

STAFF SUMMARY FOR FEBRUARY 8-9, 2017

8. NORTHERN SPOTTED OWL (CONSENT)**Today's Item**Information Action

Adopt findings for the Aug 25, 2016 decision to accept the petition to list northern spotted owl (*Strix occidentalis caurina*) as a threatened species pursuant to Section 2075.5, Fish and Game Code.

Summary of Previous/Future Actions

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|--|------------------------------------|
| • Received petition | Sept 7, 2012 |
| • FGC transmits petition to DFW | Sept 10, 2012 |
| • Published notice of receipt of petition | Oct 5, 2012 |
| • Approved DFW request for 30-day extension | Dec 12, 2012; San Diego |
| • Received DFW's evaluation and recommendation | Mar 6, 2013; Mount Shasta |
| • Deferred decision whether listing may be warranted | Apr 17, 2013; Santa Rosa |
| • FGC determined listing may be warranted | Aug 7, 2013; San Luis Obispo |
| • Approved DFW request for six month extension | Dec 3, 2014; Van Nuys |
| • Received DFW status review report | Feb 10-11, 2016; Sacramento |
| • Discussion; deferred action to Jun 2016 meeting | April 13-14, 2016; Santa Rosa |
| • Discussion; deferred action to Aug 2016 meeting | Jun 22-23, 2016; Bakersfield |
| • Determination that listing is warranted | Aug 24-25, 2016; Folsom |
| • Today adopt findings | Feb 8-9, 2017; Rohnert Park |

Background

On Aug 25, 2016, FGC made a finding pursuant to Fish and Game Code Section 2075.5, that the petitioned action to list northern spotted owl as threatened under the California Endangered Species Act is warranted.

Significant Public Comments

1. Support for adopting findings for northern spotted owl; encouraging expediting the administrative process for this species given the potential for changes in federal oversight of endangered and threatened species; and stating that FGC and DFW must maintain sustainable local management opportunities considering potential major negative impacts of federal administrative impositions are possible (Exhibit 2).

Recommendation

FGC staff: Adopt staff's proposed notice of findings that listing northern spotted owl as threatened is warranted pursuant to Section 2075.5 of the Fish and Game Code.

Exhibits

1. [Draft notice of findings](#)
2. [Email from Tom O'Key, received Jan 23, 2017](#)

STAFF SUMMARY FOR FEBRUARY 8-9, 2017

Motion/Direction

Moved by _____ and seconded by _____ that the Commission adopts the consent calendar, items 5-9.

NOTICE OF FINDINGS

Northern Spotted Owl

(Strix occidentalis caurina)

NOTICE IS HEREBY GIVEN that the California Fish and Game Commission (Commission), at its meeting in Folsom, California on August 25, 2016, made a finding pursuant to Fish and Game Code section 2075.5, that the petitioned action to add the Northern Spotted Owl (*Strix occidentalis caurina*) to the list of threatened species under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.) is warranted. (See also Cal. Code Regs., tit. 14, § 670.1, subd. (i).)

NOTICE IS ALSO GIVEN that, at its February 8, 2017 meeting in Rohnert Park, California, the Commission adopted the following findings outlining the reasons for its determination.

I. Background and Procedural History

On September 7, 2012, the Commission received the "Petition to List the Northern Spotted Owl as 'Threatened' or 'Endangered' Under the California Endangered Species Act" (September 4, 2012; hereafter, the Petition), as submitted by the Environmental Protection Information Center (Petitioner). Commission staff transmitted the Petition to the Department of Fish and Wildlife (Department) pursuant to Fish and Game Code section 2073 on September 10, 2012, and the Commission published formal notice of receipt of the Petition on October 5, 2012 (Cal. Reg. Notice Register 2012, No. 40-Z, p. 1490).

The Department requested a 30 day extension on November 19, 2012, and the Commission approved the extension on December 12, 2012. After evaluating the Petition and other relevant information the Department possessed or received, the Department determined that based on the information in the Petition, there was sufficient scientific information to indicate that the petitioned action may be warranted, and recommended the Commission accept the Petition in an evaluation dated February 6, 2013. At its meeting on March 6, 2013, the Commission formally received the Department's petition evaluation. At its meeting on April 17, 2013 the Commission considered the petition evaluation as well as an errata and corrections document filed by the Department on April 15, 2013, and postponed further deliberations concerning the petition to receive further information on questions raised during the April meeting. At its August 7, 2013 meeting, the Commission received further comments, deliberated, and voted to accept the Petition and initiate a review of the species' status in California, finding that it contained sufficient information to indicate the petitioned action may be warranted. Upon publication of the Commission's notice of determination as required by

Fish and Game Code Section 2074.2, subdivisions (e)(2) and (f), the Northern spotted owl was designated a candidate species on December 11, 2013 (Cal. Reg. Notice Register 2013, No. 52-Z, pp. 2085-2092).

Following the Commission's designation of the Northern Spotted Owl as a candidate species, the Department notified affected and interested parties and solicited data and comments on the petitioned action pursuant to Fish and Game Code section 2074.4. (see also Cal. Code Regs., tit. 14, § 670.1(f)(2).) Subsequently, the Department commenced its review of the status of the species. On February 10, 2016 the Department Director delivered a status review to the Commission pursuant to Fish and Game Code section 2074.6, including a recommendation that, based upon the best scientific information available to the Department, the petitioned action is warranted.

Final consideration of the petition, with receipt of the Department's status review report and public comment, was scheduled for the Commission's April 14, 2016 meeting in Santa Rosa, California, but the Commission continued the matter to its June meeting to allow written comments from the public, to be submitted to the Department no later than May 2, 2016. Notice of final consideration of the petition was published on May 27, 2016 for the Commission's meeting on June 23, 2016 in Bakersfield, California (Cal. Reg. Notice Register 2016, No. 22-Z, p. 907) and again on August 12, 2016 for the Commission's meeting on August 25, 2016 in Folsom, California (Cal. Reg. Notice Register 2016, No. 33-Z, p. 1464). On August 25, 2016, at its meeting in Folsom, California, the Commission received additional public and Department testimony, and voted that designating Northern Spotted Owl as a threatened species under CESA is warranted.

Species Description

The Northern Spotted Owl is a medium-sized dark brown owl, with a barred tail, round, elliptical, or irregular white spots on head, neck, back, and underparts, yellowish green bill, and dark brown, almost black eyes surrounded by prominent facial disks (Gutiérrez et al. 1995). Overall, its length is approximately 46 to 48 centimeters (18 to 19 inches) (Forsman et al. 1996). Males and females are dimorphic in size, with males averaging about 13 percent smaller than females (USFWS 2011). Males weigh between 430 and 690 grams (0.95 to 1.52 pounds), and females weigh between 490 and 885 grams (1.1 to 1.95 pounds) (Gutiérrez et al. 1995, P. Loschl and E. Forsman pers. comm. 2006 in USFWS 2011).

Federal Status

The United States Fish and Wildlife Service listed Northern Spotted Owl as a threatened species under the Endangered Species Act in 1990. In 1994, the Northwest Forest Plan

provided protections for the Northern spotted owl and other species inhabiting late-successional forests in Washington, Oregon, and California. The Northern Spotted Owl's first critical habitat designation occurred in 1992 and was revised in 2008. A new final rule designating critical habitat was published in December of 2012. The USFWS first issued a recovery plan for the Northern Spotted Owl in 2008 and revised it in 2011.

II. STATUTORY AND LEGAL FRAMEWORK

The Commission, as established by the California Constitution, has exclusive statutory authority under California law to designate endangered, threatened, and candidate species under CESA. (Cal. Const., art. IV, § 20, subd. (b); Fish & G. Code, § 2070.) The CESA listing process for Northern Spotted Owl began in the present case with the Petitioners' submittal of the Petition to the Commission on September 7, 2012. Pursuant to Fish and Game Code Section 2073, on September 10, 2012 the Commission transmitted the petition to the Department for review pursuant to Fish and Game Code Section 2073.5. The regulatory and legal process that ensued is described in some detail in the preceding section above, along with related references to the Fish and Game Code and controlling regulation. The CESA listing process generally is also described in some detail in published appellate case law in California, including:

- *Mountain Lion Foundation v. California Fish and Game Commission* (1997) 16 Cal.4th 105, 114-116;
- *California Forestry Association v. California Fish and Game Commission* (2007) 156 Cal.App.4th 1535, 1541-1542;
- *Center for Biological Diversity v. California Fish and Game Commission* (2008) 166 Cal.App.4th 597, 600; and
- *Natural Resources Defense Council v. California Fish and Game Commission* (1994) 28 Cal.App.4th 1104, 1111-1116.

The "is warranted" determination at issue here for Northern Spotted Owl stems from Commission obligations established by Fish and Game Code section 2075.5. Under this provision, the Commission is required to make one of two findings for a candidate species at the end of the CESA listing process; namely, whether the petitioned action is warranted or is not warranted. Here, with respect to the Northern Spotted Owl, the Commission made the finding under section 2075.5(e)(2) that the petitioned action is warranted.

The Commission was guided in making these determinations by statutory provisions and other controlling law. The Fish and Game Code, for example, defines an endangered species under CESA as "a native species or subspecies of a bird, mammal,

fish, amphibian, reptile or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, over exploitation, predation, competition, or disease.” (Fish & G. Code, § 2062.) Similarly, the Fish and Game Code defines a threatened species under CESA as “a native species or subspecies of a bird, mammal, fish, amphibian, reptile or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter.” (*Id.*, § 2067.)

The Commission also considered Title 14, section 670.1, subdivision (i)(1)(A), of the California Code of Regulations in making its determination regarding fisher. This provision provides, in pertinent part, that a species shall be listed as endangered or threatened under CESA if the Commission determines that the species’ continued existence is in serious danger or is threatened by any one or any combination of the following factors:

1. Present or threatened modification or destruction of its habitat;
2. Overexploitation;
3. Predation;
4. Competition;
5. Disease; or
6. Other natural occurrences or human-related activities.

Fish and Game Code section 2070 provides similar guidance. This section provides that the Commission shall add or remove species from the list of endangered and threatened species under CESA only upon receipt of sufficient scientific information that the action is warranted. Similarly, CESA provides policy direction not specific to the Commission per se, indicating that all state agencies, boards, and commissions shall seek to conserve endangered and threatened species and shall utilize their authority in furtherance of the purposes of CESA. (Fish & G. Code, § 2055.) This policy direction does not compel a particular determination by the Commission in the CESA listing context. Nevertheless, “[l]aws providing for the conservation of natural resources’ such as the CESA ‘are of great remedial and public importance and thus should be construed liberally.” (*California Forestry Association v. California Fish and Game Commission*, supra, 156 Cal. App.4th at pp. 1545-1546, citing *San Bernardino Valley Audubon Society v. City of Moreno Valley* (1996) 44 Cal.App.4th 593, 601; Fish & G. Code, §§ 2051, 2052.)

Finally in considering these factors, CESA and controlling regulations require the Commission to actively seek and consider related input from the public and any

interested party. (See, e.g., *Id.*, §§ 2071, 2074.4, 2078; Cal. Code Regs., tit. 14, § 670.1, subd. (h).) The related notice obligations and public hearing opportunities before the Commission are also considerable. (Fish & G. Code, §§ 2073.3, 2074, 2074.2, 2075, 2075.5, 2078; Cal. Code Regs., tit. 14, § 670.1, subds. (c), (e), (g), (i); see also Gov. Code, § 11120 et seq.) All of these obligations are in addition to the requirements prescribed for the Department in the CESA listing process, including an initial evaluation of the petition and a related recommendation regarding candidacy, and a review of the candidate species' status culminating with a report and recommendation to the Commission as to whether listing is warranted based on the best available science. (Fish & G. Code, §§ 2073.4, 2073.5, 2074.4, 2074.6; Cal. Code Regs., tit. 14, § 670.1, subds. (d), (f), (h).)

III. Factual and Scientific Bases for the Commission's Final Determination

The factual and scientific bases for the Commission's determination that designating the Northern Spotted Owl as a threatened species under CESA is warranted are set forth in detail in the Commission's record of proceedings including the Petition, the Department's Petition Evaluation Report, the Department's status review, written and oral comments received from members of the public, the regulated community, tribal entities, the scientific community and other evidence included in the Commission's record of proceedings.

The Commission determines that the continued existence of the Northern Spotted Owl in the State of California is in serious danger or threatened by one or a combination of the following factors as required by the California Code of Regulations Title 14, section 670.1, subdivision (i)(1)(A):

1. Present or threatened modification or destruction of its habitat;
2. Overexploitation;
3. Predation;
4. Competition;
5. Disease; or
6. Other natural occurrences or human-related activities.

The Commission also determines that the information in the Commission's record constitutes the best scientific information available and establishes that designating the Northern Spotted Owl as a threatened species under CESA is warranted. Similarly, the Commission determines that the Northern Spotted Owl, while not presently threatened

with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by CESA.

The items highlighted here and detailed in the following section represent only a portion of the complex issues aired and considered by the Commission during the CESA listing process for the Northern Spotted Owl. Similarly, the issues addressed in these findings represent some, but not all of the evidence, issues, and considerations affecting the Commission's final determination. Other issues aired before and considered by the Commission are addressed in detail in the record before the Commission, which record is incorporated herein by reference.

Background

The Commission bases its "is warranted" finding for the Northern Spotted Owl most fundamentally on the current population trend influenced by a combination of threat factors, including competition from Barred Owls and present or threatened modification or loss of its habitat which pose a risk to the continued existence of the species in California.

Threats

Barred Owls

Historically, Barred Owls were residents of the eastern United States and southern Canada, east of the Great Plains and south of the boreal forest, and also in disjunct regions of south-central Mexico (Mazur and James 2000). The recent range expansion into the western United States has resulted in the Barred Owl range completely overlapping with that of the Northern Spotted Owl. Barred Owls were first detected in California in 1976 (B. Marcot in Livezey 2009a) with the first breeding record in 1991 (T. Hacking in Dark et al. 1998). The rate of detections in California accelerated during the mid-1990s (Dark et al. 1998), and today 1,970 Barred Owl records exist in the Department's species database throughout the entire range of the Northern Spotted Owl, and even further south within the California Spotted Owl range in the Sierra Nevada.

There is a high degree of similarity in Barred Owl and Northern Spotted Owl habitat and prey base preferences. Both species have a preference for old forests with closed canopy and a high degree of structural complexity for nesting and roosting activities (Hamer et al. 2007, Singleton et al. 2010, Weins et al. 2014, Singleton 2015, Weisel 2015). Northern Spotted Owl in California consists primarily of small mammals (mainly dusky-footed woodrats in California), though other prey (e.g. birds, bats) is also taken (Forsman et al. 1984, 2001, 2004, Zabel et al. 1995, Ward et al. 1998, Franklin et al. 2000, Hamer et al. 2001). The Barred Owl diet consists of a wide array of prey,

including small mammals ranging from rabbits to bats, small to medium sized birds, amphibians, reptiles, fish, and invertebrates; however, mammals make up a majority of prey items (Hamer et al. 2001, Mazur and James 2000, Mazur et al. 2000). The broader range of prey selected by Barred Owls contributes to the smaller home ranges in comparison to Northern Spotted Owls, which may result in higher densities of Barred Owls within the Spotted Owl range (Livezey et al. 2008).

Barred Owls will negatively impact Northern Spotted Owls at several levels. Barred Owls are aggressive toward Spotted Owls (Van Lanen et al. 2011), and have attacked Spotted Owls on occasion (Leskiw and Gutiérrez 1998, Courtney et al. 2004). Spotted Owls will reduce their calls or not call at all if Barred Owls are in the vicinity (Cozier et al. 2006, Kroll et al. 2010, Dugger et al. 2011, Diller 2014, Sovern et al. 2014), making them more difficult to detect. Barred Owls will displace Northern Spotted Owls from their territories, forcing them out of their long-held territory (Olson et al. 2004, Kroll et al. 2010, Dugger et al. 2011, Diller 2014, Sovern et al. 2014, GDRC 2015, Weisel 2015, Dugger et al. 2016). Northern Spotted Owl activity centers will shift away from areas where Barred Owls are present even if they do not entirely abandon their territory (Kelly 2001, Gremel 2005, Diller 2014, Weins et al. 2014).

Competition between the two species has dramatically impacted Northern Spotted Owl site occupancy in California. A recent analysis (Dugger et al. 2016) determined territory occupancy rates declined in all 11 demographic study areas across the entire Northern Spotted Owl range, with a strong positive relationship between the presence of Barred Owls and territory extinction rates (Dugger et al. 2016). The primary cause of Northern Spotted Owl population declines are competition with Barred Owl, largely as a result of a strong negative effect of Barred Owl on Northern Spotted Owl apparent survival rates and a positive effect of Barred Owl on Northern Spotted Owl extinction rates.

When analyzing Northern Spotted Owl data through 2013, Dugger et al. (2016) indicated the primary cause of declines across the range are strong negative effect of Barred Owl on apparent survival rates and a positive effect of Barred Owl on extinction rates. Apparent survival and the rate population change rates declined on all 3 demographic study areas in California, with the exception of the Green Diamond Resource treatment area (i.e., the area where barred owls were removed). The Green Diamond Resource treatment area survival rate was 0.857 (SE=0.009) before removal, and 0.870 (SE=0.021) after removal (the highest across the entire range; Dugger et al. 2016). The rate of population change at the Green Diamond Resource treatment area was positive ($\lambda=1.030$, SE=0.040) after Barred Owls were removed (Dugger et al. 2016). When Barred Owls were removed from historical Northern Spotted Owl territories on the Green Diamond Resource Company land, Northern Spotted Owls were detected relatively soon afterward, and sometimes were the same Spotted Owls that held the

territory previously (Diller 2014), suggesting these owls were displaced from their territory but remained in the vicinity to quickly reoccupy.

The literature is clear that Barred Owls are having a severe negative impact on Northern Spotted Owl at a range-wide level (Dugger et al. 2016), including reduced survival and occupancy, reduced detection rates, increased extinction rates, displacement, and predation. Ecological similarities between Barred Owl and Northern Spotted Owl gives little evidence that nesting, roosting, or foraging habitat or food resources can be adequately partitioned to prevent competition; therefore, coexistence of both species is uncertain into the future, even with habitat management action (Gutiérrez et al. 2007, Dugger et al. 2011, Wiens et al. 2014, Singleton 2015, Weisel 2015, Dugger et al. 2016). Barred Owl removal experiments seem to be successful at positively impacting Northern Spotted Owl demographics and are feasible at a local-scale (Diller et al. 2014), but broader long-term use of removal as a management tool needs further consideration (USFWS 2013). Protecting high-quality habitat (e.g., older structurally complex forests) on the landscape may provide some amount of refugia for Spotted Owls from competitive interactions with Barred Owls, and may allow managers and others time to further evaluate the feasibility of Barred Owl control measures (USFWS 2011, USFWS 2013).

Given the quick southerly expansion of Barred Owls into Northern Spotted Owl habitat and the documented negative impacts of Barred Owl on Spotted Owl demographic rates, there is urgency on deciding a course of action to take regarding Barred Owl removal or other management actions. Without management actions, the Northern Spotted Owl faces an uncertain future and declines will presumably continue to be severe and steep into the near future, much like has been documented in more northerly portions of the range in Washington and Oregon where Barred Owl have been established longer.

Present or Threatened Modification or Destruction of Habitat

Although the rate of nesting and roosting habitat loss has declined since the Northern Spotted Owl was listed under the federal endangered species act in 1990, assessments performed range-wide since the implementation of the Northwest Forest Plan (NWFP) show that habitat loss on federal and private lands is ongoing. Wildfire has been the leading cause of habitat loss on federal land, with the fire-prone California Klamath Province experiencing the largest losses due to wildfire (10.7%; 199,800 acres since 1993). Since the development of a reserve system under the NWFP, timber harvest on federal land has declined, with only 1.3% of nesting and roosting habitat lost to harvest in the last two decades (Davis et al. 2015). Conversely, timber harvest has been the

primary cause of habitat loss on nonfederal lands since 1993 (Davis et al. 2015). State regulations governing timber harvest on nonfederal lands in California (i.e., Forest Practice Rules) are the most protective state regulations in the range of the Northern Spotted Owl. NSO abundance and densities in California forests have not plummeted, as has occurred for the species in Oregon and Washington. However, losses of nesting and roosting habitat due to timber harvest in California have continued. From 1994-2007, 5.8% of nesting and roosting habitat on nonfederal lands in California was removed by timber harvest (Davis et al. 2011). Forest succession since 1994 has resulted in replacement of an unknown amount of nesting and roosting habitat, but forest growth in the two decades since implementation of the NWFP has resulted in limited recruitment of new habitat across most of the range. The California Klamath and Cascades provinces have experienced net losses of nesting and roosting habitat since 1994 (Davis et al. 2015). However, due to habitat recruitment in the California Coast Province where habitat development through forest succession can occur relatively quickly (Thome et al. 1999, Diller et al. 2010), estimates for net change of nesting and roosting habitat in this province are positive (Davis et al. 2015). At the scale of individual owl territories, the amount and spatial configuration of different habitat types are strongly linked to Northern Spotted Owl site occupancy and demographic rates, and rates are generally positively associated with a greater amount of older forest (see the Habitat Effects on Demographics section; Dugger et al. 2016). The amount of older forest in Northern Spotted Owl territories is positively associated with occupancy rates (Dugger et al. 2011, Yackulic et al. 2012, Dugger et al. 2016), survival (Franklin et al. 2000, Olson et al. 2004, Dugger et al. 2005, Diller et al. 2010), and in some cases with fecundity (Dugger et al. 2005, Diller et al. 2010, Dugger et al. 2016). Although study design has varied across the major research studies in California and southern Oregon, some consistent patterns have arisen. In order to support productive Spotted Owl territories, a minimum amount of older forest must be retained in the core area. The definition of 'older forest' evaluated in studies has varied, but consistently has included late-seral forests with large trees and high canopy cover. Territories with the highest habitat fitness potential contain at least about 50% older forest in the core area, intermixed with other forest and nonforest cover types (Franklin et al. 2000, Dugger et al. 2005, Diller et al. 2010). Large amounts of nonhabitat (defined as nonforest or sapling cover types) in a Northern Spotted Owl home range leads to declines in demographic rates. Results indicate that in order to support a Northern Spotted Owl territory with high habitat fitness potential, no more than about 50% of a home range should consist of nonhabitat (Olson et al. 2004, Dugger et al. 2005). Minimum habitat retention requirements for timber harvest on nonfederal land in California and definitions of Northern Spotted Owl habitat in the Forest Practice Rules (Section 919.9 [939.9] subsection (g) and Section 895.1) do not appear to be sufficient to meet the habitat needs of Northern Spotted Owls in all cases. Habitat retention requirements and

definitions were developed in the early 1990s and were established to protect a combination of nesting, roosting, and foraging habitat in the area immediately surrounding the activity center (500 and 1,000 foot radii), the core use area (0.7 mile radius), and the broader home range (1.3 mile radius). The USFWS found that the cumulative effects of repeated harvest entries within many Northern Spotted Owl home ranges in the northern interior region had reduced habitat quality to a degree that caused reduced occupancy rates and frequent site abandonment, and concluded that existing habitat guidelines in the Forest Practice Rules are not sufficient for avoiding take (USFWS 2009). Because of these concerns and based on the growing body of literature linking habitat characteristics to owl fitness, the USFWS provided revised guidance for avoiding take of Northern Spotted Owl, including changes to definitions of nesting, roosting, and foraging habitat, and to the amount of each habitat type to be retained (USFWS 2008b, 2009).

Wildfire and Salvage Logging

Wildfire and other natural disturbance has been the leading cause of habitat loss on federal land in the Northwest Forest Plan area and the leading cause of nesting and roosting habitat loss in California from 1993-2012; the majority of the nesting and roosting habitat lost from the California portion of the Northwest Forest Plan area has been attributed to wildfire, and most of that loss has occurred in the Klamath Province (DFW, 2016 Status Review).

The response of Spotted Owls to fire has been mixed. Occupancy by California Spotted Owls across a wide area in the Sierra Nevada has been observed to be similar in burned and unburned areas, at least in burn areas that experienced mixed-severity burns. There is some evidence that high severity burns in the Sierra Nevada have resulted in declines in occupancy (DFW, 2016 Status Review). Conversely, occupancy rates for Northern Spotted Owls in southern Oregon declined following fire (DFW, 2016 Status Review). These occupancy declines resulted from both high extinction rates in burned areas and low colonization rates (DFW, 2016 Status Review). Northern Spotted Owls displaced by fire or occupying burned areas have also been shown to experience declines in survival rates (DFW, 2016 Status Review). Food limitation in burned areas may have also been a factor in these declines. Northern Spotted Owls in southern Oregon were also shown to avoid large areas of high severity burn or areas experiencing extensive salvage logging post-fire (DFW, 2016 Status Review).

Several variables complicate the interpretation of studies of owl response to fire, including variation in fire severity, fire size, fire history and pre-fire forest composition, post-fire salvage logging, and the timing and duration of research post-fire. Additionally,

the key studies of Northern Spotted Owl response to wildfires in southern Oregon were unable to separate the effects of severe burns from salvage logging, but observational studies and occupancy modeling conducted to date suggest that postfire landscapes that are salvage logged experience declines in Spotted Owl occupancy (DFW, 2016 Status Review). The presence of snags has been suggested as an important component of prey habitat and as perch sites for foraging Spotted Owls (DFW, 2016 Status Review). Conditions that lead to increased prey availability, including increased shrub and herbaceous cover and number of snags, may be impacted by salvage logging (DFW, 2016 Status Review). The available information suggests that fires that burn at mixed severities or at small scales such that they create habitat heterogeneity without removing important nesting and roosting habitat components at the territory scale may benefit owls (DFW, 2016 Status Review). However, uncharacteristically severe fires that burn at large scales are likely to have negative effects by eliminating required nesting and roosting habitat or reducing prey populations in Northern Spotted Owl territories (DFW, 2016 Status Review).

In recent decades, fires have become more frequent and average fire size has increased (DFW, 2016 Status Review). In some cases fires have also burned at uncharacteristically high severities, especially during dry and hot conditions, which support fire (DFW, 2016 Status Review). Because climate change will likely increase the likelihood of conditions that support more frequent, large, and severe fires which are destructive to Northern Spotted Owl habitat, habitat loss due to wildfires will likely continue to present a risk to owls in the future (DFW, 2016 Status Review).

Climate Change Impacts to Forest Composition and Structure

Most climate projection models indicate elevational and latitudinal shifts in forest habitats in the coming century (DFW, 2016 Status Review). In climate projection scenarios specific to California, the most notable response to increase temperature was a shift from conifer-dominated forests (e.g., Douglas fir-white fir) to mixed coniferhardwood forests (e.g., Douglas fir-tan oak) in the northern half of the state), expansion of conifer forests into the northeast portion of the state (e.g., Modoc Plateau), an increase dominance of oak forest at the expense of pine forest, a general decrease in large trees and basal area, shifts of redwood forests inland into Douglas-fir-tan oak forests, and advancement of conifer-dominated forests (e.g., redwood and closed-cone pine forests) along the north-central coast (DFW, 2016 Status Review). Climate change variables will likely increase the severity and frequency of wildfires within the Northern Spotted Owl range which would convert older, complex forests to young uniform stands of less suitable habitat (DFW, 2016 Status Review).

Although climate projection models have uncertainties built-in, it is apparent that forests within California will likely experience some level of elevational and latitudinal shifts, changes in species composition, and alterations in fire regimes (DFW, 2016 Status Review). The Northern Spotted Owl relies heavily on specific forest structure components and tree species composition, and on associated prey habitat and abundance (DFW, 2016 Status Review). Implications of forest shifts and fire regime changes on owl habitat and demographic rates remains uncertain, and more research is needed to elucidate whether these patterns will lead to negative impacts to Spotted Owls.

Sudden Oak Death

Sudden oak death is an emerging plant disease caused by a non-native, fungus-like pathogen particularly impacting hardwoods (Davidson et al. 2003, Garbelotto et al. 2003, Goheen et al. 2006). The disease is expanding its distribution through a substantial portion of the Northern Spotted Owl range in California (California Oak Mortality Task Force 2015). Its impact to Northern Spotted Owl habitat includes large scale die-off of tanoaks and other affected hardwood species (e.g., live oak, California bay laurel), reduction of hardwood canopy closure, simplified canopy structure, and reduced primary prey species (i.e., woodrat) abundance (Rizzo and Garbelotto 2003, McPherson et al. 2006, Goheen et al. 2006, Tietje et al. 2006, Cobb et al. 2010, 2012).

The impact of sudden oak death on oak-tanoak forests within Northern Spotted Owl habitat will not likely subside in the future (Brown and Allen-Diaz 2006, Meentemeyer et al. 2010, 2011), with high risk areas noted in coastal forests of Santa Barbara County north through Humboldt County (Koch and Smith 2012). Ultimately, spread of sudden oak death will likely result in reduced nesting, roosting and foraging opportunities for Northern Spotted Owls in most cases.

Marijuana Cultivation

Illegal and legal marijuana cultivation sites in remote forests on public and private land throughout California has been steadily increasing. Within the range of the Northern Spotted Owl, Shasta, Tehama, Humboldt, Mendocino, and Trinity counties comprise the areas known for the most marijuana cultivation in California due to the remote and rugged nature of the land (making illegal cultivation difficult to detect), and habitat conditions favorable for growing marijuana (e.g., wetter climate, rich soils) (Gabriel et al. 2013, Thompson et al. 2013, National Drug Intelligence Center 2007, Bauer et al. 2015). Given the difficulties in detecting illegal marijuana cultivation sites and the lack of

reporting for all legal cultivation sites, actual distribution and density of marijuana cultivation is likely larger and higher than current data suggests.

Activities associated with cultivation (e.g., removal of large trees, degradation of riparian habitat, use of rodenticides) may negatively impact Northern Spotted Owl habitat, and in turn, owl fitness (e.g., survival, fecundity), although there is little data assessing this impact. Areas with higher prevalence of marijuana cultivation sites may also contain high numbers of Northern Spotted Owl activity centers (National Drug Intelligence Center 2007). The level of impact likely depends on several factors, including the density of cultivation sites in proximity to owl activity centers and how much owl habitat is affected and to what extent.

IV. FINAL DETERMINATION BY THE COMMISSION

The Commission has weighed and evaluated the information for and against designating the Northern spotted owl as a threatened species under CESA. This information includes scientific and other general evidence in the Petition; the Department's Petition Evaluation Report; the Department's status review; the Department's related recommendations; written and oral comments received from members of the public, the regulated community, various public agencies, and the scientific community; and other evidence included in the Commission's record of proceedings.

Based upon the evidence in the record the Commission has determined that the best scientific information available indicates that the continued existence of the Northern spotted owl is in serious danger or threatened by present or threatened modifications or destruction of the species' habitat, predation, competition, disease, or other natural occurrences or human-related activities, where such factors are considered individually or in combination. (See generally Cal. Code Regs., tit. 14, § 670.1, subd. (i)(1)(A); Fish & G. Code, §§ 2062, 2067.) The Commission determines that there is sufficient scientific information to indicate that designating the Northern spotted owl as a threatened species under CESA is warranted at this time and that with adoption and publication of these findings the Northern spotted owl for purposes of its legal status under CESA and further proceedings under the California Administrative Procedure Act, shall be listed as threatened.

References

- Bauer, S. J. Olson, A. Cockrill, M. Van Hattem, L. Miller, M. Tauzer, and G. Leppig. 2015. Impacts of surface water diversions for marijuana cultivation on aquatic habitat in for northwestern California watersheds. PLoS ONE 10(3): e0120016. doi:10.1371/journal.pone.0120016
- Brown, L.B., B. Allen-Diaz. 2006. Forecasting the Future of Coast Live Oak Forests in the Face of Sudden Oak Death. Paper from Frankel, S.J., P.J. Shea, M.I. Haverty, tech. coord. Proceedings of the sudden oak death second science symposium: the state of our knowledge. Gen. Tech. Rep. PSW-GTR-196. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; 571 p.
- California Oak Mortality Task Force webpage, <http://www.suddenoakdeath.org/>. Accessed August 31, 2015.
- Cobb, R.C., J.A.N. Filipe, R.K. Meentemeyer, C.A. Gilligan, S.C. Lynch, and D.M. Rizzo. 2010. Community and Individual Effects on SOD Intensification in California Redwood Forests: Implications for Tanoak Persistence. Abstract from a paper presented at the Sudden Oak Death Science Symposium: The State of Our Knowledge, June 2009, Santa Cruz, California.
- Cobb, R.C., J.A.N. Filipe, R.K. Meentemeyer, C.A. Gilligan, and D.M. Rizzo. 2012. Ecosystem transformation by emerging infection disease: loss of large tanoak form California forests. *Journal of Ecology* 100:712-722.
- Courtney, S.P., J.A. Blakesley, R.E. Bigley, M.L. Cody, J.P. Dumbacher, R.C. Fleischer, A.B. Franklin, J.F. Franklin, R.J. Gutiérrez, J.M. Marzluff, and L. Sztukowski. 2004. Final Report: Scientific evaluation of the status of the Northern Spotted Owl. Sustainable Ecosystems Institute, Portland, Oregon.
- Crozier, M.L., M.E. Seamans, R.J. Gutiérrez, P.J. Loschl, R.B. Horn, S.G. Sovern, and E.D. Forsman. 2006. Does the presence of barred owls suppress the calling behavior of Spotted Owls? *The Condor* 108:760-769.
- Dark, S.J., R.J. Gutiérrez, and G.I. Gould Jr. 1998. The barred owl (*Strix varia*) invasion in California. *The Auk* 115(1):50-56.
- Davidson, J. M., S. Werres, M. Garbelotto, E.M. Hansen, and D.M. Rizzo. 2003. Sudden oak death and associated diseases caused by *Phytophthora ramorum*. Online. Plant Health Progress doi:10.1094/PHP-2003-0707-01-DG
- Davis, R.J., K.M. Dugger, S. Mohoric, L. Evers, and W.C. Aney. 2011. Northwest Forest Plan—the first 15 years (1994–2008): status and trends of northern spotted owl populations and habitats. Gen. Tech. Rep. PNW-GTR-850. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 147 p.

Diller, L., K. Hamm, D. Lamphear and T. McDonald. 2010. Green Diamond Resource Company, Northern Spotted Owl Habitat Conservation Plan, Ten-Year Review Report. Report to U.S. Fish and Wildlife Service, Arcata Fish and Wildlife Office, Arcata, California. 232 + viii pp.

Diller, L.V., J.P. Dumbacher, R.P. Bosch, R.R. Bown, and R.J. Gutiérrez. 2014. Removing Barred Owls from Local Areas: Techniques and Feasibility. *Wildlife Society Bulletin*; DOI: 10.1002/wsb.381

Dugger, K.M., E.D. Forsman, A.B. Franklin, R.J. Davis, G.C. White, C.J. Schwarz, K.P. Burnham, J.D. Nichols, J.E. Hines, C.B. Yackulic, P.F. Doherty, Jr, L. Bailey, D.A. Clark, S.H. Ackers, L.S. Andrews, B. Augustine, B.L. Biswell, J.Blakesley, P.C. Carlson, M.J. Clement, L.V. Diller, E.M. Glenn, A. Green, S.A. Gremel, D.R. Herter, J. M. Higley, J. Hobson, R.B. Horn, K.P. Huyvaert, C. McCafferty, T. McDonald, K. McDonnell, G.S. Olson, J.A. Reid, J. Rockweit, V. Ruiz, J. Saenz, S.G. Sovern. 2016. The effects of habitat, climate and Barred Owls on long-term demography of Northern Spotted Owl. *The Condor* 118: 57-116.

Dugger, K.M., F. Wagner, R.G. Anthony, and G.S. Olson. 2005. The relationship between habitat characteristics and demographic performance of northern spotted owls in southern Oregon. *Condor* 107:863–878.

Dugger, K., R.G. Anthony, and L. S. Andrews. 2011. Transient dynamics of invasive competition barred owls, spotted owls, habitat, and demons of competition present. *Ecol. Applications*. 21(7):2459-2468.

Forsman, E.D., E.C. Meslow, and H.M. Wight. 1984. Distribution and biology of the spotted owl in Oregon. *Wildlife Monographs* 87:1–64.

Forsman, E.D., S. DeStefano, M.G. Raphael, and R.J. Gutiérrez, editors. 1996. Demography of the northern spotted owl. *Studies in Avian Biology* No. 17.

Franklin, A.B., D.R. Anderson, J.R. Gutiérrez, and K.P. Burnham. 2000. Climate, habitat quality, and fitness in northern spotted owl populations in northwestern California. *Ecological Monographs* 70:539–590.

Gabriel M.W., G.M. Wengert, J. M. Higley, S. Krogan, W. Sargent, and D. L. Clifford. 2013. Silent forest? rodenticides on illegal marijuana crops harm wildlife. *The Wildlife Society*. [Internet] [cited 2015 Jun 4] Available at www.wildlife.org

Garbelotto, M., J.M. Davidson, K. Ivors, P. E. Maloney, D. Hüberli, S. T. Koike, and D. M. Rizzo. 2003. Non-oak native plants are main hosts for sudden oak death pathogen in California. *Cal. Agric.* 57(1):18-23.

Goheen, E.M., E. Hansen, A. Kanaskie, N. Osterbauer, J. Parke, J. Pscheidt, and G. Chastagner. 2006. Sudden oak death and *phytophthora ramorum*. Oregon State University-Extension Service. EM 8877. 16p.

Green Diamond Resource Company (GDRC). 2015. 22nd Annual Habitat Conservation Report. Annual report submitted to U.S Fish and Wildlife Service and California Department of Fish and Wildlife in

fulfillment of requirements specified in condition I. of permit #PRT-767798, incidental take permit for northern spotted owls, under section 10(a)(11)(B) of the Endangered Species Act and the state consistency determination. February 15, 2015.

Gremel, S.A. 2005. Factors controlling distribution and demography of Northern Spotted Owls in a reserved landscape. Thesis, University of Washington.

Gutiérrez, R.J., A.B. Franklin, and W.S. LaHaye. 1995 . Spotted Owl (*Strix occidentalis*) in A. Poole and F. Gill (editors), The birds of North America, No. 179. The Academy of Natural Sciences and the American Ornithologists' Union, Washington, D.C. 28 p.

Gutiérrez, R.J., M. Cody, S. Courtney, and A.B. Franklin. 2007. The invasion of barred owls and its potential effect on the spotted owl: a conservation conundrum. *Biol Invasions* 9:181-196

Hamer, T.E., D.L. Hays, C.M. Senger, and E.D. Forsman. 2001. Diets of Northern Barred Owls and Northern Spotted Owls in an area of sympatry. *J. Raptor Res.* 35:221–227.

Hamer, T.E., E.D. Forsman, and E.M. Glenn. 2007. Home range attributes and habitat selection of barred owls and spotted owls in an area of sympatry. *The Condor* 109(4):750-768.

Kelly, E.G.. 2001. The range expansion of the Northern Barred Owl: and evaluation of the impact on Spotted Owls [Thesis]. Oregon State University.

Koch, F.H., and W.D. Smith. 2012. A revised sudden oak death risk map to facilitate national surveys. Chapter 7 in Potter, K.M.; Conkling, B.L. (eds.). *Forest Health Monitoring 2009 National Technical Report*. Gen. Tech. Rep. SRS-167. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station, pp. 109-136.

Kroll, A.J., T.L. Fleming, and L.L. Irwin. 2010. Site occupancy dynamics of northern spotted owls in the Eastern Cascades, Washington, USA, 1990-2003. *J. of Wildl Management* 74(6):1264-1274.

Leskiw, T., and R.J. Gutiérrez. 1998. Possible predation of a spotted owl by a barred owl. *Western Birds* 29:225-226.

Livezey, K.B., M.F. Elderkin, P.A. Cott, J. Hobbs, and J.P. Hudson. 2008. Barred owls eating worms and slugs: the advantage in not being picky eaters. *Northwestern Naturalist* 89:185-190.

Livezey, K.B. 2009a. Range Expansion of Barred Owls, Part I: Chronology and Distribution. *Am. Midl. Nat.* 161:49–56.

Mazur, Kurt M. and Paul C. James. 2000. Barred Owl (*Strix varia*), *The Birds of North America Online* (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: [http://www.pnas.org/content/112/5/1458.full](http://bna.birds.cornell.edu.bnaproxy.birds.cornell.edu/bna/species/508McIntyre, P.J., J.H. Thorne, C.R. Dolanc, A.L. Flint, L.E. Flint, M. Kelly, and D.D. Ackerly. 2015. Twentieth-century shifts in forest structure in California: denser forests, smaller trees, and increased dominance of oaks. <i>Proc. Natl. Acad. Sci. USA</i> 2015 112(13):4009-4014. Available online at <a href=)

McPherson, B.A., S.R. Mori, D.L. Wood, A.J. Storer, P. Svihra, N.M. Kelly, and R.B. Standiford. 2006. Sudden Oak Death Disease Progression in Oaks and Tanoaks. Paper from Frankel, S.J., P.J. Shea, M.I. Haverty, tech. coord. Proceedings of the sudden oak death second science symposium: the state of our knowledge. Gen. Tech. Rep. PSW-GTR-196. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; 571 p.

Meentemeyer, R.K., N. Cunniffe, A. Cook, D.M. Rizzo, and C.A. Gilligan. 2010. Predicting the Spread of Sudden Oak Death in California (2010-2030): Epidemic Outcomes Under No Control. Abstract from a paper presented at the Sudden Oak Death Fourth Science Symposium, June 2009, Santa Cruz, California. [http://www.fs.fed.us/psw/publications/documents/psw_gtr229/]

Meentemeyer, R. K., N. J. Cunniffe, A. R. Cook, J. A. N. Filipe, R. D. Hunter, D. M. Rizzo, and C. A. Gilligan. 2011. Epidemiological modeling of invasion in heterogeneous landscapes: spread of sudden oak death in California (1990–2030). *Ecosphere* 2(2):1-24.

National Drug Intelligence Center. 2007. Domestic Cannabis Cultivation Assessment 2007, Appendix A. Document ID: 2007-L0848-001. Available at: <http://www.justice.gov/archive/ndic/pubs22/22486/appa.htm#start>

Olson, G.S., E.M. Glenn, R.G. Anthony, E.D. Forsman, J.A. Reid, P.J. Loschl, and W.J. Ripple. 2004. Modeling demographic performance of northern spotted owls relative to forest habitat in Oregon. *J. Wildlife Management* 68:1039–1053.

Olson, G.S., R.G. Anthony, E.D. Forsman, S.H. Ackers, P.J. Loschl, J.A. Reid, K.M. Dugger, E.M. Glenn, and W.J. Ripple. 2005. Modeling of site occupancy dynamics for northern spotted owls, with emphasis on the effects of barred owls. *J. of Wildl Management* 69(3):918-932.

Rizzo, D.M., and M. Garbelotto. 2003. Sudden oak death: endangering California and Oregon forest ecosystems. *Front Ecology Environment* 1(5): 197-204.

Singleton, P.H. 2015. Forest structure within Barred Owl (*Strix varia*) home ranges in the Eastern Cascade Range, Washington. *J. Rap. Res.* 49(2):129-140.

Singleton, P.H., J.F. Lehmkuhl, W.L. Gaines, and S.A. Graham. 2010. Barred owl space use and habitat selection in Eastern Cascades, Washington. *J. of Wildl Management* 74(2):285-294.

Sovern, S.G., E.D. Forsman, G.S. Olson, B.L. Biswell, M. Taylor, and R.G. Anthony. 2014. Barred owls and landscape attributes influences territory occupancy of northern spotted owls. *The Journal of Wildlife Management* 78(8): 1436-1443

Thome, D.M. C.J. Zabel, and L.V. Diller. 1999. Forest stand characteristics and reproduction of northern spotted owls in managed north-coastal California forests. *J. Wildlife Management* 63(1):44-59.

Thompson C., R. Sweitzer, M. Gabriel, K. Purcell, R. Barrett, R. Poppenga. 2013. Impacts of rodenticide and insecticide toxicants from marijuana cultivation sites on fisher survival rates in the Sierra National Forest, California. *Conservation Letters* 0 (2013) 1-12

Tietje, W.D., D.E. Winslow, and D.J. Tempel. 2006. The Effects of Sudden Oak Death on Wildlife – Can Anything Be Learned From the American Chestnut Blight? Paper from Frankel, S.J., P.J. Shea, M.I. Haverty, tech. coord. Proceedings of the sudden oak death second science symposium: the state of our knowledge. Gen. Tech. Rep. PSW-GTR-196. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture; 571 p.

U.S. Fish and Wildlife Service (USFWS). 2008b. U.S. Fish and Wildlife Service review of timber harvest plans and non-industrial management plans, transitional documents. Letter to CAL FIRE dated February 1, 2008.

U.S. Fish and Wildlife Service (USFWS). 2009. Regulatory and scientific basis for U.S. Fish and Wildlife Service guidance for evaluation of take for northern spotted owls on private timberlands in California's northern interior region.

U.S. Fish and Wildlife Service (USFWS). 2011. Revised Recovery Plan for the Northern Spotted Owl (*Strix occidentalis caurina*). Portland, Oregon.

U.S. Fish and Wildlife Service (USFWS). 2013. Experimental Removal of Barred Owls to Benefit Threatened Northern Spotted Owls. Final Environmental Impact Statement, July 2013. U.S. Fish and Wildlife Service, Portland, Oregon.

Van Lanen, N.J., A.B. Franklin, K.P. Huyvaert, R.F. Reiser and P.C. Carlson. 2011. Who hits and hoots at whom? Potential for interference competition between barred and northern spotted owls. *Biological Conservation* 144: 2194–2201.

Ward, J.W. Jr., R.J. Gutiérrez and B.R. Noon. 1998. Habitat selection by northern Spotted Owls: the consequences of prey selection and distribution. *Condor* 100:79-92.

Weisel, L.E. 2015. Northern Spotted Owl and Barred Owl home range and habitat selection in coastal Northwestern California. M.S. Thesis, Humboldt State University, Arcata, CA. 54 p.

Wiens, J.D., R.G. Anthony, and E.D. Forsman. 2014. Competitive interactions and resource partitioning between Northern Spotted Owls and Barred Owls in Western Oregon. *Wildlife Monographs* 185: 1-50.

Yackulic, C. B., J. Reid, J. D. Nichols, J. E. Hines, R. J. Davis, and E. Forsman . 2012. Neighborhood and habitat effects on vital rates: Expansion of the Barred Owl in the Oregon Coast Ranges. *Ecology* 93:1953–1966.

Zabel, C.J., K.M. McKelvey and J.P. Ward, Jr. 1995. Influence of primary prey on home-range size and habitat-use patterns of northern spotted owls (*Strix occidentalis caurina*). *Canadian J. Zoology* 73:433–439.

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Tom O'Key
[REDACTED]
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January 23, 2017

Dear Commissioners,

Responding to the opportunity to include my opinions on wildlife issues coming before the Commissioners as shown on the agenda for the meeting of February 8 and 9, 2017, I thank the Commission and wish to submit the following requests into the record for consideration.

For a non-agenda comment I wish to restate the request to make unlawful the unlimited take in killing wildlife and particularly contest killing of coyotes. I strongly oppose these activities and believe that current insights in best available science shows the detrimental nature of these misguided allowed activities. It is time to end recreational killing with family fun as the attraction.

I ask that you please accept my input on a number of items I've found important to me from the list of items one through thirty seven as stated on the agenda. My attention is on items 5, 6, 7, 8, 9, 12, 13 and 20

On Items for consent I submit,

*5. Adopt proposed changes to regulations to add Livermore tarplant (*Deinandra bacigalupii*) to the list of plants of California declared to be endangered (Section 670.2, Title 14, CCR)*

I strongly support this declaration.

Preventing the extinction of this plant is entirely dependent on the stewardship that only the Commission and Department can and must provide.

*6. Receive Department's request for a six month extension of time to submit its status review report on the petition to list Humboldt marten (*Martes caurina humboldtensis*) as an endangered species (Pursuant to Section 2074.6, Fish and Game Code)*

I strongly support immediate protection for the Humboldt marten and ask for immediate action in protecting this species and all other threatened species under California wildlife management.

I ask that all recreational and commercial trapping of predators be made unlawful as protection of the Humboldt marten serves as but one of countless examples of the benefits resulting from banning all predator trapping. Item 6 is well supported with a trapping ban that relieves added unnecessary stress related to negative impacts of trapping put upon the Humboldt marten and many other threatened predator species.

Many fair arguments can be made supporting a ban on all commercial and recreational trapping and an important example is the economic consideration placed on taxpayers who currently carry the burden of responsibility for paying costs of administrating and managing the practice of trapping.

Time is past due for the enforcement of existing laws as contained in California SB1148 as well as in section 4006c of the California Dept. F&G Code. Full financial costs of allowing trapping to continue must be imposed upon the consumptive users of the current allowance or the allowance must come to an end.

7. Receive petition from the Center for Biological Diversity to list foothill yellowlegged frog (*Rana boylei*) as endangered under the California Endangered Species Act (CESA) (Pursuant to Section 2073.3, Fish and Game Code, and Section 670.1(c), Title 14, CCR)

8. Ratify findings on the petition to list northern spotted owl (*Strix occidentalis caurina*) as a threatened or endangered species under CESA (Pursuant to Section 2075.5, Fish and Game Code)

9. Ratify findings on the petition to list flat-tailed horned lizard (*Phrynosoma mcallii*) as a threatened or endangered species under CESA (Pursuant to Section 2075.5, Fish and Game Code)

12. Adopt emergency regulation concerning special order relating to incidental take of tricolored blackbird (*Agelaius tricolor*) during candidacy period as an endangered species (Pursuant to Section 2084, Fish and Game Code)

13. Consider the petition, Department's evaluation report, and comments received to determine whether listing *Lupinus lupine* (*Lupinus constancei*) as a threatened or endangered species may be warranted (Pursuant to Section 2074.2, Fish and Game Code) Note: If the Commission determines listing may be warranted, a one-year status review will commence before the final decision on listing is made.

I encourage expediency in administering agenda items 7, 8, 9, 12, and 13, and of all issues of similar concern.

Given the potential for changes in Federal oversight of endangered and threatened species, new federal laws may soon jeopardize fair protections. The California Fish and Game Commission and the California Department of Wildlife Services must maintain sustainable local management opportunities. Since potential major negative impacts of Federal administrative impositions are possible, I believe time is of the essence in maintaining local control of crucial issues.

20. Adopt proposed changes to regulations concerning the use of dogs for the pursuit and take of mammals (Section 265, Title 14, CCR)

I oppose all laws allowing the use of dogs to pursue and take mammals.

Thank you for your consideration,

Sincerely, Tom O'Key

