Game Code. This is not a comment on the EIR. See response to comment O3-6 above. No further response is necessary. The comment will be forwarded to the decision makers for consideration.

**Response to Comment O3-10**

The County understands and acknowledges that the project could result in takings contrary to the Fish and Game Code, similar to past and continuing operations under the existing conditional use permits. A description of this section of the California Fish and Game Code has been added to the Regulatory Setting portion of Section 3.2, *Biological Resources*.

**Response to Comment O3-11**

See response to comment O3-10 above.

**Response to Comment O3-12**

A description of the protection of avian wildlife under the public trust doctrine has been added to the Regulatory Setting of draft EIR Section 3.2, *Biological Resources*. The County understands and acknowledges the potential liability under the public trust doctrine from the project, and from the past and continuing operations under the existing conditional use permits. Please see also the response to comment O3-10 above.

**Response to Comment O3-13**

The commenter is correct that the required permanent shutdown of 10 percent of the 920 turbines did not occur only in 2009, but included prior removals related to machine breakdowns, removal of hazardous turbines identified by the SRC and for other reasons. Clarification has been provided to establish that the CUP requirements were for 10 percent of the original 920 turbines to be removed *by* 2009, not necessarily *in* 2009 (see Chapter 4, *Draft EIR Errata*). Therefore, all 92 turbines removed from service between September 2005 and September 2009 were 'credited' toward the required removal of 10 percent of AWI's 920 turbines (but not including any turbine nacelles and blade sets that were relocated to sites that were not categorized as being high-risk hazardous risk turbines or HRTs). The clarification also identifies the specific quantities of turbines, as well as the percentages.

The project under consideration in this EIR involves the use and disposition of AWI's remaining wind generation facilities as they existed in 2012. The specific number of turbines actually removed

in 2009, and the process of 'crediting' AWI for those removals in that period of time has no particular bearing on the assessment of impacts and mitigation measures in the draft EIR and no substantial revision is required. For a detailed description of the CUP turbine removal requirements implemented prior to 2012, please refer to Exhibit G-2, Avian Wildlife Protection Program and Schedule, of the current CUPs as approved by Alameda County in 2005.

**Response to Comment O3-14**

Please see response to comment O3-13 for clarification, and reference to the EIR's discussion, of the turbine removal requirements under the current CUPs. State CEQA Guidelines Section 15124, which outlines the required content of an EIR's project description, indicates that an EIR must provide a general description of the proposed project "but should not supply extensive detail beyond that needed for evaluation and review of the environmental impact." Removal of turbines is done in accordance with the conditions of the use permits, as noted in response to comment O3-13. The project applicant is currently operating under the requirements of the CUPs, which allow a maximum number of wind turbines to operate without specifying which turbines. As governed by the existing CUPs, the operator has discretion as to the specific turbines in operation.

It is stated on pages 2-11 to 2-12 of the draft EIR that the 92 removed turbines included those shut down for the full range of reasons—Tier 1 and 2 classifications, HRT ratings from 8.5 to 10, derelict and non-operating turbines, and others. Any other turbines that have been removed from service since 2009 over and above those 92 turbines removed prior to 2009 may be counted (or "credited") toward the removal of the additional 25 percent (or net 35 percent) of turbines required by the existing CUPs. Under the current CUPs, it would continue to be the operator's prerogative to select individual turbines to be removed to meet the permit requirements, including those turbines to be removed from service by 2015.

**Response to Comment O3-15**

Table 2-1 identifies the potential area of disturbance for all project facilities. As indicated in the text of Sections 2.1.3.1 and 2.4.2.7, as well as Table 2-1, of the Project Description, much of the APWRA wind generation-related infrastructure is shared among the various wind operators; therefore, upon eventual removal, AWI would bear responsibility for its share. Impact BIO-1 (page 3.2-18 of the draft EIR) addresses the impacts associated with disturbance of this acreage, which includes both AWI-specific areas and AWI's portion of the shared acreage.

Because the existing foundations are already present, are static, and would not change if left in place, the County does not anticipate that leaving an existing foundation in place would generate new environmental impacts.

**Response to Comment O3-16**

This comment is more addressed to the project itself rather than the adequacy of the EIR. However, for clarification of the project need see Table 4-1 on page 4-4 of the draft EIR (and note *Draft EIR Errata*, page 4-30), which indicates the project would have a capacity to generate 193.1 MW of electrical energy, which is nearly 66 percent more than the 116.5 MW associated with the No Project Alternative production capacity. Furthermore, although the comparison of the project and the alternatives in Table 4-1 indicates a net increase of only about 10 percent in total nameplate production capacity of Alternative 1 over the No Project Alternative (128.7 MW, compared to 116.5 MW), these comparisons are between the entire lifetimes of the project and the alternatives (i.e., through 2015 or 2018). A comparison of renewable energy production of the alternatives in specific years (e.g.,

2014, 2015) is provided in Table 3.1-8 (page 3.1-21 of the draft EIR; also see Chapter 4, *Draft EIR Errata*, page 4-12), which shows that Alternatives 1 and 2 would substantially increase production of renewable energy (e.g., over 174 million kW hours in 2015 for Alternative 1 compared to about 96 million kW hours for the No Project Alternative). The commenter's concern about the project need will be forwarded to the decision makers for consideration.

**Response to Comment O3-17**

The EIR is not promoting either the proposed project or wind power generation in general; the term "clean energy" is a widely accepted phrase used, often interchangeably with the term "renewable energy," to describe types of power generation that rely on sources such as sun, wind, or biomass rather than fossil fuels. It should be noted that the EIR discloses and evaluates the project's impacts on avian mortality in Section 3.2, *Biological Resources*. The commenter's opinion will be forwarded to the decision makers for consideration.

**Response to Comment O3-18**

This comment primarily expresses the commenter's opposition to the proposed project, and to the project applicant's goals in particular. The EIR evaluates the proposed project's environmental effects against state, locally, and professionally-accepted thresholds of significance to identify the potential impacts on specific resources, including migratory and protected birds. The commenter's concerns will be forwarded to the decision makers for consideration.

**Response to Comment O3-19**

The commenter expresses doubt as to the relative magnitude of the project's contribution to California's renewable energy portfolio. This comment addresses the project itself rather than the adequacy of the EIR. As the comment does not relate to the environmental analysis or conclusions in the EIR, no response is required; however, also see response to comment O3-16. The comment will be forwarded to the decision makers for consideration.

**Response to Comment O3-20**

The commenter objects to the project's objective of providing benefits to human health, wildlife, and climate, as listed in Section 2.2.3 of the draft EIR. This comment addresses the project itself rather than the adequacy of the EIR. The commenter's opinion will be forwarded to the decision makers for consideration.

**Response to Comment O3-21**

The commenter objects to the inclusion in the project's objectives of contributing to Alameda County's economy, as listed in Section 2.2.3 of the draft EIR. The County agrees that the objective does not directly relate to potential environmental impacts. The inclusion of this as a project objective is meant to comply with Section 15124(b) of the State CEQA Guidelines to provide underlying project purposes, which may be those of the project proponent, and as stated by the commenter, to also aid in preparing findings of overriding considerations, if necessary. The subject section of the State CEQA Guidelines does not require evidence to support any project objective. However, this comment primarily addresses the project itself rather the adequacy of the EIR. The commenter's opinion will be forwarded to the decision makers for consideration.

**Response to Comment O3-22**

To date, monitoring team results have not indicated issues with bat fatalities at old generation turbines in the APWRA. An additional summary of the existing conditions as they relate to bats in the APWRA has been added to page 3.2-11 of the draft EIR (see Chapter 4, *Draft EIR Errata*). The clarification does not affect any of the impact conclusions in the EIR.

**Response to Comment O3-23**

A summary of the current status of other potential, experimental, mitigation measures has been added to Section 3.2, *Biological Resources*, of the EIR (see Chapter 4, *Draft EIR Errata*). Because these measures are currently experimental, their efficacy as feasible mitigation measures is in doubt. The County remains interested in these and additional measures that may become available in the future and the CUPs encourage all of the wind farm operators to employ them on a research basis.

**Response to Comment O3-24**

As required by CEQA Section 21081.6, if and when the project is approved, all required mitigation measures described in the EIR will be imposed as conditions of project approval. In addition, the County is required to adopt a Mitigation Monitoring and Reporting Plan, which will ensure compliance during project implementation. Any and all reporting requirements to the County would be publicly available upon request.

**Response to Comment O3-25**

Mitigation Measures BIO-14 and BIO-15 require the applicant to conduct specific surveys for burrowing owl and other migratory birds and raptors. Clarifications have been added to Mitigation Measures BIO-14 and BIO-15 regarding the timing of preconstruction surveys (see Chapter 4, *Draft EIR Errata*). These clarifications do not affect any of the impact conclusions in the EIR.

**Response to Comment O3-26**

Mitigation Measure BIO-3 is intended to provide specifics regarding the presence or absence of suitable habitat and the extent of surveys required at specific sites. Preconstruction surveys for individual species are described under Mitigation Measures BIO-6, BIO-9, BIO-10, BIO-12, BIO-14 and BIO-15. Clarification has been provided for specific survey timing under each measure.

**Response to Comment O3-27**

The determination in the draft EIR that the impact on the movement of native resident wildlife species would be less than significant (BIO-4) was made in the context of several factors, including the acknowledgement that as a result of both decommissioning activities and operational changes, the project would have significant and unavoidable adverse impacts on special-status avian and terrestrial species (BIO-1), significant impacts on riparian habitat and other sensitive natural communities (BIO-2), and on state or federally protected wetlands (BIO-3). In this context, the draft EIR *generally* or abstractly states that migratory birds, including the four focal raptor species in particular , but also in detail for a wide range of birds, would be killed in greater numbers under the project as compared to the baseline (see Tables 3.2-4 and 3.2-5), and that the impacts would be significant and unavoidable (BIO-1). It is acknowledged that the movement and breeding of migratory avian species would be impeded if they are struck by wind turbine blades. However, in the context of the identification of significant and unavoidable adverse impacts on all avian wildlife and on special-status wildlife (avian and terrestrial) elsewhere in the draft EIR, and the mitigation

measures that have been defined to minimize these impacts to the greatest extent feasible, no new mitigation measures are required. This clarification does not substantially alter the determinations of the EIR, or require new mitigation measures. Mitigation Measures BIO-1 to BIO-19 would collectively reduce if not completely avoid significant impacts on the movement of native resident wildlife species, and constitutes substantial evidence of identified mitigation that would also reduce and minimize impacts on the movement of resident and migratory wildlife and their native breeding or nursery sites. Clarification has also been added to Impact BIO-4. This clarification does not affect any of the impact conclusions in the EIR.

**Response to Comment O3-28**

As discussed in the response to comment O3-27, the County acknowledges that impacts on avian species would occur under the proposed project; however the assessment reflects consideration of impacts as measured against the baseline conditions identified in Section 2.5, *Project Baseline*, of the EIR.

**Response to Comment O3-29**

Please see response to comments O3-27 and O3-28. As noted in response to comment O3-27, clarification has been added to Impact BIO-4 regarding the assessment context. This clarification does not affect any of the impact conclusions in the EIR.

**Response to Comment O3-30**

The reference to 500 feet in Mitigation Measure BIO-15 is not a buffer but a survey area. This was increased to 1,000 feet to account for the maximum buffer size for species that could occur in the study area. The intent of the measure is to avoid take of migratory birds. As this distance would vary by species, the minimum buffer of 50 feet described in Mitigation Measure BIO-15 has been revised to reflect a range of 50 feet to 1,000 feet (see Chapter 4, *Draft EIR Errata*). A minimum 100-meter buffer would be excessive for a species like killdeer that has been shown to tolerate disturbances very near its nest. This revision does not affect any of the impact conclusions in the EIR.

**Response to Comment O3-31**

The commenter summarizes a portion of the EIR text. This is not a comment on the adequacy of the EIR. No change to the EIR is necessary.

**Response to Comment O3-32**

As noted in response to comment O3-23, other measures suggested in this comment are currently experimental and thus were not adopted as feasible mitigation measures for the project. Please also see response to comment I2-3 regarding the potential removal of high-risk hazardous turbines to mitigate for avian fatalities.

**Response to Comment O3-33**

The County has applied reasonable, feasible mitigation to this impact and the impact remains significant and unavoidable. Mitigation Measure BIO-17 is intended to mitigate for the loss of golden eagle only, although benefits to some other raptors may occur. Mitigation Measure BIO-16 is intended to reduce impacts on all bird species, including golden eagle and other raptors, and requires the applicant to implement seasonal shutdowns to achieve those impact reductions.

**Response to Comment O3-34**

Section 4.5.3, *Environmentally Superior Alternative*, of the draft EIR indicates that of all alternatives considered, the No Project Alternative would be environmentally superior, and therefore the State CEQA Guidelines Section 15126.6(e)(2) requires that the EIR identify an environmentally superior alternative among the remaining alternatives. Additional language has been added to Section 4.5.3, *Environmentally Superior Alternative*, of the draft EIR to clarify the discussion of the environmentally superior alternative and is shown in the Chapter 4, *Draft EIR Errata*, of this final EIR. These clarifications do not affect any of the impact conclusions in the EIR.

**Response to Comment O3-35**

The County understands and acknowledges that the project could result in takings contrary to the Fish and Game Code, similar to past and continuing operations under the existing conditional use permits. As discussed in response to comment O3-22, to date, the monitoring team results have not indicated issues with bat fatalities at old generation turbines in the APWRA. An additional description of the existing conditions related to bats in the APWRA has been added to Section 3.2, *Biological Resources*, of the EIR (see Chapter 4, *Draft EIR Errata*). This description does not affect any of the impact conclusions in the EIR.

**Response to Comment O3-36**

The avian impact analysis in the draft EIR is based on the most recent published results of avian fatality studies that have been ongoing within the APWRA since 2005. The current avian monitoring program is the largest, longest running, and most comprehensive study conducted to date in the APWRA.

**Response to Comment O3-37**

The County acknowledges that eliminating the winter seasonal shutdown for AWI turbines (considered as part of the proposed project but not Alternative 1 or 2) could potentially complicate monitoring efforts; however, APWRA monitoring activities are not environmental impacts of the project analyzed under CEQA. Please see comments O1-1 through O1-3 for the SRC's consensus comments regarding the EIR and the proposed project, and comments I1-1 through I1-5, I2-1 through I2-10, I3-1 through I3-7 I4-1 through I4-7 and I5-1 through I5-5 for individual SRC members' comments. The commenter's concerns will be forwarded to the decision makers for consideration.

**Response to Comment O3-38**

The commenter repeats the request made in comment O3-34 regarding the environmentally superior alternative. Please see response to comment O3-34.

**Response to Comment O3-39**

Please see response to comment O3-34 regarding clarification of the environmentally superior alternative.

**Response to Comment O3-40**

The County acknowledges that eliminating the winter seasonal shutdown for AWI turbines could potentially complicate APWRA monitoring efforts; however, the monitoring activities are conditions of approval rather than environmental impacts that require analysis under CEQA. This is a comment

on whether or not to approve the project as proposed. The commenter's concerns will be forwarded to the decision makers for consideration.

**Response to Comment O3-41**

The County acknowledges that Alternatives 1, 2, and 3, all of which would have additional avian impacts beyond baseline, would also contribute to significant cumulative effects. Clarification of this point has been added to Chapter 5, *Required CEQA Analyses,* of the draft EIR. This clarification does not affect the impact conclusions in the EIR.

**Response to Comment O3-42**

Please see responses to comments O3-27, O3-28, and O3-29.

**Response to Comment O3-43**

Please see responses to comments O3-37 and O3-40 regarding monitoring. The EIR does not evaluate replacement of infrastructure because the proposed project consists of changes to the removal schedule, rather than replacement, of such facilities. Please also see response to comment O3-15, which discusses shared infrastructure.

**Response to Comment O3-44**

The commenter implies that the absence of certain potential avian mortality mitigation measures, including the use of radar, altered cut-in speeds, and human field observers, renders the EIR findings inadequate for a determination of overriding considerations by the decision makers. The feasibility of these particular mitigation measures is discussed in response to comment O3-23.

In addition, the commenter states that the project objectives listed in the EIR allege benefits from the project that are not supported by any evidence. The County acknowledges and agrees that the EIR is not intended or required to set forth the other benefits of the project that could "override" the environmental impacts of the project pursuant to State CEQA Guidelines Sections 15092 and 15093. Rather, as noted in State CEQA Guidelines Section 15126.2, the EIR should focus on the proposed project's significant environmental effects. The applicant's project objectives, as included in Chapter 2, *Project Description*, were, as shown in Chapter 4, *Alternatives Analysis*, used in the development of reasonable project alternatives considered in the EIR.

**Response to Comment O3-45**

The commenter expresses a preference for the No Project Alternative and alleges that the County has conducted the EIR process as a favor to the project applicant. The County acknowledges the commenter's preference for the No Project Alternative. As the allegation of favoritism does not relate to the EIR's environmental analysis or conclusions, no response is required. The commenter's concerns will be forwarded to the decision makers for consideration.

## Responses to Comment Letter O4 – Altamont Winds, Inc.

**Response to Comment O4-1**

The commenter contends that the EIR's assessments are inaccurate and expresses a general request for reanalysis of key issues described in more specific comments that follow. This is a summary

comment that introduces specific comments. Please see responses to comments O4-8, O4-11, O4-27, and O4-28 below.

**Response to Comment O4-2**

The EIR accurately describes the project area as the 14,196-acre area within which the specific project facilities are located. Chapter 2, *Project Description*, referenced by the commenter, does not discuss study areas, which are specific to each resource area considered in Chapter 3 of the EIR. As project activities affect areas extending beyond the facility footprints, neither the project area nor the resource-specific study areas (as defined in each resource section of Chapter 3) can be assumed to include only the 233-acre footprint of project facilities. Additional language has been added to Section 2.3.2 of the EIR, as shown in Chapter 4, *Draft EIR Errata,* of this final EIR, to clarify the difference between the project area and resource-specific study areas. These clarifications do not affect any of the impact conclusions in the EIR.

**Response to Comment O4-3**

The commenter asserts that the current CUPs do not require turbine removal within one year of decommissioning, and that the CUPs do not establish a deadline for site restoration; the commenter also requests revision of the project description to reflect these assertions. While it is acknowledged that the CUPs do not specify a restoration deadline, the EIR reflects this, indicating on page 2-3 that restoration is subject to landowner agreements. Decommissioning activities are currently subject to the conditions of the existing CUPs (see Section 2.4.3.3 of the draft EIR) and other regulations described in the EIR (see Sections 3.1, 3.2, 3.3, and 3.4 of the draft EIR). Please see response to comment O4-4 regarding the decommissioning and restoration schedule assumptions used in the EIR. The text on page 2-3 has been clarified as shown in Chapter 4, *Draft EIR Errata* of this final EIR. These clarifications do not affect any of the impact conclusions in the EIR.

**Response to Comment O4-4**

In order to avoid underestimation of impacts, the decommissioning schedule evaluated in the EIR represents the most conservative schedule, with the greatest number of crews feasible. Evaluation of this schedule does not preclude implementation of decommissioning activities at a slower pace, with fewer crews and less equipment in use at any given time. These clarifications do not affect any of the impact conclusions in the EIR.

**Response to Comment O4-5**

The commenter points out an error in Figure 2-2 of the draft EIR. Figure 2-2 has been corrected; please see Chapter 4, *Draft EIR Errata,* of this final EIR. The text of Section 2.3.2, *Description of Project Area*, has been revised to reflect the requested clarification. This additional text does not affect any of the impact conclusions in the EIR.

**Response to Comment O4-6**

The County agrees that renewable energy has benefits, and mentions the referenced McCubbin report on page 3.1-4 of the draft EIR. However, as the referenced report does not address the air quality impacts of the proposed project, its conclusions are not part of the air quality analysis. The commenter's opinion will be forwarded to the decision makers for consideration.

**Response to Comment O4-7**

The County agrees that operation of APWRA wind turbines can result in GHG offsets. Please see response to comment O4-6 regarding the applicability of the McCubbin report to an individual project.

**Response to Comment O4-8**

As indicated in response to comment O4-4, in order to avoid underestimation of impacts, the decommissioning schedule evaluated in the EIR represents the most conservative schedule feasible. Evaluation of this schedule does not preclude implementation of decommissioning activities at a slower pace, with fewer crews and less equipment in use at any given time. It should be noted that even under the more aggressive decommissioning schedule evaluated, no significant air quality impacts were identified.

**Response to Comment O4-9**

The commenter introduces an overall arc of concerns with the analysis of impacts on avian species in the draft EIR and asserts that the analysis is flawed due to techniques employed and insufficient explanation. The concerns are addressed in responses to comments O4-10 through O4-26 below.

**Response to Comment O4-10**

The commenter states that the fatality rates used for estimating the impacts of the project as compared to the baseline should use only monitoring data from the years 2008 through 2010. The data from the years 2008 through 2010 do not represent the full range of bird use measured over the life of the project. By using a longer timeline and including seasonal shutdown, the two variables provide a more balanced scenario overall. The SRC and monitoring team have noted that bird use, and subsequent fatality rates, likely vary over time as bird use of the area naturally fluctuates. The County has reviewed the existing data and has determined that using data from the full range of available years provides a more realistic range of the fatalities that could be expected considering this natural fluctuation in bird use. The County acknowledges that turbines identified as hazardous by the SRC have been removed; however, the data available do not allow for assessment of the effectiveness of this management measure on its own. Additionally the fatality estimates for the proposed project are likely biased low because the fatality rates used to determine the estimates are based on years where seasonal shutdowns were in effect. The proposed project would eliminate the seasonal shutdowns. Thus, using data from all available years may partially adjust for this bias. To clarify the difference between the 2005 through 2010 data and the 2008 through 2010 data, the analysis, as presented in both the text and the tables on pages 3.2-28 through 3.2-32 of the draft EIR, considers and compares avian fatality rates for both the years since issuance of the 2005 CUPs and the more recent range of 2008-2010 (reflecting turbine shutdowns and removals). Both the 2005 through 2010 data and the 2008 through 2010 data, as shown, indicate significant avian fatality impacts.

**Response to Comment O4-11**

The commenter asserts that the methodology used to estimate avian impacts (based on installed capacity) is hypothetical and flawed, and that the method should instead be based on capacity factors, comparable to the method employed for the air quality analysis. The County recognizes that it is theoretically possible to establish a fatality rate based on capacity factors (i.e., actual electrical output as a percentage of nameplate capacity, due to low winter season winds and other periods of

low wind and energy production), instead of net installed capacity (the combined maximum potential electrical output if each turbine operated at full capacity at all times of the year and throughout the life of the project as proposed, or for each alternative). However, such a rate would also require the calculation of separate fatality rates for each avian species based on capacity factors (which vary from month to month) rather than net or installed nameplate capacity. It is not possible to multiply, as proposed in the comment, the turbines' capacity factor (e.g., 40%, to use the example in the air quality analysis, on page 3.1-20 of the draft EIR) by the "given fatality rate," because that fatality rate is directly linked to *net installed capacity* in MW per year.

The use of net installed capacity is the only effective method to compare the avian mortality impacts of the project with the alternatives. Perhaps most importantly, it allows for a standardized comparison of rates from different wind projects in the APWRA that are comprised of turbines of different sizes and generating capacities. In addition, the amount of energy actually produced is considered proprietary by power companies, and was not provided by the power companies over the term of the current monitoring program; therefore capacity factors have not been available for use. The commenter is in effect asking the County to complete an analysis based on data that is not available, to have fatality rates developed exclusively for its turbine operations and for use in the EIR, even though AWI's turbines are closely intermixed with many turbines operated by other operators, and to disregard the fatality rating system that has been in use throughout the APWRA since 2005.For clarification on how the avian impact methodology was developed and used in the draft EIR, and why it is the most appropriate method to estimate the avian mortality impacts of the project, text has been added to the draft EIR (see *Chapter 4, Draft EIR Errata*, page 4-23). Secondly, Section 3.2.3.1 of the EIR has been modified to include a discussion on how installed capacity was calculated for the project and all of the alternatives (see *Chapter 4, Draft EIR Errata,* page 4-15).

**Response to Comment O4-12**

The methodology for estimating avian fatality impacts and its background was described on page 3.2-28 in the draft EIR. However, Section 3.2.3.1 and Section 3.2.3.5 of the EIR have been modified to include a more detailed explanation of how the estimated avian fatalities are calculated. These clarifications do not affect any of the impact conclusions in the EIR (see *Chapter 4, Draft EIR Errata).*

**Response to Comment O4-13**

The calculations have been checked and are correct. Sections 3.2.3.1 and 3.2.3.5 of the draft EIR have been modified to include more detailed explanations on how the estimated avian fatalities are calculated.

When calculating the installed capacity of the No Project Alternative, the decommissioning schedule must be accounted for. The existing CUPs establish a decommissioning schedule that specifies by when certain percentages of the remaining turbines must be removed (See Section 2.4.3.3 on page 2-10 of the draft EIR). The language in the CUPs states that the turbines must be removed by September 30 of a given year. In order to accomplish the removal by September 30, turbines would need to be shut down a sufficient time ahead of that date in order to allow for the actual removal of the turbine. This would reduce the aggregate installed capacity of the No Project Alternative for the years of 2015 and 2018. The installed capacity calculation for the No Project Alternative assumes that 80 turbines per month would be removed starting in May of 2015 in order to accommodate decommissioning by September 30, 2015. For the year 2018, turbine removal would need to begin in mid-August to be completed by September 30, 2018. The ramp-down scenario for removal was not included for the proposed project and the alternatives because, based on the applicant's permit

modification request, it is assumed that if the permit modification is granted, the applicant will be required to shut down the turbines by a given date (either December 31, 2015 for the proposed project or October 1, 2015 for all other alternatives) and be allowed to remove them subsequent to the shutdown date.

However the methodology suggested by the commenter has merit. In practice, the CUP conditions have been interpreted to allow the turbines being decommissioned to operate up to the September 30 removal date. The turbines are shut off on that date and then physically removed in the following months. Because this has been the common practice, it is appropriate to analyze the avian impacts accordingly. This methodology would increase the installed capacity for only the No Project Alternative and for only the years 2015 and 2018. This increase in installed capacity would in turn increase the estimated avian fatalities associated with the No Project Alternative. The installed capacity and estimated avian fatalities would remain the same for all other alternatives. The following table shows the differences in the installed capacity that would result. This clarification does not affect any of the impact conclusions in the EIR.

**Installed Capacity Differentials**

| | No Project | Proposed Project | Difference from No Project | Alt 1 | Difference from No Project | Alt 2 | Difference from No Project | Alt 3 | Difference from No Project |
|---|---|---|---|---|---|---|---|---|---|
| DEIR Method | 116.5 | 193.1 | 76.6 | 128.7 | 12.2 | 189.5 | 73.0 | 311.0 | 194.5 |
| Modified Decom Schedule | 126.3 | 193.1 | 66.8 | 128.7 | 2.4 | 189.5 | 63.2 | 311.0 | 184.7 |

The following table shows the changes in avian mortality that would result from the change in the installed capacity. This additional analysis does not affect any of the impact conclusions in the EIR.

**Avian Fatalities**

| Species/Category | | Average Fatality Rate | No Project | | Proposed Project | | | | Alt 1 | | | | Alt 2 | | | | Alt 3 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (2008-2010) | (2005-2010) | (2008-2010) | (2005-2010) | (2008-2010) | (2005-2010) | Diff From No Proj | | (2008-2010) | (2005-2010) | Diff From No Proj | | (2008-2010) | (2005-2010) | Diff From No Proj | | (2008-2010) | (2005-2010) | Diff From No Proj | |
| **American Kestrel** | | | | | | | | | | | | | | | | | | | | |
| DEIR Method | 0.44 | 0.496 | 51.6 | 57.8 | 85.5 | 95.8 | 33.9 | 38.0 | 57.0 | 63.8 | 5.4 | 6.1 | 83.9 | 94.0 | 32.3 | 36.2 | 137.8 | 154.3 | 86.2 | 96.5 |
| Modified Decom Sched | 0.44 | 0.496 | 56.0 | 62.6 | 85.5 | 95.8 | 29.6 | 33.1 | 57.0 | 63.8 | 1.1 | 1.2 | 83.9 | 94.0 | 28.0 | 31.3 | 137.8 | 154.3 | 81.8 | 91.6 |
| **Burrowing Owl** | | | | | | | | | | | | | | | | | | | | |
| DEIR Method | 0.43 | 0.721 | 49.5 | 84.0 | 82.1 | 139.2 | 32.6 | 55.2 | 54.7 | 92.8 | 5.2 | 8.8 | 80.5 | 136.6 | 31.0 | 52.6 | 132.2 | 224.2 | 82.7 | 140.2 |
| Modified Decom Sched | 0.43 | 0.721 | 53.7 | 91.1 | 82.1 | 139.2 | 28.4 | 48.2 | 54.7 | 92.8 | 1.0 | 1.7 | 80.5 | 136.6 | 26.9 | 45.6 | 132.2 | 224.2 | 78.5 | 133.2 |
| **Golden Eagle** | | | | | | | | | | | | | | | | | | | | |
| DEIR Method | 0.06 | 0.085 | 7.1 | 9.9 | 11.8 | 16.4 | 4.7 | 6.5 | 7.9 | 10.9 | 0.7 | 1.0 | 11.6 | 16.1 | 4.5 | 6.2 | 19.0 | 26.4 | 11.9 | 16.5 |
| Modified Decom Sched | 0.06 | 0.085 | 7.7 | 10.7 | 11.8 | 16.4 | 4.1 | 5.7 | 7.9 | 10.9 | 0.1 | 0.2 | 11.6 | 16.1 | 3.9 | 5.4 | 19.0 | 26.4 | 11.3 | 15.7 |
| **Red-tailed Hawk** | | | | | | | | | | | | | | | | | | | | |
| DEIR Method | 0.29 | 0.449 | 33.3 | 52.3 | 55.2 | 86.7 | 21.9 | 34.4 | 36.8 | 57.8 | 3.5 | 5.5 | 54.2 | 85.1 | 20.9 | 32.8 | 88.9 | 139.6 | 55.6 | 87.3 |
| Modified Decom Sched | 0.29 | 0.449 | 36.1 | 56.7 | 55.2 | 86.7 | 19.1 | 30.0 | 36.8 | 57.8 | 0.7 | 1.1 | 54.2 | 85.1 | 18.1 | 28.4 | 88.9 | 139.6 | 52.8 | 82.9 |
| **Total All Birds** | | | | | | | | | | | | | | | | | | | | |
| DEIR Method | 9.07 | 9.897 | 1,056.4 | 1,153.0 | 1,751.0 | 1,911.1 | 694.6 | 758.1 | 1,167.1 | 1,273.7 | 110.6 | 120.7 | 1,718.4 | 1,875.5 | 662.0 | 722.5 | 2,820.1 | 3,078.0 | 1,763.7 | 1,925.0 |
| Modified Decom Sched | 9.07 | 9.897 | 1,145.3 | 1,250.0 | 1,751.0 | 1,911.1 | 605.7 | 661.1 | 1,167.1 | 1,273.7 | 21.8 | 23.8 | 1,718.4 | 1,875.5 | 573.1 | 625.5 | 2,820.1 | 3,078.0 | 1,674.9 | 1,828.0 |

No Stepdown for NP = Letting the turbines operate until September of the respective years (2014 and 2018) then shutting them down and removing within a year or two.
Alternative Method = adding back in the winter months (166.2 mw instead of 116.5 mw for No Project)

**Response to Comment O4-14**

The commenter suggests that avian fatality rates would vary by month or season, and thus a more useful method for estimating impacts under the various alternatives would be to use monthly or seasonal rates. While the County acknowledges that rates vary annually, and are thus likely to vary by month and/or season as bird use of the region fluctuates, the information needed to utilize this approach in a valid manner is not available. The current monitoring program was designed to estimate annual fatality rates (birds/MW/year). It was not designed to calculate fatality rates by month or by season, and because of the approximately 30-day search interval used in the study and the difficulty in determining the age of some of the avian fatalities detected, calculating rates in this way would require assumptions that are not supported by data. In addition, the seasonal shutdown of turbines instituted as part of the AWPPS beginning in 2005 precludes the derivation of an estimate of winter fatality rates from the current study.

The commenter also suggests that fatality rates during the winter months would likely be lower than other times of the year because average wind speeds are lower and wind turbines are turning less (generating less energy), reducing the collision risk posed to birds. While the County acknowledges that if wind turbines were permitted to operate, they would in fact operate less frequently during the winter months because of lower wind speeds, data collected by the MT clearly shows that wintertime use of the APWRA for some focal species (most importantly golden eagle and red tail hawk) is much higher than at other times of the year. Thus, while turbines may be spinning less during those winter months, more birds are present in the region, which the evidence suggests would result in higher fatality rates for those birds. The higher fatality rates resulting from higher bird use of the area would more than negate the reduced collision risk from reduced operations.

It should be noted that the seasonal shutdown was recommended based on information from a previous study (Smallwood and Thelander 2004) that indicated fatality rates were substantially higher in the winter period. Consequently, it is currently not possible to calculate valid separate fatality rates for the winter season versus the summer season, for example. The annual rate is all that can be supported by currently available data and thus is the most appropriate for use in the impact analysis. The rates available from the monitoring program include winter shutdowns where the wind turbines are shut down each year (from October 1 to February 15 for the last 4 years). Therefore, the use of these rates results in estimates of total fatalities for the proposed project that are biased low (underestimated) because the rates include the effect of the seasonal shutdown but the proposed project does not include seasonal shutdown. Although the currently available evidence suggests that the bias would be substantial, the extent of the bias is not mathematically determinable given the data available. This bias does not occur for the No Project Alternative and Alternatives 1 through 3 because all these alternatives include a seasonal shutdown.

See also response to comment O4-11 for discussion on net capacity.

**Response to Comment O4-15**

Section 3.2.3.1 of the EIR has been modified to include a discussion on how installed capacity was calculated for all of the alternatives. Mitigation Measure BIO-15 and Tables 3.2-4 and 3.2-5 in the draft EIR have been modified to acknowledge the bias present in the rate used.

Please see response to comment O4-14 for information concerning seasonal shutdowns.

**Response to Comment O4-16**

The use of unadjusted fatality counts is inappropriate because it does not take into account changes within and between years in the number of turbines that were searched and the frequency with which those turbines were searched. The composition and number of turbines searched each year has changed from year to year, which makes the use of raw fatality counts misleading and inappropriate.

The commenter does not provide critical information, such as whether the record set they are looking at includes only fatalities found by the MT or if it includes incidentally found carcasses or carcasses found by operations and maintenance personnel.

The existence of a potential reduction in the number of fatalities since 2007 does not mean that the estimates of total fatalities predicted in the EIR are inflated, as the commenter suggests. The estimates in the EIR used average fatality rates across years in which a decline for some species is evident to derive the estimates of total fatalities for the various alternatives. The existence of a decline in fatalities is not in conflict with the estimates of fatalities presented in the draft EIR.

There is strong evidence to suggest that fatality rates for some focal species are tied to use rates, i.e. the number of birds killed is related to the number of birds using the APWRA. Annual fluctuations in avian use of the APWRA make singling out one particular year (in this case 2007) to illustrate a point inappropriate. Because of the annual variations in avian use and fatality rates in the APWRA, the SRC determined that use of a 3-year rolling average was necessary. The SRC-determined approach is reflected in the EIR.

**Response to Comment O4-17**

As discussed on page 3.2-35 of the draft EIR, the County has assessed the potential impacts on avian species and has determined that seasonal shutdowns are a valid method of reducing avian fatalities. Consequently, the EIR includes Mitigation Measure BIO-16, which would require the applicant to implement seasonal shutdowns as part of the proposed project.

See response to comment O4-14 for more information on seasonal shutdowns.

**Response to Comment O4-18**

The commenter asserts that Mitigation Measure BIO-16 is unnecessary because the project is self-mitigating, and asks that pollutant offsets be used to address avian impacts. Please see response to comment O4-17 regarding the relevance of Mitigation Measure BIO-16 to the identified avian impacts. Section 3.1 of the EIR discusses pollutant offsets within the context of air quality and greenhouse gases. The weighing of project impacts on one resource versus another, beyond a general comparison of alternatives to identify the environmentally superior alternative (Chapter 4, *Alternatives*), is more appropriately done by the decision makers in their determination of the presence or lack of overriding considerations.

**Response to Comment O4-19**

The implementation of BIO-16: Implement Seasonal Shutdowns to Reduce Avian Fatalities, is not sufficient to reduce golden eagle mortality to zero. Therefore, Mitigation Measure BIO-17 remains included in the EIR.

See response to comment O4-11 for more information on the applicability of net capacity factors.

**Response to Comment O4-20**

Sections 3.2.3.1 and 3.2.3.5 of the EIR have been modified to include more detailed explanations on how the estimated avian fatalities are calculated.

See response to comment O4-13 for clarification on the nuances of calculating installed capacity for the No Project Alternative due to the decommissioning schedule.

**Response to Comment O4-21**

Please see response to comment O4-6 regarding the McCubbin study. The County agrees that wind energy has benefits; however, it is not the purpose of EIR to demonstrate the benefits of wind energy. Furthermore, the benefit of cleaner air to wildlife is not quantifiable and does not relate to the direct wildlife issues evaluated under CEQA; it therefore cannot offset potential direct impacts of decommissioning because it would not minimize direct take of the species.

**Response to Comment O4-22**

The County's responsibility under CEQA requires an assessment of all impacts of the proposed project and utilizing feasible mitigation measures whenever possible to avoid, minimize, and/or mitigate significant effects. The mitigation measures proposed in the EIR are consistent with the EACCS and are generally accepted measures for avoidance, minimization, and mitigation of effects on species and habitats identified as occurring in the project area. The measures are designed to be applicable to any ground disturbing activities in the eastern portion of Alameda County, will be applied to other applicants as appropriate, and thus are not overly broad or redundant.

**Response to Comment O4-23**

The County agrees, and the EIR supports the finding, that the decommissioning activities would ultimately result in a net increase in habitat. Please see response to comment A5-13, as well as the discussion in Section 3.2.3.5 of the draft EIR. In addition, the following clarification has been added to Section 3.2.3.5 of the EIR: "Reclamation and restoration of decommissioned turbines would support the goals and objectives of the EACCS." This clarification does not affect any of the impact conclusions in the EIR.

**Response to Comment O4-24**

Although some of the area subject to decommissioning activities may be previously disturbed, these previously-disturbed areas still provide habitat for special-status species and are surrounded by native grasslands that provide habitat. The impacts identified are specific to encounters with the species during decommissioning and removal activities, and relate to potential disturbance or take. The mitigation measures identified would avoid and minimize those impacts. Although roads may be well used, they do not constitute a barrier to species movement and are capable of supporting burrows within or immediately below the roadway surface. Decommissioning activities would cause disturbance beyond existing conditions; that is the impact assessed in the EIR.

**Response to Comment O4-25**

The commenter requests that the EIR consider economic factors in developing mitigation measures. Many of the mitigation measures presented in the EIR are state and/or federally mandated. Further, the CEQA requirements governing EIRs do not include consideration of an applicant's financial

status. However, the County acknowledges the commenter's economic concerns and will forward the comment to the decision makers.

**Response to Comment O4-26**

Please see response to comment O4-24. Species-specific measures identified in the EIR are consistent with those measures identified in the EACCS for any ground disturbance within potential habitat for those species.

**Response to Comment O4-27**

Noise generated by wind turbines is known to change with age and observations of older existing turbines in the APWRA confirm this. There are turbines of the same type that clearly make more noise than others and it is possible to identify those turbines based on the sound they generate. Accordingly, it is not speculative to assert that wind turbines can make more noise when they age. The EIR acknowledges that it is not possible to predict if and when increased noise with age would occur. However, because of the clear potential for turbines to result in more noise as they age and because turbines will be operating longer than originally planned in the current permits, it is reasonable to identify the potential noise impacts as significant. No changes to the EIR are required.

**Response to Comment O4-28**

For the reasons discussed in response to comment O4-27, Impact NOISE-1 is unchanged and remains identified as a significant impact based on the potential for a substantial increase in noise (5 dB) to occur. Mitigation Measure NOISE-1 is needed to reduce this impact to a less-than-significant level. The existing CUP does not specifically address an increase in noise as suggested in this comment. Accordingly, the mitigation measure requires a monitoring plan so that any claims of significant changes in noise can be evaluated and verified. No changes to the draft EIR are required.

**Response to Comment O4-29**

Mitigation Measure NOISE-1 has been modified so that the survey is limited to those residences that were in existence at the time the original permit was issued. No other changes to the EIR are required.

**Response to Comment O4-30**

The commenter requests revision of the decommissioning assumptions to use fewer crews over a longer time period. As discussed in response to comment O4-4, the assumptions used represent the most conservative schedule—with the maximum number of crews—deemed feasible. It should be noted that, even under the conservative assumptions used, Impact NOISE-2 is less than significant. However, the text of Impact NOISE-2 has been revised to reflect the possibility that reclamation activities could take up to 2 years, in accordance with landowner agreements and as noted in Section 2.1.3.1 of the draft EIR. These revisions do not affect any of the impact conclusions in the EIR and no further change to the EIR is necessary.

**Response to Comment O4-31**

Please see responses to comments O4-4 and O4-30 regarding the applicability of the decommissioning schedule evaluated in the EIR. The EIR evaluated the language presented in the existing CUPs. Clarification of the source of the decommissioning schedule has been added to Section 4.5.2.1, *No Project Alternative*, of the draft EIR.

**Response to Comment O4-32**

Please see responses to comments O4-4, O4-30, and O4-31 regarding the applicability of the decommissioning schedule evaluated in the EIR.

**Response to Comment O4-33**

The commenter objects to the nameplate capacity numbers used in the EIR and the associated avian fatality impacts. Sections 3.2.3.1 and 3.2.3.5 of the EIR have been modified to include more detailed explanations on how the estimated avian fatalities are calculated.

**Response to Comment O4-34**

The commenter objects to the use of different methodologies to assess air quality, biological resources, and noise impacts. As noted in responses to comments O4-10, O4-16 and O4-35, avian fatality impacts do not correlate directly with the amount of time that turbines are operating, due to seasonal fluctuations in avian use of the APWRA, including particularly high use in the winter. Air quality and noise impacts, conversely, are related to the duration of turbine operation.

During review of the EIR in response to comments, a math error in the air quality portion of the No Project Alternative column of Table 4-3 was identified. Table 4-3 has been revised to include the correct number, clarifying the relationship among the alternatives' greenhouse gas offsets. This correction does not affect any of the impact conclusions in the EIR.

**Response to Comment O4-35**

The commenter asserts that Alternative 1 has less impact on air quality, avian resources, and noise than the No Project Alternative because of the associated GHG offsets. As indicated in Table 4-3, Comparison of Alternatives, although Alternative 1 would offset a greater amount of GHGs than the No Project Alternative, impacts on avian species and noise sensitive receptors would be greater for Alternative 1 than for the No Project Alternative. CEQA does not include provisions to use lower impacts on one resource to mitigate impacts on another. Please see response to comment O4-18 regarding the appropriateness of weighing project impacts on one resource versus another, beyond a general comparison of alternatives to identify the environmentally superior alternative.

**Response to Comment O4-36**

The commenter requests inclusion of the Summit Wind Project in the cumulative scenario. Addition of the Summit Wind Project to cumulative conditions will not alter the proposed project's cumulative contributions to any resource areas; however, the text of Section 5.1.2, *Past, Present, and Reasonably Foreseeable Probable Future Projects*, as well as the text of Section 2.7, *Planned Cumulative Wind Power Development in the APWRA*, is revised to include the Summit Wind Project. Inclusion of this project in the cumulative scenario does not affect any of the impact conclusions in the EIR.

# Responses to Individuals' Comment Letters

The responses to individuals' written comments are presented below. Numbering of responses corresponds to the numbering of letters and individual comments in Chapter 2, *Comments*.

## Responses to Comment Letter I1 – Joanna Burger

### Response to Comment I1-1

The commenter is referring to the methodology used in the draft EIR to predict avian mortality resulting from the project, and generally affirms that the EIR avian methodology is based on that used by the SRC and monitoring team. The commenter requests clarification of the details used in making the projections. Section 3.2.3.1 and Tables 3.2-4 and 3.2-5 have been modified to explain the methods of calculating the installed capacity and impact calculations.

### Response to Comment I1-2

The commenter notes the agreement between the EIR's assumptions and those of the SRC and monitoring team and states that this agreement allows for comparison. The County acknowledges the commenter's opinion and will forward it to the decision makers.

### Response to Comment I1-3

Please see response to comment I2-3 regarding the appropriateness of proposing hazardous turbine removals as mitigation.

### Response to Comment I1-4

The County is responding to a permit modification request from the applicant to eliminate the seasonal shutdown requirement. As discussed on page 3.2-35 of the draft EIR, the County has assessed the potential impacts on avian species and has determined that seasonal shutdowns are an effective strategy to reduce avian fatalities. Consequently, Mitigation Measure BIO-16 would require the applicant to implement seasonal shutdowns.

### Response to Comment I1-5

The County considered several mitigation options and chose to implement the currently accepted guidance of the USFWS, the agency with primary regulatory authority over golden eagle management, as the most appropriate mitigation approach.

The County cannot adopt the EIR without a Statement of Overriding Considerations, because the level of avian mortality cannot be reduced to a less-than-significant level unless the No Project Alternative is adopted (i.e., the project is denied).

## Responses to Comment Letter I2 – Jim Estep

### Response to Comment I2-1

The commenter asks about the difference in fatality rates between the baseline conditions and the proposed project. Section 3.2.3.1 of the EIR has been modified to include a more detailed explanation of the methodology used to calculate installed capacity and avian fatalities, and an explanation of how the avian fatalities are estimated has been added to Section 3.2.3.5.

The period analyzed begins on October 1, 2013 because that is when the proposed permit modifications would take effect. Additionally, for all alternatives except the proposed project, the installed calculation does not include the months covered by the winter shutdown period.

**Response to Comment I2-2**

The commenter indicates agreement with the EIR's assumptions about avian resources. The County acknowledges the commenter's opinion and will forward it to the decision makers.

**Response to Comment I2-3**

Please see response to comment I1-4.

With regard to removal of high-risk hazardous turbines (HRTs, specifically those rated 8 to 10), there is uncertainty and disagreement about the effectiveness of removing such turbines, especially those rated 8 to 9. AWI has removed some of its hazardous turbines (Tier-1 and -2 turbines, as required by the 2005 CUPs) as well as some rated 9 to 10, and could be required as a condition of approval to remove additional turbines with the highest ratings. However, the removal of HRT-rated turbines has not been effectively quantified in the same way that the winter seasonal shutdown (proposed as Mitigation Measure BIO-16) has been documented, and therefore is not identified as a mitigation measure.

**Response to Comment I2-4**

No adjustments to the estimated avian fatality calculations have been made in the EIR. Please see response to comment I2-1 regarding the operational period evaluated in the EIR.

**Response to Comment I2-5**

The County investigated other mitigation options. However, as only the retrofitting option is quantifiable, it is currently the preferred mitigation method of the USFWS. All other potential mitigation approaches (such as the use of radar to identify incoming large birds, or lead abatement) are not presently quantifiable for the expected impact; thus selection of other alternatives would be arbitrary. Clarification and information on other mitigation options has been added to Section 3.2 of the draft EIR, as shown in final EIR Chapter 4, *Draft EIR Errata*.

**Response to Comment I2-6**

The commenter expresses agreement with the EIR's determination that the project would have significant unavoidable impacts on avian mortality. The County acknowledges the commenter's opinion and will forward it to the decision makers.

**Response to Comment I2-7**

Please see Chapter 4, *Draft EIR Errata*, of this final EIR for the text that has been added to the discussion of special-status wildlife to clarify the potential impacts. In addition, information was added to Table 3.2-2 and an additional reference to the table made to direct the reader to the location of suitable habitat for these species within the study area. These clarifications do not affect any of the impact conclusions in the EIR.

Please see response to comment A5-5 regarding potential for take of special-status wildlife.

**Response to Comment I2-8**

Text has been added to Mitigation Measure BIO-9 to clarify where suitable habitat occurs and to state that it is assumed that the majority of decommissioning activities would occur in suitable habitat. The clarification does not affect any of the impact conclusions in the EIR.

**Response to Comment I2-9**

Mitigation Measure BIO-14 has been modified to state that the breeding season should be considered to extend from February 1 through September 1. The revision does not affect any of the impact conclusions in the EIR.

**Response to Comment I2-10**

Mitigation Measure BIO-15 has been modified to provide a range of buffer distances, as appropriate, from 50 to 1,000 feet. The revision does not affect any of the impact conclusions in the EIR.

## Responses to Comment Letter I3 – Sue Orloff

**Response to Comment I3-1**

The County acknowledges that this measure does not provide much assurance that species are not underground; however, this mitigation was derived from the EACCS and the Programmatic Biological Opinion issued for the EACCS. The text of Section 3.2, *Biological Resources*, of the draft EIR has been modified to provide additional clarification. It should be noted that this measure applies to areas adjacent to drainages that may occur near road reclamation activities. No activities are proposed within aquatic habitats, but if species are observed adjacent to work areas, the regulatory agencies would be contacted to determine if moving is appropriate. Based on time of year, frogs could take refuge under pieces of wood or other debris in work areas, so those areas would need to be checked. No burrow scoping is proposed, given that resource agencies generally do not believe this to be a successful means of avoidance or salvage.

**Response to Comment I3-2**

Because the overall area of potential excavation would be limited to the immediate area around existing turbines, transformers, and meteorological tower foundations, the amount and duration of disturbance associated with the commenter's suggested mitigation measures, particularly excavation of burrows, seems excessive and could result in greater impacts than those associated with project activities. The remainder of activities within the 1,570-square-foot area where ground disturbance would occur consist of gravel removal and vehicle operation that would not result in excavation.

**Response to Comment I3-3**

Please see response to comment I3-2.

**Response to Comment I3-4**

The commenter requested that additional language be provided within the mitigation for amphibians to further clarify the inspection process. Text has been added to Mitigation Measures BIO-9 and BIO-10.

**Response to Comment I3-5**

Additional direction was provided by CDFW regarding this issue and the text was revised on page 3.2-24 of the draft EIR to reflect comment A5-13. The revision does not affect any of the impact conclusions in the EIR.

**Response to Comment I3-6**

Mitigation Measure BIO-12 has been modified to include a reference to the Northern Range guidelines. The revision does not affect any of the impact conclusions in the EIR. Burrow descriptions used in the EIR are the same as those provided by USFWS in their Programmatic Biological Opinion for the EACCS.

**Response to Comment I3-7**

Please see responses to comments O1-1, I5-2, I5-3 and I5-4, which address both SRC consensus and individual avian-related comments made at the March 25, 2013 SRC meeting.

## Responses to Comment Letter I4 – Julie Yee

**Response to Comment I4-1**

For the calculations of megawatt-years, it was assumed that the largest turbines would be the last removed. As indicated in Section 2.4.2.1, *Wind Turbines*, of the draft EIR Project Description, there are 808 100kW turbines and 20 250kW turbines.

**Response to Comment I4-2**

The capacities should have been expressed in megawatt years as the commenter suggests. Section 3.2.3.1 of the EIR has been modified to include a more detailed explanation of the methodology used to calculate installed capacity.

**Response to Comment I4-3**

The avian fatality rates obtained from the MT and used in the draft EIR to estimate total fatalities results in an estimate of avian fatalities that are biased low for the proposed project, because the proposed project is the only alternative that does not require a seasonal shutdown. The bias results from the fact that the data available to calculate the annual fatality rate is based entirely on years during which a seasonal shutdown in one form another occurred. Therefore, we do not have a fatality rate that measures what would happen if turbines were allowed to operate during the winter period. Also, the fatality rates used are based on the installed capacity for the entire year, including the winter months, even though the turbines were shut down during the winter.

This led the commenter to conclude that "... a more reasonable estimate of projected fatalities would be based on MW-years that include seasonal shutdown months for the No Project Alternative, and Alternatives 1 through 3." The commenter is suggesting that the estimates of total fatalities would be more accurate for all alternatives except the proposed project if the MW-years for the seasonal shutdown were added back into the installed capacity estimates. The commenter acknowledges, in comment I4-4, that the comparison would not be applicable to the proposed project because the fatality rates would be biased low for the proposed project.

The County has determined that their original method for calculating installed capacity as presented in the draft EIR is the most appropriate method to use. That method more accurately represents the proposed project, which under CEQA is the primary concern. Additionally, calculating installed capacity in the manner suggested by the commenter would minimize the difference in the magnitude of impacts of the proposed project relative to the alternatives.

However, for the sake of comparison, the County performed the calculations in the manner suggested by the commenter. The MW-years for the different project alternatives using both methods are presented in Table 3-1.

**Table 3-1. Installed Capacity as Calculated in Draft EIR and Using Alternative Method**

| | Installed Capacity | | | | |
|---|---|---|---|---|---|
| | Proposed | No Project | Alternative 1 | Alternative 2 | Alternative 3 |
| Draft EIR Method | 193.1 | 116.5 | 128.7 | 189.5 | 311 |
| Alternative Method | 193.1 | 166.2 | 178.8 | 264.6 | 436.2 |

Applying the established mortality rates as established in the draft EIR and presented in Table 4-2 of the draft EIR would result in the following comparison table.

**Table 3-2. Comparison of Mortality Rates Calculated Using Draft EIR and Alternative Methods**

| Average Fatality Rate | | | Proposed Project | | No Project | | Alternative 1 | | Alternative 2 | | Alternative 3 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Species/ Category | (2008–2010) | (2005–2010) | (2008–2010) | (2005–2010) | (2008–2010) | (2005–2010) | (2008–2010) | (2005–2010) | (2008–2010) | (2005–2010) | (2008–2010) | (2005–2010) |
| **American Kestrel** | | | | | | | | | | | | |
| draft EIR Method | 0.443 | 0.496 | 85.5 | 95.8 | 51.6 | 57.8 | 57 | 63.8 | 83.9 | 94 | 137.8 | 154.3 |
| Alternative Method | 0.443 | 0.496 | 85.5 | 95.8 | 73.6 | 82.4 | 79.2 | 88.7 | 117.2 | 131.2 | 193.2 | 216.4 |
| **Burrowing Owl** | | | | | | | | | | | | |
| draft EIR Method | 0.425 | 0.721 | 82.1 | 139.2 | 49.5 | 84 | 54.7 | 92.8 | 80.5 | 136.6 | 132.2 | 224.2 |
| Alternative Method | 0.425 | 0.721 | 82.1 | 139.2 | 70.6 | 119.8 | 76 | 128.9 | 112.5 | 190.8 | 185.4 | 314.5 |
| **Golden Eagle** | | | | | | | | | | | | |
| draft EIR Method | 0.061 | 0.085 | 11.8 | 16.4 | 7.1 | 9.9 | 7.9 | 10.9 | 11.6 | 16.1 | 19 | 26.4 |
| Alternative Method | 0.061 | 0.085 | 11.8 | 16.4 | 10.1 | 14.1 | 10.9 | 15.2 | 16.1 | 22.5 | 26.6 | 37.1 |
| **Red-tailed Hawk** | | | | | | | | | | | | |
| draft EIR Method | 0.286 | 0.449 | 55.2 | 86.7 | 33.3 | 52.3 | 36.8 | 57.8 | 54.2 | 85.1 | 88.9 | 139.6 |
| Alternative Method | 0.286 | 0.449 | 55.2 | 86.7 | 47.5 | 74.6 | 51.1 | 80.3 | 75.7 | 118.8 | 124.8 | 195.9 |
| **Total All Birds** | | | | | | | | | | | | |
| draft EIR Method | 9.068 | 9.897 | 1,751.00 | 1,911.10 | 1,056.40 | 1,153.00 | 1,167.10 | 1,273.70 | 1,718.40 | 1,875.50 | 2,820.10 | 3,078.00 |
| Alternative Method | 9.068 | 9.897 | 1,751.00 | 1,911.10 | 1,507.10 | 1,644.90 | 1,621.40 | 1,769.60 | 2,399.40 | 2,618.70 | 3,955.50 | 4,317.10 |

The County remains convinced that the original analysis is the most appropriate because it most accurately represents the potential impacts of the proposed project, and is not adjusting the impact assessment or mitigation measures based on the alternative methodology. The clarification provided in these tables does not affect any of the impact conclusions in the EIR.

**Response to Comment I4-4**

Please see response to comment I4-3 above.

**Response to Comment I4-5**

For the calculations of megawatt-years, it was assumed that the largest turbines would be the last removed. As indicated in Section 2.4.2.1, *Wind Turbines*, of the draft EIR Project Description, there are 808 100kW turbines and 20 250kW turbines.

**Response to Comment I4-6**

The calculations are in fact megawatt-years as the commenter suggests. Section 3.2.3.1 of the draft EIR has been modified to better explain the methodology.

**Response to Comment I4-7**

Tables 3.2-1 and 3.2-2 were inadvertently omitted from the draft EIR but have been included in the final EIR in Chapter 4, *Draft EIR Errata*. The inclusion of the erroneously omitted tables does not affect any of the impact conclusions in the EIR.

## Responses to Comment Letter I5 – Unidentified SRC Individuals

**Response to Comment I5-1**

The commenter's opinion is acknowledged. As this comment does not relate to the environmental analysis or conclusions in the EIR, no response is required. The commenter's opinion will be forwarded to the decision makers.

**Response to Comment I5-2**

This is a comment on the relationship between the project as proposed and the Bald and Golden Eagle Protection Act. Please see response to comment A1-6 for additional discussion of the Bald and Golden Eagle Protection Act.

**Response to Comment I5-3**

A discussion of other possible mitigation measures addressing avian mortality, including why they are not feasible or were not selected, has been added to Section 3.2, *Biological Resources*, of the draft EIR, and is shown in Chapter 4, *Draft EIR Errata*, of this final EIR. The revision does not affect any of the impact conclusions in the EIR. Please also see response to comment O3-23.

**Response to Comment I5-4**

Mitigation Measure BIO-17 requires mitigation to occur onsite first if possible; however onsite mitigation opportunities may not be available. In the event that onsite mitigation opportunities are unavailable, the mitigation measure allows offsite mitigation as long as it occurs within the local

area population as defined by USFWS. That distance is 140 miles (USFWS 2009). Under USFWS guidelines, the retrofitted poles could have benefits to eagles for a period of 10 years, where fatalities could be avoided during that period. Thus, the mitigation has more than a one-time benefit.

**Response to Comment I5-5**

Please see response to comment O3-34. In addition, language has been added to Section 4.5.3, *Environmentally Superior Alternative*, of the draft EIR to clarify the discussion of the environmentally superior alternative. The revision does not affect any of the impact conclusions in the EIR.

## Responses to Comment Letter I6 – Alan Ragsdale, Dyer Road Resident

**Response to Comment I6-1**

The County is responding to a permit modification request from the applicant to eliminate the seasonal shutdown requirement. As discussed on page 3.2-35 of the draft EIR, the County has assessed the potential impacts on avian species and has determined that seasonal shutdowns are a valid method of reducing avian fatalities. Consequently, the EIR proposes Mitigation Measure BIO-16, which would require the applicant to implement the seasonal shutdowns as part of the proposed project.

**Response to Comment I6-2**

The commenter asks for assurance of AWI's financial solvency and likelihood of turbine removal as required. CEQA mandates the evaluation of a project's environmental effects rather than the applicant's financial situation. As this comment does not relate to the environmental analysis or conclusions in the EIR, no response is required. However, the County recognizes the commenter's concerns about the potential for facility abandonment and will forward them to the decision makers for consideration.

**Response to Comment I6-3**

The past and present maintenance of existing turbines in the APWRA is an existing condition and not a result of the proposed project. Therefore, no response is required. Section 3.3, *Noise*, of the draft EIR, addresses noise issues associated with the proposed project. However, the County recognizes the commenter's concerns regarding the existing noise and visual conditions and the commenter's opinion will be forwarded to the decision makers for consideration.

## Responses to Comment Letter I7 – Robert Cooper, Dyer Road Resident

**Response to Comment I7-1**

AWI operates its wind turbines under existing CUPs issued by Alameda County. The proposed project requests modification of the CUPs to alter the operational and shutdown/removal schedules as described in both AWI's permit application and in the EIR. By its nature, modification of the CUPs would constitute a change to the conditions under which AWI could operate. In the event that the County approves AWI's request, the new conditions would take effect and supersede those associated with the existing use permits.

**Response to Comment I7-2**

The commenter asserts that operation of the wind turbines under proposed project conditions would kill at least 50% more birds than are killed under current conditions. Table 3.5-5, on page 3.2-31 of the draft EIR, presents the projected differences in expected avian mortalities. Section 3.2.3.1 of the draft EIR has been modified to better explain the methodology.

**Response to Comment I7-3**

The County has evaluated the proposed project in relation to baseline conditions as required under CEQA, and has determined that the proposed project (with mitigation) may impact approximately one golden eagle. The EIR therefore proposes mitigation that would require the applicant to mitigate for the loss of one golden eagle, as expected to be associated with the proposed project.

**Response to Comment I7-4**

The commenter expresses opposition to the EIR. It is unclear whether the commenter intended to oppose only the EIR or the proposed project as well. The County acknowledges the commenter's opinion. As this comment does not relate to the environmental analysis or conclusions in the EIR, no response is required. The commenter's opinion will be forwarded to the decision makers.

**Response to Comment I7-5**

The EIR analyzes the proposed project's decommissioning activities, which include removal of the existing wind turbines and foundations that are presently subject to the conditions of the applicant's existing CUPs. The presence and requested removal of other wind turbine foundations is unrelated to this project and therefore not evaluated in this EIR. However, the County recognizes the commenter's concern regarding this unrelated issue. The commenter's opinion will be forwarded to the decision makers for consideration.

# Responses to Public Hearing Comments

The responses to comments made at the March 28, 2013 public hearing on the draft EIR are presented below. Numbering of responses corresponds to the numbering of public hearing comments in Chapter 2, *Comments*.

**Response to Comment PH-1**

The commenter (project applicant) comments about AWI's financial decisions and request for permit modifications. This is not a comment on the EIR. No response is necessary.

**Response to Comment PH-2**

The project applicant indicates that the EIR describes winter seasonal shutdown benefits to some, but not all, species. The discussion, *APWRA Studies and Activities to Reduce Bird Kills*, in draft EIR Section 3.2.2.3, *Special-Status Species*, describes the benefits of the winter seasonal shutdown and its relationship to avian species, particularly the focal species of the ongoing APWRA fatality monitoring studies. In addition, please see responses to comments O4-10, O4-11, O4-14, and O4-16 for discussion of the background and relationship of the winter seasonal shutdown as it relates to mortality of the avian species of concern in the APWRA.

**Response to Comment PH-3**

The commenter (project applicant) questions the scientific basis of the annual fatality reports. Please see comments I1-1, I1-2, and I4-3, and the responses to those comments.

**Response to Comment PH-4**

The commenter clarifies a project component. County staff responded, during the hearing, that the proposal itself includes elimination of winter seasonal shutdown and that alternatives, since they are intended to avoid or minimize project impacts, should include winter seasonal shutdown.

**Response to Comment PH-5**

The commenter (project applicant) describes AWI's current CUPs. This is not a comment on the EIR, and no further response is necessary.

**Response to Comment PH-6**

The commenter responded to a Board member's inquiry as to whether AWI considered the EIR complete. No further response is necessary.

**Response to Comment PH-7**

The commenter (project applicant) describes AWI's current avian fatality reduction measures and air pollution offsets. This is not a comment on the EIR. Direct effects of preventing avian mortality through reduced air pollution emissions have not been sufficiently documented to accept it as a mitigating or offsetting factor for the purposes of the CEQA analysis. See also the response to comment O4-21. No further response is necessary.

**Response to Comment PH-8**

County staff responded, at the hearing, that the EIR is tasked with evaluating the direct impacts of the project and the EBZA is tasked with balancing the wind energy benefits with the impacts. This is a procedural clarification and no further response is necessary.

**Response to Comment PH-9**

The commenter expresses concern about the increased avian fatalities, particularly golden eagle, associated with the proposed project. Please see responses to comment A1-2 and A1-3, which address the commenter's written comments regarding the same issue.

**Response to Comment PH-10**

The commenter questions the adequacy of the EIR's golden eagle mitigation and notes the requirement to apply for a golden eagle take permit. Please see response to comment A1-6, which responds to the commenter's written comment on the same topic. See also the response to comment O3-6.

**Response to Comment PH-11**

The commenter indicates that the EIR does not sufficiently address impacts and mitigation for biological resources. The County has evaluated the likely effects of the proposed project and its alternatives, and has applied reasonable, feasible mitigation to avian impacts, one of which remains significant and unavoidable. Please also see responses to comments A1-5, O3-33, and I2-6.

**Response to Comment PH-12**

The commenter expresses concern about avian fatalities, particularly golden eagle, associated with turbine operation and requests continuation of the winter seasonal shutdown. The commenter's concerns will be forwarded to the decision makers for consideration.

**Response to Comment PH-13**

The commenter expresses concern about a lack of turbine maintenance. Please see response to comment I6-3. The County recognizes the commenter's concern and will forward it to the decision makers for consideration.

**Response to Comment PH-14**

The commenter requests that the decision makers ask AWI to remove turbine foundations from both existing and previously-removed turbines. Section 2.1.3 of the EIR, *Decommission All AWI Project Turbines after December 31, 2015*, describes the proposed turbine and foundation removal process for existing turbines within the context of the proposed project. In addition, the commenter's concern about previous-generation foundations will be forwarded to the decision makers for consideration.

**Response to Comment PH-15**

The commenter asks that the winter seasonal shutdown continue. This is not a comment on the EIR, but will be forwarded to the decision makers for consideration.

**Response to Comment PH-16**

Staff responded at the hearing to point out that page 2-1 is part of the project description section of the draft EIR and therefore includes no evaluation. Seasonal shutdown is an operational component that is not part of the proposed project but is a component in each of the alternatives. Operational components are considered as a whole for both the proposed project and its alternatives. Seasonal shutdown is therefore considered within the context of each of the alternatives, and compared to the proposed project. Draft EIR Chapter 4, *Alternatives Analysis*, evaluates the alternatives that include seasonal shutdown, and compares them to the proposed project, which does not include seasonal shutdown.

**Response to Comment PH-17**

The commenter is referring to the seasonal shutdown by itself as a conceptual alternative. The elimination of the seasonal shutdown is not an alternative because it is part of the project. Please see response to comment PH-16.

**Response to Comment PH-18**

The commenter asks for the location of information comparing seasonal shutdown with the proposed project (elimination of seasonal shutdown). Table 3.2-5, *Comparison of Adjusted Species Fatality Totals of Four Focal Species and All Birds, Based on an Average Fatality Rate*, in the draft EIR, shows avian fatality rates for the proposed project and presents the difference in fatalities with and without seasonal shutdown. In addition, Table 4-2 in draft EIR Chapter 4, *Alternatives Analysis*, shows the difference in fatalities, comparing the baseline, which includes seasonal shutdown, to the project and each of the alternatives. Draft EIR Chapter 3, including Sections 3.1, 3.2, 3.3, and 3.4, evaluates the impacts associated with the proposed project.

**Response to Comment PH-19**

The EIR provides a discussion and comparison of the two columns in Table 3.2-5 (the second and fifth columns, to which the commenter was referring), which represent, respectively, projected avian fatalities with the project as proposed, and projected avian fatalities with the project as mitigated with continued winter seasonal shutdowns.

For example, the text immediately above Table 3.2-5 states, "as indicated in Table 3.2-5, under the proposed project, approximately 60% more fatalities of all species would be expected to occur when compared to the baseline conditions." However, this comparison (and the approximately 60% difference) is based on the second and third columns for all birds, and it is important to recognize that the seasonal shutdown is included in the baseline and is reflected in the third column.

The SRC and the monitoring team are charged with studying the effectiveness of the winter seasonal shutdown; their approach was used in the EIR analysis.

County staff responded to this question during the hearing, summarized as follows: There are reports that discuss the seasonal shutdown. With the large sample size, and ongoing activities of wind turbine removal and turbine shutdowns, when the monitoring team looks at the annual fatality rate, they can see that the combination of management measures has gotten to a certain reduction in mortality. The monitoring team members are still discussing looking at models to see if they are able to parse out the effectiveness of measures—specifically for the winter seasonal shutdown. They think there is a signal but they have not yet measured it. Effectiveness for different species is shown by specific fatalities by month. For instance, wintertime seasonal shutdown seems to benefit red-tailed hawks and the larger raptors such as golden eagle, but doesn't seem to benefit burrowing owl or American kestrel. So the issue has been predation on the smaller raptors during the winter seasonal shutdown in terms of their higher mortality. They're still having that discussion in terms of making that association, but that seems to be what the data is pointing towards. But that's not discussed in the EIR.

**Response to Comment PH-20**

The commenter states that the project and all alternatives other than the No Project Alternative will have significant impacts, requiring a Statement of Overriding Considerations on the part of the County. The County agrees that the project and Alternatives 1, 2, and 3 have significant impacts and that a Statement of Overriding Considerations will be necessary at the time of a decision on the project. The County agrees that the financial condition of a project applicant is not a CEQA consideration.

Please see comments and responses O3-1 through O3-45 for this commenter's written comments and responses to them.

**Response to Comment PH-21**

Section 3.2.3.1 of the draft EIR has been modified to include a more detailed explanation of how the installed capacity data used to estimate avian fatalities is calculated; additional information on avian fatalities can be found in Section 3.2.3.3, *Assumptions*, and 3.2.3.5, *Impacts and Mitigation Measures*, of the draft EIR Biological Resources section. Please also see responses to comments O4-11 through O4-14 regarding assumptions used in the EIR's analyses.

**Response to Comment PH-22**

Please see responses to comments O3-23 through O3-32 and O3-42 through O3-44 regarding analysis and mitigation of impacts on biological resources in the EIR.

**Response to Comment PH-23**

Please see responses to comments O3-5 through O3-10 regarding compliance with applicable regulations.

**Response to Comment PH-24**

Please see response to comment O3-41 regarding the commenter's statements about cumulative impacts.

**Response to Comment PH-25**

The commenter expresses an opinion about the project applicant. This is not a comment on the EIR and requires no further response. The commenter's opinion will be forwarded to the decision makers for consideration.

**Response to Comment PH-26**

The commenter indicates objection to the proposed project and that consideration and preparation of an EIR for the proposed project constitutes a favor to the applicant. Please see response to comment O3-45. The commenter's opinion will be forwarded to the decision makers for consideration.

**Response to Comment PH-27**

The commenter expresses the opinion that EIRs should consider the benefits of a project, and asks that the final EIR address the impacts of continued operation of the existing turbines on avian fatalities. Table 3.2-5, *Comparison of Adjusted Species Fatality Totals of Four Focal Species and All Birds, Based on an Average Fatality Rate*, provides information on fatality rates averaged for the 2005–2010 and 2008–2010 periods, existing conditions, which would represent operation of the existing turbines. Although an EIR typically does not emphasize the benefits of a proposed project, the decision makers do weigh the benefits and impacts of a project when deciding whether or not to approve that project.

**Response to Comment PH-28**

The commenter is asking for additional discussion in Section 4.5.3.1 of the draft EIR, to give greater "weight" to the benefits of reducing greenhouse gas emissions. As indicated in the last paragraph of Section 4.5.3.1, "the most critical issue revolves around the number of avian deaths." The quantitative analysis of impacts is provided throughout Section 3 of the draft EIR, but is not repeated in Section 4.5.3.1. Section 3.1.5.6 provides a complete assessment of the air quality impacts and effects of the proposed project, including potential conflicts with applicable regulations related to the reduction of GHGs.

**Response to Comment PH-29**

County staff responded to this comment during the hearing and indicated that for each impact, there may be a different threshold, and that the lead agency has to determine that threshold in order to define the significance of any given impact.

**Response to Comment PH-30**

The commenter describes the relative difference in avian fatalities between the proposed project and baseline conditions. No further response is necessary.

**Response to Comment PH-31**

County staff responded to this comment during the hearing as follows: "[Nameplate capacity] is what each turbine is designed to produce [in megawatts]." In addition, the applicant responded to this comment during the hearing as follows: "It's an industry standard for how you rate the turbine."

**Response to Comment PH-32**

The project applicant responded to this comment (regarding Table 4-1) during the hearing to indicate that the alternatives are distinguished from each other by the total nameplate capacity among each alternative in total MW production over the lifetime of each alternative.

**Response to Comment PH-33**

The commenter (project applicant) disagrees with the capacity figures used in the EIR. Section 3.2.3.1 has been modified to better explain the methodology and the distinction between installed capacity and nameplate capacity. Please also see responses to comments O1-1 and O4-11.

**Response to Comment PH-34**

Section 3.1.5.4, *Methodology*, in the draft EIR's *Air Quality and Greenhouse Gases* analysis, outlines the approach used in determining the air quality effects associated with the proposed project and its alternatives. This methodology takes into consideration not only the operation of turbines on the proposed schedules, but also decommissioning activities.

# Chapter 4
# Draft EIR Errata

Section 15088(d) of the State CEQA Guidelines indicates that responses to comments that make important changes in the draft EIR text may take the form of revisions to the text in the body of the EIR or a separate section of the final EIR indicating that the text is revised. This chapter follows the latter route and provides changes to the EIR text as a separate chapter, with the text changes clearly distinguished. These changes constitute the revisions to the draft EIR required by State CEQA Guidelines Section 15132(a).

The following revisions to the draft EIR have been made since it was made available for public review on March 8, 2013. These revisions include correction of minor errors, clarifications, and changes made in response to comments received during the public review period. None of the corrections or additions constitutes significant new information or substantial project changes requiring recirculation as defined by Section 15088.5 of the CEQA Guidelines.

## Changes to the Draft EIR

The following changes to the draft EIR text are incorporated into the final EIR as presented below. Added text is indicated by underlined text (<u>underlined</u>) and deleted text is indicated by strikeout text (~~strikeout~~).

# Summary Table

**Page ES-7 through ES-10, Table ES-1. Summary of Impacts and Mitigation Measures has been revised as follows**.

| Impact | Level of Significance | Proposed Mitigation Measure(s) | Level of Significance after Mitigation |
|---|---|---|---|
| **Air Quality and Greenhouse Gases** | | | |
| **Impact AQ-1**: Conflict with or obstruct implementation of the applicable air quality plan | No Impact | None required | |
| **Impact AQ-2**: Violate any air quality standard or contribute substantially to an existing or projected air quality violation | Less Than Significant | None required | |
| **Impact AQ-3**: 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) | Less Than Significant | None required | |
| **Impact AQ-4**: Expose sensitive receptors to substantial pollutant concentrations | Less Than Significant | None required | |
| **Impact AQ-5**: Create objectionable odors affecting a substantial number of people | Less Than Significant | None required | |
| **Impact AQ-6**: Generation of greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment | Less Than Significant | None required | |
| **Impact AQ-7**: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases | Less Than Significant | None required | |
| **Biological Resources** | | | |
| **Impact BIO-1**: Potential to cause a substantial adverse effect, either directly or through habitat modifications, on a special-status species. | Significant; Significant and Unavoidable for Avian Species | **Mitigation Measure BIO-1**: Implement General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources<br>**Mitigation Measure BIO-2**: Restore Disturbed Annual Grasslands | Less than Significant; Significant for Avian Species |

| Impact | Level of Significance | Proposed Mitigation Measure(s) | Level of Significance after Mitigation |
|---|---|---|---|
| | | **Mitigation Measure BIO-3**: Conduct Preconstruction Surveys for Potentially Sensitive Habitat<br>**Mitigation Measure BIO-4**: Install Temporary Flagging or Barrier Fencing to Protect Sensitive Biological Resources Adjacent to the Work Area<br>**Mitigation Measure BIO-5**: Retain a Biological Monitor during Ground Disturbing Activities within Environmentally-Sensitive Habitat Areas<br>**Mitigation Measure BIO-6**: Retain Qualified Botanists to Conduct Floristic Surveys for Special-Status Plants during Appropriate Identification Periods<br>**Mitigation Measure BIO-7**: Avoid and Minimize Potential Impacts on Special-Status Plants<br>**Mitigation Measure BIO-8**: Avoid Disturbance of Vernal Pool Fairy Shrimp and Longhorn Fairy Shrimp<br>**Mitigation Measure BIO-9**: Avoid Disturbance of California Tiger Salamander, California Red-legged Frog, and Foothill Yellow-legged Frog.<br>**Mitigation Measure BIO-10**: Avoid Disturbance of Alameda Whipsnake<br>**Mitigation Measure BIO-11**: Avoid Disturbance of Coast Horned Lizard, San Joaquin Whipsnake, and Western Pond Turtle<br>**Mitigation Measure BIO-12**: Avoid Disturbance of San Joaquin Kit Fox<br>**Mitigation Measure BIO-13**: Avoid Disturbance of American Badger<br>**Mitigation Measure BIO-14**: Avoid Disturbance of Burrowing Owl<br>**Mitigation Measure BIO-15**: Avoid Disturbance of Nesting Migratory Birds and Raptors<br>**Mitigation Measure BIO-16:** Implement Seasonal Shutdowns to Reduce Avian Fatalities | |

| Impact | Level of Significance | Proposed Mitigation Measure(s) | Level of Significance after Mitigation |
|---|---|---|---|
| | | **Mitigation Measure BIO-17:** Mitigate for the Loss of Individual Golden Eagles by Retrofitting Offsite Electrical Facilities | |
| **Impact BIO-2**: Potential substantial adverse effects on any riparian habitat or other sensitive natural communities. | Significant | **Mitigation Measure BIO-1**: Implement General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources<br>**Mitigation Measure BIO-4**: Install Temporary Flagging or Barrier Fencing to Protect Sensitive Biological Resources Adjacent to the Work Area | Less Than Significant |
| **Impact BIO-3**: Potential substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means. | Significant | **Mitigation Measure BIO-1**: Implement General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources<br>**Mitigation Measure BIO-4**: Install Temporary Flagging or Barrier Fencing to Protect Sensitive Biological Resources Adjacent to the Work Area<br>**Mitigation Measure BIO-5**: Retain a Biological Monitor during Ground Disturbing Activities within Environmentally-Sensitive Habitat Areas<br>**Mitigation Measure BIO-18**: Identify and Delineate Waters of the United States and Waters of the State (including Wetlands)<br>**Mitigation Measure BIO-19**: Avoid and Minimize Disturbance of Waters of the United States, including Wetland Communities | Less Than Significant |
| **Impact BIO-4**: Potential to interfere substantially with the movement of any native resident or migratory fish or wildlife species or impede the use of native wildlife nursery sites. | Less Than Significant | None required | |
| **Impact BIO-5**: Conflict with any local policies or ordinances protecting biological resources. | No Impact | None required | |

| Impact | Level of Significance | Proposed Mitigation Measure(s) | Level of Significance after Mitigation |
|---|---|---|---|
| **Impact BIO-6**: Potential to conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. | Less Than Significant | None required | |
| **Impact BIO-7**: Result in the conversion of oak woodlands that will have a significant effect on the environment. | No Impact | None required | |
| **Noise** | | | |
| **Impact NOISE-1**: Exposure of residences to increased wind turbine noise | Significant | **Mitigation Measure NOISE-1**: Repair or remove turbines that are determined to increase the daily $L_{dn}$ value at a residence by more than 5 Db | Less Than Significant |
| **Impact NOISE-2**: Exposure of residences to noise during decommissioning activities | Significant | **Mitigation Measure NOISE-2**: Employ Noise-Reducing Practices during Decommissioning | Less Than Significant |
| **Hazards and Hazardous Materials** | | | |
| **Impact HAZ-1**: Result in a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials | Less Than Significant | None required | |
| **Impact HAZ-1**: 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 | Less Than Significant | None required | |

# Chapter 2, Project Description

**Page 2-1, Section 2.1.1, Removal of Requirement for Phased Decommissioning, the following clarifications have been added to the paragraph.**

AWI is requesting modification of the existing CUPs to alter the schedule for permanent shutdown of existing wind turbines. Under the present CUPs, AWI is required to remove a predetermined percentage of turbines on a specified, phased schedule. The first phase of decommissioning took place in 2009, at which time AWI was required to remove 10% (92) of its 920 turbines. The existing CUPs require AWI to remove an additional 25% of the original 920 turbines by September 30, 2013 (for a cumulative total of 35% [322 turbines]), an additional 50% of the original turbines by September 30, 2015 (for a cumulative total of 85% [782 turbines]), and the remaining 15% (138) of turbines by September 30, 2018.

**Page 2-3, the first three sentences of the final paragraph of Section 2.1.3.1, *Decommissioning Activities*, have been clarified as follows.**

Ideally, turbine dismantling and removal would occur within 1 year of permanent shutdown~~decommissioning, as required by the current CUP~~. Dismantling and removing wind turbines from their foundations can be done year-round as it is part of the ongoing maintenance practice of all wind operators. However, restrictions imposed by the state Department of Fish and Wildlife limit ground-disturbing removal activities to dry days, and it is estimated that within an average year, 185 dry days would be available for wind turbine removal activities.

**Page 2-3, the final sentence of the final paragraph under Footing Removal and Site Reclamation Equipment has been clarified as follows.**

Using up to four crews for each working day (185 per year), it is estimated that all 828 wind turbines ~~would~~ could be removed within 1 year and 2 months of decommissioning.

**Page 2-4, the typographical error in footnote a, Table 2-1, has been corrected as follows.**

This includes the 828~~825~~ existing turbine towers. The existing tower foundation area includes the area between the access roads and the turbines, the turbine foundations, and the disturbed area under and around the turbines.

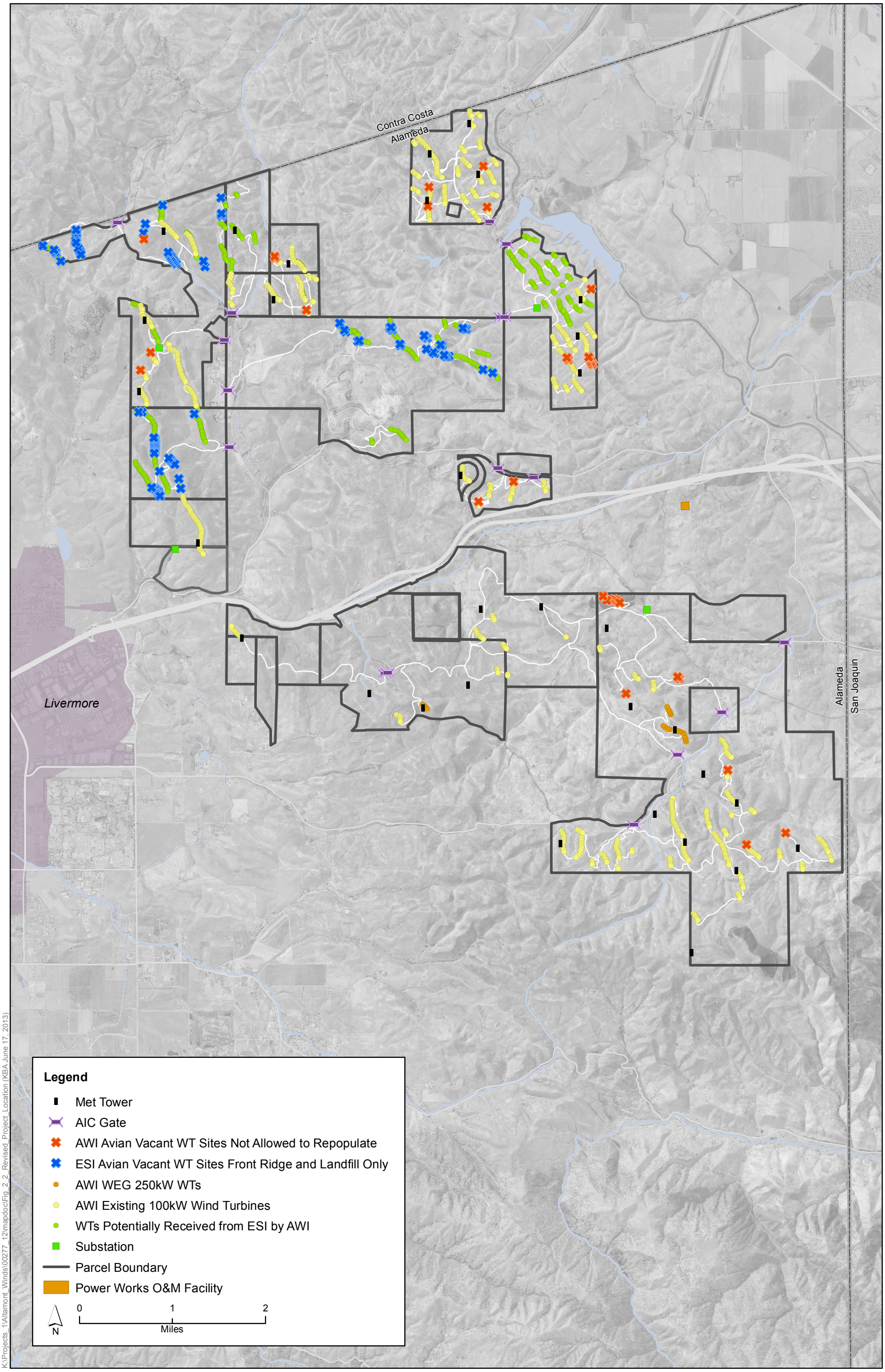
**Page 2-5, first full paragraph under Section 2.3.2, Description of Project Area, has been revised to include the following clarifications.**

The project area extends over approximately 14,196 acres of grassland in Alameda County and consists of cattle-grazed land on which the existing CUPs are in effect, and where operating wind turbines are currently, or previously have been, installed. ~~.~~ Chapter 3, Sections 3.1 through 3.4, describe resource-specific study areas, which vary depending on the issue under consideration, within the context of the proposed project.

**Page 2-7, the following clarification has been added to the paragraph following Table 2-2.**

Many of the windfarms in the APWRA overlap, with separate permits issued to different wind energy facility operating companies on a single parcel of land. Therefore, other wind companies beside AWI currently operate windfarms within the project area described above; the AWI facilities do not comprise the sole project within this boundary. In addition, as a result of ongoing negotiations with another wind farm operator in the APWRA involving future repowering plans, AWI may receive wind turbines outside of the project area in exchange for an equal number of AWI-owned wind turbines from within the project area. This exchange scenario is not expected to have any effect on the impacts analyses and determinations contained in this report.

**Following page 2-8, Figure 2-2 has been revised.**




**Revised Figure 2-2**
**Project Site and Facilities**

**Page 2-10, Section 2.4.3.3, Existing Decommissioning and Reclamation Requirements, the second and third sentences of the first paragraph have been revised as follows.**

In accordance with Exhibit G-2 of the existing CUPs, AWI has permanently shut down 92 wind turbines, representing 10% of its original 920 turbines. Exhibit G-2 of t~~T~~he existing CUPs requires AWI to continue this course, permanently shutting down and removing a cumulative 35% of its original 920 turbines by September 30, 2013 (a total of 322, of which 92—10 ~~percent~~%—have already been shut down), 85% by September 30, 2015 (460 additional turbines, for a total of 782), and the remaining 15% (138 turbines) removed by September 30, 2018.

**Pages 2-11 to 2-12, the final sentence of the final paragraph under *Existing Requirements for Removal of Hazardous Turbines* has been revised as follows.**

Overall, including turbines originally classified as Tier 1 and 2 hazardous turbines, other turbines classified as HRT 10, 9 and some as 8.5, derelict and non-operating turbines, and other turbines, by September 30, 2009, AWI had complied with the CUPs' required shutdown of 10% (92) of its existing turbines.

**Page 2-14, first full paragraph, the first two sentences have been revised as follows.**

For the purposes of this EIR, projects that meet these criteria and provide a regional context for future land use conditions in the proposed project area include three individual energy ~~repowering~~ projects and an overall Repowering Program for the APWRA. The ~~three~~ four Altamont Pass Repowering Program ~~individual~~ projects ~~include~~are: Golden Hills Project, Patterson Pass Project, ~~and the~~ FloDesign Wind Turbines Research Project, and the Summit Wind Project.

**Page 2-14, Table 2-4, Related Projects in the Area, has been revised as follows.**

| No. | Project-/Name Type | Description/Proposed Use | Location | Status |
|---|---|---|---|---|
| 1 | Vasco Winds Repowering | Repowering Program | APWRA – Contra Costa County | Completed Summer 2012 |
| 2 | Altamont Pass Repowering | Repowering Program for the Altamont Pass Wind Resource Area (APWRA) | APWRA – Alameda County | Pending |
| | Golden Hills Project (NextEra Energy Resources) (part of Altamont Pass Repowering) | Repowering Program | APWRA | Pending |
| | Patterson Pass Project (enXco) (part of Altamont Pass Repowering) | Repowering Program | APWRA | Pending |
| | FloDesign Wind Turbines Research Project | Repowering with special technology | APWRA | Research Project Pending |
| | Summit Wind Project (Altamont Winds, Inc.) | Repowering Program | APWRA | Pending |
| 3 | Mariposa Energy Center | Natural Gas Peaker Plant | Mountain House Area | Under Construction |
| 4 | Cool Earth Solar Energy Facility | Utility-Scale Solar Energy Farm | Mountain House Area | Approved |

# Chapter 3, Environmental Analysis

## Section 3.1 Air Quality and Greenhouse Gases

**Page 3.1-8, the last sentence of *Mandatory Greenhouse Gas Reporting Rule (2009)* paragraph was revised as follows.**

The Reporting Rule also ~~would~~ mandate<u>s</u> recordkeeping and administrative requirements in order for EPA to verify the annual GHG emissions reports.

**Page 3.1-14, Section 3.1.4.1, *Monitoring Data*, Table 3.1-3 has been revised as follows.**

**Table 3.1-3. Ambient Air Quality Monitoring Data from Livermore, 793 Rincon Avenue Station**

| Pollutant Standards | 2009 | 2010 | 2011 |
|---|---|---|---|
| Ozone ($O_3$) | | | |
| Maximum 1-hour concentration (ppm) | 0.113 | 0.150 | 0.115 |
| Maximum 8-hour concentration (ppm) | 0.086 | 0.097 | 0.084 |
| Number of days standard exceeded[a] | | | |
| CAAQS 1-hour (>0.09 ppm) | 8 | 3 | 3 |
| CAAQS 8-hour (>0.070 ppm) | 8 | 6 | 9 |
| NAAQS 8-hour (>0.075 ppm) | 6 | 3 | 2 |
| Carbon Monoxide (CO) | | | |
| Maximum 8-hour concentration (ppm) | 1.31 | – | – |
| Maximum 1-hour concentration (ppm) | 2.4 | – | – |
| Number of days standard exceeded[a] | | | |
| NAAQS 8-hour (≥9 ppm) | 0 | 0 | 0 |
| CAAQS 8-hour (≥9.0 ppm) | 0 | 0 | 0 |
| NAAQS 1-hour (≥35 ppm) | 0 | – | – |
| CAAQS 1-hour (≥20 ppm) | – | – | – |
| Nitrogen Dioxide ($NO_2$) | | | |
| State maximum 1-hour concentration (ppm) | 0.052 | 0.058 | 0.057 |
| State second-highest 1-hour concentration (ppm) | 0.048 | 0.056 | 0.053 |
| Annual average concentration (ppm) | 0.012 | 0.011 | 0.011 |
| Number of days standard exceeded | | | |
| CAAQS 1-hour (0.18 ppm) | 0 | 0 | 0 |
| Particulate Matter (PM2.5) | | | |
| National[b] maximum 24-hour concentration (µg/m³) | 45.7 | 34.7 | 23.6 |
| National[b] second-highest 24-hour concentration (µg/m³) | 38.2 | 31.2 | 23.2 |
| ~~State[e]~~ State[c] maximum 24-hour concentration (µg/m³) | 45.7 | 34.7 | 23.6 |
| ~~State[e]~~ State[c] second-highest 24-hour concentration (µg/m³) | 38.2 | 31.2 | 23.2 |
| National annual average concentration (µg/m³) | 9.1 | 7.6 | – |
| State annual average concentration (µg/m³)~~[f]~~[d] | 9.2 | 7.6 | – |
| Number of days standard exceeded[a] | | | |
| NAAQS 24-hour (>35 µg/m³) | 4.0 | 0.0 | – |

Source: California Air Resources Board 2012b; U.S. Environmental Protection Agency 2012c.

Notes:

ppm = parts per million
NAAQS = National Ambient Air Quality Standards
CAAQS = California Ambient Air Quality Standards
µg/m³ = micrograms per cubic meter
mg/m³ = milligrams per cubic meter
– = data not available

[a] An exceedance is not necessarily a violation.

[b] National statistics are based on standard conditions data. In addition, national statistics are based on samplers using federal reference or equivalent methods.

[c] State statistics are based on local conditions data, except in the South Coast Air Basin, for which statistics are based on standard conditions data. In addition, State statistics are based on California approved samplers.

~~[d] Measurements usually are collected every 6 days.~~

[ed] State criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.

~~[f] Mathematical estimate of how many days concentrations would have been measured as higher than the level of the standard had each day been monitored. Values have been rounded.~~

**Page 3.1-18, last sentence of the third paragraph has been deleted:**

~~The construction assumptions and calculations are presented in Appendix A.~~

**Page 3.1-21, The first row in Table 3.1-8. *Electricity Production by Alternative 2013–2018 (kW hours)* has been modified as follows:**

| Alternative | 2013 | 2014 | 2015 | 2016[a] | 2017 | 2018 | Total (2013–2018) |
|---|---|---|---|---|---|---|---|
| No Project | 7,242,096 | 127,533,235 | ~~122,228,515~~ 95,986,658 | 34,127,280 | 34,117,171 | 34,117,171 | ~~359,365,469~~ 333,123,612 |
| Proposed Project | 16,098,826 | 184,347,821 | 184,347,821 | – | – | – | 384,794,467 |
| Alternative 1 | 9,894,456 | 174,241,267 | 174,241,267 | – | – | – | 358,376,990 |
| Alternative 2 | 9,894,456 | 174,241,267 | 174,241,267 | 174,292,894 | – | – | 532,669,885 |
| Alternative 3 | 9,894,456 | 174,241,267 | 174,241,267 | 174,292,894 | 174,241,267 | 174,241,267 | 881,152,419 |

[a] 2016 is a leap year, so electricity production is slightly higher than adjacent years with identical schedules.

**Page 3.1-21, third paragraph, last sentence has been corrected as follows.**

The construction assumptions and calculations are presented in Appendix C~~A~~.

**Page 3.1-21, third paragraph, last sentence referencing Appendix C.**

Appendix C was inadvertently omitted from the DEIR. It is included at the end of this chapter.

**Page 3.1-24, second paragraph, last two sentences have been modified as follows.**

The project would offset 15,108~~7,435~~ MT $CO_2$e more than the No Project Alternative. Alternatives 2 and 3 would offset substantial amounts of GHG emissions more than the No Project Alternative, while Alternative 1 would offset 384~~289~~ MT $CO_2$e ~~less~~ more than the No Project Alternative.

**Page 3.1-24, Table 3.1-12. *Offset GHGs by Alternative (Metric Tons CO2 equivalents)* has been revised as follows:**

| Alternative | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | Total Offset GHGs (2013–2018) | Comparison to No Project[a] |
|---|---|---|---|---|---|---|---|---|
| No Project | 2,117 | 37,288 | ~~35,737~~ 28,065 | 9,978 | 9,975 | 9,975 | ~~105,072~~ 97,399 | – |
| Proposed Project | 4,707 | 53,900 | 53,900 | – | – | – | 112,507 | ~~7,435~~ 15,108 |
| Alternative 1 | 2,893 | 50,945 | 50,945 | – | – | – | 104,783 | ~~-289~~ 7,384 |
| Alternative 2 | 2,893 | 50,945 | 50,945 | 50,960 | – | – | 155,743 | ~~50,671~~ 58,344 |
| Alternative 3 | 2,893 | 50,945 | 50,945 | 50,960 | 50,945 | 50,945 | 257,633 | ~~152,561~~ 160,234 |

[a] This column shows GHG Emissions that are offset relative to the No Project Alternative. A positive value indicates that the alternative offsets more GHGs than the No Project Alternative, and a negative value indicates that the alternative offsets less GHGs than the No Project Alternative.

**Text has been deleted from the last paragraph on page 3.1-24 and the first paragraph of page 3.1-25.**

As shown by comparing Tables 3.1-12 and 3.1-13, the GHGs offset under any of the alternatives would substantially exceed the increase in emissions associated with decommissioning and infrastructure removal activities. The net effect of the project (GHG emissions created versus GHG emissions avoided from fossil fuel power plants as a result of increased wind-generated electricity) would be a net decrease in GHG emissions. Accordingly, the proposed project or Alternatives 1, 2, and 3 would result in a less-than-significant impact. ~~Table 3.1-12 indicates Alternative 1 would result in less emission offsets (289 MT $CO_2$e) relative to the No Project Alternative, meaning Alternative 1 would result in fewer offsets beyond those that would otherwise occur under the No Project Alternative. When construction emissions are considered with operational emissions associated with Alternative 1, the net effect would be an increase of approximately 460 MT $CO_2$e (170.66 + 289). However, this increase in emissions is below the BAAQMD's threshold of 10,000 MT $CO_2$e for stationary sources. Consequently, Alternative 1 is also considered less than significant.~~

## Section 3.2 Biological Resources

**Page 3.2-1, Section 3.2.1, Regulatory Setting, the following text was added after the first paragraph.**

In California, the public trust doctrine provides that the state holds tidelands and navigable waters "as trustee for the public" (*City of Berkeley v. Superior Court* (1980) 26 Cal.3d 515, 521). However, in addition, the courts have held that "it is clear that the public trust doctrine encompasses the protection of undomesticated birds and wildlife" (*Center for Biological Diversity v. FPL Group* (2008) 166 Cal.App.4th 1349, 1363). Thus, public agencies such as the County "must consider the protection and preservation of wildlife" although, generally speaking, these obligations are typically defined by statutes such as the Fish and Game code provisions set forth below (*Id*. at 1364.). In addition, the courts have determined that members of the public may bring an action against a public agency if they believe that the agency has failed to discharge its responsibilities under the public trust. (See *Id*. at 1370).

**Page 3.2-5 under *California Endangered Species Act*, the following text was added to the end of the paragraph.**

Several state-listed species, including California tiger salamander, Alameda whipsnake, and San Joaquin kit fox, may have the potential to be affected by decommissioning activities associated with the proposed project, which would then require consultation with CDFW and authorization under Section 2081 (Incidental Take Permit).

**Page 3.2-5, the discussion of the California Fish and Game Code has been revised as follows.**

## California ~~Department of~~ Fish and ~~Wildlife~~ Game Code

***Fully Protected Species***

The California ~~Department of~~ Fish and ~~Wildlife~~ Game Code provides protection from take for a variety of species, referred to as "fully protected species." Section 5050 lists fully protected amphibians and reptiles, Section 3515 lists fully protected fish, Section 3511 lists fully protected birds, and Section 4700 lists fully protected mammals. The California ~~Department of Fish and Wildlife Code~~Fish and Game Code defines take as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Except for take related to scientific research or authorized pursuant to an approved Natural Community Conservation Plan, all take of fully protected species is prohibited, and CDFW cannot issue take permits for fully protected species.

***Protection of Birds and Raptors***

Section 3503 of the California ~~Department of~~ Fish and Game ~~Wildlife~~ Code prohibits the killing of birds and/or the destruction of bird nests. Section 3503.5 prohibits the killing of raptor species and/or the destruction of raptor nests. Typical violations include destruction of active bird and raptor nests as a result of tree removal, and failure of nesting attempts (loss of eggs and/or young) as a result of disturbance of nesting pairs caused by nearby human activity. Section 3513 prohibits any take or possession of birds designated by the MBTA as migratory nongame birds except as allowed by federal rules and regulations pursuant to the MBTA. The proposed project, including both operation and reclamation activities, has the potential to adversely affect birds and raptors protected under the California ~~Department of Fish and Wildlife Code~~Fish and Game Code.

**Page 3.2-11 under *Avian and Bat Species* the following text has been added after the first paragraph.**

The APWRA also supports resident and migratory bat species, although specific surveys within the APWRA are limited. A review of fatality data collected by the Alameda County Monitoring Team (MT) over a period of 7 years (2005–2010) indicates that bat fatalities have been detected, but occur at a rate of approximately 2–4 individual bats per year, with a total of 22 bat fatalities detected during that period. Given these low (albeit unadjusted) numbers of reported fatalities, bats do not appear to be at a significant risk, at least from old generation wind turbines in the APWRA. The resulting focus of the County has therefore been on the quantification and reduction of avian fatalities, as discussed below.

**On the un-numbered pages following page 3.2-11, the following tables were inadvertently omitted from the draft EIR and are inserted.**

**Table 3.2-1.** Special-Status Plants Known to Occur or that May Occur in the Study Area 

| Species | Status[a] Federal/State/CNPS | California Distribution | Habitats | Blooming Period | Likelihood to Occur in Study Area[c] |
|---|---|---|---|---|---|
| *Amsinckia grandiflora* Large-flowered fiddleneck | E/E/1B.1 | Foothills of Mount Diablo in Alameda, Contra Costa, and San Joaquin Counties; currently known from only three natural occurrences | Open grassy slopes in annual grasslands and cismontane woodlands | April–May | Low—suitable annual grassland habitat is present throughout the study area; however, the species is not known to occur in the study area and is only known from 3 localities in California. Designated critical habitat for the species occurs approximately 2 miles southeast from the study area (Figure 3.2-2). |
| *Amsinckia lunaris* Bent-flowered fiddleneck | –/–/1B.2 | Alameda, Contra Costa, Lake, Marin, Santa Cruz, Shasta, and Siskiyou Counties | Cismontane woodland, valley and foothill grassland | March–June | High—suitable annual grassland habitat is present throughout the study area. |
| *Astragalus tener* var. *tener* Alkali milk-vetch | –/–/1B.2 | Historically found in western San Joaquin Valley, San Francisco Bay Area, and Monterey County; likely extirpated from all historical occurrences except those in Merced, Solano, and Yolo Counties | Playas and grasslands with adobe clay soils and alkaline vernal pools | March–June | High—suitable annual grassland and alkali habitats are present throughout the study area. |
| *Atriplex cordulata* Heartscale | –/–/1B.2 | Western Central Valley and valleys of adjacent foothills | Alkali grasslands, alkali meadows, alkali scrublands | May–October | High—suitable annual grassland and alkali habitats are present throughout the study area; species is known to occur along Laughlin Road adjacent to the study area. |
| *Atriplex depressa* Brittlescale | –/–/1B.2 | Western Central Valley and valleys in foothills on west side of Central Valley | Alkali grasslands, alkali meadows, alkali scrublands, chenopod scrublands, playas, valley and foothill grasslands; on alkaline or clay soils | May–October | High—suitable annual grassland and alkali habitats are present throughout the study area; species is known to occur along Altamont Pass Road within the study area. |

**Table 3.2-1.** Continued



| Species | Status[a] Federal/State/CNPS | California Distribution | Habitats | Blooming Period | Likelihood to Occur in Study Area[c] |
|---|---|---|---|---|---|
| *Atriplex joaquiniana* San Joaquin spearscale (saltbush) | –/–/1B.2 | West margin of Central Valley from Glenn to Tulare Counties | Alkali grasslands, alkali scrublands, alkali meadows, saltbush scrublands | April–September | High—suitable annual grassland and alkali habitats are present throughout the study area; species is known to occur along Altamont Pass Road and Dyer Road near the study area. |
| *Atriplex minuscula* Lesser saltscale | –/–/1B.1 | Sacramento and San Joaquin Valley, Butte County to Kern County | Alkali sink and sandy alkaline soils in grasslands, chenopod scrub, between 65-325 feet about msl | May-October | High—suitable annual grassland and alkali habitats are present throughout the study area; species is known to occur along Altamont Pass Road within the study area |
| *Balsamorhiza macrolepis* var. *macrolepis* Big-scale balsamroot | –/–/1B.2 | Scattered occurrences in Coast Ranges and Sierra Nevada foothills. | Chaparral, cismontane woodland, valley and foothill grassland, sometimes on serpentine soils, at 295–4,593 feet. | March–June | Low—suitable annual grassland habitat within study area but no nearby occurrences. |
| *Blepharizonia plumosa* ssp. *plumosa* Big tarplant | –/–/1B.1 | Interior Coast Range foothills in Alameda, Contra Costa, San Joaquin, Stanislaus[b], and Solano[b] Counties | Dry hills and plains in annual grasslands | July–October | High—suitable annual grassland habitat and occurrences adjacent to the study area. |
| *California macrophylla* Round-leaved filaree | –/–/1B.1 | Scattered occurrences in the Great Valley, southern North Coast Ranges, San Francisco Bay Area, South Coast Ranges, Channel Islands, Transverse Ranges, and Peninsular Ranges | Cismontane woodland, valley and foothill grassland on clay soils | March-May | High—suitable annual grassland habitat and occurrences adjacent to the study area. |
| *Calochortus pulchellus* Mt. Diablo fairy lantern | –/–/1B.2 | Endemic to Contra Costa and Alameda Counties | Wooded, brushy slopes of chaparral, cismontane woodlands, riparian woodlands, and valley and foothill grasslands | April–June | Low—not known to occur nearby and habitat is marginal |
| *Caulanthuslemmonii* Lemmon's jewel-flower | –/–/1B.2 | Southeast San Francisco Bay Area, south through the South Coast Ranges and adjacent San Joaquin Valley to Ventura County | Dry, exposed slopes in grasslands and pinyon-juniper woodland | March—May | Moderate—not known to occur in the study area however there are nearby occurrences |

**Table 3.2-1.** Continued



| Species | Status[a] Federal/State/CNPS | California Distribution | Habitats | Blooming Period | Likelihood to Occur in Study Area[c] |
|---|---|---|---|---|---|
| *Centromadia parryi* ssp. *congdonii* Congdon's tarplant | –/–/1B.2 | Eastern San Francisco Bay Area, Salinas Valley, and Los Osos Valley | Lower slopes, flats, and swales in annual grasslands; locally on alkaline or saline soils | June–November | High—annual grassland habitat and alkaline soils are present in the study area; species is known to occur along Altamont Pass Road and Dyer Road near the study area. |
| *Chloropyron mollis* ssp. *hispidus* Hispid bird's-beak | –/–/1B.1 | Central Valley (Kern, Fresno, Merced, Placer, and Solano Counties) and Alameda County | Meadows, grasslands, and playas; on alkaline soils | June–September | Low—suitable annual grassland habitat within study area, but unlikely to be suitably alkaline |
| *Chloropyron palmatus* Palmate-bracted bird's-beak | E/E/1B.1 | Known from seven populations in Livermore Valley and Central Valley from Colusa County to Fresno County | Alkali grasslands, alkali meadows, and chenopod scrublands | May–October | Low—suitable annual grassland habitat within study area, but unlikely to be suitably alkaline |
| *Deinandra bacigalupii* Livermore tarplant | –/–/1B.2 | Endemic to Alameda County (Livermore Valley) | Alkaline meadows and seeps, not in Jepson Manual | June-October | Low—suitable annual grassland habitat within study area, but unlikely to be suitably alkaline |
| *Delphinium recurvatum* Recurved larkspur | –/–/1B.2 | San Joaquin Valley and interior valleys of the south Coast Ranges, Contra Costa County to Kern County | Subalkaline soils in annual grassland, saltbush scrub, cismontane woodland, vernal pools | March–May | High—suitable annual grassland habitat and alkaline soils are present in the study area and there are nearby occurrences. |
| *Dirca occidentalis* Western leatherwood | –/–/1B.2 | San Francisco Bay region, Alameda, Contra Costa, Marin, Santa Clara, San Mateo, and Sonoma Counties | Moist areas in broadleaved upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, North Coast coniferous forest, riparian forest, riparian woodland | January-March (April, uncommonly) | Low—riparian habitat within study area is likely too disturbed and there are no nearby occurrences |
| *Eschscholzia rhombipetala* Diamond-petaled poppy | –/–/1B.1 | Interior foothills of south Coast Ranges from Contra Costa County to Stanislaus County, Carrizo Plain in San Luis Obispo County | Grassland, chenopod scrub, on clay soils, where grass cover is sparse enough to allow growth of low annuals | March–April | High—suitable annual grassland habitat within study area and nearby occurrences |

| Species | Status[a] Federal/State/CNPS | California Distribution | Habitats | Blooming Period | Likelihood to Occur in Study Area[c] |
|---|---|---|---|---|---|
| *Lasthenia conjugens* Contra Costa goldfields | E/–/1B.1 | Napa and Solano Counties | Alkaline or saline vernal pools and swales, below 1,542 feet. | March–June | Low—suitable alkali soils and swales may be present but no nearby occurrences. Designated critical habitat occurs approximately one mile north of the study area (Figure 3.2-2). |
| *Madia radiata* Showy golden madia | –/–/1B.1 | Scattered populations in the interior foothills of the South Coast Ranges: Contra Costa[b], Fresno, Kings[b], Kern, Monterey[b], Santa Barbara[b], San Benito, Santa Clara, San Joaquin[b], San Luis Obispo, and Stanislaus Counties | Oak woodland, Valley and foothill grassland, slopes | March-May | Low—suitable annual grassland habitat within study area, but not documented in Alameda County |
| *Mondardella villosa* ssp.*globosa* Robust monardella | –/–/1B.2 | North Coast Ranges and Eastern San Francisco Bay Area: Alameda, Contra Costa, Humboldt, Lake, Mendocino, Napa, Santa Clara, Santa Cruz, San Mateo, and Sonoma Counties | Grassy openings in broadleafed upland forest and chaparral, cismontane woodland, coastal scrub, valley and foothill grassland | June-July (August, uncommonly) | Low—suitable annual grassland habitat within study area but no nearby occurrences |
| *Pentachaeta exilis* ssp. *aeolica* San Benito pentachaeta (formerly Slender pentachaeta) | –/–/1B.2 | Monterey, San Benito, and Santa Clara Counties | Cismontane woodland, valley and foothill grassland | March-May | Low—suitable annual grassland habitat within study area but not documented in Alameda County |
| *Plagiobothrys glaber* Hairless popcorn-flower | –/–/1A | Coastal valleys from Marin County to San Benito County | Alkaline meadows, coastal salt marsh | April–May | Low—suitable annual grassland habitat within study area, but unlikely to be suitably alkaline |
| *Plagiobothrys uncinatus* Hooked popcornflower | –/–/1B.2 | Monterey, San Benito, Santa Clara, San Luis Obispo, and Stanislaus Counties | Chaparral on sandy soils, cismontane woodland, valley and foothill grassland | April-May | Low—suitable annual grassland habitat within study area but no nearby occurrences |

| Species | Status[a] Federal/State/CNPS | California Distribution | Habitats | Blooming Period | Likelihood to Occur in Study Area[c] |
|---|---|---|---|---|---|
| *Trifolium depauperatum* var. *hydrophilum* Saline clover | –/–/1B.2 | Alameda, Colusa, Monterey, Napa, San Benito, Santa Clara, San Luis Obispo, San Mateo, Solano, and Sonoma Counties | Marshes and swamps, valley and foothill grassland (mesic, alkaline), and vernal pools | April–June | Low—suitable annual grassland habitat within study area but no nearby occurrences |
| *Tropidocarpum capparideum* Caper-fruited tropidocarpum | –/–/1B.1 | Historically known from the northwest San Joaquin Valley and adjacent Coast Range foothills | Grasslands in alkaline hills | March–April | Moderate—suitable habitat in the study area but known from very few occurrences |

[a] Status explanations:

**Federal**

E = listed as endangered under the ESA

– = no listing

**State**

E = listed as endangered under the CESA

– = no listing

**California Native Plant Society (CNPS)**

1A = List 1A species: presumed extinct in California

1B = List 1B species: rare, threatened, or endangered in California and elsewhere

2 = List 2 species: rare, threatened, or endangered in California but more common elsewhere

CNPS Code Extensions:

0.1 = seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat

0.2 = fairly endangered in California (20- 80% of occurrences threatened)

[b] Populations uncertain or extirpated in the county

[c] Definitions of levels of Occurrence likelihood:

Low: Plant not known to occur in the region from the CNDDB, or other documents in the vicinity of the project; or habitat conditions are of poor quality

None: Plant not known to occur in the region from the CNDDB, or other documents in the vicinity of the project; or suitable habitat is not present in any condition

**Table 3.2-2. Special-Status Wildlife Species Known to Occur or that May Occur in the Project Area**



| Scientific and Common Names | Status Federal/State | Geographic Distribution | Habitat Requirements | Likelihood to Occur in the Study Area |
|---|---|---|---|---|
| **Invertebrates** | | | | |
| *Branchinecta conservatio* Conservancy fairy shrimp | E/– | Disjunct occurrences in Solano, Merced, Tehama, Ventura, Butte, and Glenn Counties | Large, deep vernal pools in annual grasslands | None - suitable habitat may be present; however, the species is not known to occur in Alameda County. |
| *Branchinecta longiantenna* Longhorn fairy shrimp | E/– | Eastern margin of central Coast Ranges from Contra Costa County to San Luis Obispo County; disjunct population in Madera County | Small, clear pools in sandstone rock outcrops of clear to moderately turbid clay- or grass-bottomed pools | Moderate –suitable wetland habitat could be present in rock outcrops within the study area; known occurrences at Brushy Peak Conservation Area and Vasco Caves located north of the study area; designated critical habitat for the species overlaps with a small portion of the study area in the northwest corner where rock outcrops are present (Figure 3.2-2). |
| *Branchinecta lynchi* Vernal pool fairy shrimp | T/– | Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County; isolated populations also in Riverside County | Common in vernal pools; also found in sandstone rock outcrop pools | Moderate - alkali wetlands in the study area provide potential habitat for the species; no known occurrences within the study area but species has been documented just west of the study area; Designated Critical Habitat occurs approximately 1 mile west and north of the study area (Figure 3.2-2). |
| *Lepidurus packardi* Vernal pool tadpole shrimp | T/– | Shasta County south to Merced County | Vernal pools and ephemeral stock ponds | Low—stock ponds and alkali wetlands in the study area provide potential habitat for the species; however, no known occurrences of vernal pool tadpole shrimp occur in or near the study area (CNDDB 2012). |
| Valley elderberry longhorn beetle | T/-- | Streamside habitats below 3,000 feet above sea level throughout the Central Valley. | Riparian and oak savanna habitats with elderberry shrubs and streamside habitats below 3,000 feet above sea level. Elderberry shrub is the host plant. | None – study area drains to the San Francisco Bay ans is not within the current range of the species. |

**Table 3.2-2. Continued**



| Scientific and Common Names | Status Federal/State | Geographic Distribution | Habitat Requirements | Likelihood to Occur in the Study Area |
|---|---|---|---|---|
| **Fish** | | | | |
| *Acipenser medirostris* Green sturgeon | T/SSC | In marine waters of the Pacific Ocean from the Bering Sea to Ensenada, Mexico. In rivers from British Columbia south to the Sacramento River, primarily in the Klamath/Trinity and Sacramento Rivers. | Primarily marine, using large anadromous freshwater rivers and associated estuaries for spawning and rearing. | None – outside of species known range and there is no suitable habitat in the study area. |
| *Hypomesus transpacificus* Delta smelt | T/T | Primarily in the Sacramento–San Joaquin Estuary, but has been found as far upstream as the mouth of the American River on the Sacramento River and Mossdale on the San Joaquin River; range extends downstream to San Pablo Bay. | Occurs in estuary habitat in the Delta where fresh and brackish water mix in the salinity range of 2–7 parts per thousand (Moyle 2002). | None – No suitable habitat (estuary) in the study area; designated critical habitat overalps with the study area in the extreme northeast corner of the study area; this area does not support aquatic habitat for delta smelt. |
| *Oncorrhynchus mykiss* Central California Coastal steelhead | T/- | Coastal drainages along the central California coast. | An anadromous fish that spawns and spends a portion of its life in inland streams, typically maturing in the open ocean | None – no perennial streams suitable for anadromous fish are present in the study area. |
| *Oncorrhynchus mykiss* Central Valley steelhead | T/- | Sacramento and San Joaquin River and their tributaries. | An anadromous fish that spawns and spends a portion of its life in inland streams, typically maturing in the open ocean | None – no perennial streams suitable for anadromous fish are present in the study area. |
| **Amphibians** | | | | |
| *Rana boylii* Foothill yellow-legged frog | --/SSC | Occurs in the Klamath, Cascade, north Coast, south Coast, Transverse, and Sierra Nevada Ranges up to approximately1,800 meters (6,000 feet). | Creeks or rivers in woodland, forest, mixed chaparral, and wet meadow habitats with rock and gravel substrate and low overhanging vegetation along the edge. Usually found near riffles with rocks and sunny banks nearby. | Low – not previously documented in the study area; however, streams within the study area that contain suitable substrate and cover could support the species. |

**Table 3.2-2. Continued**



| Scientific and Common Names | Status Federal/State | Geographic Distribution | Habitat Requirements | Likelihood to Occur in the Study Area |
|---|---|---|---|---|
| *Rana draytoni* California red-legged frog | T/SSC | Found along the coast and coastal mountain ranges of California from Mendocino County to San Diego County and in the Sierra Nevada from Butte County to Stanislaus County. | Permanent and semipermanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation; may estivate in rodent burrows, soil ~~or~~ cracks, or downed logs during dry periods | High—species has been documented at numerous (15+) locations within and near (within 1 mile) the study area (CNDDB 2012); based on the proximity of known occurrences and presence of suitable aquatic and upland habitat throughout the study area, all upland and aquatic habitats within the study area are considered potentially occupied. The study area occurs entirely within designated critical habitat for the species (Figure 3.2-2). |
| *Ambystoma californiense* California tiger salamander | T/T | Central Valley, including Sierra Nevada foothills, up to approximately 1,000 feet, and coastal region from Sonoma County south to Santa Barbara County | Small ponds, lakes, or vernal pools in grasslands and oak woodlands for breeding and larval development; adults and juveniles spend a majority of their life cycles in uplands within rodent burrows and ~~,~~ rock crevices~~, or fallen logs for cover for adults and for summer dormancy~~. | High—species has been documented at numerous (20+) locations within and near (within 1.2 miles) the study area (CNDDB 2012); based on the proximity of known occurrences and presence of suitable aquatic and upland habitat throughout the study area, all upland and aquatic habitats within the study area are considered potentially occupied. |
| *Spea hammondii* Western spadefoot | –/SSC | Sierra Nevada foothills, Central Valley, Coast Ranges, coastal counties in southern California | Shallow streams with riffles; seasonal wetlands, such as vernal pools in annual grasslands and oak woodlands | None—the study area does not occur within the known range of the species. No previously documented occurrences are known from the study area. |
| **Reptiles** | | | | |
| *Phyrnosoma blainvillii* Coast horned lizard | --/SSC | Sacramento Valley, including foothills, south to southern California; Coast Ranges south of Sonoma County; below 1,200 meters (4,000 feet) in northern California. | Grasslands, brushlands, woodlands, and open coniferous forest with sandy or loose soil; requires abundant ant colonies for foraging | Moderate – suitable habitat (grasslands and woodlands) are present throughout the study area but not all areas would support suitable substrate conditions; known occurrences from Lawrence Livermore Laboratory's Site 300 southeast of the study area (CNDDB 2012). |

**Table 3.2-2. Continued**



| Scientific and Common Names | Status Federal/State | Geographic Distribution | Habitat Requirements | Likelihood to Occur in the Study Area |
|---|---|---|---|---|
| *Masticophis flagellum ruddocki* San Joaquin whipsnake | --/SSC | From Colusa county in the Sacramento Valley southward to the grapevine in the San Joaquin Valley and westward into the inner coast ranges. An isolated population occurs at Sutter Buttes. Known elevational range from 20 to 900 meters. | Occurs in open, dry, vegetative associations with little or no tree cover. It occurs in valley grassland and saltbush scrub associations. Often occurs in association with mammal burrows | Moderate – suitable grassland habitat is present within the study area; known occurrences from Lawrence Livermore Laboratory's Site 300 southeast of the study area (CNDDB 2012). |
| *Masticophis lateralis euryxanthus* Alameda whipsnake | T/T | Restricted to Alameda and Contra Costa Counties; fragmented into five disjunct populations throughout its range | Valleys, foothills, and low mountains associated with northern coastal scrub or chaparral habitat; requires rock outcrops for cover and foraging | Low—suitable grassland habitat is present throughout the study area but vegetation associations (scrub and chaparral) and rock outcrops are limited; known occurrences south of the study area. Designated critical habitat for the species overlaps with a small area in the southern extent of the study area (Figure 3.2-2). |
| *Actinemys marmorata* Western pond turtle | –/SSC | The western pond turtle is uncommon to common in suitable aquatic habitat throughout California, west of the Sierra-Cascade crest and absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries. | Occupies ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms and with watercress, cattails, water lilies, or other aquatic vegetation in woodlands, grasslands, and open forests. Nests are typically constructed in upland habitat within 0.25 mile of aquatic habitat. | High—pond, alkali meadow, and alkali wetland habitats in the study area provide suitable habitat; previously documented occurrences are known from the study area along Dyer Road(individual observed during 2006 survey west of the study area in the Arroyo Las Positas. Site has moderately suitable basking habitat. There are no emergent logs or protected banks. CNDDB records within 10 miles. |
| *Thamnophis gigas* Giant garter snake | T/T | Central Valley from the vicinity of Burrel in Fresno County to near Chico in Butte County. Extirpated from areas south of Fresno. | Sloughs, canals, low-gradient streams, and freshwater marshes where there is a prey base of small fish and amphibians. Also irrigation ditches and rice fields. Requires grassy banks and emergent vegetation for basking and areas of high ground protected from flooding during winter. | None—no suitable habitat is present in the study area and no nearby occurrences (CNDDB 2012). |

**Table 3.2-2. Continued**



| Scientific and Common Names | Status Federal/State | Geographic Distribution | Habitat Requirements | Likelihood to Occur in the Study Area |
|---|---|---|---|---|
| **Mammals** | | | | |
| *Antrozous pallidus* Pallid bat | --/SSC | Low elevations throughout California. | Occurs in a variety of habitats from desert to coniferous forest; most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in northern California. Prefers rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Uses caves, crevices, mines, and hollow trees for roosting. | Moderate—may forage in the study area and roost in the trees and rock crevices within the study area; known occurrences within 10 miles of the study area (CNDDB 2012). |
| *Corynorhinus townsendii* Townsend's big-eared bat | --/SSC | Widespread throughout California | Roosts in caves, tunnels, mines, crevices, hollow trees, and buildings; usually near water. | Moderate—may forage in the study area and roost in trees and structures within the study area. |
| *Neotoma fuscipes annectens* San Francisco dusky-footed woodrat | --/SSC | Found in foothills around San Francisco Bay and adjacent coastal ranges. | Found in brushy habitat in chaparral and woodland in foothills around San Francisco Bay and adjacent coastal ranges. Builds mounded stick lodges that may range in size from 3 to 8 feet across and as much as 6 feet tall. | None—species is not known to occur in the Livermore valley. No nearby occurrences (CNDDB 2012). |
| *Taxidea taxus* American badger | –/SSC | In California, badgers occur throughout the state except in humid coastal forests of northwestern California in Del Norte and Humboldt Counties | Badgers occur in a wide variety of open, arid habitats but are most commonly associated with grasslands, savannas, mountain meadows, and open areas of desert scrub; the principal habitat requirements for the species appear to be sufficient food (burrowing rodents), friable soils, and relatively open, uncultivated ground. | High—suitable grassland habitat and known occurrences (CNDDB) are present throughout the study area. |
| *Vulpes macrotis mutica* San Joaquin kit fox | E/T | Principally occurs in the San Joaquin Valley and adjacent open foothills to the west; recent records from 17 counties extending from Kern County north to Contra Costa County | Saltbush scrub, grassland, oak, savanna, and freshwater scrub. | High—suitable grassland habitat is present throughout the study area; although sightings are uncommon in Alameda County, the species has been documented at several localities (10+) within and near the study area (CNDDB 2012). |

**Table 3.2-2. Continued**



| Scientific and Common Names | Status Federal/State | Geographic Distribution | Habitat Requirements | Likelihood to Occur in the Study Area |
|---|---|---|---|---|
| **Birds** | | | | |
| *Laterallus jamaicensis coturniculus* California black rail | --/T | Found along San Francisco Bay, the Delta, coastal southern California, the Salton Sea, lower Colorado River, and some in land areas in the northern Sacramento Valley and adjacent foothills. | Found in brackish and freshwater emergent marshes. Typically found in high wetland zone near the upper limit of flooding. | None – no suitable habitat in the study area. |
| *Haliaeetus leucocephalus* Bald eagle | D/E | Nests in Siskiyou, Modoc, Trinity, Shasta, Lassen, Plumas, Butte, Tehama, Lake, and Mendocino Counties and in the Lake Tahoe Basin; reintroduced into central coast; winter range includes the rest of California, except the southeastern deserts, very high altitudes in the Sierra Nevada, and east of the Sierra Nevada south of Mono County | In western North America, nests and roosts in coniferous forests within 1 mile of a lake, reservoir, or stream, or the ocean | High—species winters in the APWRA and may forage adjacent to the study area; however, no suitable foraging habitat (large lakes, reservoirs, or rivers) is present in the study area. |
| *Aquila chrysaetos* Golden eagle | –/FP | Foothills and mountains throughout California; uncommon nonbreeding visitor to lowlands such as the Central Valley | Nests in cliffs and escarpments or tall trees; forages in annual grasslands, chaparral, or oak woodlands that provide abundant medium and large-sized mammals for prey | High—species is known to occur in the APWRA; however, unlikely to nest in the study area based on the lack of suitable woodland habitat; suitable foraging habitat is present throughout the study area. |
| *Buteo swainsoni* Swainson's hawk | –/T | Lower Sacramento and San Joaquin Valleys, Klamath Basin, and Butte Valley. Highest nesting densities occur near Davis and Woodland, Yolo County. | Nests in oaks or cottonwoods in or near riparian habitats. Forages in grasslands, irrigated pastures, and grain fields. | High—species is known to occur in the APWRA and is likely to forage in the study area. Large trees suitable for nesting are limited. NO previous nesting records within the study area (CNDDB 2012). |
| *Circus cyaneus* Northern harrier | –/SSC | Throughout lowland California; has been recorded in fall at high elevations | Grasslands, meadows, marshes, and seasonal and agricultural wetlands providing tall cover | High— species is known to occur in the APWRA; suitable nesting and foraging habitat is present throughout the study area. |
| *Elanus leucurus* White-tailed kite | –/FP | Lowland areas west of Sierra Nevada from the head of the Sacramento Valley south, including coastal valleys and foothills to western San Diego County at the Mexico border | Low foothills or valley areas with valley or live oaks, riparian areas, and marshes near open grasslands for foraging | High—species is known to occur in the APWRA and is likely to forage in the study area. Large trees suitable for nesting are limited. |

**Table 3.2-2. Continued**



| Scientific and Common Names | Status Federal/State | Geographic Distribution | Habitat Requirements | Likelihood to Occur in the Study Area |
|---|---|---|---|---|
| *Falco peregrinus anatum* American peregrine falcon | D/D | Permanent resident of the north and south Coast Ranges; may summer on the Cascade and Klamath Ranges south through the Sierra Nevada to Madera County; winters in the Central Valley south through the Transverse and Peninsular Ranges and the plains east of the Cascade Range | Nests and roosts on protected ledges of high cliffs, usually adjacent to lakes, rivers, or marshes that support large populations of other bird species | Low—potential winter migrant; foraging areas area limited and no suitable nesting habitat is present. |
| *Athene cunicularia* Burrowing owl | –/SSC | Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas; rare along south coast | Level, open, dry, heavily grazed or low stature grassland or desert vegetation with available burrows | High—suitable nesting and foraging habitat is present throughout the study area; numerous(15+) known occurrences throughout the study area (CNDDB 2012). |
| *Lanius ludovicianus* Loggerhead shrike | –/SSC | Resident and winter visitor in lowlands and foothills throughout California; rare on coastal slope north of Mendocino County, occurring only in winter | Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. Nests in densely foliaged trees or shrubs | High—species is known to occur in the APWRA; suitable foraging habitat is present throughout the study area; nesting habitat is limited within the study area to areas that supports shrubs and trees. |
| *Melospiza melodia pusillula* Alameda song sparrow | --/SSC | Species is found along the edges of San Francisco Bay | Occurs in salt marshes along San Francisco Bay | None—no suitable habitat is present within the study area. |
| *Agelaius tricolor* Tricolored blackbird | –/SSC | Permanent resident in the Central Valley from Butte County to Kern County; breeds at scattered coastal locations from Marin County south to San Diego County and at scattered locations in Lake, Sonoma, and Solano Counties; rare nester in Siskiyou, Modoc, and Lassen Counties | Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grain fields; habitat must be large enough to support 50 pairs; probably requires water at or near the nesting colony | High—suitable foraging habitat is present throughout the study area; there is a low potential for nesting due to the limited availability of areas that could support adequate nesting substrate. |

Notes:

Status explanations:

**Federal**

| | | |
|---|---|---|
| E | = | listed as endangered under the ESA |
| T | = | listed as threatened under the ESA |
| PT | = | proposed for federal listing as threatened under the ESA |
| C | = | species for which USFWS has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposed rule to list, but issuance of the proposed rule is precluded |
| D | = | delisted |
| – | = | no listing |

**State**

| | | |
|---|---|---|
| E | = | listed as endangered under CESA |
| T | = | listed as threatened under CESA |
| FP | = | fully protected under the California Fish and Game Code |
| SSC | = | species of special concern in California |
| D | = | delisted |
| – | = | no listing |

**Potential Occurrence in the Study Area**

| | |
|---|---|
| High: | Known occurrences of the species within the study area, or CNDDB, or other documents, records the occurrence of the species within a 10-mile radius of the study area; suitable habitat is present within the study area |
| Moderate: | CNDDB, or other documents, records the known occurrence of the species within a 10-mile radius of the study area; poor quality suitable habitat is present within the study area |
| Low: | CNDDB, or other documents, does not record the occurrence of the species within a 10-mile radius of the study area; suitable habitat is present within the study area |

**Page 3.2-14, under section 3.2.3.1 *Impact Methods*, fourth paragraph, fourth sentence has been modified as follows.**

That is, the more ~~the~~ turbines that are in operation~~generating energy~~, the greater the number of turbine-related avian fatalities.

**Page 3.2-14, after the fourth paragraph of Section 3.2.3.1 *Impact Methods*, the following text and table were added.**

## Calculating Installed Capacity

*Installed capacity* is a measure of the total amount of energy that would be produced if all installed turbines were operating perfectly under ideal conditions. It is based on *nameplate capacity*, which is a measure of the amount of energy a turbine would produce if it were operating perfectly under ideal conditions, and is particular to each individual turbine make and model. Thus, the total installed capacity is the number of turbines of a particular type multiplied by the nameplate capacity of that turbine type.- For this analysis, the unit of time used is years.

Three variables must be considered when calculating the installed capacity for each alternative: the nameplate capacities of the turbines, the presence or absence of a seasonal shutdown, and the decommissioning schedule, which determine how many turbines are permitted to be operational each year. -Installed capacity was calculated for each alternative by doing the following.

- Determining the number of turbines of each type operating in the year, multiplying them by their respective nameplate capacities, and summing the results.
- Multiplying the result by the fraction of the year that they are expected to operate in that configuration for a given year (to account for seasonal shutdown),
- Repeating this calculation for each year and for each alternative,
- Summing the total of each year for each alternative.

Example: For Alternative 1 the installed capacity would be calculated as follows.

- Year 2013:
  808 turbines with a nameplate capacity of 0.1MW [100kW] = 80.8 MW
  + 20 turbines with a nameplate capacity of 0.25MW [250kW turbines] = 5 MW.
  80.8 MW + 5 MW = 85.8 MW * 0.0833 Years [1 month or 1/12 of a year, October] = 7.2MW-years (rounded to 1 decimal place).
- Year 2014:
  808 turbines with a nameplate capacity of 0.1MW [100kW] = 80.8 MW
  + 20 turbines with a nameplate capacity of 0.25MW [250kW turbines] = 5 MW.
  80.8 MW + 5 MW = 85.8 MW * 0.708 Years [8.5 months or 8.5/12 of a year, Feb. 15–-Oct. 31] = 60.8MW-years (rounded to 1 decimal place).
- Year 2015:
  808 turbines with a nameplate capacity of 0.1MW [100kW] = 80.8 MW
  + 20 turbines with a nameplate capacity of 0.25MW [250kW turbines] = 5 MW.

80.8 MW + 5 MW = 85.8 MW * 0.708 Years [8.5 month or 8.5/12 of a year, Feb. 15-–-Oct. 31] = 60.8MW-years (rounded to 1 decimal place).

- Sum the megawatt-years for each year:
  (7.2MW + 60.8MW + 60.8MW) = 128.7 MW-years (rounded to 1 decimal place)

When calculating the installed capacity for the No Project Alternative, the decommissioning schedule unique to that alternative must be taken into account. The existing CUPs establish a decommissioning schedule by when certain percentages of the remaining turbines must be removed (See Section 2.4.3.3 on Page 2-10 of the draft EIR). The language in the CUPs states that the turbines must be removed by September 30 of a given year. -In order to accomplish the removal by September 30, turbines would need to be shut down a sufficient time ahead of that date in order to allow for the actual removal of the turbine. -This would reduce the total installed capacity of the No Project Alternative for the years of 2015 and 2018. The installed capacity calculation for the No Project Alternative assumes that 80 turbines per month would be removed starting in May of 2015 in order to accommodate decommissioning by September 30, 2015. For the year 2018, turbine removal would need to begin in mid-August to be completed by September 30, 2018. -The ramp--down scenario for removal was not included for the proposed project and the alternatives because, based on the applicant's permit modification request, it is assumed that if the permit modification is granted, the applicant will be required to shut down the turbines by a given date (either December 31, 2015 for the proposed project or October 1, 2015 for all other alternatives) and be allowed to remove them subsequent to the shut-down date.

The calculated installed capacities for each year of each alternative are presented in Table -3.2-3a.

**Table 3.2-3a. Summary of Installed Capacity Per Megawatt Year for All Scenarios**

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | Total MW-Years |
|---|---|---|---|---|---|---|---|---|
| Proposed Project | 21.5 | 85.8 | 85.8 | 0.0 | 0.0 | 0.0 | 0.0 | 193.1 |
| No Project Alternative | 5.2 | 44.5 | 32.1 | 11.9 | 11.9 | 10.9 | 0.0 | 116.5 |
| Alternative 1 | 7.2 | 60.8 | 60.8 | 0.0 | 0.0 | 0.0 | 0.0 | 128.7 |
| Alternative 2 | 7.2 | 60.8 | 60.8 | 60.8 | 0.0 | 0.0 | 0.0 | 189.5 |
| Alternative 3 | 7.2 | 60.8 | 60.8 | 60.8 | 60.8 | 60.8 | 0.0 | 311.0 |

**Page 3.2-15, first paragraph the third sentence was clarified as follows.**

More specifically, currently permitted turbines (the No Project Alternative) would have a~~n aggregate~~ total installed generation capacity rating of 116.5 MW over their 5-year life, accounting for seasonal shutdowns and phased decommissioning.

**Page 3.2-16 under section 3.2.3.3 *Impact Assumptions*, the following bullet was added.**

- All grassland in the study area is potential habitat for the special-status species identified in Tables 3.2-1 and 3.2.2.

**Page 3.2-17 under *Impacts and Mitigation Measures*, first paragraph, the second sentence has been revised as follows.**

Decommissioning would largely entail reclaiming and restoring areas that are generally already compacted, graveled, or contain impervious surfaces (i.e. concrete foundations) to a pre-project state, which could result in some impacts on species and habitats, but is expected to have an overall benefit to habitats and species in the project area. Reclamation and restoration of decommissioned turbines would support the goals and objectives of the EACCS.

**Pages 3.2-17, 3.2-18 and 3.2-26:** To accommodate insertion of the new Table 3.2-3a in response to comments, the numbering of the original, draft EIR Table 3.2-3 was revised to Table 3.2-3b. All text references (pages 3.2-17, 3.2-18, and 3.2-26) have been updated accordingly.

**Page 3.2-19, the impact discussion under Special Status Wildlife has been revised as follows.**

Suitable habitat for 23 special-status wildlife species occurs throughout the APWRA (Table 3.2-2). Six of the 23 wildlife species have been previously identified within the APWRA (California tiger salamander, California red-legged frog, western pond turtle, western burrowing owl, American badger, and San Joaquin kit fox). Many of the species identified in Table 3.2-2 have potential to occur in annual grassland habitat, which is the dominant habitat type present in the APWRA where existing facilities are located. Table 3.2-2 provides a description of preferred habitats for special-status species potentially occurring in the study area and identifies where the species is known and/or likely to occur within the study area.

It is ~~likely~~ assumed that decommissioning work areas are adjacent to and/or may overlap with habitats that could be used by special-status wildlife, either as residents or during migration/movement though the open grassland landscape. Although the proposed project would not result in the permanent removal of habitat, excavation and grading activities could result in the temporary disturbance or direct mortality of special-status wildlife (including longhorn fairy shrimp, vernal pool fairy shrimp, California red-legged frog, California tiger salamander, western pond turtle, coast horned lizard, San Joaquin whipsnake, Alameda whipsnake, western burrowing owl, northern harrier, American badger, and San Joaquin kit fox) if they are present within, move through, or are adjacent to the decommissioning work area. The proposed project has the potential to result in the following direct impacts.

- Excavation to remove existing foundations associated with turbines, transformers, and meteorological towers has the potential to collapse underground burrows that could be occupied by California red-legged frog, California tiger salamander, coast horned lizard, San Joaquin whipsnake, Alameda whipsnake, western burrowing owl, American badger, and San Joaquin kit fox. These activities could entrap or crush special-status species within burrows or in soil cracks, resulting in injury or mortality.
- Excavation, removal of vegetation and/or gravel, and grading have the potential to impact special-status species moving above ground or nesting within grasslands in decommissioning work areas.
- Noise associated with dismantling and excavation, although of short duration (approximately 1–2 days at a given location), could cause nesting birds to abandon active nests with eggs or chicks.

- Aquatic habitats for special-status wildlife occurring downslope from proposed decommissioning activities could be affected from spills of hazardous materials (e.g., petroleum products) or sediment runoff from stockpiled soils that are not properly contained.

Loss of special-status wildlife species or degradation of habitat for these species ~~may bise~~ considered significant under CEQA if the loss or habitat degradation is substantial and could affect the long-term survival of the affected population. Because the presence and extent of any special-status wildlife in the decommissioning work area are unknown, it is assumed that these species are present and that this would be a ~~potentially~~ significant impact. Additionally, p~~P~~roject impacts that result in take of federally and state-listed species would ~~also~~ violate the ESA and CESA. For activities that have the potential to result in take of a state or federally listed species, AWI will apply for and obtain an Incidental Take Permit from USFWS and/or CDFW prior to conducting any decommissioning activities. Mitigation Measures BIO-1 and BIO-~~-~~4 through BIO-16 are consistent with AMMs identified in the EACCS and implement all conditions related to state and federally listed species.

Implementing Mitigation Measures BIO-1 through BIO-5 and BIO-8 through BIO-15 (consistent with the EACCS) would avoid and/or minimize impacts on special-status wildlife and reduce impacts associated with decommissioning to a less-than-significant level.

**Page 3.2-20, the first bulleted item has been revised as follows.**

- Employees and contractors performing decommissioning and reclamation activities will receive environmental sensitivity training. Training will include review of environmental laws and AMMs that must be followed by all personnel to reduce or avoid effects on ~~covered~~ special-status species during construction activities.

**Page 3.2-20, Mitigation Measure BIO-1, the fourth bulleted item has been revised as follows.**

- The following will not be allowed at or near work sites for ~~covered~~ project activities: trash dumping, firearms, open fires (such as barbecues) not required by the activity, hunting, and pets (except for safety in remote locations).

**Page 3.2-21, Mitigation Measure BIO-1, the first bulleted item has been clarified as follows.**

- Within 48 hours p~~P~~rior to ground-disturbing activities in sensitive habitats, decommissioning and reclamation activity boundaries and access areas will be flagged and temporarily fenced during those activities to reduce the potential for vehicles and equipment to stray into adjacent habitats.

**Page 3.2-21, the text under Mitigation Measure BIO-2 has been clarified as follows.**

Within 30 days p~~P~~rior to any ground disturbance, a qualified biologist will prepare a Grassland Restoration Plan in coordination with CDFW (Danielle Roach or Craig Weightman at 916-944-5500) and subject to CDFW approval, to ensure that temporarily disturbed annual grasslands and areas planned for the removal of permanent roads and turbine pad areas are restored to pre-project conditions. The Grassland Restoration Plan will include but not be limited to the following measures.

- Gravel shall be removed from areas proposed for grassland restoration.
- To the maximum extent feasible, topsoil shall be salvaged from within on–site work areas prior to construction. Imported fill soils shall be limited to weed-free topsoil similar in texture, chemical composition, and pH to soils found at the reference site.
- Where appropriate, restoration areas will be seeded (hydroseeding is acceptable) to ensure erosion control. Seed mixes shall be tailored to closely match that of reference site(s) within the study area and should include native or naturalized, non-invasive species sourced within the project or within 50 miles of the project area.

Reclaimed roads shall be restored in such a way as to permanently prevent vehicular travel.

~~measures for temporary topsoil stockpiling where appropriate, seeding with native species (hydroseeding is acceptable), and if recommended based on site-specific conditions, seeding with annual or sterile cover crops to ensure erosion control. The species used will include native grasses and species not listed on the California Invasive Plant Council's (Cal-IPC's) *Invasive Plants of California's Wildlands*.~~

The plan will include a requirement to monitor restoration areas annually (between March and May) in years 1–3 following the year of restoration. At the end of 3 years, the restoration will be considered successful if the percent cover for restored areas is 70% absolute cover of the planted/seeded species compared to the percent absolute cover of nearby reference sites. -No more than 5% relative cover of the vegetation in the restoration areas shall consist of species designated as invasive plants in Cal-IPC's California Invasive Plant Inventory Database (http://www.cal-ipc.org)~~no bare areas larger than 250 square feet are present, the site contains a mixture of native and non-native plant species, and no invasive species (unless they are already present in the surrounding area) are present~~. Remedial measures included in the plan will include supplemental seeding, weed control, etc. as determined necessary to achieve the long term success criteria. Monitoring may be extended for 2 additional years if necessary to achieve the success criteria. Other performance standards may also be required as they relate to special-status species habitat; these will be identified in coordination with CDFW and included in the plan. AWI will provide evidence that CDFW has reviewed and approved of the Grassland Restoration Plan. Additionally, AWI will provide annual monitoring reports to the County by August 1 of each year, summarizing the monitoring results and any remedial measures implemented (if any are necessary).

**Pages 3.2-21 to 3.2-22, the text under Mitigation Measure BIO-3 has been clarified as follows.**

Within no more than 3 years and no less than 1 year p~~P~~rior to ground-disturbing decommissioning activities and during the appropriate identification periods for special-status plants and wildlife listed in Tables 3.2-1 and 3.2-2, a qualified biologist (as determined by Alameda County) will conduct field surveys within decommissioning work areas and the immediately adjacent areas to determine the ~~potential~~ presence of habitat for special-status plant and wildlife species. AWI will submit a report documenting the survey results to Alameda County for review and approval, no less than 1 year prior to conducting any decommissioning activities. The report will include the location and description of all proposed work areas (such as whether or not landowners have chosen to retain roads on their lands), the location and description of all suitable habitat for special-status plant and wildlife species, and the location and description of other sensitive habitats (e.g., vernal pools or wetlands). Additionally, the

report will outline where additional species and/or habitat-specific mitigation measures (as required under Mitigation Measures BIO-4 through BIO-15) are required. This report will provide the basis for any applicable permit applications where incidental take may occur. ~~.~~

**Page 3.2-22, the first sentence of Mitigation Measure BIO-6 has been revised as follows.**

If required pursuant to Mitigation Measure BIO-3, and within 3 years prior to ground disturbance associated with decommissioning activities (consistent with the EACCS), qualified botanists (i.e., botanists with prior experience conducting floristic surveys and approved by Alameda County) will survey areas proposed for ground disturbance and an additional 100 feet surrounding the areas proposed for ground disturbance, to document the presence of special-status plants.

**Page 3.2-23, Mitigation Measure BIO-8, the following sentence has been added to the end of the first paragraph.**

These measures are consistent with the EACCS and are in addition to any conservation measures or conditions of approval identified in applicable project permits (i.e., incidental take permits under CESA and/or ESA).

**Pages 3.2-23 to 3.2-24, Mitigation Measure BIO-9 has been revised as follows.**

If required pursuant to Mitigation Measure BIO-3, and where suitable upland or aquatic habitat for California tiger salamander, California red-legged frog, and/or foothill yellow-legged frog is identified within ~~near~~ proposed work areas, the following AMMs will be implemented to ensure that the proposed project does not have an adverse impact on California tiger salamander, California red-legged frog, and/or foothill yellow-legged frog. Based on the extent of known occurrences for these species throughout the APWRA and presence of upland annual grassland habitat throughout the study area that is used by dispersing California red-legged frogs and by California tiger salamanders as underground refugia during most of their life span, it is assumed that the majority of decommissioning activities will occur in suitable habitat for these species.

The following measures are consistent with the EACCS and are in addition to any conservation measures or conditions of approval identified in applicable project permits (i.e., incidental take permits under CESA an d/or ESA).

- A qualified biologist will conduct preconstruction surveys immediately prior to ground-disturbing activities (including equipment staging, vegetation removal, grading) associated with decommissioning. The biologist will survey the work area and all suitable habitat within 300 feet of the work area. If individuals (including adults, juveniles, larvae, or eggs) are found, work will not begin until USFWS and/or CDFW is contacted to determine if moving these life-stages is appropriate. If relocation is deemed necessary, a ~~they are moved out of the decommissioning and reclamation activities zone to a~~ USFWS and/or ~~/~~CDFW-approved relocation site will be identified and a relocation plan developed.
- Where applicable, barrier fencing will be installed around the worksite to prevent amphibians from entering the work area. Barrier fencing will be removed within 72 hours of completion of work.
- No monofilament plastic will be used for erosion control.

- Ground-disturbing activities shall be limited to dry weather between April 15 and October 31. No ground-disturbing work shall occur during wet weather. Wet weather is defined as when there has been 0.25 inch of rain in a 24-hour period. Ground disturbing activities halted due to wet weather may resume when precipitation ceases and the National Weather Service 72-hour weather forecast indicates a 30% or less chance of precipitation. No ground-disturbing work shall occur during a dry-out period of 48 hours after the above referenced wet weather.
- All project activity shall terminate 30 minutes before sunset and shall not resume until 30 minutes after sunrise during the migration/active season from November 1 to June 15. Sunrise and sunset times are established by the U.S. Naval Observatory Astronomical Applications Department for the geographic area where the project is located.
- To prevent inadvertent entrapment of special-status amphibians during construction, all excavated, steep-walled holes or trenches more than 6 inches deep will be provided with one or more escape ramps constructed of earth fill or wooden planks and will be inspected by a qualified biologist prior to being filled.
- ~~Work crews or a~~An onsite biological monitor will inspect open trenches, pits, and under construction equipment and material left onsite ~~-~~in the morning and evening to look for amphibians that may have become trapped or are seeking refuge~~for trapped amphibians~~.
- A qualified biologist possessing a valid ESA Section 10(a)(1)(A) permit or who is USFWS-approved under an active biological opinion, will be contracted to trap and to move California tiger salamanders or California red-legged frogs to nearby suitable habitat if individuals of these species are found onsite (including animals trapped in a trench) and cannot or do not move offsite on their own.

~~Work will be avoided within suitable habitat during rain events or within 48 hours following a rain event (defined as more than 0.25 inch of rain within a 24 hour period)~~

**Page 3.2-24, Mitigation Measure BIO-10 has been revised as follows.**

If required pursuant to Mitigation Measure BIO-3, and in areas determined by the preconstruction surveys as likely to contain suitable habitat for Alameda whipsnake near proposed work areas, the following AMMs will be implemented to ensure that the proposed project does not have an adverse impact on Alameda whipsnake. These measures are consistent with the EACCS and are in addition to any conservation measures or conditions of approval identified in applicable project permits (i.e., incidental take permits under CESA and/or ESA).

- A qualified biologist will conduct preconstruction surveys immediately prior to ground-disturbing activities (including equipment staging, vegetation removal, grading) associated with decommissioning and reclamation. If individuals are found, work will not begin until they are moved out of the decommissioning and reclamation activities zone to a USFWS/CDFW-approved relocation site.
- No monofilament plastic will be used for erosion control.
- Where applicable, barrier fencing will be used to exclude snakes from the work area. Barrier fencing will be removed within 72 hours of completion of work.
- ~~Work~~ crews or on-site biological monitor will inspect open trenches, pits, and under construction equipment and material left onsite in the morning and evening to look for reptiles

that may have become trapped or are seeking refuge. ~~in the morning and evening for trapped reptiles.~~

- Ground disturbance in suitable habitat will be minimized.
- Vegetation within the proposed work area shall be removed prior to grading. Prior to clearing and grubbing operations, a qualified biologist shall clearly mark vegetation within the work area that shall be avoided. Vegetation outside the work area shall not be removed. Where possible hand tools (e.g., trimmer, chain saw, etc.) shall be used to trim or remove vegetation. All vegetation removal shall be monitored by the qualified biologist to minimize impacts to Alameda whipsnake.
- A qualified biologist possessing a valid ESA Section 10(a)(1)(A) permit or who is USFWS-approved under an active biological opinion, and approved by CDFW will be contracted to trap and to move Alameda whipsnake to nearby suitable habitat if individuals of the species are found onsite (including animals trapped in a trench) and cannot or do not move offsite on their own.

**Page 3.2-25, Mitigation Measure BIO-12, the following sentence has been added to the end of the first paragraph.**

These measures are consistent with the EACCS and are in addition to any conservation measures or conditions of approval identified in applicable project permits (i.e., incidental take permits under CESA and/or ESA).

**Page 3.2-25, Mitigation Measure BIO-12, the first bulleted item has been clarified as follows.**

- A qualified USFWS- and CDFW-approved biologist will conduct a preconstruction survey no more than 30 days before the beginning of ground disturbance or any activity likely to impact San Joaquin kit fox. Surveys will follow USFWS's 1999 *San Joaquin Kit Fox Survey Protocol for the Northern Range.* Written results of the surveys will be submitted to CDFW and USFWS within 1 week of the completion of surveys and prior to the beginning of ground disturbance and/or decommissioning activities likely to affect San Joaquin kit fox. This measure will be implemented in all offroad work areas. The biologist will survey the proposed work area and a 200-foot buffer around the work area to identify suitable dens. The biologist will conduct den searches by systematically walking transects spaced 30–100 feet apart through the survey area. Transect distance should be determined based on the height of vegetation such that 100 percent visual coverage of the project area is achieved. If dens are found during the survey, the biologist will map the location of each den and record the size and shape of the den entrance; the presence of tracks, scat, and prey remains; and if the den was recently excavated. The biologist will also record information on prey availability (e.g., ground squirrel colonies). The status of the den as defined by USFWS should also be determined and recorded. Dens will be classified in one of the following four den status categories.

**Page 3.2-27, Mitigation Measure BIO-14, the first bulleted item has been revised as follows.**

- A qualified biologist will conduct preconstruction nesting bird and raptor survey within 7 days prior to ground-disturbing activities. The survey area should encompass a 500-foot ~~buffer~~ radius around the proposed work area.

**Page 3.2-27, Mitigation Measure BIO-14, the third bulleted item has been revised as follows.**

- If an active burrow is identified near a proposed work area and work cannot be conducted outside of the nesting season (~~March 15~~ February 1 to September 1), a no-activity zone will be established by a qualified biologist. The no-activity zone will be large enough to avoid nest abandonment and will at a minimum cover a 250-foot radius from the burrow.

**Page 3.2-27, Mitigation Measure BIO-14, the fourth bulleted item has been revised as follows.**

- If burrowing owls are present at the site during the non-breeding season (September 2 through January 31~~March 14~~), a qualified biologist will establish a no-activity zone of at least 150 feet.

**Page 3.2-27, Mitigation Measure BIO-15, the first bulleted item has been revised as follows.**

- A qualified biologist will conduct a preconstruction nesting bird and raptor survey within 7 days prior to ground-disturbing activities. The survey area should encompass a ~~500~~1,000-foot ~~buffer~~ radius around the proposed work area.

**Page 3.2-28, the second bulleted item of Mitigation Measure BIO-15 has been revised as follows.**

- If an active nest is identified near a proposed work area and work cannot be conducted outside of the nesting season (February 1 to September 1), a no-activity zone will be established by a qualified biologist. ~~The no-activity zone will be large enough to avoid nest abandonment and will at a minimum cover a 50-foot radius from the nest.~~ To minimize the potential to affect the reproductive success of the nesting pair, the extent of the no-activity zone will be developed based on the type and extent of the proposed activity in proximity to the nest, the duration and timing of the activity, the sensitivity and habituation of the species nesting, and the dissimilarity of the proposed activity to background activities The no-activity zone will be large enough to avoid nest abandonment and will range between 50 feet and 1,000 feet from the nest.

**Page 3.2-28, under Operational Changes, the following clarifying text has been inserted between the second and third paragraphs.**

*Estimated Avian Mortality*

The fatality rates used in this analysis are based on megawatts of installed capacity. Fatality rates can be measured in a variety of ways, including fatalities per turbine, fatalities per megawatt (MW) of installed capacity, and fatalities per MW of energy produced. The best available rates for use are expressed in terms of installed capacity per year. Fatalities per MW of installed capacity—the metric

used by this analysis—is the metric most commonly used to measure and report turbine-related fatality rates. This is because it allows for a standardized comparison of rates from different wind projects that are comprised of turbines of different sizes and generating capacities. Because the amount of energy actually produced is considered proprietary by power companies, and has not been provided by the power companies over the term of the current monitoring program, that rate is not available for use. Fatality rates based on the most recent published results of avian fatality studies conducted within the APWRA from 2005–2010 are the best available data and are expressed in terms of MW of installed capacity. To estimate the impacts associated with each alternative, the average annual fatality rate measured in fatalities per MW of installed capacity is multiplied by the total installed capacity for each alternative.

**Page 3.2-28, under Operational Changes, the third paragraph has been revised as follows.**

Fatality rates vary considerably from one year to the next, in part due to changes in the number of birds using the APWRA in a given year. To account for this, the average of the annual fatality rates for two different periods, 2005–2010, and 2008–2010, were used. The first average includes all of the variation observed throughout the study, while the second average may be more representative of current conditions in the APWRA because the installed capacity of the APWRA has declined steadily since 2005. Table 3.2-4 provides the anticipated avian species impacts under the proposed project (cumulative estimated totals) as calculated from the APWRA-wide fatality rate estimates (standardized on a per-MW basis). Average fatality rates are presented for all available monitoring years (2005–2010) as well as for recent monitoring years (2008–2010). ~~The rates for recent monitoring years are presented in order to consider years in which more intensive efforts have been made to reduce avian mortality within the APWRA.~~

The use of these rates results in estimates of total fatalities for the proposed project that are biased low (underestimated) because the rates include the effect of the seasonal shutdown but the proposed project does not include seasonal shutdown. Although the currently available evidence suggests that the bias would be substantial, the extent of the bias is not mathematically determinable given the data available. For the No Project Alternative and Alternatives 1 through 3, this bias does not occur because these alternatives each include a seasonal shutdown.

As outlined in the table, several special-status avian species have had fatalities in the APWRA, for example, Swainson's hawk, white-tailed kite, and brown pelican; however the reported fatalities have been relatively few, often reported from only 1 or 2 individuals during all monitoring years. Additionally, species reported in the table below as having a zero average fatality rate do not necessarily represent zero fatalities; the data may just not be reported out to enough significant digits. The data suggest, however, that fatalities to these species are low, and the corresponding potential for impacts on them from the AWI project is also low. For example, the estimated per-MW fatality rate for Swainson's hawk is 0.001 birds per MW per year based on an average of monitoring years 2005–2010, and 0.000 birds per MW per year based on an average of monitoring years 2008–2010, which equates to zero to less than one bird (0.24 bird) for the remaining life of the proposed project.

**Pages 3.2-29 and 3.2-30, Table 3.2-4, Adjusted Species Fatality Rates for the Proposed Project Based on an Average Fatality Rate (Fatalities per Megawatt per Year), has been clarified with a note as follows.**

**Table 3.2-4. Adjusted Species Fatality Rates for the Proposed Project Based on an Average Fatality Rate (Fatalities per Megawatt per year)**

| Species/Category | Average Fatality Rate (based on 2005–2010 monitoring results) | Average Fatality Rate (based on 2008-2010 monitoring results) | Proposed Project (Range of Cumulative Totals)[6] |
|---|---|---|---|
| American kestrel | 0.496 | 0.443 | 85.5–95.8 |
| burrowing owl[1] | 0.721 | 0.425 | 82.1–139.2 |
| golden eagle[2, 3] | 0.085 | 0.061 | 11.7–16.4 |
| red-tailed hawk | 0.449 | 0.286 | 55.2–86.7 |
| **Total Focal Species** | **1.751** | **1.215** | **234.5–338.1** |
| barn owl | 0.223 | 0.175 | 33.7–43.0 |
| ferruginous hawk | 0.004 | 0.002 | 0.3–0.8 |
| great-horned owl | 0.056 | 0.052 | 10–10.8 |
| northern harrier[1] | 0.009 | 0.004 | 0.8–1.8 |
| peregrine falcon | 0.003 | 0.000 | 0–0.5 |
| prairie falcon | 0.012 | 0.013 | 2.3–2.5 |
| red-shouldered hawk | 0.002 | 0.000 | 0–0.5 |
| Swainson's hawk[4] | 0.001 | 0.000 | 0–0.2 |
| turkey vulture | 0.015 | 0.008 | 1.6–2.9 |
| white-tailed kite[3] | 0.003 | 0.007 | 0.7–1.3 |
| **Total Raptors** | **0.329** | **0.261** | **50.4–63.5** |
| American avocet | 0.003 | 0.006 | 0.6–1.2 |
| American coot | 0.012 | 0.021 | 2.4–4.0 |
| American crow | 0.014 | 0.007 | 1.4–2.6 |
| American pipit | 0.019 | 0.015 | 2.9-3.7 |
| barn swallow | 0.016 | 0.020 | 3.1–3.9 |
| black-necked stilt | 0.002 | 0.000 | 0–0.3 |
| Bonaparte's gull | 0.001 | 0.000 | 0–0.3 |
| Brewers blackbird | 0.078 | 0.057 | 10.9–15.0 |
| brown pelican[3] | 0.001 | 0.001 | 0.1–0.3 |
| brown-headed cowbird | 0.004 | 0.000 | 0–0.7 |
| California gull | 0.027 | 0.033 | 5.3–6.3 |
| cliff swallow | 0.027 | 0.017 | 3.3–5.1 |
| common goldeneye | 0.002 | 0.003 | 0.3–0.6 |
| common poorwill | 0.003 | 0.000 | 0–0.5 |
| common raven | 0.091 | 0.086 | 16.6–17.7 |
| dark-eyed junco | 0.004 | 0.008 | 0.8–1.6 |
| European starling | 2.213 | 2.303 | 427.3–444.8 |
| golden-crowned sparrow | 0.004 | 0.000 | 0–0.8 |
| great blue heron | 0.001 | 0.000 | 0–0.2 |
| great egret | 0.001 | 0.000 | 0–0.3 |
| Hammonds flycatcher | 0.011 | 0.000 | 0–2.2 |
| horned lark | 0.250 | 0.198 | 38.2–48.2 |

| Species/Category | Average Fatality Rate (based on 2005–2010 monitoring results) | Average Fatality Rate (based on 2008-2010 monitoring results) | Proposed Project (Range of Cumulative Totals)[6] |
|---|---|---|---|
| house finch | 0.006 | 0.000 | 0–1.1 |
| house sparrow | 0.004 | 0.000 | 0–0.8 |
| house wren | 0.011 | 0.010 | 1.9–2.1 |
| Killdeer | 0.021 | 0.022 | 4.1–4.3 |
| lesser goldfinch | 0.006 | 0.013 | 1.2–2.5 |
| Lincolns sparrow | 0.006 | 0.000 | 0–1.1 |
| loggerhead shrike[1] | 0.137 | 0.113 | 21.8–26.4 |
| Mallard | 0.059 | 0.060 | 11.4–11.6 |
| mountain bluebird | 0.028 | 0.007 | 1.3–5.3 |
| mourning dove | 0.282 | 0.261 | 50.4–54.5 |
| northern flicker | 0.027 | 0.038 | 5.2–7.3 |
| northern mockingbird | 0.010 | 0.000 | 0–2.0 |
| orange-crowned warbler | 0.005 | 0.000 | 0–1.0 |
| pied-billed grebe | 0.003 | 0.000 | 0–0.5 |
| red-winged blackbird | 0.102 | 0.051 | 9.8–19.7 |
| ring-billed gull | 0.001 | 0.002 | 0.2–0.4 |
| rock pigeon | 2.198 | 2.383 | 424.5–460.2 |
| rock wren | 0.015 | 0.000 | 0–2.9 |
| sandhill crane[2, 3] | 0.001 | 0.000 | 0–0.1 |
| savannah sparrow | 0.032 | 0.064 | 6.2–12.4 |
| Says phoebe | 0.008 | 0.007 | 1.4–1.5 |
| spotted towhee | 0.004 | 0.000 | 0–0.8 |
| Swainson's thrush | 0.013 | 0.008 | 1.5–2.5 |
| Townsends warbler | 0.005 | 0.000 | 0–0.9 |
| tricolored blackbird[1] | 0.006 | 0.006 | 1.2–1.2 |
| unidentified empidonax | 0.001 | 0.000 | 0–0.2 |
| unidentified warbler | 0.002 | 0.000 | 0–0.5 |
| violet-green swallow | 0.003 | 0.000 | 0–0.6 |
| warbling vireo | 0.004 | 0.000 | 0–0.9 |
| western gull | 0.001 | 0.000 | 0–0.2 |
| western meadowlark | 1.998 | 1.753 | 338.6–385.9 |
| western scrub-jay | 0.006 | 0.000 | 0–1.2 |
| western tanager | 0.012 | 0.007 | 1.4–2.2 |
| white-throated swift | 0.006 | 0.000 | 0–1.2 |
| wild turkey | 0.002 | 0.000 | 0–0.3 |
| Wilsons warbler | 0.010 | 0.009 | 1.8–1.9 |
| **Total Non-raptors** | **7.818** | **7.592** | **1,466.1–1,509.6** |
| **Total All Birds** | **9.897** | **9.068** | **1,750.9–1,911.2** |

[1] California species of special concern
[2] Protected under the Bald and Golden Eagle Protection Act and fully protected in California
[3] Fully protected in California
[4] Listed under the California Endangered Species Act
[5] Listed under the Federal Endangered Species Act
[6] These rates are biased low (underestimated) due to the rate used to calculate them.

**Page 3.2-31, Table 3.2-5, Comparison of Adjusted Species Fatality Totals of Four Focal Species and All Birds, Based on an Average Fatality Rate (Fatalities per Megawatt per year), has been clarified with a note as follows.**

**Table 3.2-5. Comparison of Adjusted Species Fatality Totals of Four Focal Species and All Birds, Based on an Average Fatality Rate (Fatalities per Megawatt per year)**

| Species | Average fatalities per MW (2005–2010/ 2008–2010) | Projected number of fatalities under the proposed project[2] | Projected number of fatalities under baseline conditions | Difference in number of fatalities comparing baseline to proposed project | Number of fatalities of proposed project with seasonal shutdowns | Difference in number of fatalities comparing baseline to proposed project with seasonal shutdowns |
|---|---|---|---|---|---|---|
| American kestrel | 0.496/0.443 | 85.5–95.8 | 51.6–57.8 | 33.9–38.0 | 57.0–63.8 | 5.4–6.0 |
| burrowing owl | 0.721/0.425 | 82.1–139.2 | 49.5–84.0 | 32.6–55.2 | 54.7–92.8 | 5.2–8.8 |
| golden eagle | 0.085/0.061 | 11.7–16.4 | 7.1–9.9 | 4.6–6.5 | 7.8–10.9 | 0.7–1.0 |
| red-tailed hawk | 0.449/0.286 | 55.2–86.7 | 33.3–52.3 | 21.9–34.4 | 36.8–57.8 | 3.5–5.5 |
| All birds[1] | 9.897/9.068 | 1,750.9–1,911.2 | 1,056.4–1,153.0 | 694.5–758.2 | 1,167.0–1,273.74 | 110.6–120.7 |

MW = megawatt

[1] Includes focal species

[2] These rates are biased low (underestimated) due to the rate used to calculate them.

**Page 3.2-32, the following paragraph was added between the second and third paragraphs.**

Additionally, several other technologies and techniques have been considered at new wind projects in California and the U.S., including the use of active radar systems, adjustments to cut-in speeds, and biological monitoring with active control (immediate shutdowns) of the turbines. Each of these measures was considered as a potential mitigation strategy; however none appear to be feasible for the older generation turbines in use on the AWI project. The AWI turbines are old generation models and the ability to actively control cut-in speed at the individual turbine level does not exist as it does with modern turbine models that have independent controllability. Thus, adjustments to cut-in speeds are not feasible as a potential mitigation strategy. Similarly, the use of active radar systems and active biological monitoring, now being considered and/or implemented at new wind project sites, relies on the ability to detect an incoming bird and immediately stop nearby turbines that pose a risk to the bird. The old-generation turbines in use on the AWI project do not have the ability to control operations by bringing their rotation to a quick stop in response to a detected bird.

**Page 3.2-33, Mitigation Measure BIO-16 has been revised as follows.**

**Mitigation Measure BIO-16: Implement Seasonal Shutdowns to Reduce Avian Fatalities**

Established operational modifications, including seasonal shutdowns, have been implemented across the APWRA in order to reduce impacts on avian species. In order to reduce the potential

impacts of the proposed project on avian species, AWI will implement seasonal shutdowns on all turbines for the remaining operational period.

Under this seasonal shutdown measure, t~~T~~urbines will be turned off on November 1 each year and will remain off until February 15 of the following year. No operational modifications will occur during the February 16 to October 31 period. AWI will notify Alameda County each year when turbines have been shut down, and again when they have resumed operating.

**Page 3.2-33, Mitigation Measure BIO-17, the second sentence has been clarified as follows.**

The mitigation must occur within 14~~6~~0 miles of the proposed project, the area typically defined by the USFWS as the "local population~~.~~" and must occur in an area with eagles at risk from electrocutions as determined through coordination with USFWS.

**Page 3.2-36, Impact BIO-4, second paragraph, the reference to Table 3.2-3 is revised as follows.**

Although ground disturbance associated with these activities could temporarily impact the movement of resident or migratory wildlife through the study area, this impact would be limited to a small area associated with each facility (Table 3.2-3b) and would be of short duration.

**Page 3.2-36, Impact BIO-4, the following clarifications were added to the Operational Changes paragraph.**

Implementation of the proposed project would allow wind turbine operation during the existing WSSD period. As a result of existing CUPs for all wind turbine companies within the APWRA, there currently are no wind turbines operating within the APWRA during the WSSD. The operation of wind turbines during this period would adversely affect raptors, other birds, and bats migrating through and wintering in the APWRA because they could be injured or killed if they fly thorough the rotor plane of operating wind turbines. A large number of raptors, particularly red-tailed hawks, winter in the APWRA. Mitigation Measure BIO-16 (Seasonal shutdowns), and BIO-17 (golden eagle mitigation) would reduce impacts on all birds. Because this impact on the movement of resident or migratory birds would be short-term (turbine operation ending completely in 2015), ~~and~~ the proposed project would result in an overall shorter duration of turbine operation (termination in 2015 versus 2018). Accordingly, in the context of baseline conditions, this impact is considered less than significant.

## Section 3.3 Noise

**Page 3.3-9, the first sentence of the first paragraph of Mitigation Measure NOISE-1 is revised as follows.**

Within 60 days of project approval, the applicant will retain a qualified acoustic consultant to conduct a noise monitoring survey to quantify existing noise conditions at residential receptors whose presence pre-dates operation of the project turbines and which are located within 500 feet of an operating turbine.

**Page 3.3-9, the first sentence of the second paragraph of Mitigation Measure NOISE-1 is revised as follows.**

In the event that a resident at one of the measured locations reports that wind turbine noise has substantially increased, the County will review the situation to determine if additional measurements are warranted.

**Page 3.3-10, Impact NOISE-2, the following clarifying text is added to the second paragraph.**

It is estimated that one crew can dismantle and remove one wind turbine in 1 day. Using four crews for each working day (185 days per year), it is estimated that all 828 wind turbines ~~w~~could be removed within 1 year and 2 months. Reclamation activities ~~could~~, in accordance with agreements between landowners and AWI, could take up to 2 years to complete.

# Chapter 4, Alternatives Analysis

**Page 4-4, Section 4.5.2, Alternatives Analyzed, the following sentence is added to the end of the second paragraph.**

As described in Section 3.2.3.1, nameplate capacity is a measure of the amount of energy a turbine would produce if it were operating perfectly under ideal conditions, and is particular to each individual turbine make and model.

**Page 4-4, Section 4.5.2.1, No Project Alternative, the first paragraph is revised as follows.**

Under the No Project Alternative, the existing CUPs would continue to be enforced. Seasonal shutdown of all wind turbines would occur yearly between November 1 and February 15. Phased decommissioning would continue to occur. The first phase of decommissioning took place in 2009, at which time AWI was required to remove 10% of its 920 turbines. Exhibit G-2 of ~~T~~the existing CUP~~S~~s requires AWI to remove a total of 35% of the original 920 turbines by September 30, 2013, 85% of original turbines by September 30, 2015, and the remaining 15% of turbines by September 30, 2018. Under the No Project Alternative, turbines would be decommissioned according to the schedule in the CUPs, as also described in this EIR in Section 2.4.3.3 ~~of this EIR~~, *Existing Decommissioning and Reclamation Requirements*.

**Page 4-4, Section 4.5.2.1, No Project Alternative, the first sentence of the second paragraph is revised as follows.**

Under this alternative, as outlined in Exhibit G-2 of the CUPs, AWI would need to not only shut down, but remove, a precise number of turbines by the dates specified in the existing CUPs.

**Page 4-5, under Air Quality and Greenhouse Gases, the first full sentence is revised as follows.**

Decommissioning activities would result in emissions of criteria pollutant ~~emissions~~, but these emissions would be below the Bay Area Air Quality Management District's (BAAQMD's) daily thresholds.

**Page 4-19, Section 4.5.3, Environmentally Superior Alternative, is clarified as follows.**

CEQA requires an EIR to examine a range of feasible alternatives to the project. CEQA Guidelines Section 15126.6(e)(2) requires that the EIR identify which of those alternatives is the environmentally superior alternative. If, in the course of identifying the environmentally superior alternative, the No Project Alternative is found to be the environmentally superior alternative, then Section 15126.6(e)(2) of the State CEQA Guidelines requires that the EIR identify which ~~of~~among the other alternatives is the environmentally superior alternative. In the case of this proposed project and its alternatives, the No Project Alternative would be considered environmentally superior. Consequently, although the No Project Alternative is evaluated and is presented for comparison purposes, determination of the environmentally superior alternative in this chapter primarily reflects the differences in impacts ~~between~~among the remaining alternatives.

**Page 4-20, Table 4-3, an Air Quality calculation error was corrected as follows.**

**Table 4-3. Comparison of Alternatives**

| | Project | No Project | Alt 1 | Alt 2 | Alt 3 |
|---|---|---|---|---|---|
| **AQ**<br>Total Offset GHGs | 112,507 | 105,072<br>97,399 | 104,783 | 155,743 | 257,633 |
| **Biological Resources**<br>Projected number of avian fatalities | 1,750.9–1,911.2 | 1,056.4–1,153.0 | 1,167.1–1,273.77 | 1,718.4–1,875.53 | 2,820.1–3,078.04 |
| **Noise** | Moderate impacts | Least impacts | Moderate impacts | Moderate impacts | Greatest impacts |
| **Hazards and Hazardous Materials** | Less-than-significant impacts | Less-than-significant impacts | Less-than-significant impacts | Less-than-significant impacts | Less-than-significant impacts |

**Page 4-20, Section 4.5.3.1, Comparison to the Project, the final paragraph has been revised to include the following clarification.**

Alternative 1 would have less-severe impacts on both avian wildlife and noise associated with increased wind turbine operation. Although this alternative would generate approximately 60% less energy than the proposed project, the most critical issue revolves around the number of avian deaths in relation to wind turbine operation. Based on a quantitative analysis of impacts presented in this document, it can be determined that, ~~in the absence of~~ when the No Project Alternative is not included, Alternative 1 would have the fewest environmental impacts and would therefore be considered the environmentally superior alternative compared to the project and the other alternatives.

# Chapter 5, Required CEQA Analyses

**Page 5-4, Section 5.1.2.2, Altamont Pass Repowering Projects, the following paragraph has been added immediately preceding Section 5.1.2.3, Mariposa Energy Center.**

## Summit Wind Project

AWI proposes the Summit Wind Project, a 95 MW wind repowering project, to be constructed on lands in the APWRA currently occupied by existing wind facilities. The Summit Wind Project would repower the existing wind energy facility by decommissioning all existing wind turbines on the site and replacing them with up to 59 new, larger wind turbines.

**Page 5-5, Table 5-1, Related Projects in the Area, has been revised as follows.**

**Table 5-1. Related Projects in the Area**

| No. | Project /Name Type | Description/Proposed Use | Location | Status |
|---|---|---|---|---|
| 1 | Vasco Winds Repowering | Repowering Program | APWRA – Contra Costa County | Completed Summer 2012 |
| 2 | Altamont Pass Repowering | Repowering Program for the Altamont Pass Wind Resource Area (APWRA) | APWRA – Alameda County | Pending |
| | Golden Hills Project (NextEra Energy Resources) (part of Altamont Pass Repowering) | Repowering Program | APWRA | Pending |
| | Patterson Pass Project (EDF Renewable Energy, formerly enXco) (part of Altamont Pass Repowering) | Repowering Program | APWRA | Pending |
| | FloDesign Wind Turbines Research Project | Repowering with special technology | APWRA | Research Project Pending |
| | Summit Wind Project (Altamont Winds, Inc.) | Repowering Program | APWRA | Pending |
| 3 | Mariposa Energy Center | Natural Gas Peaker Plant | Mountain House Area | Under Construction |
| 4 | Cool Earth Solar Energy Facility | Utility-Scale Solar Energy Farm | Mountain House Area | Approved |

**Page 5-5, the following section title and numbering clarifications have been made.**

# Cumulative Analysis

## ~~5.1.2.5~~ 5.1.3.1 Air Quality

**Page 5-5, the final sentence of the Air Quality paragraph has been clarified as follows.**

Because decommissioning activities and other cumulative project effects would not exceed the BAAQMD thresholds, neither the proposed project nor~~and~~ its alternatives would ~~not~~ result in a cumulatively considerable net increase of any criteria pollutant.

**Page 5-5, Section 5.1.2.6, Biological Resources, has been renumbered as follows.**

## ~~5.1.2.6~~ 5.1.3.2 Biological Resources

**Page 5-6, the final sentence of the final paragraph has been clarified as follows.**

On this basis, ongoing impacts on avian species from the proposed project ~~and~~or its alternatives, when taken into context with past, present, and reasonably foreseeable future projects, are considered cumulatively significant and unavoidable impacts.

**Page 5-7, Section 5.1.2.7, Noise, has been renumbered as follows.**

## ~~5.1.2.7~~ 5.1.3.3 Noise

**Page 5-7, under Noise, the second paragraph has been clarified as follows.**

Under the proposed project ~~and project alternatives,~~ AWI turbines would operate on days when requirements of the current CUPs would otherwise prohibit operation of AWI turbines and turbines from other operators; project alternatives would continue to follow the winter seasonal shutdown schedule. Turbine noise would therefore occur on days that would not have turbine noise under the current CUP.

**Page 5-7, under Noise, the final sentence of the third paragraph has been clarified as follows.**

Although the project ~~and project alternatives~~ would result in turbine noise occurring on days when it would otherwise not occur under the existing CUPs, that noise is expected to be in compliance with the noise standards in Section 22 of the CUPs and therefore would not make a cumulatively considerable contribution to cumulative turbine noise impacts.

**Page 5-7, under Noise, the final two sentences of the final paragraph have been clarified as follows.**

Because these activities would be highly localized and distant from other sources of heavy equipment noise, and because there are no adverse cumulative noise impacts in the project area, noise from decommissioning, under either the proposed project or its alternatives, would not make a cumulatively considerable contribution to adverse cumulative equipment noise impacts. ~~Noise generated by the proposed project and project alternatives is not expected to be cumulative considerable.~~

**Page 5-7, Section 5.1.2.8, Hazards and Hazardous Materials, has been renumbered as follows.**

## ~~5.1.2.8~~ 5.1.3.4 Hazards and Hazardous Materials

**Page 5-8, the final sentence of the first paragraph has been clarified as follows.**

Consequently, the risk of loss, injury, or death involving wildland fires as a result of ~~construction of~~ decommissioning activities associated with the proposed project ~~construction~~or its alternatives, in concert with other foreseeable projects, would not be cumulatively considerable.

# Appendix C
# 2016 Estimated Annual Emission Rates

EMFAC 2011
2016 Estimated Annual Emission Rates
EMFAC 2011 Vehicle Categories
Alameda COUNTY
San Francisco Bay Area AIR BASIN
Bay Area AQMD

| Area | CalYr | Season | Veh | Fuel | MdlYr | Speed (Miles/hr) | Pop (Vehicles) | VMT (Miles/day) | Trips (Trips/day) | ROG_RUNEX (gms/mile) | CO_RUNEX (gms/mile) | NOX_RUNEX (gms/mile) | CO2_RUNEX (gms/mile) | PM10_RUNEX (gms/mile) | PM2_5_RUNEX (gms/mile) | SOX_RUNEX (gms/mile) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alameda (SF) | 2016 | Annual | LDT1 | GAS | AllMYr | 25 | 0 | 146217 | 0 | 0.115050185 | 3.55084271 | 0.33167869 | 473.8767595 | 0.005966967 | 0.005487 | 0 |
| Alameda (SF) | 2016 | Annual | LDT1 | DSL | AllMYr | 25 | 0 | 202.651 | 0 | 0.091521088 | 0.414487338 | 0.567171044 | 325.3322209 | 0.076557269 | 0.070433 | 0 |
| Alameda (SF) | 2016 | Annual | LDT2 | GAS | AllMYr | 25 | 0 | 398251 | 0 | 0.054000675 | 1.965356832 | 0.219884309 | 560.339316 | 0.002695465 | 0.002477 | 0 |
| Alameda (SF) | 2016 | Annual | LDT2 | DSL | AllMYr | 25 | 0 | 196.71 | 0 | 0.061164994 | 0.32458125 | 0.550602396 | 319.1430616 | 0.048859366 | 0.044951 | 0 |
| Alameda (SF) | 2016 | Annual | T7 tractor | DSL | AllMYr | 25 | 0 | 22831.6 | 0 | 0.319503083 | 1.157483329 | 8.654605863 | 2006.154848 | 0.084132133 | 0.077402 | 0 |

| Vehicle Type | Fuel Type | VMT | VMT % |
|---|---|---|---|
| LDT1 | Gas | 146216.592 | 99.86% |
| LDT1 | Diesel | 202.650731 | 0.14% |
| LDT2 | Gas | 398251.184 | 99.95% |
| LDT2 | Diesel | 196.709683 | 0.05% |

Weighted Emission Factors (Using VMT %)

| | ROG_RUNEX | CO_RUNEX | NOX_RUNEX | SOX_RUNEX | PM10_RUNEX | PM2_5_RUNEX | CO2_RUNEX |
|---|---|---|---|---|---|---|---|
| T7 Tractor | 0.319503083 | 1.15748333 | 8.6546059 | 0 | 0.08413 | 0.07740156 | 2006.154848 |
| LDT1 | 0.115050185 | 3.55084271 | 0.3316787 | 0 | 0.00597 | 0.00548716 | 473.8767595 |
| LDT2 | 0.054004212 | 1.9645468 | 0.2200476 | 0 | 0.00272 | 0.00249837 | 560.2202399 |
| Average LDT1 and LDT2 | 0.084527198 | 2.75769475 | 0.2758631 | 0 | 0.00434 | 0.00399277 | 517.0484997 |

# EXHAUST EMISSION FACTORS

OFFROAD Equipment Emission Factors, from Table 3.4 of Caleemod Appendix D

http://www.aqmd.gov/caleemod/guide.htm

| Equipment Type | Year | HP Bin | | Grams per Hp-Hour | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Low HP | High HP | TOG | ROG | CO | NOX | SO2 | PM10 | PM2.5 | CO2 | CH4 |
| Cranes | 2016 | 176 | 250 | 5.608 | 0.443 | 1.334 | 3.818 | 0.006 | 0.131 | 0.131 | 568.3 | 0.04 |
| Excavators | 2016 | 121 | 175 | 9.01 | 0.492 | 3.366 | 3.323 | 0.006 | 0.179 | 0.179 | 568.3 | 0.044 |
| Generator Sets | 2016 | 26 | 50 | 9.132 | 1.146 | 4.41 | 4.685 | 0.007 | 0.318 | 0.318 | 568.3 | 0.103 |
| Rough Terrain Forklifts | 2016 | 51 | 120 | 3.133 | 0.663 | 3.85 | 4.315 | 0.006 | 0.335 | 0.335 | 568.299 | 0.059 |

ONROAD Vehicle Emission Factors, from EMFAC 2011 Webtool

http://www.arb.ca.gov/jpub/webapp//EMFAC2011WebApp/rateSelectionPage_1.jsp

Assumptions:

Year 2016
Alameda County (SF)
Annual Average emission rates
All Speeds, all Fuels, and Combined Model Years
Pickup Truck Emission Rates calculated based on an average of the weighted average (by fuel) for light-duty trucks 1 and 2
Flat bed truck emission rates based on T7 Tractor Trailor

| Truck Type | EMFAC type | speed | Grams per Mile | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | ROG | CO | NOX | SO2 | PM10 | PM2.5 | CO2 w/o Pavley and LCFS | CO2 w/ Pavley and LCFS |
| Pickup Trucks | LDT1/LDT2 avg | 25 | 0.084527 | 2.757695 | 0.275863 | 0 | 0.004343 | 0.003993 | 517.0484997 | 446.4783267 |
| Flat Beds | T7 Tractor | 25 | 0.319503 | 1.157483 | 8.654606 | 0 | 0.084132 | 0.077402 | 2006.154848 | 1935.939428 |

**EMISSIONS PER CREW**

UNMITIGATED

| | | | | | | | Emission Factor (grams per hp-hr) | | | | | | | | UNMITIGATED Pounds Per Day | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Equipment | Number per Day | Average Hrs/Day (Each) | HP Rating | Load Factor | Daily Hp-Hrs | ROG | CO | NOX | SO2 | PM10 exhaust | PM2.5 exhaust | CO2 | Other CO2e | ROG | CO | NOX | SO2 | PM10 exhaust | PM2.5 exhaust | CO2 | Other CO2e | CO2e |
| OFFROAD EQUIPMENT | Crane | 1 | 3 | 208 | 0.29 | 180.96 | 0.44 | 1.33 | 3.82 | 0.01 | 0.13 | 0.13 | 568.30 | 0.04 | 0.18 | 0.53 | 1.52 | 0.00 | 0.05 | 0.05 | 226.72 | 0.02 | 226.74 |
| | Forklift | 1 | 5 | 149 | 0.40 | 298 | 0.66 | 3.85 | 4.32 | 0.01 | 0.34 | 0.34 | 568.30 | 0.06 | 0.44 | 2.53 | 2.83 | 0.00 | 0.22 | 0.22 | 373.36 | 0.04 | 373.40 |
| | Generator | 0 | 0 | 84 | 0.43 | 0 | 1.15 | 4.41 | 4.69 | 0.01 | 0.32 | 0.32 | 568.30 | 0.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | Excavator | 1 | 6 | 101 | 0.38 | 230.28 | 0.49 | 3.37 | 3.32 | 0.01 | 0.18 | 0.18 | 568.30 | 0.04 | 0.25 | 1.71 | 1.69 | 0.00 | 0.09 | 0.09 | 288.51 | 0.02 | 288.54 |
| | | | | | | | | | | | | | | TOTAL OFFROAD | 0.86 | 4.77 | 6.05 | 0.01 | 0.36 | 0.36 | 888.60 | 0.08 | 888.67 |

| | | | | | | | Emission Factor (grams per VMT) | | | | | | | | UNMITIGATED Pounds Per Day | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Equipment | Number per Day | Average Hrs/Day (Each) | Travel Speed (mph) | daily VMT per truck | Total VMT | ROG | CO | NOX | SO2 | PM10 exhaust | PM2.5 exhaust | CO2 | Other CO2e | ROG | CO | NOX | SO2 | PM10 exhaust | PM2.5 exhaust | CO2 | Other CO2e | CO2e |
| ONROAD VEHICLES | Flatbed Truck (T7) | 1 | 2 | 25 | 30 | 30 | 0.08 | 2.76 | 0.28 | 0.00 | 0.004 | 0.004 | 517.05 | 27.21 | 0.01 | 0.18 | 0.02 | 0.00 | 0.00 | 0.00 | 34.20 | 1.80 | 36.00 |
| | Pickup truck (LDT1/LDT2 avg) | 3 | 1 | 25 | 30 | 90 | 0.32 | 1.16 | 8.65 | 0.00 | 0.08 | 0.08 | 2006.15 | 105.59 | 0.06 | 0.23 | 1.72 | 0.00 | 0.02 | 0.02 | 398.05 | 20.95 | 419.00 |
| | | | | | | | | | | | | | | TOTAL ONROAD | 0.07 | 0.41 | 1.74 | 0.00 | 0.02 | 0.02 | 432.25 | 22.75 | 455.00 |
| | | | | | | | | | | | | | | EMISSIONS PER CREW - UNMITIGATED | 0.93 | 5.18 | 7.78 | 0.01 | 0.38 | 0.38 | 1320.85 | 22.83 | 1343.67 |
| | | | | | | | | | | | | | | BAAQMD CONSTRUCTION-RELATED THRESHOLDS | 54 | -- | 54 | -- | 82 | 82 | -- | -- | -- |

| Electricity Produced | kWh | | | | | | |
|---|---|---|---|---|---|---|---|
| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | Total (2013-2018) |
| No Project Alternative | 7,242,096 | 127,533,235 | 95,986,658 | 34,127,280 | 34,117,171 | 34,117,171 | 333,123,612 |
| Proposed Project | 16,098,826 | 184,347,821 | 184,347,821 | - | - | - | 384,794,467 |
| Alternative 1 | 9,894,456 | 174,241,267 | 174,241,267 | - | - | - | 358,376,990 |
| Alternative 2 | 9,894,456 | 174,241,267 | 174,241,267 | 174,292,894 | - | - | 532,669,885 |
| Alternative 3 | 9,894,456 | 174,241,267 | 174,241,267 | 174,292,894 | 174,241,267 | 174,241,267 | 881,152,419 |

| Offset GHGs | MT CO2 | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | Total (2013-2018) | Offset GHG Emissions Relative to No Project |
| No Project Alternative | 2,117 | 37,288 | 28,065 | 9,978 | 9,975 | 9,975 | 97,399 | - |
| Proposed Project | 4,707 | 53,900 | 53,900 | - | - | - | 112,507 | 15,108 |
| Alternative 1 | 2,893 | 50,945 | 50,945 | - | - | - | 104,783 | 7,384 |
| Alternative 2 | 2,893 | 50,945 | 50,945 | 50,960 | - | - | 155,743 | 58,344 |
| Alternative 3 | 2,893 | 50,945 | 50,945 | 50,960 | 50,945 | 50,945 | 257,633 | 160,234 |

**Emission Factors and Constants**

| | | | | | |
|---|---|---|---|---|---|
| 641.35 | lbs CO2/MWh | 0.036 | lbs CH4/MWH | 0.008 | lbs N2O/MWh |
| 2204.6 | lbs/MT | | | | |
| 1000 | kWh per MWh | | | | |
| 21 | GWP CH4 | | | | |
| 310 | GWP N2O | | | | |

# Chapter 5
# **References**

Smallwood, K. S., and C. G. Thelander. 2004. *Developing Methods to Reduce Bird Fatalities in the Altamont Wind Resource Area*. Final Report by BioResource Consultants to the California Energy Commission, Public Interest Energy Research—Environmental Area. Contract No. 500-01-019 (L. Spiegel, Project Manager).

U.S. Fish and Wildlife Service. 2009. *Final Environmental Assessment, Proposal to Permit Take Provided Under the Bald and Golden Eagle Protection Act*. Draft Under Review. Division of Migratory Bird Management. April.

Appendix A

# Final Mitigation, Monitoring & Reporting Program

# Final Mitigation, Monitoring & Reporting Program

## Introduction

Section 21081.6 of the California Environmental Quality Act (CEQA) and Section 15097 of the State CEQA Guidelines require a lead agency that adopts an environmental impact report (EIR) to establish a program to monitor and report on the adopted mitigation measures in order to ensure that approved mitigation measures are implemented subsequent to project approval. Specifically, the lead agency must adopt a reporting or monitoring program for mitigation measures incorporated into a project or imposed as conditions of approval. The program must be designed to ensure compliance during project implementation. As stated in Public Resources Code Section 21081.6(a)(1):

> The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes which have been required or incorporated into the project at the request of a responsible agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the lead agency or a responsible agency, prepare and submit a proposed reporting or monitoring program.

This mitigation monitoring and reporting program (MMRP) is designed to meet that requirement. As lead agency for this project, Alameda County will use this MMRP to ensure compliance with mitigation measures associated with implementation of the proposed conditional use permit modifications. Under each identified resource, the MMRP provides the adverse impact(s), its corresponding mitigation measure(s), and the implementation and monitoring requirements, defined as follows.

- **Impact:** Identifies the impact number and statement as shown in the final EIR.
- **Proposed Mitigation Measure(s):** Provides full text of the mitigation measure as shown in the final EIR.
- **Timing:** Defines the phase of the project when a specific mitigation action will be taken.
- **Implementing Party(s):** Designates the party or parties responsible for implementing the mitigation measure.
- **Monitoring:** Identifies the party responsible for review of the mitigation measure's implementation, and the action and criteria necessary for ensuring implementation.

Mitigation is required to address significant or potentially significant impact(s) on the following resources.

- Biological Resources
- Noise

A sample mitigation monitoring compliance form is provided at the end of this document. For detailed information regarding environmental resource impact methodology and analysis, please see the draft EIR and final EIR.

**Table A-1. Final Mitigation, Monitoring & Reporting Program**

| Impact | Proposed Mitigation Measure(s) | Timing | Implementing Party | Monitoring |
|---|---|---|---|---|
| **Biological Resources** | | | | |
| **Impact BIO-1**: Potential to cause a substantial adverse effect, either directly or through habitat modifications, on a special-status species. | **Mitigation Measure BIO-1**: Implement General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources<br>The following EACCS general AMMs will be implemented prior to, during, and following decommissioning and reclamation activities to ensure that sensitive biological resources (i.e., special-status species, waters of the United States, waters of the state, and sensitive natural communities) are not adversely affected by project implementation.<br>Employees and contractors performing decommissioning and reclamation activities will receive environmental sensitivity training. Training will include review of environmental laws and AMMs that must be followed by all personnel to reduce or avoid effects on special-status species during construction activities.<br>Environmental tailboard trainings will take place on an as-needed basis in the field. These trainings will include a brief review of the biology of the covered species and guidelines that must be followed by all personnel to reduce or avoid negative effects on these species during decommissioning and reclamation activities. Directors, managers, superintendents, and the crew leaders will be responsible for ensuring that crewmembers comply with the guidelines.<br>Contracts with contractors, construction management firms, and subcontractors will obligate them to comply with these requirements and AMMs.<br>The following will not be allowed at or near work sites for project activities: trash dumping, firearms, open fires (such as barbecues) not required by the activity, hunting, and pets (except for safety in remote locations).<br>Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.<br>Offroad vehicle travel will be avoided.<br>Vehicles will not exceed a speed limit of 15 mph on unpaved roads within natural land cover types, or during offroad travel.<br>Vehicles or equipment will not be refueled within 100 feet of a wetland, stream, or other waterway unless a bermed and lined refueling area (i.e., a created berm made of sandbags or other removable material) is constructed.<br>Vehicles will be washed only at approved areas. No washing of vehicles will occur at job sites.<br>To discourage the introduction and establishment of invasive plant species, seed mixtures and straw used within natural vegetation will be either rice straw or weed-free straw.<br>Pipes, culverts, and similar materials greater than 4 inches in diameter will be stored so as to prevent wildlife species from using these as temporary refuges, and these materials will be inspected each morning for the presence of animals prior to being moved.<br>Erosion control measures will be implemented to reduce sedimentation in nearby aquatic habitat when activities are the source of potential erosion. Plastic monofilament netting (erosion control matting) or similar material containing netting will not be used at the project. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.<br>Material will be stockpiled only in areas that do not support special-status species or sensitive habitats.<br>Grading will be restricted to the minimum area necessary around each turbine to accomplish the restoration goals.<br>Within 48 hours prior to ground-disturbing activities in sensitive habitats, decommissioning and reclamation activity boundaries and access areas will be flagged and temporarily fenced during those activities to reduce the potential for vehicles and equipment to stray into adjacent habitats. | Flagging of activity boundaries and access areas within 48 hours prior to ground-disturbing activities in sensitive habitats; daily search of trenches left open overnight during decommissioning and reclamation activities; following decommissioning and reclamation activities | Project Applicant/Contractor | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Check where vehicles are parked to ensure there is no additional disturbance<br>• Check that wetlands/culverts are bermed<br>• Check to ensure that straw used is either rice or weed-free<br>• Check that materials are not stockpiled in areas where animals will find use<br>• Review and assess erosion control measures are being implemented<br>• Check to ensure that grading is kept to a minimum<br>**Monitoring Action**<br>Review measures during plan check and verify periodically during and after decommissioning/reclamation activities |

**Table A-1. Continued**

| Impact | Proposed Mitigation Measure(s) | Timing | Implementing Party | Monitoring |
|---|---|---|---|---|
| | Trenches and pits will be backfilled as soon as possible. Trenches that are left open overnight will be searched each day prior to decommissioning and reclamation activities to ensure no covered species are trapped. Earthen escape ramps will be installed at intervals prescribed by a qualified biologist. Work will not continue until trapped animals have moved out of open trenches.<br>These measures will be incorporated into contract specifications and implemented by the program contractor. In addition, AWI will ensure that the contractor incorporates all permit conditions into construction specifications. | | | |
| | **Mitigation Measure BIO-2**: Restore Disturbed Annual Grasslands<br>Within 30 days prior to any ground disturbance, a qualified biologist will prepare a Grassland Restoration Plan in coordination with CDFW (Danielle Roach or Craig Weightman at 916-944-5500) and subject to CDFW approval, to ensure that temporarily disturbed annual grasslands and areas planned for the removal of permanent roads and turbine pad areas are restored to pre-project conditions. The Grassland Restoration Plan will include but not be limited to the following measures.<br>• Gravel shall be removed from areas proposed for grassland restoration.<br>• To the maximum extent feasible, topsoil shall be salvaged from within onsite work areas prior to construction. Imported fill soils shall be limited to weed-free topsoil similar in texture, chemical composition, and pH to soils found at the reference site.<br>• Where appropriate, restoration areas will be seeded (hydroseeding is acceptable) to ensure erosion control. Seed mixes shall be tailored to closely match that of reference site(s) within the study area and should include native or naturalized, non-invasive species sourced within the project or within 50 miles of the project area.<br>• Reclaimed roads shall be restored in such a way as to permanently prevent vehicular travel.<br>The plan will include a requirement to monitor restoration areas annually (between March and May) in years 1–3 following the year of restoration. At the end of 3 years, the restoration will be considered successful if the percent cover for restored areas is 70% absolute cover of the planted/seeded species compared to the percent absolute cover of nearby reference sites. No more than 5% relative cover of the vegetation in the restoration areas shall consist of species designated as invasive plants in Cal-IPC's California Invasive Plant Inventory Database (http://www.cal-ipc.org). Remedial measures included in the plan will include supplemental seeding, weed control, etc. as determined necessary to achieve the long term success criteria. Monitoring may be extended for 2 additional years if necessary to achieve the success criteria. Other performance standards may also be required as they relate to special-status species habitat; these will be identified in coordination with CDFW and included in the plan. AWI will provide evidence that CDFW has reviewed and approved of the Grassland Restoration Plan. Additionally, AWI will provide annual monitoring reports to the County by August 1 of each year, summarizing the monitoring results and any remedial measures implemented (if any are necessary). | Preparation of Grassland Restoration Plan within 30 days prior to ground disturbance; after ground-disturbing activities for Restoration Plan implementation; annual monitoring between March and May for at least 3 years and up to 5 years after restoration | Project Applicant/Qualified Biologist | **Reviewing Party**<br>CDFW, County of Alameda<br>**Criteria**<br>• Check to ensure that disturbed grasslands have been restored within 3 years<br>• Confirm provision of annual monitoring report from AWI by August 1 of each year<br>**Monitoring Action**<br>Review measures prior to decommissioning and restoration activities and verify after restoration |
| | **Mitigation Measure BIO-3**: Conduct Preconstruction Surveys for Potentially Sensitive Habitat<br>Within no more than 3 years and no less than 1 year prior to ground-disturbing decommissioning activities and during the appropriate identification periods for special-status plants and wildlife listed in Tables 3.2-1 and 3.2-2, a qualified biologist (as determined by Alameda County) will conduct field surveys within decommissioning work areas and the immediately adjacent areas to determine the presence of habitat for special-status plant and wildlife species. AWI will submit a report documenting the survey results to Alameda County for review and approval, no less than 1 year prior to conducting any decommissioning activities. The report will include the location and description of all proposed work areas (such as whether or not landowners have chosen to retain roads on their lands), the location and description of all suitable habitat for special-status plant and wildlife species, | Within 3 years but no less than 1 year prior to ground-disturbing decommissioning and reclamation activities | Project Applicant/Qualified Biologist | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Ensure that report documenting identification efforts is submitted<br>**Monitoring Action**<br>Review measure and report prior to ground-disturbing decommissioning and reclamation activities |

**Table A-1. Continued**

| Impact | Proposed Mitigation Measure(s) | Timing | Implementing Party | Monitoring |
|---|---|---|---|---|
| | and the location and description of other sensitive habitats (e.g., vernal pools or wetlands). Additionally, the report will outline where additional species and/or habitat-specific mitigation measures (as required under Mitigation Measures BIO-4 through BIO-15) are required. This report will provide the basis for any applicable permit applications where incidental take may occur. | | | |
| | **Mitigation Measure BIO-4**: Install Temporary Flagging or Barrier Fencing to Protect Sensitive Biological Resources Adjacent to the Work Area<br>If required pursuant to Mitigation Measure BIO-3, a qualified biologist (as determined by Alameda County) will identify and flag or fence sensitive biological habitat onsite to ensure it is avoided during decommissioning and reclamation activities. Sensitive resources that occur in and adjacent to the decommissioning and reclamation area may include sensitive natural communities, aquatic resources (which also provide suitable habitat for federally listed invertebrates and amphibians), special-status species populations, burrows that could be used by special-status wildlife, special-status plants, and active bird or raptor nests | Prior to and during decommissioning and reclamation activities if required pursuant to MM BIO-3 | Project Applicant/Qualified Biologist/Contractor | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Check to ensure flagging is intact and sensitive areas are avoided<br>**Monitoring Action**<br>Review measures during plan check |
| | **Mitigation Measure BIO-5**: Retain a Biological Monitor during Ground Disturbing Activities within Environmentally-Sensitive Habitat Areas<br>If required pursuant to Mitigation Measure BIO-3, AWI will retain a qualified biologist (as determined by Alameda County) to conduct periodic monitoring of decommissioning and reclamation activities that occur adjacent to sensitive biological resources (e.g., special-status species, sensitive vegetation communities, wetlands). The biologist will assist the crew, as needed, to comply with all project implementation restrictions and guidelines. In addition, the biologist will be responsible for ensuring that AWI or its contractors maintain exclusion areas adjacent to sensitive biological resources, and for documenting compliance with all biological resources-related mitigation measures. | During ground-disturbing activities if required pursuant to MM BIO-3 | Project Applicant/Qualified Biologist | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Assess feasibility of avoidance measures<br>• Check that a qualified biologist instructs construction personnel on sensitivity of area<br>• Check that ground-disturbing activities are compliant with sensitive-species regulations<br>**Monitoring Action**<br>Review measures during plan check and verify periodically during and after ground-disturbing activities |
| | **Mitigation Measure BIO-6**: Retain Qualified Botanists to Conduct Floristic Surveys for Special-Status Plants during Appropriate Identification Periods<br>If required pursuant to Mitigation Measure BIO-3, and within 3 years prior to ground disturbance associated with decommissioning activities (consistent with the EACCS), qualified botanists (i.e., botanists with prior experience conducting floristic surveys and approved by Alameda County) will survey areas proposed for ground disturbance and an additional 100 feet surrounding the areas proposed for ground disturbance, to document the presence of special-status plants. In the event that reclamation of one or more foundation sites does not include removal of tower foundations or other ground-disturbing activities, no floristic surveys will be necessary for those individual sites. The botanists will conduct floristic surveys that follow the CDFW botanical survey guidelines (California Department of Fish and Game 2009). All plant species observed will be identified to the level necessary to determine whether they qualify as special-status plants or are plant species with unusual or significant range extensions. The field surveys are to be conducted when special-status plants that could occur in the area are evident and identifiable, generally during the blooming period. To account for different special-status plant identification periods, one or more series of field surveys will be required in spring and summer preceding decommissioning activities. | Within 3 years prior to and during ground-disturbing decommissioning and reclamation activities if required pursuant to MM BIO-3 | Project Applicant/Qualified Biologist | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Assess feasibility of avoidance measures<br>• Check that a qualified biologist instructs construction personnel on sensitivity of area<br>• Check that ground-disturbing activities are compliant with sensitive-species regulations<br>**Monitoring Action**<br>Review measures during plan check and verify periodically during and after ground-disturbing activities |

**Table A-1. Continued**

| Impact | Proposed Mitigation Measure(s) | Timing | Implementing Party | Monitoring |
|---|---|---|---|---|
| | If any special-status plants are identified during the surveys, the botanist will photograph and map locations of the plants, document the location and extent of the special-status plant population on a CNDDB Survey Form, and submit the completed survey form to the CNDDB. Mitigation Measures BIO-1 (general protection measures), BIO-2 (restoration of annual grassland), BIO-4 (exclusion zones), BIO-5 (biological monitoring), and BIO-7 (avoid special-status plants) will be implemented as necessary to avoid and minimize impacts on special-status plants. | | | Confirm completion/submittal of CNDDB Survey Form if any special-status plants are identified during the surveys |
| | **Mitigation Measure BIO-7**: Avoid and Minimize Potential Impacts on Special-Status Plants<br>If necessary pursuant to the results of surveys conducted under Mitigation Measure BIO-6, AWI will modify the work area to the extent feasible to avoid indirect or direct impacts on special-status plants. If complete avoidance of special-status plants is not feasible, disturbance within the work area will be limited to the minimum area necessary to perform required activities and a qualified biologist will monitor decommissioning and reclamation activities to ensure that the contractor is implementing general protection measures (Mitigation Measure BIO-1), restoration of annual grassland (Mitigation Measure BIO-2), and maintaining exclusion zones (Mitigation Measure BIO-4) to minimize impacts on the species. | During decommissioning activities if necessary pursuant to results of MM BIO-6 surveys | Project Applicant/Qualified Biologist/Contractor | **Reviewing Party**<br>County of Alameda<br>**Monitoring Action**<br>Verify prior to issuing grading or building permits; periodically check during decommissioning/reclamation activities |
| | **Mitigation Measure BIO-8**: Avoid Disturbance of Vernal Pool Fairy Shrimp and Longhorn Fairy Shrimp<br>If required pursuant to Mitigation Measure BIO-3, and where suitable habitat for vernal pool fairy shrimp and/or longhorn fairy shrimp is identified near proposed work areas, the following AMMs will be implemented to ensure that the proposed project does not have an adverse impact on vernal pool fairy shrimp and longhorn fairy shrimp. These measures are consistent with the EACCS and are in addition to any conservation measures or conditions of approval identified in applicable project permits (i.e., incidental take permits under CESA and/or ESA).<br>• Ground disturbance will be avoided from the first day of the first significant rain (1 inch or greater) until June 1, or until pools remain dry for 72 hours and no significant rain is forecast on the day of such ground disturbance.<br>• If vernal pools, clay flats, alkaline pools, ephemeral stock tanks, sandstone pools, or roadside ditches are present within the work area or within 250 feet of the work area, a qualified biologist will stake and flag an exclusion zone prior to decommissioning and reclamation activities. The exclusion zone will be fenced with orange construction and erosion control fencing.<br>• The exclusion zone will encompass the maximum practicable distance from the worksite and at least 250 feet from the aquatic feature wet or dry.<br>• No herbicide will be applied within 100 feet of exclusion zones, except when applied to cut stumps or frilled stems or injected into stems. No broadcast applications will be applied.<br>• Avoid modifying or changing the hydrology of the habitat. | Prior to and during decommissioning and reclamation activities if necessary pursuant to MM BIO-3 | Project Applicant/Contractor | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Based on results of MM BIO-3 surveys, confirm if MM BIO-8 implementation necessary<br>• Check that ground-disturbing activities are compliant with vernal pool and sensitive-species regulations<br>**Monitoring Action**<br>Verify prior to issuing grading or building permits; periodically check during decommissioning/reclamation activities |
| | **Mitigation Measure BIO-9**: Avoid Disturbance of California Tiger Salamander, California Red-legged Frog, and Foothill Yellow-legged Frog.<br>If required pursuant to Mitigation Measure BIO-3, and where suitable upland or aquatic habitat for California tiger salamander, California red-legged frog, and/or foothill yellow-legged frog is identified within proposed work areas, the following AMMs will be implemented to ensure that the proposed project does not have an adverse impact on California tiger salamander, California red-legged frog, and/or foothill yellow-legged frog. Based on the extent of known occurrences for these species throughout the APWRA and presence of upland annual grassland habitat throughout the study area that is used by dispersing California red-legged frogs and by California tiger salamanders as | Immediately prior to and during ground-disturbing activities if necessary pursuant to MM BIO-3 | Project Applicant/Qualified Biologist | **Reviewing Party**<br>USFWS/CDFW/County of Alameda<br>**Criteria**<br>• Based on results of MM BIO-3 surveys, confirm if MM BIO-9 implementation necessary<br>• Assess feasibility of avoidance measures |

**Table A-1. Continued**

| Impact | Proposed Mitigation Measure(s) | Timing | Implementing Party | Monitoring |
|---|---|---|---|---|
| | underground refugia during most of their life span, it is assumed that the majority of decommissioning activities will occur in suitable habitat for these species.<br>The following measures are consistent with the EACCS and are in addition to any conservation measures or conditions of approval identified in applicable project permits (i.e., incidental take permits under CESA an d/or ESA).<br>• A qualified biologist will conduct preconstruction surveys immediately prior to ground-disturbing activities (including equipment staging, vegetation removal, grading) associated with decommissioning. The biologist will survey the work area and all suitable habitat within 300 feet of the work area. If individuals (including adults, juveniles, larvae, or eggs) are found, work will not begin until USFWS and/or CDFW is contacted to determine if moving these life-stages is appropriate. If relocation is deemed necessary, a USFWS and/or CDFW-approved relocation site will be identified and a relocation plan developed.<br>• Where applicable, barrier fencing will be installed around the worksite to prevent amphibians from entering the work area. Barrier fencing will be removed within 72 hours of completion of work.<br>• No monofilament plastic will be used for erosion control.<br>• Ground-disturbing activities shall be limited to dry weather between April 15 and October 31. No ground-disturbing work shall occur during wet weather. Wet weather is defined as when there has been 0.25 inch of rain in a 24-hour period. Ground disturbing activities halted due to wet weather may resume when precipitation ceases and the National Weather Service 72-hour weather forecast indicates a 30% or less chance of precipitation. No ground-disturbing work shall occur during a dry-out period of 48 hours after the above referenced wet weather.<br>• All project activity shall terminate 30 minutes before sunset and shall not resume until 30 minutes after sunrise during the migration/active season from November 1 to June 15. Sunrise and sunset times are established by the U.S. Naval Observatory Astronomical Applications Department for the geographic area where the project is located.<br>• To prevent inadvertent entrapment of special-status amphibians during construction, all excavated, steep-walled holes or trenches more than 6 inches deep will be provided with one or more escape ramps constructed of earth fill or wooden planks and will be inspected by a qualified biologist prior to being filled.<br>• Work crews or onsite biological monitor will inspect open trenches, pits, and under construction equipment and material left onsite in the morning and evening to look for amphibians that may have become trapped or are seeking refuge.<br>• A qualified biologist possessing a valid ESA Section 10(a)(1)(A) permit or who is USFWS-approved under an active biological opinion, will be contracted to trap and to move California tiger salamanders or California red-legged frogs to nearby suitable habitat if individuals of these species are found onsite (including animals trapped in a trench) and cannot or do not move offsite on their own. | | | • Check that a qualified biologist instructs construction personnel on sensitivity of area<br>• Check that ground-disturbing activities are compliant with sensitive-species regulations<br>**Monitoring Action**<br>Review measures during plan check and verify periodically during and after ground-disturbing activities |
| | **Mitigation Measure BIO-10**: Avoid Disturbance of Alameda Whipsnake<br>If required pursuant to Mitigation Measure BIO-3, and in areas determined by the preconstruction surveys as likely to contain suitable habitat for Alameda whipsnake near proposed work areas, the following AMMs will be implemented to ensure that the proposed project does not have an adverse impact on Alameda whipsnake. These measures are consistent with the EACCS and are in addition to any conservation measures or conditions of approval identified in applicable project permits (i.e., incidental take permits under CESA and/or ESA). | Immediately prior to and during ground-disturbing activities if necessary pursuant to MM BIO-3 | Project Applicant/Qualified Biologist/Contractor | **Reviewing Party**<br>USFWS/CDFW/County of Alameda<br>**Criteria**<br>• Based on results of MM BIO-3 surveys, confirm if MM BIO-10 implementation necessary<br>• Assess feasibility of avoidance measures |

**Table A-1. Continued**

| Impact | Proposed Mitigation Measure(s) | Timing | Implementing Party | Monitoring |
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| | • A qualified biologist will conduct preconstruction surveys immediately prior to ground-disturbing activities (including equipment staging, vegetation removal, grading) associated with decommissioning and reclamation. If individuals are found, work will not begin until they are moved out of the decommissioning and reclamation activities zone to a USFWS/CDFW-approved relocation site.<br>• No monofilament plastic will be used for erosion control.<br>• Where applicable, barrier fencing will be used to exclude snakes from the work area. Barrier fencing will be removed within 72 hours of completion of work.<br>• Work crews or on-site biological monitor will inspect open trenches, pits, and under construction equipment and material left onsite in the morning and evening to look for reptiles that may have become trapped or are seeking refuge.<br>• Ground disturbance in suitable habitat will be minimized.<br>• Vegetation within the proposed work area shall be removed prior to grading. Prior to clearing and grubbing operations, a qualified biologist shall clearly mark vegetation within the work area that shall be avoided. Vegetation outside the work area shall not be removed. Where possible hand tools (e.g., trimmer, chain saw, etc.) shall be used to trim or remove vegetation. All vegetation removal shall be monitored by the qualified biologist to minimize impacts to Alameda whipsnake.<br>• A qualified biologist possessing a valid ESA Section 10(a)(1)(A) permit or who is USFWS-approved under an active biological opinion, and approved by CDFW will be contracted to trap and to move Alameda whipsnake to nearby suitable habitat if individuals of the species are found onsite (including animals trapped in a trench) and cannot or do not move offsite on their own. | | | • Check that a qualified biologist instructs construction personnel on sensitivity of area<br>• Check that ground-disturbing activities are compliant with sensitive-species regulations<br>**Monitoring Action**<br>Verify prior to issuing grading or building permits; periodically check during ground-disturbing activities |
| | **Mitigation Measure BIO-11**: Avoid Disturbance of Coast Horned Lizard, San Joaquin Whipsnake, and Western Pond Turtle<br>If required pursuant to Mitigation Measure BIO-3, any reptile found within the active work area will be avoided and allowed to passively move out of the active decommissioning and reclamation zone. Implementing general protection measures (Mitigation Measure BIO-1) and AMMs for Alameda whipsnake (Mitigation Measure BIO-10) will ensure that the proposed project does not result in adverse impacts on coast horned lizard, San Joaquin whipsnake, and western pond turtle. | Prior to ground-disturbing activities; during ground-disturbing activities | Project Applicant/Qualified Biologist/Contractor | **Reviewing Party**<br>USFWS/CDFW/County of Alameda<br>**Criteria**<br>• Based on results of MM BIO-3 surveys, confirm if MM BIO-11 implementation necessary<br>• Assess feasibility of avoidance measures<br>• Check that a qualified biologist instructs construction personnel on sensitivity of area<br>• Check that ground-disturbing activities are compliant with sensitive-species regulations<br>**Monitoring Action**<br>Verify prior to issuing grading or building permits; periodically check during decommissioning and reclamation activities |

**Table A-1. Continued**

| Impact | Proposed Mitigation Measure(s) | Timing | Implementing Party | Monitoring |
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| | **Mitigation Measure BIO-12**: Avoid Disturbance of San Joaquin Kit Fox<br>If required pursuant to Mitigation Measure BIO-3, and in areas determined by the preconstruction surveys as likely to contain suitable habitat for San Joaquin kit fox near proposed work areas, the following AMMs will be implemented to ensure that the proposed project does not have an adverse impact on San Joaquin kit fox. These measures are consistent with the EACCS and are in addition to any conservation measures or conditions of approval identified in applicable project permits (i.e., incidental take permits under CESA and/or ESA).<br>• A qualified USFWS- and CDFW-approved biologist will conduct a preconstruction survey no more than 30 days before the beginning of ground disturbance or any activity likely to impact San Joaquin kit fox. Surveys will follow USFWS's 1999 *San Joaquin Kit Fox Survey Protocol for the Northern Range*. Written results of the surveys will be submitted to CDFW and USFWS within 1 week of the completion of surveys and prior to the beginning of ground disturbance and/or decommissioning activities likely to affect San Joaquin kit fox. This measure will be implemented in all offroad work areas. The biologist will survey the proposed work area and a 200-foot buffer around the work area to identify suitable dens. The biologist will conduct den searches by systematically walking transects spaced 30–100 feet apart through the survey area. Transect distance should be determined based on the height of vegetation such that 100 percent visual coverage of the project area is achieved. If dens are found during the survey, the biologist will map the location of each den and record the size and shape of the den entrance; the presence of tracks, scat, and prey remains; and if the den was recently excavated. The biologist will also record information on prey availability (e.g., ground squirrel colonies). The status of the den as defined by USFWS should also be determined and recorded. Dens will be classified in one of the following four den status categories.<br>o **Potential den:** Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is sufficient to conclude that it is being used or has been used by a San Joaquin kit fox. Potential dens comprise: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for San Joaquin kit fox use.<br>o **Known den:** Any existing natural den or artificial structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records; past or current radio telemetry or spotlighting data; San Joaquin kit fox signs such as tracks, scat, and/or prey remains; or other reasonable proof that a given den is being or has been used by a San Joaquin kit fox.<br>o **Natal or pupping den:** Any den used by San Joaquin kit fox to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more San Joaquin kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which San Joaquin kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two; therefore, for purposes of this definition either term applies.<br>o **Atypical den:** Any artificial structure that has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings. | No more than 30 days prior to ground-disturbing activities, and during ground-disturbing activities if necessary pursuant to MM BIO-3 | Project Applicant/Qualified Biologist/Contractor | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Based on results of MM BIO-3 surveys, confirm if MM BIO-12 implementation necessary<br>• Assess feasibility of avoidance measures<br>• Check that a qualified biologist instructs construction personnel on sensitivity of area<br>• Ensure adequate flagging is used to delineate sensitive areas<br>• Check that ground-disturbing activities are compliant with sensitive-species regulations and designed to minimize rodent burrows<br>**Monitoring Action**<br>Verify prior to issuing grading or building permits; periodically check during decommissioning and reclamation activities |

**Table A-1. Continued**

| Impact | Proposed Mitigation Measure(s) | Timing | Implementing Party | Monitoring |
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| | • After preconstruction den searches and before the commencement of decommissioning and reclamation activities, exclusion zones will be established as measured in a radius outward from the entrance or cluster of entrances of each den. Decommissioning activities will be prohibited or greatly restricted within these exclusion zones. Only essential vehicular operation on existing roads and foot traffic should be permitted. All other decommissioning and reclamation activities, vehicle operation, material and equipment storage, and other surface-disturbing activities will be prohibited in the exclusion zones. Barrier fencing will be removed within 72 hours of completion of work. Exclusion zones will be established as follows:<br>o **Potential and atypical dens:** A total of four or five flagged stakes will be placed 50 feet from the den entrance to identify the den location.<br>o **Known den:** Orange construction barrier fencing will be installed between the decommissioning and reclamation work area and the known den site at a minimum distance of 100 feet from the den. The fencing will be maintained until all decommissioning- and reclamation-related disturbances have ceased. At that time, all fencing will be removed to avoid attracting subsequent attention to the den.<br>o **Natal/pupping den:** USFWS will be contacted immediately if a natal or pupping den is discovered at or within 200 feet from the boundary of the decommissioning and reclamation area.<br>o In cases where avoidance is not a reasonable alternative, limited destruction of potential San Joaquin kit fox dens will be allowed as follows. Potential dens can be removed by careful hand excavation by a USFWS-approved biologist or under the supervision of a USFWS-approved biologist, after the dens have been monitored for 3 days with tracking medium or a remote sensor camera and determined to be vacant of San Joaquin kit foxes. If, during excavation or monitoring, a potential den is determined to be currently or previously used (e.g., San Joaquin kit fox sign found inside) by San Joaquin kit fox, then destruction of the den or decommissioning and reclamation activities in that area will cease and USFWS will be notified immediately.<br>• Vehicle traffic will be restricted to established roads, decommissioning and reclamation areas, and other designated areas.<br>Grading activities will be designed to minimize or eliminate effects on rodent burrows. Areas with high concentrations of burrows and large burrows suitable for San Joaquin kit fox dens will be avoided by grading activities to the maximum extent possible. In addition, when concentrations of burrows or large burrows are observed within the site, these areas will be staked and flagged to ensure work crew personnel are aware of their location and to make sure they avoid these areas. | | | |
| | **Mitigation Measure BIO-13**: Avoid Disturbance of American Badger<br>If required pursuant to Mitigation Measure BIO-3, and where suitable habitat for American badger is identified near proposed work areas, preconstruction surveys will be conducted in conjunction with the San Joaquin kit fox preconstruction surveys (Mitigation Measure BIO-12). Any occupied or potentially occupied badger den will be avoided by establishing an exclusion zone consistent with a San Joaquin kit fox potential burrow (i.e., four or five flagged stakes will be placed 50 feet from the den entrance). | No more than 30 days prior to ground-disturbing activities, and during ground-disturbing activities if necessary pursuant to MM BIO-3 | Project Applicant/Qualified Biologist/Contractor | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Based on results of MM BIO-3 surveys, confirm if MM BIO-13 implementation necessary<br>• Assess feasibility of avoidance measures<br>• Check that a qualified biologist instructs construction personnel on sensitivity of area |

**Table A-1. Continued**

| Impact | Proposed Mitigation Measure(s) | Timing | Implementing Party | Monitoring |
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| | | | | • Check that ground-disturbing activities are compliant with sensitive-species regulations<br>**Monitoring Action**<br>Verify prior to issuing grading or building permits; periodically check during decommissioning and reclamation activities |
| | **Mitigation Measure BIO-14**: Avoid Disturbance of Burrowing Owl<br>If required pursuant to Mitigation Measure BIO-3, and in areas determined by the preconstruction surveys as likely to contain suitable habitat for burrowing owls near proposed work areas, the following AMMs will be implemented to ensure that the proposed project does not have an adverse impact on burrowing owls.<br>• A qualified biologist will conduct preconstruction nesting bird and raptor survey within 7 days prior to ground-disturbing activities. The survey area should encompass a 500-foot buffer around the proposed work area.<br>• Avoid all occupied burrowing owl burrows.<br>• If an active burrow is identified near a proposed work area and work cannot be conducted outside of the nesting season (March 15 to September 1), a no-activity zone will be established by a qualified biologist. The no-activity zone will be large enough to avoid nest abandonment and will at a minimum cover a 250-foot radius from the burrow.<br>• If burrowing owls are present at the site during the non-breeding season (September 2 through March 14), a qualified biologist will establish a no-activity zone of at least 150 feet.<br>• If the designated no-activity zone for either breeding or non-breeding owls cannot be established, an experienced burrowing owl biologist will evaluate site-specific conditions to develop a minimum buffer that minimizes the potential to affect the reproductive success of the owls. The site-specific buffer will consider the type and extent of the proposed activity occurring near the occupied burrow, the duration and timing of the activity, the sensitivity and habituation of the owls, and the dissimilarity of the proposed activity to background activities.<br>For buffers that are less than the recommended no-activity zones, an experienced burrowing owl biologist will monitor work within the no-activity zone to ensure that owls do not exhibit stress that could cause them to abandon their burrow or affect their reproductive success. If the biologist determines that the birds are being stressed, activities within the no-activity zone will cease until juvenile owls have fledged and/or owls have moved out on their own. | Prior to ground-disturbing activities, and during ground-disturbing activities, if necessary pursuant to MM BIO-3 | Project Applicant/Qualified Biologist/Contractor | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Check for presence of burrowing owl nests within 500 feet of the project impact zone over four separate site visits<br>• If ground-disturbing activities will occur during breeding season, retain the services of a qualified biologist.<br>• Check that a burrowing owl survey is conducted within 7 days prior to ground-disturbing activities<br>• Check that a qualified biologist instructs construction personnel on sensitivity of area<br>• Ensure that ground-disturbing activities comes to a halt if burrowing owls are found to be present on the site and begin passive relocation<br>**Monitoring Action**<br>Review measures during plan check and verify periodically during and after decommissioning and reclamation activities |
| | **Mitigation Measure BIO-15**: Avoid Disturbance of Nesting Migratory Birds and Raptors<br>If required pursuant to Mitigation Measure BIO-3, and in areas determined by the preconstruction surveys as likely to contain tree- and ground-nesting migratory birds and raptors near proposed work areas, the following AMMs will be implemented to ensure that the proposed project does not have an adverse impact on nesting migratory birds and raptors, including special-status birds with potential to occur in the study area (Table 3.2-2).<br>• A qualified biologist will conduct a preconstruction nesting bird and raptor survey within 7 days prior to ground-disturbing activities. The survey area should encompass a 1,000-foot buffer around the proposed work area. | Prior to ground-disturbing activities; during ground-disturbing activities | Project Applicant/Qualified Biologist/Contractor | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Check whether grading and removal of vegetation occurs during the non-breeding season<br>• If decommissioning or reclamation activities will occur during the breeding season, retain the services of a qualified biologist |

**Table A-1. Continued**

| Impact | Proposed Mitigation Measure(s) | Timing | Implementing Party | Monitoring |
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| | • If an active nest is identified near a proposed work area and work cannot be conducted outside of the nesting season (February 1 to September 1), a no-activity zone will be established by a qualified biologist. To minimize the potential to affect the reproductive success of the nesting pair, the extent of the no-activity zone will be developed based on the type and extent of the proposed activity in proximity to the nest, the duration and timing of the activity, the sensitivity and habituation of the species nesting, and the dissimilarity of the proposed activity to background activities. The no-activity zone will be large enough to avoid nest abandonment and will range between 50 feet and 1,00 feet from the nest. | | | • Check that weekly bird surveys are conducted 30 days prior to the initiation of decommissioning or reclamation work<br>• If a protected bird is found nesting, check that clearance/disturbance activities are delayed within range determined by biologist until nest(s) are vacated<br>• Check that raptor nesting areas are properly buffered and flagged and that decommissioning/reclamation activities avoids the flagged areas<br>• Check that a qualified biologist instructs construction personnel on sensitivity of area<br>• Check to ensure compliance with native raptor protection regulations<br>**Monitoring Action**<br>Verify prior to issuing grading or building permits; periodically check during decommissioning and reclamation activities |
| | **Mitigation Measure BIO-16:** Implement Seasonal Shutdowns to Reduce Avian Fatalities<br>In order to reduce the potential impacts of the proposed project on avian species, AWI will implement seasonal shutdowns on all turbines for the remaining operational period, and hazardous turbine removals on a subset of turbines. Turbines will be turned off on November 1 each year and will remain off until February 15 of the following year. No operational modifications will occur during the February 16 to October 31 period. AWI will notify Alameda County each year when turbines have been shut down, and again when they have resumed operating. | November 1 to February 15 of each year | Project Applicant | **Reviewing Party**<br>County of Alameda, SRC<br>**Criteria**<br>• Verify that seasonal shutdowns have been implemented<br>**Monitoring Action**<br>Verify each year between November 1 and February 15 |
| | **Mitigation Measure BIO-17**: Mitigate for the Loss of Individual Golden Eagles by Retrofitting Offsite Electrical Facilities<br>AWI will mitigate for the proposed project's additional contribution to golden eagle mortality by retrofitting hazardous electrical poles in an onsite location (if any hazardous poles are located onsite), or in an offsite location. The mitigation must occur within 140 miles of the proposed project, the area typically defined by the USFWS as the "local population", and must occur in an area with eagles at risk from electrocutions as determined through coordination with the USFWS. The proposed project, with implementation of mitigation measure BIO-16, (together identified as Alternative 1 in the analysis of project alternatives) is projected to result in the fatality of approximately one eagle (cumulatively, and statistically, 0.7–1.0) when compared to the existing avian baseline condition (the No Project Alternative) (Table 3.2-5). Although the baseline fatality rate is higher, this mitigation measure addresses the impacts of the proposed project (with mitigation), which is approximately one additional eagle fatality. Based on current published draft guidance from the USFWS (2012), and using a general example, a ratio of 29 utility pole retrofits for each eagle is suggested by the USFWS. AWI will therefore retrofit 29 utility poles as mitigation for the expected level of eagle fatality from | Prior to decommissioning and reclamation activities; after decommissioning and reclamation activities | Project Applicant | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Check to ensure retrofitting of electrical poles has been conducted<br>**Monitoring Action**<br>Require measure as part of issuing grading/building permits. Verify compensation after decommissioning and reclamation activities. |

**Table A-1. Continued**

| Impact | Proposed Mitigation Measure(s) | Timing | Implementing Party | Monitoring |
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| | the proposed project. AWI may contract directly with an electrical utility to fund this mitigation; however, a written agreement and evidence of the completion of the retrofits must be provided to the County. USFWS has estimated the cost of retrofits at $7,500 per pole, and therefore AWI may contribute $217,500 ($7,500 x 29 poles) to a third party mitigation account (approved by Alameda County) instead of contracting directly with a utility. The third party mitigation account holder would have the responsibility of completing the mitigation or contracting for the mitigation to be completed. Evidence of completion of mitigation must be provided to the County within 1 year of approval of the proposed project. | | | |
| **Impact BIO-2**: Potential substantial adverse effects on any riparian habitat or other sensitive natural communities. | **Mitigation Measure BIO-1**: Implement General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources<br>The following EACCS general AMMs will be implemented prior to, during, and following decommissioning and reclamation activities to ensure that sensitive biological resources (i.e., special-status species, waters of the United States, waters of the state, and sensitive natural communities) are not adversely affected by project implementation.<br>Employees and contractors performing decommissioning and reclamation activities will receive environmental sensitivity training. Training will include review of environmental laws and AMMs that must be followed by all personnel to reduce or avoid effects on special-status species during construction activities.<br>Environmental tailboard trainings will take place on an as-needed basis in the field. These trainings will include a brief review of the biology of the covered species and guidelines that must be followed by all personnel to reduce or avoid negative effects on these species during decommissioning and reclamation activities. Directors, managers, superintendents, and the crew leaders will be responsible for ensuring that crewmembers comply with the guidelines.<br>Contracts with contractors, construction management firms, and subcontractors will obligate them to comply with these requirements and AMMs.<br>The following will not be allowed at or near work sites for project activities: trash dumping, firearms, open fires (such as barbecues) not required by the activity, hunting, and pets (except for safety in remote locations).<br>Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.<br>Offroad vehicle travel will be avoided.<br>Vehicles will not exceed a speed limit of 15 mph on unpaved roads within natural land cover types, or during offroad travel.<br>Vehicles or equipment will not be refueled within 100 feet of a wetland, stream, or other waterway unless a bermed and lined refueling area (i.e., a created berm made of sandbags or other removable material) is constructed.<br>Vehicles will be washed only at approved areas. No washing of vehicles will occur at job sites.<br>To discourage the introduction and establishment of invasive plant species, seed mixtures and straw used within natural vegetation will be either rice straw or weed-free straw.<br>Pipes, culverts, and similar materials greater than 4 inches in diameter will be stored so as to prevent wildlife species from using these as temporary refuges, and these materials will be inspected each morning for the presence of animals prior to being moved.<br>Erosion control measures will be implemented to reduce sedimentation in nearby aquatic habitat when activities are the source of potential erosion. Plastic monofilament netting (erosion control matting) or similar material containing netting will not be used at the project. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds. | Flagging of activity boundaries and access areas within 48 hours prior to ground-disturbing activities in sensitive habitats; daily search of trenches left open overnight during decommissioning and reclamation activities, following decommissioning and reclamation activities | Project Applicant/Contractor | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Checking where vehicles are parked to ensure there is no additional disturbance<br>• Check that wetlands/culverts are bermed<br>• Check to ensure that straw used is either rice or weed-free<br>• Check that materials are not stockpiled in areas where animals will find use<br>• Review and assess erosion control measures are being implemented<br>• Check to ensure that grading is kept to a minimum<br>**Monitoring Action**<br>Review measures during plan check and verify periodically during and after decommissioning/reclamation activities |

**Table A-1. Continued**

| Impact | Proposed Mitigation Measure(s) | Timing | Implementing Party | Monitoring |
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| | Material will be stockpiled only in areas that do not support special-status species or sensitive habitats.<br>Grading will be restricted to the minimum area necessary around each turbine to accomplish the restoration goals.<br>Within 48 hours prior to ground-disturbing activities in sensitive habitats, decommissioning and reclamation activity boundaries and access areas will be flagged and temporarily fenced during those activities to reduce the potential for vehicles and equipment to stray into adjacent habitats.<br>Trenches and pits will be backfilled as soon as possible. Trenches that are left open overnight will be searched each day prior to decommissioning and reclamation activities to ensure no covered species are trapped. Earthen escape ramps will be installed at intervals prescribed by a qualified biologist. Work will not continue until trapped animals have moved out of open trenches.<br>These measures will be incorporated into contract specifications and implemented by the program contractor. In addition, AWI will ensure that the contractor incorporates all permit conditions into construction specifications. | | | |
| | **Mitigation Measure BIO-4**: Install Temporary Flagging or Barrier Fencing to Protect Sensitive Biological Resources Adjacent to the Work Area<br>If required pursuant to Mitigation Measure BIO-3, a qualified biologist (as determined by Alameda County) will identify and flag or fence sensitive biological habitat onsite to ensure it is avoided during decommissioning and reclamation activities. Sensitive resources that occur in and adjacent to the decommissioning and reclamation area may include sensitive natural communities, aquatic resources (which also provide suitable habitat for federally listed invertebrates and amphibians), special-status species populations, burrows that could be used by special-status wildlife, special-status plants, and active bird or raptor nests | Prior to and during decommissioning and reclamation activities if required pursuant to MM BIO-3 | Project Applicant/Contractor | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Check to ensure flagging is intact and sensitive areas are avoided<br>**Monitoring Action**<br>Review measures during plan check |
| **Impact BIO-3**: Potential substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means. | **Mitigation Measure BIO-1**: Implement General Protection Measures to Avoid and Minimize Impacts on Sensitive Biological Resources<br>The following EACCS general AMMs will be implemented prior to, during, and following decommissioning and reclamation activities to ensure that sensitive biological resources (i.e., special-status species, waters of the United States, waters of the state, and sensitive natural communities) are not adversely affected by project implementation.<br>Employees and contractors performing decommissioning and reclamation activities will receive environmental sensitivity training. Training will include review of environmental laws and AMMs that must be followed by all personnel to reduce or avoid effects on special-status species during construction activities.<br>Environmental tailboard trainings will take place on an as-needed basis in the field. These trainings will include a brief review of the biology of the covered species and guidelines that must be followed by all personnel to reduce or avoid negative effects on these species during decommissioning and reclamation activities. Directors, managers, superintendents, and the crew leaders will be responsible for ensuring that crewmembers comply with the guidelines.<br>Contracts with contractors, construction management firms, and subcontractors will obligate them to comply with these requirements and AMMs.<br>The following will not be allowed at or near work sites for project activities: trash dumping, firearms, open fires (such as barbecues) not required by the activity, hunting, and pets (except for safety in remote locations).<br>Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable. | Flagging of activity boundaries and access areas within 48 hours prior to ground-disturbing activities in sensitive habitats; daily search of trenches left open overnight during decommissioning and reclamation activities; following decommissioning and reclamation activities | Project Applicant/Qualified Biologist | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Checking where vehicles are parked to ensure there is no additional disturbance<br>• Check that wetlands/culverts are bermed<br>• Check to ensure that straw used is either rice or weed-free<br>• Check that materials are not stockpiled in areas where animals will find use<br>• Review and assess erosion control measures are being implemented<br>• Check to ensure that grading is kept to a minimum<br>**Monitoring Action**<br>Review measures during plan check and verify periodically during and after decommissioning/reclamation activities |

**Table A-1. Continued**

| Impact | Proposed Mitigation Measure(s) | Timing | Implementing Party | Monitoring |
|---|---|---|---|---|
| | Offroad vehicle travel will be avoided.<br>Vehicles will not exceed a speed limit of 15 mph on unpaved roads within natural land cover types, or during offroad travel.<br>Vehicles or equipment will not be refueled within 100 feet of a wetland, stream, or other waterway unless a bermed and lined refueling area (i.e., a created berm made of sandbags or other removable material) is constructed.<br>Vehicles will be washed only at approved areas. No washing of vehicles will occur at job sites.<br>To discourage the introduction and establishment of invasive plant species, seed mixtures and straw used within natural vegetation will be either rice straw or weed-free straw.<br>Pipes, culverts, and similar materials greater than 4 inches in diameter will be stored so as to prevent wildlife species from using these as temporary refuges, and these materials will be inspected each morning for the presence of animals prior to being moved.<br>Erosion control measures will be implemented to reduce sedimentation in nearby aquatic habitat when activities are the source of potential erosion. Plastic monofilament netting (erosion control matting) or similar material containing netting will not be used at the project. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.<br>Material will be stockpiled only in areas that do not support special-status species or sensitive habitats.<br>Grading will be restricted to the minimum area necessary around each turbine to accomplish the restoration goals.<br>Within 48 hours prior to ground-disturbing activities in sensitive habitats, decommissioning and reclamation activity boundaries and access areas will be flagged and temporarily fenced during those activities to reduce the potential for vehicles and equipment to stray into adjacent habitats.<br>Trenches and pits will be backfilled as soon as possible. Trenches that are left open overnight will be searched each day prior to decommissioning and reclamation activities to ensure no covered species are trapped. Earthen escape ramps will be installed at intervals prescribed by a qualified biologist. Work will not continue until trapped animals have moved out of open trenches.<br>These measures will be incorporated into contract specifications and implemented by the program contractor. In addition, AWI will ensure that the contractor incorporates all permit conditions into construction specifications. | | | |
| | **Mitigation Measure BIO-4**: Install Temporary Flagging or Barrier Fencing to Protect Sensitive Biological Resources Adjacent to the Work Area<br>If required pursuant to Mitigation Measure BIO-3, a qualified biologist (as determined by Alameda County) will identify and flag or fence sensitive biological habitat onsite to ensure it is avoided during decommissioning and reclamation activities. Sensitive resources that occur in and adjacent to the decommissioning and reclamation area may include sensitive natural communities, aquatic resources (which also provide suitable habitat for federally listed invertebrates and amphibians), special-status species populations, burrows that could be used by special-status wildlife, special-status plants, and active bird or raptor nests | Prior to and during decommissioning and reclamation activities if required pursuant to MM BIO-3 | Project Applicant/Contractor | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Check to ensure flagging is intact and sensitive areas are avoided<br>**Monitoring Action**<br>Review measures during plan check |
| | **Mitigation Measure BIO-5**: Retain a Biological Monitor during Ground Disturbing Activities within Environmentally-Sensitive Habitat Areas<br>If required pursuant to Mitigation Measure BIO-3, AWI will retain a qualified biologist (as determined by Alameda County) to conduct periodic monitoring of decommissioning and reclamation activities that occur adjacent to sensitive biological resources (e.g., special-status species, sensitive vegetation | During ground-disturbing activities if required pursuant to MM BIO-3 | Project Applicant/Qualified Biologist | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Assess feasibility of avoidance measures |

**Table A-1. Continued**

| Impact | Proposed Mitigation Measure(s) | Timing | Implementing Party | Monitoring |
|---|---|---|---|---|
| | communities, wetlands). The biologist will assist the crew, as needed, to comply with all project implementation restrictions and guidelines. In addition, the biologist will be responsible for ensuring that AWI or its contractors maintain exclusion areas adjacent to sensitive biological resources, and for documenting compliance with all biological resources-related mitigation measures. | | | • Check that a qualified biologist instructs construction personnel on sensitivity of area<br>• Check that ground-disturbing activities are compliant with sensitive-species regulations<br>**Monitoring Action**<br>Review measures during plan check and verify periodically during and after ground-disturbing activities |
| | **Mitigation Measure BIO-18**: Identify and Delineate Waters of the United States and Waters of the State (including Wetlands)<br>Prior to decommissioning activities and siting of individual work areas, AWI will retain a qualified wetland ecologist (i.e., a wetland ecologist with previous experience conducting wetland delineations in the region) to identify areas that could qualify as waters of the United States and waters of the state, including wetlands, assuming such features exist within or adjacent to work areas identified for each project element. Wetlands will be identified using both the USACE and USFWS/CDFW definitions of wetlands. USACE jurisdictional wetlands will be delineated using the methods outlined in the 1987 Corps of Engineers *Wetlands Delineation Manual* (Environmental Laboratory 1987) and where appropriate, using the updated methods in the Arid West Supplement (USACE 2008) to the 1987 manual. The jurisdictional boundary of other waters of the United States will be identified based on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area (33 CFR 328.3[e]).<br>This information will be mapped and documented in a wetland delineation report and submitted to USACE. Mitigation Measures BIO-1 (general protection measures), BIO-3 (exclusion zones), BIO-4 (biological monitoring), and BIO-18 will be implemented during decommissioning and reclamation activities that could impact waters of the United States and state. | Prior to decommissioning activities and siting of individual work areas; during decommissioning and reclamation activities | Project Applicant/Qualified Biologist | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Check wetland delineation report is completed with sensitive areas mapped and documented<br>**Monitoring Action**<br>Review measures during plan check and verify periodically during and after decommissioning and reclamation activities<br>Confirm preparation and submittal to USACE of wetland delineation report |
| | **Mitigation Measure BIO-19**: Avoid and Minimize Disturbance of Waters of the United States, including Wetland Communities<br>To the extent possible, the applicant will avoid and minimize impacts on wetlands and other waters of the United States (creeks and streams) by implementing the following measures.<br>• Redesign or modify the location of work areas to avoid direct and indirect impacts on wetland habitats, if feasible.<br>• Protect wetland habitats that occur near the project site by installing fencing around the environmentally sensitive area at least 20 feet from the edge of the wetland. Depending on site-specific conditions and permit requirements, this buffer may be wider than 20 feet (e.g., 250 feet for seasonal wetlands considered special-status wildlife habitat). The location of the fencing will be marked in the field with stakes and flagging and shown on the construction drawings. The construction specifications will contain clear language that prohibits decommissioning- and reclamation-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within the fenced environmentally sensitive area. | Prior to and during decommissioning and reclamation activities | Project Applicant/Contractor | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Check to ensure flagging is intact and sensitive areas are avoided<br>**Monitoring Action**<br>Review measures during plan check and verify periodically during and after decommissioning and reclamation activities |

**Table A-1. Continued**

| Impact | Proposed Mitigation Measure(s) | Timing | Implementing Party | Monitoring |
|---|---|---|---|---|
| | • Stabilize exposed slopes and streambanks immediately upon completion of decommissioning and reclamation activities. Other waters of the United States will be restored in a manner that encourages vegetation to re-establish to its pre-program condition and that reduces the effects of erosion on the drainage system.<br>• In highly erodible stream systems, stabilize banks using a non-vegetative material that will bind the soil initially and break down within a few years. If the project engineers determine that more-aggressive erosion control treatments are needed, use geotextile mats, excelsior blankets, or other soil stabilization products.<br>• During decommissioning and reclamation, remove trees, shrubs, debris, or soils that are inadvertently deposited below the OHWM of drainages in a manner that minimizes disturbance of the drainage bed and bank. | | | |
| **Noise** | | | | |
| **Impact NOISE-1**: Exposure of residences to increased wind turbine noise | **Mitigation Measure NOISE-1**: Repair or remove turbines that are determined to increase the daily $L_{dn}$ value at a residence by more than 5 dB<br>Within 60 days of project approval, the applicant will retain a qualified acoustic consultant to conduct a noise monitoring survey to quantify existing noise conditions at residential receptors whose presence pre-dates operation of the project turbines and which are located within 500 feet of an operating turbine. This will include measurement of the daily A-weighted and C-weighed $L_{dn}$ values over a 1-week period and concurrent logging of wind speeds at the nearest meteorological station. Not later than 2 months from the time of project approval, the applicant will submit a report documenting the results of the survey to the County for review and approval.<br>In the event that a resident at one of the measured locations reports that wind turbine noise has substantially increased, the County will review the situation to determine if additional measurements are warranted. If they are, the applicant will conduct a similar 1-week measurement at that location and report the measurement results to the County. If the County determines that the daily $L_{dn}$ value has increased by more than 5 dB, the County will direct the applicant to repair or remove the turbines that are determined to be the cause of the increase. | Within 60 days of project approval | Project Applicant | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Review noise monitoring survey report<br>• Ensure applicant conduct additional noise measurements, if deemed necessary<br>**Monitoring Action**<br>Review measures during plan check and verify periodically during and after decommissioning and reclamation activities |
| **Impact NOISE-2**: Exposure of residences to noise during decommissioning activities | **Mitigation Measure NOISE-2**: Employ Noise-Reducing Practices during Decommissioning<br>The project applicant will employ a combination of the following noise-reducing construction practices so that construction noise does not exceed Alameda County property line noise ordinance standards. Measures that can be used to limit noise include, but are not limited to:<br>• Prohibit noise-generating decommissioning activities before 7 a.m. and after 7 p.m. on any day except Saturday or Sunday, and before 8 a.m. and after 5 p.m. on Saturday or Sunday.<br>• Locate equipment as far as practical from noise sensitive uses.<br>• Require that all construction equipment powered by gasoline or diesel engines have sound-control devices that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation.<br>• Use noise-reducing enclosures around noise-generating equipment where practicable.<br>• Implement other measures with demonstrated practicability in reducing decommissioning noise, upon prior approval by the County.<br>In no case will the applicant be allowed to use gasoline or diesel engines without muffled exhausts. | Prior to and during decommissioning activities | Project Applicant<br>Project Engineer; Contractor | **Reviewing Party**<br>County of Alameda<br>**Criteria**<br>• Inspect construction equipment to ensure mitigation measures are implemented prior to approval<br>**Monitoring Action**<br>Review measures during plan check and verify periodically during and after decommissioning and reclamation activities |

**ALTAMONT WINDS INC.**
**PERMIT MODIFICATION PROJECT**

**MITIGATION MEASURE MONITORING COMPLIANCE FORM**

**Reporting Period:**

☐ **Pre-construction** ☐ **Decommissioning/Reclamation** ☐ **Post-reclamation**

**Report Date:** _____

**Mitigation Measure:**

_____
_____
_____
_____

**Has the mitigation measure been implemented?**

☐ **Yes** ☐ **No**

**Notes:**

_____
_____
_____
_____

**Is further action or monitoring required?**

☐ **Yes** ☐ **No**

**If yes, describe:**

_____
_____
_____
_____

**Is consultation with outside agencies required?**

☐ **Yes** ☐ **No**

**If yes, identify agency:** _____

**Has consultation with outside agency been completed?**

☐ **Yes** ☐ **No**

**Monitoring verified by:** _____ **Date:** _____