



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Habitat Conservation Planning Branch
1416 9th Street
Sacramento, CA 95814
www.wildlife.ca.gov

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



May 31, 2016

Edith Hannigan
Board Analyst
California State Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244
VegetationTreatment@bof.ca.gov

ATTN: Mr. Matt Dias
Acting Executive Officer
California Board of Forestry and Fire Protection

Dear Ms. Hannigan:

VEGETATION TREATMENT PROGRAM (PROJECT)
DRAFT PROGRAM ENVIRONMENTAL IMPACT REPORT (DPEIR)
SCH# 2005082054

The California Department of Fish and Wildlife (CDFW) received a Notice of Availability of a DPEIR from the California State Board of Forestry and Fire Protection (BOF) for the Project pursuant to the California Environmental Quality Act (CEQA) and CEQA Guidelines.¹ CDFW previously submitted comments in response to the Notice of Preparation of the DPEIR.

Thank you for the opportunity to provide comments and recommendations regarding those activities involved in the Project that may affect California fish and wildlife. Likewise, we appreciate the opportunity to provide comments regarding those aspects of the Project that CDFW, by law, may be required to carry out or approve through exercise of its own regulatory authority under the Fish and Game Code.

In 2013 CDFW commented on an earlier version of the PEIR and provided comments on the Notice of Preparation for this PDEIR (see *Attachment B*). Many of the issues detailed in this letter are similar to those that CDFW commented on in the past.

The 1994 *Interim Joint CDFW/Board Policy on Pre, During, and Post Fire Activities and Wildlife Habitat* (Joint Policy) outlines a process to facilitate needed coordination to achieve common goals and objectives, develop implementation plans for fire-related activities and address potential effects on wildlife habitat. CDFW recommends that the VTP PEIR acknowledge this Joint Policy and its guidance for developing and maintaining a cooperative working relationship between CAL FIRE and CDFW regarding BOF's VTP.

¹ CEQA is codified in the California Public Resources Code in section 21000 et seq. The "CEQA Guidelines" are found in Title 14 of the California Code of Regulations, commencing with section 15000.

CDFW ROLE

CDFW is California's **Trustee Agency** for fish and wildlife resources, and holds those resources in trust by statute for all the people of the State. (Fish & G. Code, §§ 711.7, subd. (a) & 1802; Pub. Resources Code, § 21070; CEQA Guidelines § 15386, subd. (a).) CDFW, in its trustee capacity, has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitat necessary for biologically sustainable populations of those species. (*Id.*, § 1802.) Similarly for purposes of CEQA, CDFW is charged by law to provide, as available, biological expertise during public agency environmental review efforts, focusing specifically on projects and related activities that have the potential to adversely affect fish and wildlife resources.

CDFW is also submitting comments as a **Responsible Agency** under CEQA. (Pub. Resources Code, § 21069; CEQA Guidelines, § 15381.) CDFW expects that it may need to exercise regulatory authority as provided by the Fish and Game Code. As proposed, for example, the Project may be subject to CDFW's lake and streambed alteration regulatory authority. (Fish & G. Code, § 1600 et seq.) Likewise, to the extent implementation of the Project as proposed may result in "take" as defined by State law of any species protected under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.), related authorization, as provided by the Fish and Game Code, may be required.

PROJECT DESCRIPTION SUMMARY

Proponent: BOF

Objective: Treat vegetation for fire prevention and protection, and ecological restoration. Implement vegetation treatment activities that would meet the goals outlined in the Board of Forestry and Fire Protection's 2010 Strategic Fire Plan for California and California Department of Forestry and Fire Protection's 2012 Strategic Plan in a manner that both reduces wildfire risk and severity and avoids significant environmental effects, to the extent feasible. The primary purpose of these documents and the Project is to strategically implement actions to minimize the negative effects of wildfire in areas with high values at risk. Primary Project activities include:

- Prescribed fire (underburn, jackpot burn, broadcast burn, pile burn, establishment of control lines)
- Mechanical (chaining, tilling, mowing, roller chopping, masticating, brushraking, skidding and removal, chipping, piling, pile burning)
- Manual (hand pull and grub, thin, prune, hand pile, pile burning, lop and scatter, hand plant)
- Prescribed herbivory (grazing by domestic animals)
- Herbicides (ground applications only, such as backpack spray, hypohatchet, and pellet dispersal).

Location: Statewide in the CAL FIRE State Responsibility Area (approximately 31 million acres). The project would treat 60,000 acres annually for a total of 600,000 acres (937 square miles).

Timeframe: 10 years

COMMENTS AND RECOMMENDATIONS

Due to the multiple issues presented below, CDFW strongly encourages BOF to review, as an example, the Department of Conservation Draft Program EIR for Analysis of Oil and Gas Well Stimulation Treatments in California (<http://www.conservation.ca.gov/dog/SB4DEIR>) and to incorporate a similar structure and initial study checklist for subsequent activities.

With regards to this letter, “special status species” includes, but is not limited to, the following:

- A species that is listed as rare, threatened, or endangered under federal law
- A species that is listed as rare, threatened, endangered, candidate, or fully protected under California State law
- A sensitive species listed by the California Board of Forestry and Fire Protection (BOF)
- A species with a California Rare Plant Rank (CRPR) of 1 through 4 (<http://www.cnps.org/cnps/rareplants/ranking.php>)
- A California Species of Special Concern (SSC) (<http://www.dfg.ca.gov/wildlife/nongame/ssc/>)
- A local or regional rare plant identified in a local or regional plan, policy, or regulation

A species that meets the criteria of CEQA Guidelines section 15380 are “CEQA rare and endangered species.”

Intended Uses of the DPEIR

The DPEIR should state that CDFW is anticipated to be a Responsible Agency that will use the DPEIR in its decision making for Project activities (CEQA Guidelines, § 15124).

Significance Thresholds

The DPEIR biological resource thresholds do not adequately identify potentially significant impacts (DPEIR Section 4.2.2.1). For example, the first threshold states that “a significant effect occurs when there is a [t]hreat to eliminate a plant community.” However significant impacts on sensitive plant communities may occur well before elimination. For example, a substantial reduction in riparian or other sensitive plant communities would typically be a significant impact. CEQA Guidelines Appendix G (Appendix G) significance thresholds more adequately state that a project would cause a potentially significant impact if it would “[h]ave a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by [CDFW] or U.S. Fish and Wildlife Service [USFWS].”

The remaining DPEIR thresholds are insufficient to adequately analyze potentially significant impacts, and they do not adequately address the *mandatory findings of significance* found in the CEQA Guidelines section 15065 and Appendix G, which state, for

example, that a project would result in a potentially significant impact if it would “substantially reduce the number or restrict the range of a rare or endangered plant or animal...” It is unclear why the DPEIR only uses the CEQA Appendix G thresholds in the Cumulative Effects Analysis (DPEIR Section 5.5.1.1) and not elsewhere in the DPEIR.

The DPEIR should utilize the Appendix G significance thresholds to analyze Project impacts on biological resources. CDFW and most other agencies typically use the Appendix G significance thresholds because they are generally adequate. The thresholds should additionally identify potentially significant impacts on wetlands not subject to Section 404 of the Clean Water Act (currently under consideration by the Office of Planning and Research for inclusion in Appendix G).

Further, it is unclear if the DPEIR threshold (d) in Section 4.2.2.1 intends that *any* adverse impact on special status species or their habitats would be considered significant. It is unlikely that the Project objectives would be achieved if all adverse impacts would be avoided because special status species occur across broad areas of California. The DPEIR should clarify if *any* adverse impacts are anticipated, and state that additional analysis will be required to determine impact significance in additional tiered environmental documents.

Alternatively, the DPEIR could analyze potential impacts on a suite of fish, wildlife, and habitat resources that are more likely to be significantly impacted by the Project (e.g., species with a wide range), and include mitigation as necessary, to avoid frequent preparation of additional CEQA environmental documents. A program EIR is most helpful in addressing subsequent activities if it treats the effects of the program as specifically and comprehensively as possible (CEQA Guidelines, § 15168).

Impact Analysis

The DPEIR incorrectly concludes that impacts on biological resource will be less than significant with implementation of Standard Project Requirements (SPRs) and undetermined Project Specific Requirements (PSRs). The Project Scale Analysis (PSA) checklist indicates that SPRs may not be implemented for Project activities (e.g., checklist question 16). If SPRs are not implemented and it is not determined if PSRs could reduce impacts to less than significant, then impacts would be potentially significant. The purpose of the checklist questions unrelated to SPRs is unclear.

Additionally, the SPRs would not mitigate impacts to less than significant levels for “in scope” Project activities if implemented, as discussed below.

Mitigation

The SPRs do not mitigate impacts on biological resources to less than significant. For example, if a project may substantially adversely impact a special status species:

- The SPRs would not necessarily identify species potentially impacted because the method of establishing the environmental setting (baseline conditions) is inadequate (further discussed in specific comments).

- If a species was identified as potentially impacted, the field survey conducted by the project coordinator may not detect the species due to the absence of a disclosed accepted survey protocols or the need to follow adequate survey protocols.
- If species impacts were determined, BIO-4 states that CDFW, USFWS, and NOAA Fisheries (wildlife agencies) would be consulted to determine avoidance measures. CDFW may assist as resources allow; however, it is not incumbent on CDFW to assess take avoidance measures unless our project authorization (e.g., California Endangered Species Act Incidental Take Permit) is warranted (CEQA Guidelines, § 15020). Many special status species impacts do not require wildlife agency authorization (e.g., several California Species of Special Concern)

CDFW appreciates BOF's efforts to include in the DPEIR consultation with CDFW to assist in avoiding significant impacts on biological resources through SPR BIO-4 and the Burn Plan in DPEIR Appendix J. However, for the above stated reasons, SPR BIO-4 should not include CDFW consultation.

Tiering

The SPRs and PSA checklist do not adequately identify potentially significant impacts in or out of the DPEIR scope because the DPEIR significance thresholds, and the inadequate methods of establishing the environmental setting and determining impacts, as discussed above.

Establishing a procedure in the DPEIR for determining if subsequent Project activities are within the scope of the DPEIR, or require an additional environmental document, will be critical to ensuring adequate analysis of Project activity effects on biological resources. Such a procedure and checklist, which can be used as a model, was developed for infill projects and can be found in CEQA Guidelines section 15183.3 and Appendix N.

The checklist should be accompanied by enough relevant information and reasonable inferences from this information to support each conclusion concerning biological resources. For subsequent Project activities that may affect sensitive biological resources, a *site-specific analysis* should be prepared, from which the supporting information would be derived. A *qualified biologist* should prepare the site-specific analysis (see comments below). The checklist should cite the specific portions of the DPEIR, including page and section references, containing the analysis of the subsequent Project activities' significant effects and indicate whether it incorporates all applicable mitigation measures from the DPEIR.

The DPEIR should state that as soon as the lead agency has determined that an additional environmental document will be required for a subsequent Project activity, it shall consult with all responsible and trustee agencies, including CDFW, to obtain recommendations as to whether an additional EIR or negative declaration should be prepared (CEQA Guidelines, § 15063).

Mitigation Monitoring and Reporting

The DPEIR does not include a method of monitoring and reporting measures to avoid significant impacts on biological resources because it treats those measures as SPRs that are part of the project description rather than mitigation measures. CDFW understands the purpose of this practice, and recognizes the CEQA definition of mitigation (CEQA Guidelines, § 15370) and the “gray area” between measures that constitute mitigation and measures that may be considered a project feature. However, based on the scale and scope of the Project and anticipated measures to reduce impacts, SPRs should be designated as Project mitigation measures.

Regardless of whether BOF chooses to treat the measures as project features or mitigation, due to the broad scope of the project, large impact area, and high potential for multiple and ongoing significant impacts on fish and wildlife resources, the DPEIR should include a mechanism for monitoring and reporting measure implementation, and reporting should be available to CDFW (CEQA Guidelines, § 15097).

Resource Specific Comments and Recommendations

CDFW offers additional resource-specific comments and recommendations (“Mitigation Measures” or “MM”) below to assist BOF in adequately identifying and/or mitigating the Project’s significant or potentially significant direct and indirect impacts on fish and wildlife (biological) resources. Editorial comments or other suggestions are also included below to improve the document. A Comment Organization Key is provided in *Attachment A*.

Implementation of CDFW proposed feasible mitigation measures would likely, in many cases, reduce impacts to less than significant. However, CDFW anticipates that BOF may not implement some mitigation measures for site-specific activities to achieve Project objectives. Based on the potential for the Project to have a significant impact on biological resources, CDFW concludes that an *Environmental Impact Report* is appropriate for the Project.

In the comment section below, ***bold and italicized text*** indicates a heading from the CEQA Guidelines Appendix G (subsection IV) Checklist.

I. Project Description and Related Impact Shortcoming

Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS?

COMMENT 1:

Section 4.4.3, Pages 4-244 to 4-255

Issue: The hazardous materials section of the DPEIR includes a discussion of “various pesticides...and other hazardous materials (e.g., common household hazardous materials such as fuels, oils, lubricants, solvents, and detergents; retardants, foams, and water enhancers to control an escaped prescribed fire).” While the discussion of the possible impacts from pesticides is in-depth, there is no discussion of the “other hazardous materials.” Common household hazardous materials,” such as the hydrocarbon mixtures found in gasoline and oil, can have lasting impacts on the environment. Such impacts have typically been noted after large oil spills in marine environments (Chang et al. 2014). However, terrestrial impacts occur as well. In addition, use of “retardants, foams, and water enhancers” can also significantly adversely affect the environment (Backer et al. 2004). Use of these materials needs to be fully disclosed and possible impacts discussed.

As stated above, the DPEIR includes an in-depth discussion of pesticide chemicals proposed for use during Project activities (see Appendix D). Three chemicals identified for VTP herbicide treatments are classified as “high mobility” during runoff events: Clopyralid, hexazinone, and imazapyr. Both Hexazinone and imazapyr have a half-life of 30 days after foliar application occurs (DPEIR Appendix D, Table D.2-2 and Table D.2-3). Due to the combination of high mobility and fairly long half-life, these chemicals are more likely to come into contact with non-target species, including special status species, after rain events following application.

HAZ-2 requires that “prior to the start of vegetation treatment activities, the Project coordinator or contractor shall inspect all equipment for leaks.” However, when addressing on-going inspection of equipment, HAZ-2 lacks specificity and inadequately requires the project coordinator to “regularly inspect [the equipment] thereafter until equipment is removed from the site.” Without a definition of regular inspections, there is no way to ascertain how often equipment inspections would occur. Additionally, there is no instruction for actions to take if a leak is found.

Specific impact: Hazardous materials used during vegetation treatment, but not fully discussed in the DPEIR, could result in habitat destruction, injury, or mortality of special status species. Specifically, pesticide drift could occur and adversely impact special status species if herbicides are applied up to 30 days before a storm event. Additionally, leaks from equipment and vehicles can impact water and soil quality, and reduce the fitness of organisms that come into contact with them. (Bergeon Burns et al. 2014; Ball and Truskewycz 2013)

Why impact would occur: No description of the above mentioned household hazardous materials exists in the current DPEIR though these materials could substantially adversely affect special status species. In addition, HAZ-9 and HAZ-2 do not adequately prevent pesticide drift from rain events that could occur greater than 24-hours post-application or equipment leaks.

Evidence impact would be significant: The project’s use of hazardous material, including herbicides, fuels, and fire retardants, could substantially adversely affect special

status species by resulting in further decline including local or regional extirpation of already vulnerable populations.

MITIGATION MEASURE 1a:

To reduce impacts to less than significant: The Project proponent will:

- Avoid herbicide application during the rainy season. The rainy season varies by Bioregion, and will be identified for each site specific activity.
- Inspect equipment every day prior to Project activities.
- Prohibit use of any leaky equipment during Project activities.
- Include spill scenarios in the Spill Prevention and Response Plan (SPRP) for household hazardous materials, not just pesticides, discussed in HAZ-4. Fully discuss when fire suppressants would be used during VTP activities and where they would be stored. Include the relevant materials (retardants, foams) in the SPRP.

Fully describe the common household hazardous materials that would be used and their specific purpose. Describe any on-site storage of these hazardous materials

The DPEIR should describe the additional actions to take if a leak is discovered, at minimum placing a drip pan beneath the leak to prevent hazardous materials from leaching into the soil.

Would the Project interfere substantially with movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede use of native wildlife nursery sites?

COMMENT 2:

Section Chapter 4

Issue: Herbivory is included as a potential treatment method, including the potential of installing fencing to confine animals within the herbivory treatment unit. The Project description does not include the type of fencing that would be utilized or how fencing would be installed, nor do the PSA or SRAs include anything specific to herbivory fencing and potential impacts to wildlife corridors/movement and wildlife entrapment.

Specific impact: Fencing for herbivory treatment units may interfere substantially with movement of any native resident or migratory wildlife species or with established native resident or migratory wildlife corridors. Fencing may also potentially ensnare wildlife, including special status species.

Why impact would occur: Fencing may be installed within wildlife movement/migratory corridors which would not be identified for avoidance.

Evidence impact would be significant: The project could substantially adversely affect wildlife movement/corridors. Further, the type of fence and installation of the fence could ensnare, injure, or kill wildlife, including special status species

MITIGATION MEASURE 2a:

To reduce impacts to less than significant: A qualified biologist will assess potentially impacted wildlife corridors prior to fence installation for herbivory Project activities. The Project proponent, under the guidance of a qualified biologist, will avoid corridors as feasible and where infeasible, utilize wildlife friendly fencing. A qualified biologist will evaluate fence installation impacts on sensitive biological resources. The project proponent will avoid such impacts.

To be qualified, a biologist must hold a bachelor degree from an accredited university and: 1) be knowledgeable in relevant species life histories and ecology, 2) can correctly identify relevant species, 3) have conducted field surveys of relevant species, 4) is knowledgeable in survey protocols, and 5) is knowledgeable of state and federal laws regarding the protection of sensitive species.

MANDATORY FINDINGS OF SIGNIFICANCE Does the Project have the potential to threaten to eliminate a plant or animal community, or substantially reduce the number or restrict range of a rare or endangered plant or animal?

COMMENT 3:

Section 4.4.3, Pages 4-244 to 4-255

Issue: Same as Comment 1 for rare and endangered species.

Specific impact: Same as Comment 1 for rare and endangered species.

Why impact would occur: Same as Comment 1 for rare and endangered species.

Evidence impact would be significant: CEQA rare and endangered species are among the most vulnerable species in California and often are threatened with extinction. The project could substantially reduce the number or restrict the range of CEQA rare and endangered species by resulting in further decline including local or regional extirpation of already highly vulnerable populations.

MITIGATION MEASURE 3a:

To reduce impacts to less than significant: Implement Mitigation Measure (MM) 1a to ensure hazardous materials, herbicides, pesticides, and leaking equipment do not cause a potentially significant impact on CEQA rare and endangered species.

II. Environmental Setting and Related Impact Shortcoming

Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS?

COMMENT 4:

Section 4.2.3.1, Page 4-156

Issue: DPEIR BIO-1 and BIO-2 would not identify all special status species.

Specific impact: Vegetation treatment activities could result in habitat destruction, injury, or mortality of these special status species.

Why impact would occur: Special status species may be present and would not be identified for avoidance during vegetation treatment activities.

Evidence impact would be significant: The project could substantially adversely affect special status species by resulting in further decline including local or regional extirpation of already vulnerable populations.

MITIGATION MEASURE 4a:

To reduce impacts to less than significant: Identify all special status species that may be impacted by the Project through conducting an adequate and thorough database and literature review, and field survey (field survey as necessary, see Comment 3). The review shall be conducted by a qualified biologist. The review shall minimally include, and, based on a qualified biologist's professional discretion, exceed the following (or the most recent equivalents):

- A California Natural Diversity Database (CNDDDB) nine-quad search or 5-mile radius surrounding the Project site (note CNDDDB is a positive detection database and lack of data does not indicate species absence)
- USFWS critical habitat mapping
- USFWS Sacramento Information, Planning, and Conservation System (IPaC) (http://www.fws.gov/sacramento/es_species/Lists/es_species_lists-overview.htm).
- County lists of locally and regionally rare species
- Santa Barbara Botanical Garden list of locally rare or uncommon species (Santa Barbara County only)
- California Native Plant Society lists of locally unique species
- Current aerial imagery (past aerial imagery as necessary to review seasonal/historical habitat changes) (e.g., Google Earth)
- Aquatic habitat databases:
 - EcoAtlas (www.ecoatlas.org)

- California Environmental Data Exchange Network (www.ceden.org)
- USFWS National Wetlands Inventory (www.fws.gov/wetlands/Data/Mapper.html)
- USFWS species 5-year reviews and recovery plans (as applicable)
- Local Habitat Conservation Plans (HCPs)/Natural Community Conservation Plans (NCCPs)
- CDFW Species Accounts of Rare, Threatened, and Endangered Plants from 2004 Status Report (www.wildlife.ca.gov/Conservation/Plants/Info)
- U.S. Department of Agriculture web soil survey mapping (as applicable to identify soils suitable to support CEQA special status plants) (see websoilsurvey.sc.egov.usda.gov/App/HomePage.htm)
- Implement MITIGATION MEASURE 5a

COMMENT 5:

Section 4.2.3.1, Page 4-157

Issue: The DPEIR BIO-3 field review within the project area conducted by a project coordinator would often not identify presence or absence of special status species or their habitats that may be impacted by the Project.

Often, a species-specific protocol level survey is necessary to identify presence or absence of special status species (e.g., northern spotted owl (*Strix occidentalis caurina*) survey protocol from 2012). Additionally, the expertise of a qualified biologist is generally necessary to identify appropriate habitat for special status species. In most cases, surveys and habitat assessments include areas adjacent to the project site and any other areas that may support special status species that may be impacted by the project.

Specific impact: Vegetation treatment activities could result in habitat destruction, injury, mortality, or reduced survivorship or reduced reproductive success, of special status species and destruction of their habitat.

Why impact would occur: Special status species or their habitats may be present and would not be identified for avoidance during vegetation treatment activities.

Evidence impact would be significant: The Project could substantially adversely affect special status species by resulting in local or regional decline or extirpation of already vulnerable populations.

MITIGATION MEASURE 5a:

To reduce impacts to less than significant: The database and literature review conducted by the qualified biologist (see MM 1a and MM 2a) will identify special status species and their habitats with the potential to be impacted by the project. Species presence and impacts will be assumed unless a qualified biologist conducts an appropriate survey to infer absence. In many cases, a species-specific protocol survey

may be necessary if suitable habitat may be impacted by the project. Protocol surveys must be conducted by individuals with the qualifications required by the protocols, including in some cases CDFW or USFWS approval. Several protocol survey procedures for wildlife and plants are available on the CDFW webpage at: http://www.dfg.ca.gov/wildlife/nongame/survey_monitor.html#Plants).

If species presence or their habitat is assumed or documented during a survey, Project activities shall avoid impacts on special status species and their habitats.

COMMENT 6:

Section 4.2.3.1, Page 4-158

Issue: DPEIR BIO-8, 9, and 10 do not address impacts on special status species by aquatic invasive species (e.g., mudsnails, mussels), disease (e.g., sudden oak death, chytrid fungus), and plant pathogens such as *Phytophthora* spp.

Additionally, pile burning-related impacts on special status species are not assessed.

Specific impact: These invasive species could adversely impact special status species (as defined in Comment 1) and their habitat.

For example, sudden oak death affects many vegetation communities that support CEQA special status species, such as oak woodlands (Oak Mortality Task Force, 5/11/16, <http://www.suddenoakdeath.org/about-sudden-oak-death/faq/>).

Why impact would occur: The Project may transport these invasive species with logging/water drafting equipment.

The high heat of Project pile burning activities may damage native seed banks, soil structure, and micro-organisms, resulting in gradual replacement by invasive weeds and fragmented, degraded habitat.

According to the U.S. Forest Service: *“Burning to reduce fuels would increase the likelihood of noxious weed establishment due to the exposure of mineral soil by fire. Pile burning is especially conducive to weed establishment since it creates small areas devoid of any ground cover... Scattered burn piles would require more time and manpower to monitor for weeds... cheatgrass establishment post burning would be a major concern because of the difficulty in displacing established species with native plants... Depending upon the level of treatment completed and amount of access it will be important to monitor and treat any noxious invasive weeds post treatment to limit establishment or spread.”* (U.S. Department of Agriculture 2005)

Use of weed-free straw described in BIO-8 would not measurably reduce damage caused to soils and seedbanks from the high heat caused by pile burning. Wind and animal-dispersed invasive seed may reach these areas and weeds are likely to establish and

persist, absent a direct program to control subsequent invaders and reintroduce appropriate native species. CDFW staff has repeatedly observed that burn piles in chaparral typically become weed dominated and support few, if any, native species.

Project activities, particularly those resulting in soil movement or plant parts via vehicles, clothing or equipment, has the potential to spread plant pathogens.

Evidence impact would be significant: The Project could substantially adversely affect special status species by resulting in their further decline through local or regional extirpation of already vulnerable populations.

MITIGATION MEASURE 6a:

To reduce impacts to less than significant: The Project proponent will implement protocols to decontaminate equipment and prevent the spread of aquatic invasive species and disease, including but not limited to the following:

- California Department of Fish and Wildlife. 2013. Aquatic Invasive Species Decontamination Protocol. Invasive Species Program, Sacramento, CA (<http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=43333>)
- California Oak Mortality Task Force. 2014. Sudden Oak Death Guidelines for Forestry. Berkeley, CA <http://www.suddenoakdeath.org/wp-content/uploads/2014/12/forestry-08-10-with-new-2014-map.pdf>
- Johnson, M.L., Berger, L., Philips, L., and R. Speare. 2003. Fungicidal effects of chemical disinfectants, UV light, desiccation and heat on the amphibian chytrid *Batrachochytrium dendrobatidis*. *Diseases of Aquatic Organisms* 57:255-260

The Project proponent will proactively control for invasive species by:

- Reducing or otherwise directly controlling existing weeds on existing or new fire lines, historic fuel or fire breaks, roadsides and staging areas prior to initiating treatments in adjoining areas;
- Ongoing Integrated Pest Management (IPM) activities: Direct weed management by appropriately trained personnel and direct monitoring of treatment areas annually for at least three years and including at least one year of average or above average rainfall. Weed management teams will undertake direct control of invasive weeds if they are establishing or expanding following treatments;
- Explicit incorporation of the Best Management Practices described in Chapter 10.2 of the California Invasive Pest Plant Council's (Cal-IPC) "Preventing the Spread of Invasive Plants: Best Management Practices for Land Managers (3rd edition)" (California Invasive Pest Plant Council, 2012).
- Locating burn piles only on previously disturbed ground and outside natural habitat areas. If infeasible, burn pile locations will receive direct subsequent weed control treatments and native species suitable to the location will be restored through direct methods including reseeded.
- Minimize disturbance in areas susceptible to invasive plant establishment.

All Project activities will fully incorporate specific measures, appropriate to the activity, to prevent the establishment, spread, and persistence of invasive weeds by following the established procedures outlined in Cal-IPC (2012). For projects on private lands with local stakeholders, their equipment and personnel will also comply with these procedures to prevent invasive from spreading into more remote areas where treatments may occur.

Plant pathogen best management practices will be implemented from the following sources:

http://www.valleywater.org/uploadedFiles/Programs/Safe_Clean_Water_and_Natural_Flood_Protection/Priority_D/sensitive_contam_site_final_bmp_072215.pdf?n=4310

[http://www.valleywater.org/uploadedFiles/Programs/Safe_Clean_Water_and_Natural_Flood_Protection/Priority_D/General%20construction%20BMP_final_081915%20\(2\).pdf?n=1583](http://www.valleywater.org/uploadedFiles/Programs/Safe_Clean_Water_and_Natural_Flood_Protection/Priority_D/General%20construction%20BMP_final_081915%20(2).pdf?n=1583)

Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS?

COMMENT 7:

Section 2.2.2 Page 2-12

Issue: The mapping standard for vegetation is extremely coarse and inaccurate, which could lead to undetected impacts on sensitive natural communities.

Specific impact: The Project could result in the destruction of sensitive natural communities.

Why impact would occur: The analysis within the PDEIR is based on an inadequate mapping standard. Vegetation is mapped to a coarse level of three categories: trees, shrubs, and grasses. These three categories are simplified from more specific California Wildlife Habitat Relationships (CWHR) categories; CWHR is a classification of habitat, not vegetation (CDFW 2014). Without a finer-scale mapping standard, impacts to natural communities cannot be adequately assessed. Many natural communities are rare globally or in the state.

Evidence impact would be significant: Many natural communities within the Project area (SRA) are sensitive and face many threats, including: development, fire, climate change, and grazing. Examples that could be impacted by treatment activities include Oregon white oak woodlands and Valley oak woodlands which have a State-rank of S3 (“vulnerable”).

CDFW and CNPS maintain a list of natural communities derived from “A Manual of California Vegetation”. This publication includes global and state rarity rankings:

- http://www.dfg.ca.gov/biogeodata/vegcamp/natural_communities.asp
- http://www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_list.asp
- <http://vegetation.cnps.org/>

MITIGATION MEASURE 7a:

To reduce impacts to less than significant: The PDEIR must employ a finer-grain analysis to determine impacts on sensitive natural communities. The use of a vegetation classification scheme that employs a classification system with more detail than “trees, shrubs, and grasses” is an essential starting point. CDFW can work with the BOF and lead agencies to implement methods used to develop “A Manual of California Vegetation” and map natural communities and assess potential impacts. Once it is understood where sensitive natural communities are relative to the treatable area, the lead agencies can assess potential impacts to them and alter (or restrict entirely) the types of treatments relative to these sensitive resources. A description of methods to be employed to classify natural communities is found in: Survey of California Vegetation Classification and Mapping Standards, June 30, 2015. http://www.dfg.ca.gov/biogeodata/vegcamp/survey_ca_veg_class_and_mapping_stds.asp.

COMMENT 8:

Section 4.2.3.1, Page 4-158

Issue: DPEIR BIO-11 states aquatic habitats and species shall be protected through the use of watercourse and lake protection zones (WLPZ) as defined in the California Forest Practice Rules (FPRs) and HYD-3. However, the FPR’s watercourse classification system (i.e., Class I, Class II, etc.) and standard WLPZs may not be adequate to avoid project-related impacts to riparian habitat, and to seeps, springs and wetlands, which are not defined under the FPRs.

Specific impact: Riparian habitat and the species that depend on them would be impacted by Project activities, e.g., prescribed fire, manual activities, and mechanical activities, prescribed herbivory, and targeted ground application of herbicides. Impacts would result from dust, project site run-off, soil compaction, soil erosion, sedimentation, release of pollutants, and exhaustion of important soil seed banks.

“Backing fires” are allowable within all classes of streams, suggesting that organic matter, herb layers, woody material, and live vegetation adjoining streams could be damaged by ground fire. This may reduce the ability of these areas to filter sediments and maintain channel integrity. Backing fires have the potential to consume or damage vegetation flanking streams and remove ground litter thereby increasing the potential for surface erosion and sediment discharge, adversely affecting resources onsite and downstream.

Why impact would occur: The classification system utilized in the DPEIR would not identify all riparian and other aquatic habitat types for avoidance.

Evidence impact would be significant: The Project could substantially adversely affect riparian habitats by resulting in loss or further destruction of these vulnerable habitat types.

MITIGATION MEASURE 8a:

To reduce impacts to less than significant: A qualified biologist will delineate riparian and other aquatic habitat and adjacent areas that may be impacted by the Project, and establish buffer areas to ensure avoidance. Project activities will avoid the buffer area except for existing crossings of aquatic habitat.

If impacts are unavoidable, potential site-specific significant impacts will likely require additional analysis and related mitigation in a subsequent environmental document prepared by the Lead Agency.

Would the Project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption or other means? [CDFW added same question for non-federally protected wetlands]

COMMENT 9:

Section 4.2.2.4, Pages 4-121 to 4-153

Issue: The DPEIR does not address the potential for the Project to directly or indirectly impact wetlands not subject to the federal Clean Water Act, which are important habitats for a variety of species. Note that wetlands that are not subject to the federal Clean Water Act ("state" wetlands) are addressed under Fish and Game Code and policies of the California Fish and Game Commission.

Specific impact: Project activities could result in loss or degradation of wetlands.

Why impact would occur: Wetlands not subject to the Clean Water Act could be impacted by the Project would not be detected because no site-specific surveys by qualified biologists with expertise in wetland identification and delineation are required. Fixed buffer distances applied to WLPZ and ELZ areas may not adequately protect the site-specific conditions that vary by specific geologic, topographic and biological conditions, and therefore may be ineffective.

State wetlands lacking permanent water may not be detected within proposed treatment areas. Drought cycles may influence the condition of wetlands, making detection more problematic. Furthermore, some seasonal wetlands which support vernal pool species or semi-aquatic species (e.g. western spadefoot (*Spea hammondi*)), may exhibit no evidence

of recent ponding (because of drought effects) or may lack aquatic plant indicator species. Three criteria are used to identify wetlands: indicator plants, inundation or saturation, and hydric soils. Only one of the three wetland criteria is necessary to define state wetlands (Cowardin et al. 1978). Drought can also affect isolated springs and seeps, some of which currently are releasing no water, yet retain an ability to recover when drought abates.

Evidence impact would be significant: More than 90 percent of California wetlands have disappeared primarily by development and habitat destruction (EPA 2016; USGS 1996). Wetlands are vital to many wildlife species including migratory birds, and provide a number of ecological services. Federal and California resources agencies generally have a no-net-loss policy for wetlands. Loss or degradation of wetlands would constitute a significant adverse impact.

MITIGATION MEASURE 9a:

To reduce impacts to less than significant: A biologist with experience conducting wetland delineations will identify all wetlands, including both those subject to the Clean Water Act and those described in the Fish and Game Commission policies that may be impacted by the Project.

The proponent, under the guidance of a qualified biologist, will:

- Avoid impacts to wetlands. This may include installation of silt fencing or other materials around waters and wetlands.
- Establish vegetative buffer strips within vegetation treatment areas around wetlands to maintain ground litter, shade, and root systems to minimize soil erosion, prevent sediment discharge maintaining channel and side slope integrity. Vegetative buffer strips will be established based upon specific topography and site conditions. Extending these areas to the first slope break is recommended.

If impacts to wetlands are unavoidable, avoidance of potential significant impacts will likely require additional analysis and related site-specific mitigation in a subsequent environmental document prepared by the Lead Agency.

Would the Project conflict with provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan?

COMMENT 10:

Section 2.5.1, Page 2-56, etc.

Issue: There is considerable overlap between the SRA and lands under NCCPs and/or HCPs. The PDEIR does not provide any maps or metrics detailing this overlap, or any provisions that tiered projects will detract from the goals and objectives of NCCPs or HCPs. In the PDEIR BIO-4 Standard Project Requirement, a CAL FIRE Environmental

Coordinator is directed to request information regarding special status species in HCPs (NCCPs are not mentioned). However, HCPs (and unmentioned NCCPs) cover more than just special status species. They all account for patterns, ecological processes, and natural communities with the goal of keeping landscape-level areas intact and ecologically functional.

Specific impact: Vegetation treatment activities could conflict with the goals and objectives of HCPs/NCCPs and/or have a significant effect on conservation areas.

Why impact would occur: If project proponents do not know the locations of and the potential impacts to HCPs or NCCPs, projects might occur in conservation plan areas without consideration of how to minimize or avoid impacts. There are numerous large HCP and NCCPs comprising a substantial extent of the state. The measures (BIO-4) meant to indicate awareness of these landscape-level plans is inadequate as they do not recognize the need to respond to the presence of NCCPs or coordinating with implementing agencies of HCPs or NCCPs to avoid significant impacts.

Evidence impact would be significant: Conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan is deemed to be a significant impact.

MITIGATION MEASURE 10a:

To reduce impacts to less than significant: The PDEIR needs to map the location of HCPs, NCCPs, or other approved local, regional, or state habitat conservation plans relative to vegetation treatment project impact area (i.e., SRA). After determining the overlap, the plan will indicate whether total avoidance with HCP/NCCP lands is warranted or how treatment activities would not conflict with the goals and objectives of the HCPs/NCCPs. The Project proponent will coordinate with state or local implementing agencies to ensure treatment activities are compatible.

MANDATORY FINDINGS OF SIGNIFICANCE: Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or substantially reduce the number or restrict range of a rare or endangered plant or animal?

COMMENT 11:

Section 4.2.3.1, Page 4-156

Issue: DPEIR BIO-1 and BIO-2 would not identify all species that may be impacted by the Project that are rare or endangered under CEQA (CEQA Guidelines, § 15380).

As with Comment 4, there are several other categories of species under CEQA that are rare and endangered species, including but not limited to:

- CRPR species ranked 1B, 2, and in some cases rank 3 or 4 (see Comment 4)
- SSC (see Comment 4).
- Locally or regionally rare plants identified in a local or regional plan, policy, or regulation (See Comment 4)

Specific impact: Same as Comment 4 for CEQA rare and endangered species (CEQA Guidelines, § 15380).

Why impact would occur: Same as Comment 4 for CEQA rare and endangered species.

Evidence impact would be significant: CEQA rare and endangered species are among the most vulnerable species in California and often are threatened with extinction. The project could substantially reduce the number or restrict the range of CEQA rare and endangered species by resulting in further decline including local or regional extirpation of already highly vulnerable populations or habitat destruction.

MITIGATION MEASURE 11a:

To reduce impacts to less than significant: Identify all CEQA rare and endangered species that may be impacted by the Project through conducting an adequate and thorough database and literature review, as described in MM 4a. Implement MM 5a.

COMMENT 12:

4.2.3.1, Page 4-157

Issue: The DPEIR BIO-3 field review within the project area conducted by a project coordinator would often not identify presence or absence of CEQA rare and endangered species or their habitats that may be impacted by the Project.

As with Comment 5, other surveys and expertise is required to identify CEQA rare and endangered species that may be impacted by the project.

Specific impact: Same as Comment 5 for CEQA rare and endangered species.

Why impact would occur: Same as Comment 5 for CEQA rare and endangered species.

Evidence impact would be significant: CEQA rare and threatened species are among the rarest and endangered in California and often are threatened with extinction. The project could substantially reduce the number or restrict the range of CEQA rare and endangered species by resulting in further decline including local or regional extirpation of already highly vulnerable populations or habitat destruction.

Mitigation Measure 12a:

To reduce impacts to less than significant: Determine presence or absence of CEQA rare and endangered species or their habitats and avoid impacts on such species by implementing MM 5a.

COMMENT 13

Section 4.2.3.1, Page 4-158

DPEIR BIO-8, 9, and 10 do not address aquatic invasive species (e.g., mudsnails, mussels) and disease (e.g., sudden oak death, chytrid fungus) impacts on CEQA rare and endangered species (as defined in Comment 11).

Specific impact: Same as Comment 6 for CEQA rare and endangered species.

Why impact would occur: Same as Comment 6 for CEQA rare and threatened species.

Evidence impact would be significant: CEQA rare and endangered species are among the most vulnerable species in California and often are threatened with extinction. The project could substantially reduce the number or restrict the range of CEQA rare and endangered species by resulting in further decline including local or regional extirpation of already highly vulnerable populations or habitat destruction.

MITIGATION MEASURE 13a:

To reduce impacts to less than significant: The Project proponent will implement the protocols in MM 6a to decontaminate equipment and prevent the spread of aquatic invasive species and disease:

If impacts are unavoidable, potential site-specific significant impacts will likely require additional analysis and related mitigation in a subsequent environmental document prepared by a Lead Agency.

COMMENT 14:

Section Chapters 2, 4, and 5

Issue: The Project may impact 600,000 acres, which covers a vast area and a wide variety of habitats in California. 600,000 acres is 2.73 percent of the total treatable area of the state. For each of the bioregions, the estimates are likewise calculated at 2.73 percent of the total treatable area for that bioregion. However, due to the use of inadequate mapping standards where all vegetation is classed into three broad categories, it is impossible to determine if impacts would occur in sensitive natural communities, or if the total effect of the treatment would represent a significant impact. Additionally, impacts could be significant on natural communities that have not yet been designated as sensitive.

Specific impact: The quantification of potentially impacted acres is not adequate to determine level of significance.

Why impact would occur: Sensitive and non-sensitive habitats may be disproportionately impacted by the Project; greater than 2.73 percent of these habitats may be impacted.

Evidence impact would be significant: As the information disclosure is incomplete, there is insufficient information to make an informed decision on whether the Project has the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, or threaten to eliminate a plant or animal community.

MITIGATION MEASURE 14a:

To minimize significant impacts:

Implement MM 7a to minimize impacts on the quality of the environment, substantially reduce the habitat of a fish or wildlife species, or threaten to eliminate a plant or animal community.

III. Mitigation Measure or Alternative and Related Impact Shortcoming

Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by CDFW or USFWS?

COMMENT 15:

Section 4.2.3.1, Page 4-158

Issue: DPEIR BIO-7 50-foot and 15-foot buffer areas around species status species, nest sites, or den locations are generally inadequate to avoid impacts on these species.

Specific impact: Vegetation treatment activities could result in injury, mortality, or reduced survivorship or reproductive success of special status species.

Why impact would occur: Special status species would be impacted by vegetation treatment activities including: prescribed fire, manual activities, mechanical activities, prescribed herbivory, and targeted ground application of herbicides. Impacts would result from noise, dust, project site run-off, visual disturbances, soil compaction, soil erosion, sedimentation, release of pollutants, spread of plant pathogens such as *Phytophthora*, spread of invasive plant species, creation of conditions that are favorable for the spread of invasive species, exhaustion of important soil seed banks, and other impacts.

Evidence impact would be significant: The Project could substantially adversely affect special status species by resulting in further decline including local or regional extirpation of already vulnerable populations.

MITIGATION MEASURE 15a:

To reduce impacts to less than significant: A qualified biologist will establish special status species buffer areas based on the species-specific sensitivity, life cycle stage, local conditions, and documented and CDFW/USFWS-recognized species-specific recommended avoidance buffers.

The buffer area will be as large as necessary to ensure avoidance of species impacts. In some cases, the buffer distance may be considerably more than the proposed 50 and 15 feet, particularly for species defined as sensitive. Sections 919.3 and 919.9 of the FPRs provide for modification through consultation with CDFW on a case-by-case basis.

Regarding plants: under the guidance of a qualified biologist, the Project proponent will establish a buffer area of 50 feet or more around CEQA special status plant occurrences or populations that may be impacted by the Project. Experts on the affected plant taxa and how activities could affect them may recommend a smaller or larger buffer.

The Project proponent will install and maintain high-visibility flagging or fencing at the outer margins of buffer areas surrounding the plant populations before and during Project activities and prohibit all Project activities within the buffer zone. These measures will be included in all Project plans and contracts.

Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS?

COMMENT 16

Section 2.5.1, Page 2-57

Issue: DPEIR BIO-6 states that older, acorn producing oaks may be retained during activities, indicating that young oaks and acorn mast would not be retained.

Specific impact: Vegetation treatment activities could result in the reduction in the extent of or local extirpation of some oak natural communities through the elimination of oak regeneration and recruitment.

Why impact would occur: Manual, mechanical, or fire removal of understory material would result in the elimination of young oaks and oak mast. This would negatively impact oak regeneration which is already well documented as low (Zavaleta et al. 2007).

Evidence impact would be significant: Oak natural communities are sensitive and facing many threats, including: development, fire, climate change, and grazing. Some oak natural communities are rare, with a state-rank of S3 or higher. Examples that could be impacted by treatment activities include Oregon white oak woodlands and Valley oak woodlands.

CDFW and CNPS maintain a list of natural communities derived from “A Manual of California Vegetation.” This publication includes global and state rarity rankings.

MITIGATION MEASURE 16a:

To reduce impacts to less than significant: Implement MM 7a to avoid impacts on young oaks and acorn masts.

MANDATORY FINDINGS OF SIGNIFICANCE Does the Project have the potential to threaten to eliminate a plant or animal community, or substantially reduce the number or restrict range of a rare or endangered plant or animal?

COMMENT 17

Section 4.2.3.1, Page 4-158

DPEIR BIO-7 50 foot and 15 foot buffer areas around CEQA rare and endangered species, nest sites, or den locations are generally inadequate to avoid impacts on these species.

Specific impact: Same as Comment 15 for CEQA rare and endangered species.

Why impact would occur: Same as Comment 15 for CEQA rare and threatened species.

Evidence impact would be significant: CEQA rare and endangered species are among the most vulnerable species in California and often are threatened with extinction. The project could substantially reduce the number or restrict the range of CEQA rare and endangered species by resulting in further decline including local or regional extirpation of already highly vulnerable populations or habitat destruction.

MITIGATION MEASURE 17a:

To reduce impacts to less than significant: A qualified biologist will establish avoidance buffer areas around CEQA rare and endangered species by implementing MM 15a.

IV. Closely Related Past, Present, and Reasonably Foreseeable Probable Future Projects (*CUMULATIVE IMPACTS, MANDATORY FINDING OF SIGNIFICANCE: Does the Project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that incremental effects of the Project are considerable when viewed in connection with effects of past projects, effects of other current projects, and effects of probable future projects?*)

MANDATORY FINDINGS OF SIGNIFICANCE Does the Project have potential to degrade quality of environment, substantially reduce habitat of a fish or wildlife species, cause fish or wildlife population to drop below self-sustaining levels?

COMMENT 18:

Section 5.3.2 & 5.3.3, Pages 5-19 to 5-21

Issue: The cumulative effects analysis does not appear to consider and evaluate the impacts of an appropriate range of past, present and probable future projects in and near the Project area and how their impacts could add to those of the Project's to create a significant adverse cumulative impact on biological resources. Projects whose impacts will be considered include, but are not limited to, power line right-of-ways, highway construction, residential and commercial development, and all types of exemption notices. All of these to varying degrees entail removal of vegetation. For example, in less than one year, beginning in September of 2015, more than 40,000 acres have been the subject of exemption notices for the salvage of dead and dying trees submitted under Section 1038(k) of the FPRs. Many of these and others occur in the area covered by the Governor's State of Emergency declaration, and Executive Order (EO) regarding State's record drought conditions, which have exacerbated bark beetle infestation that is killing millions of trees across California. The Tree Mortality Task Force identified approximately 228,633 acres of Tier 1 High Hazard Zones and approximately 6.3 million acres of Tier 2 High Hazard Zones (as defined by watersheds) within the southern Sierra Nevada's (Tuolumne County south through Kern County). Many of these areas should be expected to be under future exemption notices, emergency notices, and THPs, the impacts of which will be estimated and included in the cumulative effects analysis.

Specific impact: Several forest vegetation communities including tree and understory growth would be removed and degraded. A variety of cavity user or nester species, including representatives from all classes of terrestrial animals, use partially live or dead trees for various life functions (Nietro et al. n.d.). These species' habitat would be degraded and the species would likely be killed or injured, or experience reduced survivorship or reproduction.

Why impact would occur: Project activities, such as prescribed fire, manual activities, and mechanical activities would cut, remove, and burn tree and understory vegetation habitat (alive and dead).

Evidence impact would be significant: Vast areas of California's varied forests have recently been deeply impacted by projects to remove dead trees, which provide high habitat value. According to the U.S. Forest Service (Nietro et al. n.d.):

The dependency of many species on dead trees ranges from absolute to incidental, but for some species the presence of dead trees can mean the difference between local extinction and the perpetuation of existing populations. In forests, cavity-nesting birds may account for 30-45 percent of the total bird population (Jackman 1974a; Raphael and White 1984, Scott et al. 1980). Woodpeckers are dependent on snags and other dead wood for nesting, roosting, foraging, and other functions. Woodpecker nest cavities when abandoned are used by other animals (secondary cavity users) for nest sites. Some researchers believe that the use of cavities has allowed birds to become polygamous, nest earlier, have larger clutches, and fledge more young per nesting effort than noncavity-nesting birds (Nice 1957, Steinhart 1981).

The absence of suitable snags can be the major limiting factor for some snag-dependent wildlife populations (Haapanen 1965, Balda 1975). The abundance and diversity of hole-nesting birds are directly related to the dead and dying wood characteristics and general vegetation features of a forest. Morrison and Morrison (1983), in analyzing 30 years of Audubon Society Christmas bird count data, found that populations of three species--common (northern) flicker, hairy woodpecker, and downy woodpecker--show a downward trend in the Pacific Northwest. They speculate that this may be the result of intensive forest management practices."

The Project will exacerbate these already potentially significant impacts from dead tree removal as described above, and therefore has the potential to degrade the quality of the environment and substantially reduce the habitat of a fish or wildlife species.

MITIGATION MEASURE 18a:

To minimize significant impacts: Minimize exacerbation of vast forest habitat degradation by conducting Project activities in a way that minimizes to the extent feasible destruction of California forests.

CDFW recommends digitizing all projects being conducted under the Governor's EO and all CAL FIRE Exemptions/Emergencies, and ensure these projects are included in the DPEIR Cumulative Impacts analysis.

V. Editorial Comments and/or Suggestions

Global

- CDFW is intermittently referred to as DFG. Please update these references to CDFW.

Chapter 2

- Section 2.5.1, page 2-53: ADM-3 states that if a SPR does not perform adequately to protect the specified resource the project coordinator should determine adaptation strategies in coordination with the contractor and/or CAL FIRE personnel. It is unclear if the potential impacts of the “adaptation strategies” must be within the original PSA for the project. Example: if the staging area must be moved to a new location, but the new location and potential impacts were not included in the original PSA would the “adaptation strategies” of moving the staging area be allowed? CDFW recommends a qualified biologist is also consulted prior to implementing “adaptation strategies” that may impact fish and wildlife resources, and that CDFW is notified.

Chapter 4

- Section 4.2.1, page 4-79: Please include the specific website for the Wildlife Action Plan. <https://www.wildlife.ca.gov/SWAP>
- Section 4.2.1.1, page 4-79: The California Laws and Regulations list is incomplete and does not include other relevant Fish and Game Codes, such as 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 nongame bird). BOF is responsible for complying with all applicable local, State, and Federal laws, including the Fish and Game Code.
- Section 4.2.1.1, page 4-80: Capitalize “fish” in “fish and Game Commission.”
- Section 4.2.1.1, page 4-80: This section cites “The California Endangered Species Act...was enacted in 1984...” Please correct this reference to identify the California Endangered Species Act was enacted in 1970 (Stats. 1970, ch. 1510, § 3). The current basic structure was added to the California Fish and Game Code in 1984, replacing the original Act from 1970 (stats. 1984, ch. 1162, §§ 5 & 6: stats. 1984, ch. 1240, §§ 1 & 2.).
- Section 4.2.1.2, pages 4-85 to 4-114: The Biological Setting and Concerns by Bioregion includes examples of sensitive species that occur in each bioregion, yet they do not meet the definition of “special status species” in the glossary, and therefore would not be identified in the PSA.
- Section 4.2.1.2, page 4-98: Text references the incorrect table for Sacramento Valley bioregion. Text references 4.2-17 and 4.2-18. Should be 4.2-11 and 4.2-12.
- Section 4.2.2.1, page 4-114, 4-115, 4-120: Use of direct/indirect take is inaccurate. Neither under the federal nor California Endangered Species Acts is there a reference to “direct” or “indirect” take. There is only “take.” The authors may be referring to mortality vs. habitat loss or modification. Additionally, the overarching assumption that treatment activities will avoid mortality of a special status species is not substantiated given measures to determine presence or absence of special status species are inadequate.
- Section 4.2.2.1, page 4-115: This section states a significant effect occurs when there is a violation of any state or federal wildlife protection law. The DPEIR does

not address Fish and Game Code sections 3503, 3503.5, or 3513, nor does the PSA or SPRs include any protection measures for nesting birds. The trees, shrubs, and grasses that would be removed and disturbed within and in the vicinity of the vegetation treatment activities likely provide nesting habitat for songbirds and raptors. If vegetation treatment activities occur during the breeding season (February through mid-September), BOF is responsible for ensuring that implementation of the Project does not result in any violation of the Migratory Bird Treaty Act or relevant Fish and Game Codes as referenced above. Due to the nature of the VTP, it is unclear how BOF will comply with the Fish and Game Codes referenced above, and avoid violating state or federal wildlife protection laws and, thus, a significant effect under CEQA by BOF's own definition.

- Section 4.2.2.2, page 4-115: Please include the specific website for CNDDDB <https://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp>
- Section 4.2.2.2, page 4-116: "(subterranean (" has a typo with extra parenthesis.
- Section 4.2.2.3.4, page 4-145: In the first paragraph in the Invasive Species section, the fifth sentence is unclear: "Prescribed herbivory treatments are expected to have a net beneficial effect on the status of non-native plant populations since livestock would often be used to reduce the spread of non-native seeds in livestock, from the movement of animals during implementation of projects."
- Section 4.5.1.1: This section describes the regulatory setting regarding water quality-related requirements. Please include in this section a discussion of Fish and Game Code section 5650 which describes the prohibition on discharge of specified substances.

Appendix A

- Section A.1.3: This section inaccurately describes the role of CDFW's Vegetation Classification and Mapping Program (VegCAMP) in mapping vegetation formations for the VTP. Specifically, the DPEIR conflates the Manual of California Vegetation (MCV) with the Survey of California Vegetation (SCV). While the MCV provides a description of vegetation and vegetation patterns in California, the mapped data used in VTP crosswalking comes from SCV data. Please edit this section to accurately describe the mapping process.

Appendix D

- Appendix D: There is no literature cited section for Appendix D. However, there are multiple parenthetical references. The references are not included in DPEIR Chapter 9 References. Please include these references.

Appendix J

- Appendix J, pages J-3 to J-13: The VTP Burn Plan Specific Resources Review questions include several questions that are also included in the PSA and SPRs; however, there are several inconsistencies. The VTP Burn Plan includes additional biological resources questions/evaluations, and it is unclear why items in the VTP Burn Plan are not included in the PSA or SPRs for all VTP projects. The VTP Burn Plan takes into consideration 'rare' species and 'sensitive' species, which are not

evaluated in the PSA or SPRs. Other types of vegetation treatments could potentially adversely affect species that can be shown to meet the criteria for Endangered, Threatened, or Rare as specified in the CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, and Section 15380), and should be fully considered in the environmental analysis for all VTP projects. The Specific Resources Review questions also include a list of potential mitigation measures which are not included in the PSA or SPRs. Several of the biological resources questions include a statement of CDFW reviewing the project, or conducting a site inspection, and making a determination and/or conclusion about potentially significant impacts to biological resources. CDFW is not ultimately responsible for conducting an adequate analysis of significant impacts on biological resources (see Impact Analysis above).

ENVIRONMENTAL DATA

CEQA requires that information developed in environmental impact reports and negative declarations be incorporated into a database which may be used to make subsequent or supplemental environmental determinations (Pub. Resources Code, § 21003, subd. (e)). Accordingly, please report any special status species and natural communities detected during Project surveys to the California Natural Diversity Database (CNDDDB). The CNDDDB field survey form can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/CNDDDB_FieldSurveyForm.pdf. The completed form can be mailed electronically to CNDDDB at the following email address: CNDDDB@wildlife.ca.gov. The types of information reported to CNDDDB can be found at the following link: http://www.dfg.ca.gov/biogeodata/cnddb/plants_and_animals.asp.

FILING FEES

The Project, as proposed, would have an impact on fish and/or wildlife, and assessment of filing fees is necessary. Fees are payable upon filing of the Notice of Determination by the Lead Agency and serve to help defray the cost of environmental review by CDFW. Payment of the fee is required in order for the underlying project approval to be operative, vested, and final. An additional filing fee is required for each separate environmental document prepared for Project subsequent activities unless the Project proponent obtains a No Effect Determination from CDFW (Cal. Code Regs, tit. 14, § 753.5; Fish & G. Code, § 711.4; Pub. Resources Code, § 21089.)

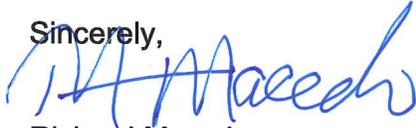
Ms. Edith Hannigan, Board Analyst
California State Board of Forestry and Fire Protection
May 31, 2016
Page 29

CONCLUSION

CDFW appreciates the opportunity to comment on the DPEIR to assist BOF in identifying and mitigating Project impacts on biological resources.

Questions regarding this letter or further coordination should be directed to William Condon, Environmental Program Manager, at (916) 651-3110, or William.Condon@wildlife.ca.gov.

Sincerely,



Richard Macedo
Branch Chief
Habitat Conservation Planning Branch

Attachments

- A. Comment Organization Key
- B. CDFW Response to Notice of Preparation

cc: Office of Planning and Research, State Clearinghouse, Sacramento
Post Office Box 3044
Sacramento, CA 95812-3044

J. Keith Gilles, Ph.D., Chair
California Board of Forestry and Fire Protection
PO BOX 944246
Sacramento, CA 94244-2460

Russell K. Henly, Ph.D.
Assistant Secretary of Forest Resources Management
California Natural Resources Agency
1416 Ninth Street, Suite 1311
Sacramento, CA 95814

Mr. Dennis Hall
Assistant Deputy Director, Forest Practice
California Department of Forestry and Fire Protection
PO BOX 944246
Sacramento, CA 94244-2460

Mr. William Short
Supervising Engineering Geologist
California Department of Conservation
California Geological Survey

Ms. Edith Hannigan, Board Analyst
California State Board of Forestry and Fire Protection
May 31, 2016
Page 30

Forest and Watershed Geology Program
801 K Street, MS 13-40
Sacramento, CA 95814

Mr. Paul Hann
Manager
State Water Resources Control Board
Division of Water Quality
Surface Water / Regulatory Branch
1001 I Street 15th Floor
Sacramento, CA 95814

Ms. Angela Wilson
Senior Engineering Geologist
Forest Activities Program Manager
Central Valley Regional Water Quality Control Board
364 Knollcrest Dr. Suite 205
Redding, CA 96002

Mr. Fred Blatt
Division Chief
Nonpoint Source and Surface Water Protection Division
North Coast Regional Water Quality Control Board
5550 Skylane Blvd. Suite A
Santa Rosa CA 95403-1072

ec: California Department of Fish and Wildlife

Sandra Morey, Deputy Director
Ecosystem Conservation Division
Sandra.Morey@wildlife.ca.gov

Stafford Lehr, Deputy Director
Wildlife and Fisheries Division
Stafford.Lehr@wildlife.ca.gov

William Condon, Environmental Program Manager
Habitat Conservation Planning Branch
William.Condon@wildlife.ca.gov

Cathie Vouchilas, Environmental Program Manager
Habitat Conservation Planning Branch
Cathie.Vouchilas@wildlife.ca.gov

Ryan Mathis, Senior Environmental Scientist (Supervisor)

Habitat Conservation Planning Branch
Ryan.Mathis@wildlife.ca.gov

Elliot Chasin, Senior Environmental Scientist (Specialist)
Habitat Conservation Planning Branch
Elliot.Chasin@wildlife.ca.gov

Melanie Day, Senior Environmental Scientist (Specialist)
Habitat Conservation Planning Branch
Melanie.Day@wildlife.ca.gov

Neil Manji, Regional Manager
Northern Region (Region 1)
Neil.Manji@wildlife.ca.gov

Tina Bartlett, Regional Manager
North Central Region (Region 2)
Tina.Bartlett@wildlife.ca.gov

Scott Wilson, Regional Manager
Bay Delta Region (Region 3)
Scott.Wilson@wildlife.ca.gov

Julie Vance, Regional Manager
Central Region (Region 4)
Julie.Vance@wildlife.ca.gov

Ed Pert, Regional Manager
South Coast Region (Region 5)
Ed.Pert@wildlife.ca.gov

Leslie MacNair, Regional Manager
Inland Deserts Region (Region 6)
Leslie.MacNair@wildlife.ca.gov

Tom Lupo, Deputy Director
Biogeographic Data Branch
Tom.Lupo@wildlife.ca.gov

Curt Babcock, Environmental Program Manager
Northern Region (Region 1)
Curt.Babcock@wildlife.ca.gov

Joe Croteau, Environmental Program Manager
Northern Region (Region 1)
Joe.Croteau@wildlife.ca.gov

Ms. Edith Hannigan, Board Analyst
California State Board of Forestry and Fire Protection
May 31, 2016
Page 32

Jeff Drongesen, Environmental Program Manager
North Central Region (Region 2)
Jeff.Drongesen@wildlife.ca.gov

Craig Weightman, Environmental Program Manager
Bay Delta Region (Region 3)
Craig.Weightman@wildlife.ca.gov

Annee Ferranti, Environmental Program Manager
Central Region (Region 4)
Annee.Ferranti@wildlife.ca.gov

Betty Courtney, Environmental Program Manager
South Coast Region (Region 5)
Betty.Courtney@wildlife.ca.gov

Gail Sevens, Environmental Program Manager
South Coast Region (Region 5)
Gail.Sevens@wildlife.ca.gov

Bruce Kinney, Environmental Program Manager
Inland Deserts Region (Region 6)
Bruce.Kinney@wildlife.ca.gov

REFERENCES

- Backer, D. M., Jensen, S. E., & Mcpherson, G. R. (2004). Impacts of Fire-Suppression Activities on Natural Communities. *Conservation Biology*, 18(4), 937-946.
- Ball, A., & Truskewycz, A. (2013). Polyaromatic hydrocarbon exposure: an ecological impact ambiguity. *Environmental Science & Pollution Research*, 20(7), 4311-4326.
- Bergeon Burns, C. M., Olin, J. A., Woltmann, S., Stouffer, P. C., & Taylor, S. S. (2014). Effects of Oil on Terrestrial Vertebrates: Predicting Impacts of the Macondo Blowout. *Bioscience*, 64(9), 820-828.
- California Invasive Pest Plant Council's "Preventing the Spread of Invasive Plants: Best Management Practices for Land Managers (3rd edition)" (2012).
- California Department of Fish and Wildlife. California Interagency Wildlife Task Group. 2014. CWHR version 9.0 personal computer program. Sacramento, CA.
- Chang, S. E., Stone, J., Denies, K., & Piscitelli, M. (2014). Consequences of oil spills: a review and framework for informing planning. *Ecology & Society*, 19(2), 457-472.
- Cowardin L.M., V. Carter, F.C. Golet and E. T. LaRoe. 1979. Classification of wetlands and deep water habitats of the United States. Report FWS/OBS-79/31, USDI, U.S. Fish and Wildlife Service, Biological Services Program, Washington D.C.
- Leppig, Gordon and Jeffrey W. White, 2006. Conservation of Peripheral Plant Populations In California. *Madrono*, Vol. 53, No. 3, pp. 264–274.
- Neitro et al. Snags (Wildlife Trees). U.S. Forest Service. Accessed online May 20, 2016 at: http://www.fs.usda.gov/detail/r6/landmanagement/resourcemanagement/?cid=fsbdev2_026701
- Nielson, J. L., J. M. Scott and J.L. Aycrigg. 2001. Endangered species and peripheral populations: cause for conservation. *Endangered Species Update* 18:194–197.
- Semlitsch Raymond D., and J. Russell Bodie, 2003. Biological Criteria for Buffer Zones around Wetlands and Riparian Habitats for Amphibians and Reptiles. *Conservation Biology* Vol. 17, No. 5; pp 1219-1228.
- U.S. Department of Agriculture. 2005. Cibola National Forest, Torrance County, Arizona. Tajique Watershed Protection Project, Final Environmental Impact Statement.
- U.S. Environmental Protection Agency. 2016. *National Wetland Condition Assessment 2011: A Collaborative Survey of the Nation's Wetlands*. EPA-843-R- 15-005. US Environmental Protection Agency, Washington, DC.

Ms. Edith Hannigan, Board Analyst
California State Board of Forestry and Fire Protection
May 31, 2016
Page 34

U.S. Geological Survey National Water Summary on Wetland Resources. 1996. U Water-Supply Paper 2425.

Zaveleta, E.S., K.B. Hulvey, and B. Fulfroost. 2007. Regional patterns of recruitment success and failure in two endemic California oaks. *Diversity and Distributions* 13:735-745.



State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Director's Office
1416 Ninth Street, 12th Floor
Sacramento, CA 95814
www.wildlife.ca.gov

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



October 26, 2015

Ms. Edith Hannigan
Department of Forestry and Fire Protection
P.O. Box 94244-2460
Sacramento, CA 94244-2460

ATTN: Mr. Matt Dias
Acting Executive Officer,
California Board of Forestry and Fire Protection

Dear Ms. Hannigan:

**NOTICE OF PREPARATION, DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT
REPORT FOR CALIFORNIA BOARD OF FORESTRY AND FIRE PROTECTION
VEGETATION TREATMENT PROGRAM**

Thank you for the opportunity to provide comments to the October 5, 2015 Notice of Preparation (NOP) for the intended Draft Programmatic Environmental Impact Report (DPEIR) for the California Board of Forestry and Fire Protection's (Board's) Vegetation Treatment Program (VTP).

The California Department of Fish and Wildlife (CDFW) has jurisdiction over the conservation, protection, and management of fish, wildlife, and habitat necessary for biologically sustainable populations of those species (Fish & G. Code, § 1802). CDFW also has regulatory authority under the California Endangered Species Act (CESA), Native Plant Protection Act, the Natural Community Conservation Planning Act, and other provisions of Fish and Game Code that afford conservation and protection to California's fish and wildlife resources.

CDFW offers the following general comments and recommendations in response to the NOP to aid Board's efforts in adequately scoping important issues. CDFW will provide additional and more specific comments after release of the DPEIR.

Consistency with Existing Plans: CDFW recommends the VTP DPEIR reference and be consistent with existing applicable plans such as the 2015 State Wildlife Action Plan, various cooperative fire protection agreement and operation plans, habitat conservation plans and natural community conservation plans.

Vegetation Analysis, Mapping, and Standardization: CDFW has worked closely with local, state, and federal agency partners to develop the Second Edition of *A Manual of California Vegetation* to provide a standardized, floristic-based systematic classification and description of vegetation in California (Sawyer et. al, 2009). The method of vegetation classification used in this manual represents the standards for large-scale vegetation maps recently adopted by the State of California. CDFW recommends the DPEIR use this vegetation classification system to help better determine the extent of common, rare, and unique habitats in need of protection and allow for a more comprehensive planning effort.

Subsequent Environmental Review: CDFW is concerned that forthcoming projects that will be tiered to the VTP PEIR may prompt parties to merely query the California Natural Diversity Database (CNDDDB) or the Biogeographic Information and Observation System (BIOS) in lieu of on-the-ground general biological surveys. Although these databases provide useful information for determining which species are potentially present on a site, they alone are not always an appropriate substitute for project-level general biological surveys. It is not clear what criteria would determine the need for surveys.

Projects conducted under the VTP PEIR within habitat occupied by species listed as threatened, endangered, or candidate for listing under CESA would require further consultation with CDFW. Such pre-project consultation would be necessary to determine if a permit would be warranted because of the potential for the incidental take of a listed species (Fish & G. Code, § 2080 *et seq.*).

Climate Change: One of greatest effects of a changing climate in California will be on the frequency and intensity of fires. As the state warms, the length of the dry season expands, and precipitation becomes more unpredictable, vegetation regimes will change across the state. These altered regimes may be more or less fire-adapted, in a climate that is potentially less resilient to large fires. CDFW recommends that the DPEIR incorporate the most current scientific literature detailing the effects of climate change on California's vegetation and fire regime.

Invasive Species Management: CDFW believes removing invasive species and retaining native species should be a goal for every VTP project, not on a case-by-case basis. VTP projects should include field analyses and effective strategies to prevent invasive species from expanding into project treatment areas. Post-treatment follow-up monitoring should also be considered to address changed conditions stemming from the project and include mitigation to actually effectively control and remove noxious and problematic weeds.

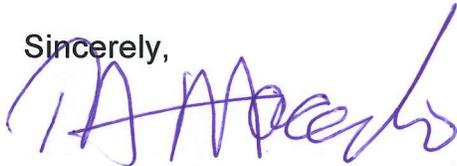
Coordination with CDFW: The 1994 *Interim Joint CDFW/Board Policy on Pre, During, and Post Fire Activities and Wildlife Habitat* (Joint Policy) outlines a process to facilitate

Ms. Edith Hannigan
Department of Forestry and Fire Protection
October 26, 2015
Page 3

needed coordination to achieve common goals and objectives, develop implementation plans for fire-related activities and address potential effects on wildlife habitat. CDFW recommends VTP PEIR acknowledge this Joint Policy as part of a basis for a cooperative working relationship between CalFire and CDFW regarding CalFire's VTP.

If you have any questions, please contact CDFW Environmental Program Manager William Condon at (916) 651-3110 or William.Condon@wildlife.ca.gov.

Sincerely,



Richard Macedo
Chief, Habitat Conservation Planning Branch

Literature Cited:

Sawyer, John O.; Keeler-Wolf, Todd and Julie M. Evens. 2009. A Manual of California Vegetation. Second Edition. California Native Plant Society, Sacramento, California, USA. 1,300 pages. ISBN 978-0-943460-49-9

cc: J. Keith Gilliss, Ph.D., Chair
California Board of Forestry and Fire Protection
PO BOX 944246
Sacramento, CA 94244-2460

Mr. Dennis Hall
Assistant Deputy Director, Forest Practice
California Department of Forestry and Fire Protection
PO BOX 944246
Sacramento, CA 94244-2460

Mr. William Short
Supervising Engineering Geologist
California Department of Conservation
California Geological Survey
Forest and Watershed Geology Program
801 K Street, MS 13-40
Sacramento, CA 95814

Ms. Edith Hannigan
Department of Forestry and Fire Protection
October 26, 2015
Page 4

Mr. Paul Hann
Manager
State Water Resources Control Board
Division of Water Quality
Surface Water / Regulatory Branch
1001 I Street 15th Floor
Sacramento, CA 95814

Ms. Angela Wilson
Senior Engineering Geologist
Forest Activities Program Manager
Central Valley Regional Water Quality Control Board
364 Knollcrest Dr. Suite 205
Redding, CA 96002

Mr. Fred Blatt
Division Chief
Nonpoint Source and Surface Water Protection Division
North Coast Regional Water Quality Control Board
5550 Skylane Blvd. Suite A
Santa Rosa CA 95403-1072

cc: California Department of Fish and Wildlife

Sandra Morey, Deputy Director
Ecosystem Conservation Division
Sandra.Morey@wildlife.ca.gov

Neil Manji, Regional Manager
Northern Region (Region 1)
Neil.Manji@wildlife.ca.gov

Tina Bartlett, Regional Manager
North Central Region (Region 2)
Tina.Bartlett@wildlife.ca.gov

Scott Wilson, Regional Manager
Bay Delta Region (Region 3)
Scott.Wilson@wildlife.ca.gov

Ms. Edith Hannigan
Department of Forestry and Fire Protection
October 26, 2015
Page 5

Julie Vance, Regional Manager
Central Region (Region 4)
Julie.Vance@wildlife.ca.gov

Ed Pert, Regional Manager
South Coast Region (Region 5)
Ed.Pert@wildlife.ca.gov

Leslie MacNair, Regional Manager
Inland Deserts Region (Region 6)
Leslie.MacNair@wildlife.ca.gov

Steve Schoenig, Chief
Biogeographic Data Branch
Steve.Schoenig@wildlife.ca.gov

Curt Babcock, Environmental Program Manager
Northern Region (Region 1)
Curt.Babcock@wildlife.ca.gov

Joe Croteau, Environmental Program Manager
Northern Region (Region 1)
Joe.Croteau@wildlife.ca.gov

Jeff Drongesen, Environmental Program Manager
North Central Region (Region 2)
Jeff.Drongesen@wildlife.ca.gov

Craig Weightman, Environmental Program Manager
Bay Delta Region (Region 3)
Craig.Weightman@wildlife.ca.gov

Annee Ferranti, Environmental Program Manager
Central Region (Region 4)
Annee.Ferranti@wildlife.ca.gov

Betty Courtney, Environmental Program Manager
South Coast Region (Region 5)
Betty.Courtney@wildlife.ca.gov

Gail Sevrens, Environmental Program Manager
South Coast Region (Region 5)
Gail.Sevrens@wildlife.ca.gov

Ms. Edith Hannigan
Department of Forestry and Fire Protection
October 26, 2015
Page 6

Bruce Kinney, Environmental Program Manager
Inland Deserts Region (Region 6)
Bruce.Kinney@wildlife.ca.gov

William Condon, Environmental Program Manager
Habitat Conservation Planning Branch
William.Condon@wildlife.ca.gov

Cathie Vouchilas, Environmental Program Manager
Habitat Conservation Planning Branch
Cathie.Vouchilas@wildlife.ca.gov