CALIFORNIA FISH AND GAME COMMISSION
NOTICE OF FINDINGS

NOTICE IS HEREBY GIVEN that, pursuant to the provisions of Fish and Game Code Section 2074.2, the California Fish and Game Commission (Commission), at its August 7, 2013, meeting in San Luis Obispo, accepted the petition filed by the Environmental Protection and Information Center to list the Northern spotted owl (*Strix occidentalis caurina*) as an endangered or threatened species based on a finding that the petition provided sufficient information to indicate that the petitioned action may be warranted. At this meeting, the Commission announced its intention to ratify its findings at a future meeting.

NOTICE IS ALSO GIVEN that, at its December 11, 2013, meeting in San Diego, the Commission adopted the following findings outlining the reasons for the acceptance of the petition.

I
BACKGROUND

September 7, 2012. The Commission office received a petition from the Environmental Protection Information Center (EPIC) to list the Northern spotted owl as endangered or threatened under the California Endangered Species Act (CESA) (Fish & G. Code, § 2050 et seq.).

September 10, 2012. The Commission office referred the petition to the Department of Fish and Wildlife (Department) for review and analysis pursuant to Section 2073.5 of the Fish and Game Code.

October 5, 2012. The Commission submitted a notice of receipt of the petition, for publication in the California Regulatory Notice Register, as well as for mailing to interested and affected parties.

November 19, 2012. The Department submitted a written request for a 30-day extension to evaluate the petition.

December 12, 2012. The Commission approved the Department's request for a 30-day extension to evaluate the petition.

February 6, 2013. The Department submitted its written initial evaluation of the petition (report).

March 6, 2013. The Commission announced receipt of the Department's report and indicated its intent to consider the petition, the Department's report, and public comments at the April 17, 2013 meeting.

April 17, 2013. The Commission considered the petition, the Department's report, and took additional related public comments. Thereafter, the Commission postponed further deliberations concerning the petition until the August 7, 2013 meeting in order to receive further information on questions raised during the meeting.

August 7, 2013. The Commission took further comments, deliberated, and accepted the petition, finding that it contained sufficient information to indicate the petitioned action may be warranted. The Commission directed staff to prepare a draft statement of Commission findings pursuant to Fish and Game Code Section 2074.2.

II

STATUTORY REQUIREMENTS

A species is endangered under CESA if it "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.) A species is threatened under CESA if it is "not presently threatened with extinction [but] is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by [CESA]…." (*Id.*, § 2067.) The Commission exercises exclusive statutory authority with respect to whether a species should be listed as endangered or threatened under CESA. (*Id.*, § 2070.)

The Commission makes the determination as to whether a species currently faces a serious danger of extinction throughout all or a significant portion of its range, (or for a listing as threatened whether such a future threat is likely) on a case-by-case basis after evaluating and weighing all available biological and management information.

Non-emergency listings involve a two-step process. First, the Commission considers a petition to list the species and determines whether the petitioned action "may be warranted." (Fish & G. Code, § 2074.2.) If it determines the action "may be warranted," the species is designated as a candidate, related regulatory protection attaches to the species following published notice, and the Department commences a year-long scientific, peer-reviewed study of the species' status in California. (Fish & G. Code, §§ 2074.6, 2084, 2085.) At the second step of the listing process, the Commission considers the Department's statusreport and information provided by other parties, and makes a final decision whether to formally list the species as endangered or threatened. (*Id.*, § 2075.5.)

To be accepted by the Commission as an initial matter, a petition to list a species under CESA must include sufficient scientific information that listing may be warranted. (Fish & G. Code, § 2072.3; Cal. Code Regs.,tit. 14, § 670.1, subds. (d), (e).) The petition must include information regarding the species' population trend, range, distribution, abundance and life history; factors affecting the species' ability to survive and reproduce; the degree and immediacy of the threat to the species; the impact of existing management efforts; suggestions for future management of the species; the availability and sources of information about the species; information about the kind of habitat necessary for survival of the species; and a detailed distribution map. (Fish & G. Code, § 2072.3; Cal. Code Regs., tit. 14, § 670.1, subd. (d)(1).)

Within 10 days of receipt , the Commission forwards the petition to the Department for an initial evaluation. (Fish & G. Code, § 2073.) Within 90 days thereafter, CESA directs the Department to submit an initial report to the Commission evaluating the information for and against the petitioned action, and including a recommendation on whether the petitioned action may be warranted. (Fish & G. Code, § 2073.5.) The Department may request and be granted a time extension of up to 30 additional days to submit its initial evaluation report to the Commission. (*Ibid.*) Upon receipt of the Department's initial report, the Commission schedules the petition for consideration at a noticed public hearing. (*Id.*, § 2074.) At the hearing, the Commission considers the petition itself, the Department's initial written evaluation of the petition, and other comments and information received by the Commission regarding the petitioned action. The Commission, in turn, considers whether there is sufficient scientific information to indicate the petitioned action may be warranted. (*Id.*, § 2074.2.)

The requisite standard of proof to be used by the Commission in deciding whether listing may be warranted was described in *Natural Resources Defense Council* v. *California Fish and Game Commission* (1994) 28 Cal.App.4th 1104 (*NRDC*). In *NRDC*, the court determined that "the section 2074.2 phrase 'petition provides sufficient information to indicate that the petitioned action may be warranted' means that amount of information, when considered in light of the Department's written report and the comments received, that would lead a reasonable person to conclude there is a substantial possibility the requested listing could occur[.]" (*Id.* at p. 1125.) This "substantial possibility" standard is more demanding than the low "reasonable possibility" or "fair argument" standard found in the California Environmental Quality Act (CEQA), but is lower than the standard for a preliminary injunction, which would require the Commission to determine that a listing is "more likely than not" to occur. (*Ibid.*) Distinguishing the fair argument standard under CEQA, the *NRDC* court also noted the "substantial possibility" standard at candidacy under CESA involves an exercise of the Commission's discretion, and a weighing of evidence for and against listing. (*Ibid*.)

In *Center for Biological Diversity v. California Fish and Game Commission* (2008) 166 Cal.App.4th 597 (*CBD*), the court acknowledged "the Commission is the finder of fact in the first instance in evaluating the information in the record." (*Id.* at p. 611, citing *NRDC*, 28 Cal.App.4th at p. 1125.) The court explained:

> "If the information clearly would lead a reasonable person to conclude that there is a substantial possibility that listing could occur, rejection of the petition is outside the Commission's range of discretion under section 2074.2. (*Id*. at p. 611.)
>
> [T]he standard, at this threshold in the listing process, requires only that a substantial possibility of listing could be found by an objective, reasonable person. The Commission is not free to choose between conflicting inferences on subordinate issues and thereafter rely upon those choices in assessing how a reasonable person would view the listing decision. Its decision turns not on rationally based doubt about listing, but on the absence of any substantial possibility that the species could be listed after the requisite review of the status of the species by the Department[.]"
>
> (*Ibid*.)

Thus at candidacy, without choosing between conflicting inferences, the Commission must objectively evaluate and weigh the information both for and against the listing action and determine whether there is a substantial possibility that the listing could occur. (*Id.* at p. 612.) In order for the Commission to reject a petition, the scientific evidence viewed as a whole must establish the absence of a substantial possibility that the listing could occur.

III
REASON FOR FINDING

The following discussion sets forth and provides an explanation of the bases for the Commission's determination that the petition provides sufficient information to indicate that the petitioned action to list the Northern spotted owl (NSO) as threatened or endangered may be warranted. The discussion below is not a comprehensive overview of all information considered by the Commission in reaching its determination. However, all written and oral comments, and other information presented to the Commission regarding the petition are considered part of the administrative record of proceedings. The Commission made its determination based upon and after considering its administrative record of proceedings.

Guided by the *NRDC* and *CBD* cases, the Commission now finds, pursuant to Fish and Game Code section 2074.2, subdivision (a)(1), that the petition and other information provide sufficient information to indicate that the petitioned action may be warranted. The Commission also finds that the information before the Commission would lead a reasonable person to conclude that there is a substantial possibility that the listing could occur.

The specific bases for these findings are as follows:

1. **Population Size and Abundance:**

The petition (pages 12-15) does not include direct information about the population size or abundance of NSO populations in California, nor does it discuss abundance range-wide. The Department deemed the relevant information found in the literature cited in the petition and other scientific documents consulted for its evaluation report to be inconclusive to determine the abundance of NSO range-wide or in California, and concluded that further research and analysis is required to determine the abundance for NSO populations in California. (Evaluation Report, page 6.)

Based on information in the petition and other data available to the Department at the time of its evaluation, the Department's report states that there is uncertainty about whether the declining population trends from specific study areas has translated into an overall decrease in abundance of NSO in California. (Evaluation Report, page 6.) However, based on the studies and the potential threats, the Department acknowledges that abundance may have declined. (Evaluation Report, page 6.)

Comments received from Humboldt Redwood Company (HRC) assert that HRC has, "through our surveys and monitoring over time, found that HRC's forestlands contain a very high density of NSO occurring on the managed landscape." (4/4/13 letter to FGC, page 1.)

2. **Population Trend:**

The petition summarizes the population trend of NSO (pages 3, 12-15), but does not assess the species' current population trend in California specifically. The petition describes declining population trends over the entire range of NSO, including California, Oregon, and Washington in the United States, and British Columbia, Canada. The petition (pages 13-14) primarily cites a recent study (Forsman et al. 2011) that analyzed eleven study areas spanning Washington, Oregon and northern California cumulatively comprising approximately 9% of the NSO's range. This study indicates an average annual decline of 2.9% for the entire population from 1985 to 2006. For California, two of the three study areas identified declining annual population trends over the analysis period; 1.7% for NSO in Northwest California (1988-2006) and 2.8% for NSO within Green Diamond (1990-2006) land ownership. The third California study area (Hoopa: 1992-2006) is apparently stable, with a point estimate of decline that is not statistically significant.

The evaluation report notes that, while the Department maintains a spotted owl occurrence database that consists of occurrences for both NSO and California spotted owls, until recently the database has not been regularly updated due to budget constraints and therefore population trend data for northern spotted owl populations in California are not readily available to the Department. (Evaluation Report, page 5.) Reports from Mendocino Redwood Company (MRC 2010), Humboldt Redwood Company (HRC 2012), and Green Diamond Resource Company (Green Diamond 2011)

summarized survey results over at least a 10-year period and estimated population trend as characterized by territory occupancy. Respectively, the first report indicated a stable occupancy rate; the second, a varying but apparent overall downward trend; and the third a downward trend over the 10+ year time frame. (Evaluation Report as amended, page 5.) The annual progress report for federal lands in Northwestern California shows a fairly stable NSO population over the last 15 years, however, a body of recent research indicates that increasing threats from barred owls and other factors may negatively influence this trend in the future (Franklin et al. 2012) (Evaluation Report, page 5.)

The petition also discusses and cites literature that indicates population trends on public land declined at a slightly lower rate than those on privately owned and managed lands (Anthony 2006, Davis et al. 2011, Forsman et al. 2011) (page 14). These studies consider the difference to be largely due to the management guidelines developed in the Northwest Forest Plan including the retention of late seral forest stands and other high quality NSO habitats required in the plan. For 8 sites located on federal lands in portions of California, Oregon and Washington from 1985 to 2008, the NSO population trend shows a 2.8% decline each year. The annual decline for just the Northwestern California NSO study area during this period was 1.7% (Davis et al. 2011).

Comments received from HRC assert that "there does not appear to be evidence of a steady decline, and to the contrary there appears to be a stable or slightly increasing number of NSO." (4/4/13 letter to FGC, page 1.) Comments received from Mendocino Redwood Company (MRC) assert that "occupancy estimates for NSO territories show, at a minimum, a dynamically stable population trend over the past 13 years" and "territory occupancy remained relatively constant over this time and increased slightly during the past three years." (4/5/13 letter to FGC, page 1.) Comments received from Sierra Pacific Industries (SPI) cite a "5-year landscape survey strategy" on "170,000 acres of SPI ownership," the results of which "indicated over the 23 years to date since 1989, the study area…demonstrates a stable population…" (4/5/13 letter to FGC, page 2.) Campbell Timberland Management (CTM) asserts that, "[a]lthough we have not conducted an analysis of annual rates of population change for the NSO on the [approximately 165,000 acres of industrial timberlands] ownerships, other analyses have been conducted suggesting the populations of NSOs occurring on the ownerships are stable." CTM concludes that "[e]ven though our analyses are not robust indicators of annual rates of population change as they do not consider contributions of variables such as immigration, productivity, and other vital rates in open populations, it provides evidence of no discernible decline of NSOs in the study area regardless of contributory effects." (4/5/13 letter to FGC, pages 1-2.) Crane Mills asserts that "[b]ased on our analysis, we can safely conclude that the NSO population in and around our Main Block ownership is stable and has been over the last 24 years." (4/11/13 letter to FGC, page 3.)

Based on information in the petition and other data consulted for the petition evaluation, the Department concluded in its report that there is sufficient evidence to conclude that population trends are declining and warrant further evaluation to determine the extent of the decline in terms of the population's threat of extinction. (Evaluation Report, page 5.)

3. **Population Range and Distribution:**

The petition (pages 7-10) accurately describes the known historic and current NSO range in California that runs south from Siskiyou to Marin County in Northwestern California. It also discusses that the ranges of the NSO and California spotted owl meet at the southern end of the Cascade Range, near the Pit River area (Gutiérrez and Barrowclough 2005). The petition (Figure 1 on page 8) identifies all

the occupied physiographic provinces in the U.S. occupied by NSO, including three in California: California Coast, California Klamath, and California Cascades (USFWS 2008b).

The petition does not discuss a recent restriction or contraction of the species range or any changes or stability of the range in California; however, the factors identified as contributors to range reduction in the northern part of the species' range may also be factors in many California locations. (Evaluation Report, page 6.)

The petition (pages 9-10) includes very limited information addressing NSO distribution. The current distribution map included with the Department's report shows an increase in the total number of known records, but does not readily impart any new information about the distribution of NSO in California. (Evaluation Report, page 6 and Appendix B.)

The Department did not find evidence to indicate that the distribution of NSO has changed during the time period of years for which surveying/monitoring of the species distribution has occurred. (Evaluation Report, page 6.)

4. **Kind of Habitat Necessary for Survival:**

The petition (pages 11-12) lists general, range-wide habitat characteristics necessary for NSO survival, including relatively large areas of complex, older forests for breeding, foraging, roosting and dispersal life history functions (Forsman et al. 2011). However, the petition does not specifically describe habitats that exist in California, nor how available habitat types influence NSO populations found in the state. The only habitat information related to California in the petition attributed to Franklin et al. (2000) is nonspecific to habitat types (page 12).

The petition cites research supporting the assertion that both the amount and the spatial distribution of nesting, roosting, foraging, and dispersal habitat influences NSO reproductive success and long-term population viability (pages 11-12). The petition and the Department's report agree that there have been extensive studies supporting a strong association of northern spotted owls with older forests throughout its range. (Evaluation Report, page 8.)

Citing Diller and Thome (1999), the petition states that breeding occupancy is related to the presence of mature and old-growth forests in Northwestern California, as NSO usually occur in the oldest forests available on private lands (page 12). Then, citing several studies (Carey et al. 1992, Rosenberg and Anthony 1992, Buchanan et al. 1995, LaHaye and Gutiérrez 1999, Lehmkuhl et al. 2006) the petition identifies understory structural characteristics of late-successional forest habitats as important for NSO and its prey (page 12). These conclusions are supported by the referenced studies and the information the Department has in its possession. (Evaluation Report, page 8.)

The petition states that NSO fecundity, production, survival, and recruitment are positively correlated to a larger proportion of older forest habitats in a pair's home range (Forsman et al. 2011, Bart and Forsman 1992, Franklin et al. 2000, Dugger et al. 2005, Olson et al. 2004)(page 12). Additionally, the effects of barred owls have been found to increase with a decrease in the proportion of old forest habitat in a home range (Dugger et al. 2011); however, most of these studies cited are associated with habitats in Southern Oregon and would need further analyses to determine how strongly this correlates with habitats found in California. (Evaluation Report, page 8.)

The petition describes dispersal habitat (page 12) as forested stands with adequate tree size and canopy closure to provide for foraging opportunities and protection from avian predators. The Petition asserts that population growth can occur only if there is adequate habitat in an appropriate configuration to allow for the dispersal of owls across the landscape; including dispersing juveniles, nonresident sub-adults, and adults that have not yet recruited into the breeding population (page 12). The Department's report cites studies (e.g., Davis and Lint 2005) showing a distinct lack of dispersal habitat connectivity within two of the three California Provinces (California Coast and Cascades Provinces). (Evaluation Report, page 8.) However, the Department notes that this and other studies show that a variety of habitats are used for dispersal, and more information is needed to determine what key elements of dispersal habitat structure are required for a sustainable population range-wide and in California (LaHaye and Gutiérrez 1999, Thome et al. 1999, Franklin et al. 2000, Gonzales 2005, Phillips et al. 2010). (Evaluation Report, page 8.)

Comments received from the California Forestry Association (CFA) assert that "Habitat for the NSO is abundant and of high quality on California's private forestlands. The dynamic yet stable population of [NSO] on private forestlands in California is indicative of the high-quality habitat that is present on these lands. California's private forestlands are some of the most productive in the nation, for not only the sustainable production of forests and their products, but also for the production of prey and food sources for the [NSO]. This abundant food source actually results in a smaller home range for many [NSOs], quite often resulting in higher densities of NSO on private forestlands than public." (4/12/13 letter to FGC, page 2.)

Comments received from the Sierra Club's Redwood Chapter and Sierra Club California criticize the "U.S. Fish and Wildlife Service strategy for spotted owl recovery centered on the creation of a network of federally-owned 'late-successional reserves' as habitat islands for [NSO], while largely ignoring habitat destruction elsewhere. As a result, [NSO] have been nearly extirpated on state and private lands throughout the region, and their population status on federal lands remains precarious." (4/10/13 letter to FGC, page 1, 4/16/13 letter to FGC, page 1.)

5. **Degree and Immediacy of Threat:**

The petition (page 3 and pages 15-25) discusses the degree and immediacy of threat to NSO, relying on sources ranging from USFWS federal listing documents to specific focused studies. The petition provides information that spans potential or documented threats to NSO range-wide, including impacts to the owl populations and prey base, loss of critical habitats by fire, logging and urban development, and other potentially increasing impacts by barred owls, predation, and disease.

The Department's report notes that while the petition did not discuss potential impact and degree of threat from climate change, the research readily available suggests it poses a threat that warrants a full evaluation (Franklin et al. 2000, Spies et al. 2010, Glenn et al. 2011). (Evaluation Report, page 10.)

While loss of late-seral forest and other required habitat elements across the NSO's range is well-documented (USFWS 2011a, Moeur et al. 2005, Raphael 2006, Courtney et al. 2004), the petition describes extensive habitat loss in Washington and Oregon over the last 20 years (Courtney et al. 2004, Davis and Lint 2005, Campbell et al. 2010) but does not cite studies discussing historic or recent habitat loss for California. The petition instead identifies twenty-seven Sierra Pacific Industries (SPI) timber harvesting plans (THPs) (Table 3 in the Petition) as activities "destroying northern spotted owl habitat in violation of the ESA Section 9 'Take' prohibition" (pages 16-17), and

concludes that over 2833 ha (7000 ac) of NSO habitat have been or will be destroyed by these plans. However, no supporting data was provided with the petition for the information in the table, and the Department's report concludes that a more in-depth evaluation is needed to assess the impacts of timber harvest activities in California for direct, indirect and cumulative effects to NSO populations. (Evaluation report, page 10.)

The petition and the Department's report agree that one of the greatest threats to the NSO, both in California and across its range, is the increasing competition by the barred owl. Barred owls have expanded westward and now completely overlap the range of the NSO. The barred owl is known to prey upon, hybridize with, displace and out-compete northern spotted owls (USFWS 2011a). The petition and the Department's report agree that the barred owl poses an increasing threat to NSO due to competition for breeding and foraging habitats, and the associated significant negative effects on NSO reproduction and survivorship. (Evaluation report, page 11.)

The Department's report shows a north to southward trend in the expansion of the barred owl range, with this threat recently moving into California. Studies cited in the Department's report indicate that the barred owl may be the primary reason for the near-extirpation of NSO in Canada, as well as the factor in the marked declines in Washington and Oregon (Forsman 2011, USFWS 2011a, USFWS 2012b, Dark et al. 1998, Kelly et al. 2003). (Evaluation report, page 11.) After a period of initial invasion, barred owl populations increase as do their potential impacts to NSO. Currently, the California portion of the NSO's range is experiencing the post-invasion increase in barred owls. As in other parts of the NSO's range, the barred owl may be the primary reason for recent declines in California. Recent scientific information (Diller et al. 2010) cited in the Department's report suggests a strong negative link between barred and NSO. The related research cited above on Green Diamond Resource Company land found in most cases that NSO reoccupied areas where barred owls were removed. (Evaluation report, page 11.)

The petition further identifies predation and West Nile Virus as potential threats that may have a negative impact on the northern spotted owl populations in the future (page 18). A more thorough evaluation of current research is required to determine the extent to which these factors may influence owl population viability in California. The Department's report identifies Trichomoniasis as a disease that has been recently identified in NSO carcasses (CDFG 2012b) but which requires more analysis prior to understanding the disease or its impact on the species. (Evaluation report, page 11.) While the petition suggests certain correlations regarding predation and disease impacts to NSO, the Department's report concludes that, in the absence of research specific to diseases and predation effects in California, the scientific uncertainty limits conclusions regarding the importance of these factors in affecting the viability of NSO populations without further evaluation. (Evaluation report, page 11.)

Much of the information included in the petition supporting the degree and immediacy of threat was derived from studies conducted outside of California. However, the Department's report points out that, while the magnitude and mechanisms of the threats may differ between California and other portions of the NSO's range, the non-California studies provide useful information regarding potential in-state threats. (Evaluation report, page 11.)

Comments received from the Sustainable Forest Action Coalition raise the threat of fire and state that "[w]ithout the flexibility to properly manage our public and private forest land, our state faces even more issues that are at least as or more critical than this current NSO issue…Allowing management on these forest lands is our only hope for reduction in size, number and intensity of wildfires…It is common that these fires are destroying more NSO, Goshawk, fisher and other

species habitat than has ever been impacted by proper forest management." (4/11/13 letter to FGC, page 2.)

Comments received from the Sierra Club's Mother Lode Chapter list "habitat loss due to aggressive logging practices, competition from the barred owl, and the absence of species recovery efforts" as threats "heavily impact[ing]" NSO. (4/15/13 letter to FGC, page 1.) Comments received from Forests Forever assert that "[c]oupled with continued habitat loss is the very significant threat posed by the barred owl, which displaces [NSO] and thrives in the highly fragmented and simplified industrial forest landscapes." (7/19/13 letter to FGC, page 1.)

6. **Existing Management Efforts:**

The petition (pages 19-23) asserts that there are overall regulatory and management inadequacies between federal lands, non-federal lands, and within each U.S. state within the NSO's range. The petition points to the inadequacy of federal protections to stop declines in NSO populations in California, noting that the NSO population has not stabilized since the 1990 Federal Endangered Species Act (ESA) listing in spite of the protections afforded by the Northwest Forest Plan (NWFP) (Davis et al. 2011, USFWS 2011a). The Petition concludes that this is due to insufficient protections and a lack of recovery planning outside of late-successional reserves established on federal lands by the NWFP (page 19).

The petition cites DellaSala 2011 for the proposition that management deficiencies occur in the following areas:

> *(a) variable and often inadequate protection given to owls and owl habitat;*
> *(b) lack of landscape-scale planning, especially on non-federal lands;*
> *(c) use of survey protocols and other standards that fail to incorporate current relevant science;*
> *(d) prevalence of discretionary guidelines and/or unclear or unsuitable direction;*
> *(e) failure to consistently require involvement of personnel with biological expertise in evaluating/assessing ecological information.* (page 19.)

The Department's report explains that, while it conducted "take" consultations of all THPs until June 1999, its involvement in biological assessment and evaluation for the species in THP review has been limited in the last few years. Subsequently, the U.S. Fish and Wildlife Service (USFWS) picked up the work until about spring 2008, when the California Department of Forestry and Fire Protection (CAL FIRE) began reviewing THPs following USFWS guidelines and supported by technical assistance from USFWS regarding specific plans and issues. Beginning January 1, 2013, the Department will resume full participation in the THP review process. (Evaluation report, page 12.)

The petition asserts that NSO's federal threatened designation under ESA, which prohibits all non-permit take, is insufficient to ensure the long-term survival of NSO in California (page 19). The Department's report indicates that the USFWS has issued survey guidance, including updates (most recently, USFWS 2011b) to identify situations where a development project may take an NSO. (Evaluation report, page 12.)

The Department's revised report indicates that NSO is currently designated a species of special concern in California, and governmental entities and land managers are required to evaluate any potential impacts to native biological resources during CEQA review. Projects that have the

potential to impact NSO are required to comply with the California Environmental Quality Act (CEQA) or an equivalent Certified Regulatory Program such as the Forest Practices Act. (Evaluation report, pages 12-13.) To comply with CEQA dictates, projects must avoid "take" under the federal ESA and must be developed to identify and mitigate significant direct and cumulative significant impacts. CAL FIRE has also developed guidance specific to California to avoid take of NSO by timber harvest (CALFIRE 2012). (Evaluation report, page 13.)

Comments received from Green Diamond Resource Company (GDRCo) assert that "[e]xisting management efforts to protect and conserve the NSO in California have been and continue to be effective because of the direct requirements of the ESA, and because of the response of the State of California and landowners to the federal ESA listing of the NSO that has been in place for over 20 years." (4/12/13 letter to FGC, page 3.) GDRCo additionally states that "listing of the NSO under the CESA will not improve on the existing procedures and standards for the protection and conservation of NSO that apply to federal actions and state and local projects in California," however, such a listing "does have the potential to interfere with existing conservation efforts dedicated to NSO in California" by interfering with the implementation of habitat conservation plans. (4/12/13 letter to FGC, page 5.) Comments received from the CFA laud "California's robust regulatory process" which ensures that timber harvesting plans "contain provisions for the protection of NSO individuals, nests, related activity centers, and the surrounding forest habitat." (4/12/13 letter to FGC, page 2.)

Comments received from the Sierra Club's Redwood Chapter assert that, "[a]lthough listed as 'threatened' under the federal ESA for more than 20 years, [NSO] populations continue to decline, with an acceleration of the trend in recent years. In California, vast areas that once offered prime habitat no longer support any [NSO] at all. Relentless habitat loss, competition from the invasive barred owl, and inadequate regulatory mechanisms are combining to push this species ever closer to extinction." (4/10/13 letter to FGC, page 1.) Comments received from Forests Forever cite the "inadequacy of regulatory mechanisms, especially the lack of recovery efforts on state and private lands," for the conclusion that "[w]ithout CESA protections, a more holistic view of species recovery and landscape-scale conservation that includes private and state owned lands, the [NSO] is likely to go extinct in the foreseeable future." (4/11/13 letter to FGC, page 1.) Forests Forever additionally states that "[t]he heavy reliance on fragmented reserves on federal lands without a comprehensive approach to [NSO] conservation on non-federal lands has proven to be a critical error, and one of the primary reasons why recovery has failed." (7/19/13 letter to FGC, page 1.)

IV
FINAL DETERMINATION BY COMMISSION

The Commission has determined and hereby finds based on its administrative record of proceedings that there is sufficient scientific information to indicate that listing NSO as endangered or threatened may be warranted. In making this determination, the Commission finds its administrative record includes sufficient scientific information to lead a reasonable person to conclude there is a substantial possibility that the listing could occur. In short:

- Data indicates the NSO population trends in California may be in decline and warrant further examination to determine the extent of the decline in terms of the threat of extinction;

- Information indicates the loss of suitable habitat from either timber management activities, catastrophic wild fires, or both may be a threat to the northern spotted owl across its entire range. Again, however, further examination of the loss of suitable habitat is warranted to assess the impacts of, among other things, timber harvest activities in California for direct, indirect, and cumulative effects to northern spotted owl populations;

- Information indicates that another threat to the northern spotted owl in California may be increased competition by the barred owl (*Strix varia*). Evidence indicates barred owls may pose a threat to northern spotted owls due to competition for breeding and foraging habitats, and the associated significant negative effects on northern spotted owl reproduction and survivorship; and

- Disease and effects of climate change on habitat are uncertain, but pose potential new threats to the northern spotted owl in California that also merit further consideration to assess existing science regarding the species' status in California.

Fish and Game Commission

Dated: December __, 2013

Sonke Mastrup
Executive Director