

Report on Northern Spotted Owl Stakeholder Meetings
California Department of Fish and Wildlife
Timberland Conservation Program
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Background

In 2013, the Board of Forestry and Fire Protection (BOF) briefly considered three rule plead options within the California Forest Practice Rules (FPR) for Northern Spotted Owl (*Strix occidentalis caurina*, NSO)(Appendix A). Proposed options ranged from text removal to a more thorough update of multiple FPR sections. The BOF decided to suspend its deliberations on these rule pleads pending the California Fish and Game Commission (Commission) decision to list NSO pursuant to the California Endangered Species Act (CESA).

On August 25, 2016, the Commission voted to designate NSO as threatened under CESA. Almost a year later, on July 7, 2017, the Commission's findings were published in the California Regulatory Notice Register, officially changing the state legal status of NSO to threatened (Office of Administrative Law, 2017). During the period leading up to the Commission's listing decision, CDFW prepared the "Report to the Fish and Game Commission: A Status Review of the Northern Spotted Owl (*Strix occidentalis caurina*) in California" (Status Review). The Status Review outlines "Management Recommendations" pertaining to "Planning and Timber Management Practices." One recommendation is to "Coordinate with USFWS [United States Fish and Wildlife Service], Board of Forestry [and Fire Protection], and CAL FIRE [California Department of Forestry and Fire Protection] in developing scientifically-based and contemporary Forest Practice Rules to (1) provide for the breeding, feeding and sheltering of Northern Spotted Owls and (2) conserve existing owl sites and high quality habitat."

On October 26, 2016, the California Department of Fish and Wildlife (CDFW) submitted a memorandum to the BOF during their Annual Call for Regulatory Review, requesting the BOF to revisit the three rule pleads, in addition to considering other proposals. The BOF Forest Practice Committee made this request Priority 1 for 2017.

Introduction

In response to the management recommendation in the Status Review and the BOF's prioritization of NSO rule reform, CDFW met with stakeholders to discuss NSO. In total, CDFW held 21 meetings from April 18, 2017 to May 31, 2017 with a variety of stakeholders to discuss NSO conservation and management on private timberlands. A CAL FIRE biologist and the BOF executive officer attended several meetings. Stakeholders represented private industrial ownerships, small landowners, consultants, and environmental non-profit organizations (Appendix B). CDFW chose stakeholders to interview based in part on recommendation from its regional staffs.

Five themes emerged from these meetings:

- NSO rule reform in the FPR
- Advantages/disadvantages of the "Protocol for Surveying Proposed Management Activities that may Impact Northern Spotted Owl" (Protocol) (USFWS 2011, revised 2012).

- Roles and responsibilities of CDFW, USFWS, and CAL FIRE
- Monitoring ideas for proposals to the BOF Effectiveness Monitoring Committee (EMC)
- The Spotted Owl Observations Database

This report summarizes the wide range of ideas and opinions from stakeholders involved with NSO-related issues on non-federal (mostly private) timberlands within the range of NSO in California. CDFW is presenting this information to the BOF for its consideration when it deliberates on NSO-related FPR reform options. CDFW also intends to use the information in this report as a basis for proposing monitoring ideas to the EMC, and to guide management decisions internally. Appendix C defines the acronyms used throughout this report.

Note that the statements under any given bullet were expressed either by an individual stakeholder or by more than one stakeholder. Those expressed by the latter are a combination of similar statements.

NSO Rule Reform in the California Forest Practice Rules

Spotted Owl Expert (SOE)

Delete the SOE

- Employment of an SOE's services is not necessary under § 919.9 (e), which is the most frequently used option for submission of NSO-related information in THPs.
- The purpose of establishing the SOE under the FPR was to allow a means for project proponents to propose deviations from the USFWS Protocol that are informed by the SOE's specialized knowledge and experience. Despite the SOEs' expertise, review of their recommendations and findings is still necessary to ensure they are in the best interest of the NSO. The role of the SOE is largely rendered superfluous because CAL FIRE evaluates proposed deviations from the Protocol and defers to USFWS.

Revise the SOE purpose and/or the process for evaluating SOE qualifications

- Change the last sentence of Spotted Owl Expert in §895.1 to read: "The Director shall refer all SOE qualifications received to the U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife for evaluation of qualifications."
- An SOE should review the SOE qualifications regularly.
- Wildlife Agencies (CDFW and USFWS) have not been verifying the qualification of SOE candidates.
- Many SOEs are not knowledgeable about NSO biology.
- The SOE's function and purpose is not clear. There should at least be better selection criteria and training to qualify as an SOE. Define the minimum level and expectations.
- If the recommendations and findings of SOEs are allowing timber operations to proceed while avoiding take, then the SOE provision of the FPR is effective. CAL FIRE needs to recognize the validity and expertise of the SOEs and rely on them. The process could

possibly be stricter to become an SOE, like the one created for designating Private Consulting Biologists (PCB, see below) in the 1990s: require the candidates to demonstrate to the Wildlife Agencies their competencies in typing habitat and NSO call point coverage in the field, validating survey result interpretation, and making findings that could delay timber operations.

- The SOE process is not effective until the SOE has more authority than a non-SOE. Currently, SOEs do not hold the same weight as a biologist or any review team agency. The SOEs are the ones on the ground that know the area and owls.
- The SOE option is not being used. Either support it or eliminate it.

Do not revise the SOE

- The SOE is effective under a Spotted Owl Resource Plan (SORP), which requires reporting and analysis. It limits the amount of people doing owl work.
- Employing an SOE is important because it involves a person with a level of NSO expertise and understanding of the species biology, who makes assessments, performs surveys, justifies deviations from the Protocol, and gives the agency reviewer some certainty that the NSO information in THPs is reliable.

[14 California Code of Regulations §895.1, §919.9, and §919.10](#)

Considering the three draft rulemaking pleads developed for the BOF's consideration in 2013 (Appendix A)

- Option 1 is preferred. Include deviation from the Protocol but require long-term monitoring data and consultation with CDFW or USFWS.
- Option 3 has support, referring to the Protocol and consultation with agencies.
- Do not put specifics in the FPR that subsequently could need to be changed.
- Regulations need to have a scientific approach to receive support. Landowners need to be assured of sound science and justification with well-thought-out studies.
- Any FPR reform should consider how the review process would be affected. Any proposed reforms should be evaluated against whether they would result in a more streamlined process than what is in place now, whether THP review can conform with statutory timelines, and whether they would allow timber operations to begin earlier in the year than they can now. Will it bottleneck all landowners to harvest at a particular time? Will it flood THP submittals to one time?
- If referencing the Protocol, attachments, or other guidance, consider the probability of revision. The FPR would have to be updated to reflect changes.

Revise § 919.9

- § 919.9 should include specific protection measures for NSO because there is sufficient data on the species and they affect a large number of landowners. This could be a minimum standard with various options. It should be simple and not too prescriptive.

- Option for revision:
 - § 919.9 (b) should be included no matter what.
 - § 919.9 (c) could be updated to the new standards in the Protocol.
 - Keep § 919.9 (d) and (e), but in (e) add reference to the “Northern Spotted Owl Take Avoidance Analysis and Guidance for the California Coast Forest District” also known as “Attachment A” and “Attachment B: Take Avoidance Analysis-Interior.”
 - § 919.9 (f) keep or fold into (a). This seems like a SORP and the intent should be clarified.
 - Remove § 919.9 (g) and use rule plead Option 1.
- Revise the FPR for NSO with the following three options:
 - Programmatic approaches, such as a Habitat Conservation Plan (HCP), SORP, and Safe Harbor Agreement.
 - Have a checklist in regulation of a standardized approach to avoid take. It would acknowledge that the Protocol are guidelines.
 - Pre-consult and make a take/no-take determination. This provides flexibility and a site-specific approach.
- Update the habitat definitions
 - Make them consistent with the USFWS habitat definitions.
 - Keep habitat definitions simple, and let specifics be resolved with existing guidance documents or through consultation with CDFW or USFWS.
 - Delete Type A, B, and C Owl Habitat
 - Keep “functional” in the habitat definitions in § 895.1 and consider a definition for lower-quality habitat (that does not meet the current criteria in § 895.1) as NSO refugia on a site-specific basis.
 - Definitions for habitat in §895.1 should include NSO post-fire habitat. For example, there are definitions of NSO post-fire habitat in the biological opinion for the Westside Fire on the Klamath. The function of post-fire habitat depends on the pre-fire habitat condition and burn severity.
- Delete §919.9
 - Add a line to follow the most recent Protocol. Ultimately, that is what will be used anyway.
 - The FPR could work without the current measures in § 919.9 if there was a rule requiring the landowners and their agents to follow the most recent Protocol and pre-consult with agencies if deviating from it. Since agency roles change, a basic structure or process would be important to outline:
 - Simplify the process while continuing to maintain strict oversight and consistency across all regions.
 - There are too many differences in each county in how large industrial forest ownerships and small landowners follow the Protocol and in what agencies look at for each.

- Consider the Barred Owl
 - Barred Owl (BDOW) is tough to incorporate in to the FPR, and the problem is not yet statewide. However, it needs to be recognized as an issue. It would be helpful if more people submitted BDOW data.
- Outline a process
 - The protection measures outlined in §919.9 (a), (b), (c), (d), (f), and (g) are not being used. § 919.9 could be changed to reflect the actual processes happening on the ground.
 - Since NSO affects so many landowners, a detailed regulation outlining the process is necessary.
- Update § 919.9 for consistency with the Protocol.
 - Revise the FPR to incorporate the Protocol and attachments, and update the definitions. Remove the unused definitions and update the active definitions so that they are consistent with the Protocol. Separate the Interior and the Coast. Consult with agencies. Call out that this is specifically for the NSO.
 - Provide the most updated Protocol. Consider that the Protocol focuses on a naïve landscape that has never been surveyed.
- Take out specific NSO definitions and prescriptions in §895.1 and §919.9. In §919.9, refer to using the best available science, consultation with CDFW, and the most recent Protocol, similarly to § 919.11 for MAMU.
- § 919.9(b)(3) change to: As adjacent landowners permit and from other available information, a discussion of adjacent owl habitat up to 0.5 mile from the proposed boundary and its importance relative to the owl habitat within the boundary.
- The FPR are focused on those trying to leave the minimum, not those trying to be conservative by maintaining nesting and roosting habitat after harvest. Put incentives into the FPR.
- A biologist should write the NSO section of a THP, verify the habitat, and follow the Protocol and Attachment A.
- The FPR should provide certainty for landowners and there should be at least one option that provides flexibility in a letter of Technical Assistance (TA).

Do not revise § 919.9

- Do not modify the FPR for NSO. Even a good rule package could drastically change in the 45-day public comment period. While some references are outdated, the plan proponent considers current guidance and references. A THP will not go through if following outdated references. The rules are not broken. Do not open Pandora's Box.
- A rule change will not fix any issues. Are there staffing decisions at the CDFW level to help with NTMP's and small landowners?
- Rule reform will not be effective unless less-than 3-acre conversions and CEQA exemptions for marijuana are addressed.
- The FPR keeps species consultations to a strict timeline. Pre-consulting takes too long.

- The current process is working. The FPR have supported a stable population of owls.

Protocol

Abandonment and Activity Center (AC) Placement

- The definition of abandonment should be refined and simplified. State and federal agencies should make the determination.
- Outline a process for determining abandonment. This could consider the nighttime surveys, daytime stand searches, BDOW, and substantial datasets. There could be an option to harvest under a different standard if the NSO has not been in the AC for a minimum number of years. Keep the AC but have flexibility to harvest in the 100-acre core.
- It is impossible to get an abandonment determination.
- Clarification is needed between abandonment and recovery. Recovery standards should not burden private landowners (e.g. maintaining ACs after several years of NSO absence).
- ACs are easy to create but not easy to get rid of. Static ACs do not fit what is happening on the landscape.
- NSO do reoccupy ACs, so historic ACs should be retained permanently. If NSO are using alternate ACs, they should all be protected. This is critical habitat for dispersing juveniles and new NSO pairs that could move in.
- It is difficult to move ACs. If BDOW displace NSO from an AC, USFWS still wants to keep the AC, even if NSO have been found elsewhere. Many ACs are protected that are attributed to one NSO pair. There needs to be flexibility with ACs especially when the criteria for establishing them is so low. Even with compelling evidence, USFWS is critical of abandonment or simply moving ACs around. Each situation is unique.
- When mapping the 100 acre core area around an AC, there is no guidance for how to use habitat on neighboring properties. For instance, one landowner may use 20 acres of Nesting/Roosting habitat on their neighbor's property as part of their core area, while the neighboring landowner could be using that same 20 acres for a different core area. This double counting should be addressed.

Deviation and the 6-visit, 2-year Protocol

- Landowners need the option to use a 1-year survey Protocol instead of the current 2-year survey Protocol in site-specific circumstances where ongoing monitoring is occurring (e.g. on NTMPs and larger ownerships with greater than 2,500 acres).
- There should be a process (e.g. consultation) in place to provide flexibility and deviations from the Protocol when certain conditions are met.

- The 6-visit survey is supported, but not two years of it. There should be reduced calling (e.g. three spot-check visits) every year past Year 1 on properties where long-term monitoring is occurring.
- Allow harvesting in the 100-acre core while retaining habitat elements for NSO.
- The 6-visit Protocol in Year 1 is supported, but Year 2 should be a 3-visit spot check. Spot checks could include a 2-hour evening stand search in known ACs before any nighttime calling occurs to avoid excessive calling. If NSO are not found, then do night calling.
- The 6-visit, 2-year Protocol is supported with BDOW on the landscape. However, landowners that commit to creating long-term habitat for NSO (e.g. growing big trees) and have a substantial long-term data set should receive flexibility in the Protocol (e.g. 1-year, six visits).
- NTMPs lose flexibility with the 2-year Protocol. The second year of surveying is a huge cost to landowners just to increase the chances of detecting NSO by 3%. Do more intense surveys on the first year and do not operate during the breeding season rather than have a second year of surveys. This is especially true for landowners that are not even reducing the quality of habitat for NSO. The second year of surveys is supported if the habitat is being reduced.
- Small landowners need relief. The 6-visit, 2-year Protocol forces small landowners with NTMPs to call every year so it is all in place when the market is good to sell timber. Small landowners do not trust that the Protocol will stay the same, and are calling six times a year every year. Most of these landowners are good stewards of the land and are still retaining nesting and roosting habitat.
- Deviation from the Protocol that is landscape specific should be allowed. Set up surveys to call the highest quality habitat and stations that have the best coverage first. Eliminate areas where NSO are found. Then get broader and expand calling to other areas.
- There needs to be a process to deviate from the Protocol to limit harassing NSO with excessive calling (e.g., it is always Year 2 of the Protocol).
- There was only a 5% increase in detection probability going from one to two years.
- The Protocol was designed for the entire range of the NSO and for finding NSO in a new area (i.e. properties that were never surveyed). Rich survey history is not accounted for. There should be a separate protocol for California, since the current one does not meet the conditions we see here.
- The Protocol was developed with data from outside California. California needs a detectability analysis accounting for BDOW presence or absence.
- Completion of the three spot checks in Year 3 and 4 by April 15 is convenient for starting early logging operations May 1. However, the calls should be spread out if operations are starting later in the summer.

- Each station is on its own schedule with the six visits or 3-visit spot check. It is confusing when the stations for more than one THP overlap. Permission to do three survey visits for the entire forest would be helpful.
- Why call the same route repeatedly if the location of NSO is already known?
- Having flexibility for site-specific situations is great, but leaving it too open-ended is scary because the process is unknown.
- USFWS has been reluctant to discuss deviating from the Protocol for old inactive ACs even with a lot of data and the birds moving around so much. There should be different protections for old inactive ACs. We will continue to have inactive ACs because of BDOW. Landowners cannot continue providing 100-acre core protections for every AC historically used by NSO. If we are improving habitat for NSO we should receive some relief from the Protocol.
- A one-year survey is necessary to accommodate the timber market conditions. One year of surveys could include night surveys and daytime stand searches, which increase the detection probability.
- Change the Protocol to combine complete visits (Section 5.5 of the Protocol) and spot check surveys (Section 10.1 of the Protocol) into one description: Complete Visits and Current Management Activity Status—this provides a flexible framework. For areas that have not been surveyed in the last two years:
 - Year 1: Provide six night surveys with follow-up for positive detections within 48 hours.
 - Year 2: Provide three night surveys before June 30 with one in April, one in May, and one in June (eliminating night survey stations within 0.5 mile radius of known ACs), coupled with two 2-hour stand searches of known ACs between March 1-August 31 with each survey or search more than seven days apart. If found during the first stand search, consider complete; if BDOW are present abort search and provide BDOW data to USFWS and/or CDFW.
 - Following Years: To maintain current management activity status, provide three night surveys (before June 30 with one in April, one in May, and one in June) and/or two stand searches of known ACs between March 1 and August 31, with each survey or search more than seven days apart.
 - Beginning with Year 3 and moving forward, operations may run concurrently with survey efforts with prior approval from USFWS and/or CDFW (given previously approved survey data).

Attachments A and B

- Avoid take with consultation, not by referencing Attachments A and B (which could change in due time).
- Attachments A and B should be consistent with each other in the way they measure habitat. It is also unclear where the line is between the Coast and the Interior.

Delineating the boundary between where the two attachments apply along ridgelines makes sense.

- Attachment A and Attachment B are problematic and often inconsistent with each other. Attachment B requires more habitat retention than does Attachment A. This makes it extremely difficult to harvest using any silvicultural method in the Interior and maintain NSO habitat. Additionally, definitions of habitat in the Attachments do not comport with reality. For example, a stand might technically be Foraging Habitat based on the canopy, tree size, and basal area, but lacks prey items like wood rats. Alternately, NSO are often found roosting in habitat that does not meet the Nesting/Roosting Habitat definitions, particularly in Napa and Marin Counties. Revisiting both Attachments would be ideal.

Habitat Definitions

- NSO are nesting in lower quality habitat that does not meet the definitions in §895.1. ACs are not always in prime habitat, and they may be more highly associated with prey base. When NSO are found in these areas, it locks up the entire 1.3-mile buffer to meet the habitat retention requirements in the Protocol.
 - An example of lower quality habitat is strips of timber along grassland.
- Redefine NSO foraging habitat to consider prey base habitat. The focus is on managing for nesting and roosting habitat, but there needs to be a balance on the landscape with managing for the prey base. Some unsuitable NSO habitat is suitable prey base habitat.
- Protocol Habitat to Survey (pp.7-8)
 - Update the following sections: USFWS will not be providing further guidance (p.7, bottom), and their contact information (referenced on p.8, Appendix 2 of the Protocol) will no longer be accurate. It is advisable to provide an updated Habitat document and provide a new contact list.
 - The top of page eight refers to the Thomas Report (Thomas et al. 1990) and is outdated and inaccurate. For example, the Thomas Report says Marin County will support (about) 12 pairs, but Marin County now actually has (about) 80 pairs.

Station Placement

- The spacing between call points (0.25-0.5 mile) should consider topography. The electronic callers are pulling NSO in to call points from more than a mile away and are harassing them.
- The required minimum distance between call stations is a gray area that is open to interpretation.
- Change California Coast Range (redwood zone) survey radius from 0.7 mile to 0.5 mile.

- Reasoning: This would allow surveying from project/property boundaries without trespass, and would allow for collection of NSO data on ACs within an effective range. Humans can hear NSO up to 0.5 mile, which is the maximum distance between survey stations.

Agency Roles and Responsibilities

Current Issues

- USFWS disengagement leaves landowners confused about the process forward, including how to get assistance for NSO in THPs.
- If USFWS disengages, all the work that went into developing and implementing Habitat Retention Agreements (HRA) and Safe Harbor Agreements will be lost. CAL FIRE cannot accept these agreements because they are not in the scope of §919.9.
- USFWS will no longer review and approve NSO measures or data submitted with Notices of Timber Operations (NTO) under NTMPs. This is concerning and could cause delays for small landowners.
- Agencies are inconsistent in NSO review and recommendations which creates uncertainty and frustration for landowners.
- There are too many differences in each county regarding private industrial and small landowners' interpretations of the Protocol and review by the agencies.
- Agency roles are always changing.
- CAL FIRE does not always defer to CDFW recommendations for NSO relating to federal "take." However, it does defer to CDFW for marbled murrelet determination and mitigation in §919.11.
- CAL FIRE does not want to make decisions on deviating from the Protocol without USFWS input.
- Registered Professional Foresters (RPF) have to submit THPs to CAL FIRE and see what happens. No agency is available for pre-consultations. If CDFW were to engage with RPFs in pre-consultations, it would need to learn from USFWS what allowances it would have to approve deviations from the Protocol and under what circumstances such deviations would be appropriate.
- There is no system now to handle NSO issues and develop personal relationships. What is needed are ways to be more efficient so that landowners know what to expect.
- There is a wall between landowners and agencies. They need to work together to conserve the species. Landowners should not be dis-incentivized.

USFWS/CDFW Designated Biologist and PCB Programs

Many stakeholders expressed their support for the USFWS/CDFW Designated Biologist and Private Consulting Biologist (PCB) programs from the 1990s. They were considered effective and timely. Landowners and their representatives consulted with CDFW (and occasionally, with CAL FIRE) designated biologists (both before and after plan submittal/approval) for review of

NSO survey effort, habitat designation and analysis, and NSO AC locations and management. The level of engagement depended on size and availability of CDFW workforce. Under the PCB Program, CDFW designated biologists completed a rigorous review of the qualifications and work products of consulting and company biologists who applied to be certified as PCBs. PCBs completed the work that had been exclusively the agency biologists'. PCBs were a trusted resource engaged in a streamlined process that expedited completion of consultation and sign-off on NSO-related information. PCBs completed NSO pre-survey consultations, THP and re-consultation checklists, verified NSO data, performed field consultations, made take-/no-take determinations and completed a standardized report. On rare occasions, PCBs whom CDFW determined did not perform according to established criteria lost their PCB designation.

Outline a Basic Structure or Process

Most stakeholders expressed support for a clear review and approval process of NSO-related information in THPs. The majority of stakeholders have no preference regarding the agency in charge of review of NSO-related information. Their main concern is that a clear process exists that provides certainty and timeliness. Stakeholders said they prefer a "one-stop shop" and do not want to go to all three agencies (USFWS, CDFW, and CAL FIRE) to get answers on an issue. Flexibility through consultation is also important for site-specific situations or deviation from the Protocol. It is critical that individuals involved in this process are qualified and have adequate NSO experience. Additional suggestions included:

- Set up a pre-consultation process to provide flexibility when certain conditions are met.
- Do not set up a pre-consultation process because the timeline would be too long. The agencies (USFWS, CDFW, and CAL FIRE) should act in alignment with the strict timelines of the THP review process and not engage in pre-consultations, which are not subject to any regulatory timeframes.
- CDFW should take over the role of processing NSO consultation requests and be given the authority to make "take/no-take" determinations for NSO. CDFW could take over the USFWS TA process.
- Keep both CDFW and USFWS as agencies with whom to consult for NSO since roles could shift.
- CAL FIRE should assess the data and make determinations.
- CAL FIRE is not qualified and should not have the authority to make the "take" determinations.
- Either make a process with CDFW to mirror what timber companies do or stick with CAL FIRE making most of the determinations.

Training and Communication

If CDFW plans to play a larger role in NSO review, they need more individuals that are qualified. Many stakeholders expressed concern over individuals without wildlife biology backgrounds

making determinations. Better communication within CDFW and between agencies is important for consistency.

- Non-agency professional expertise (e.g., SOE) needs to be acknowledged and accepted.
- There should be deference given to an individual's qualifications and training. For example, a week of training should not give someone the same status as an SOE.
- There needs to be a baseline skill level for surveyors and reviewers to give NSO the best chance.
- CDFW regions need qualified people to make general calls, but have a specialized person with a substantial amount of NSO experience to make harder calls (i.e. deviating from the Protocol).
- Have a clear process for identifying who is a designated person or expert. Make sure on the private industry side there are required qualifications. No exam or cost, but just a statement of qualifications with THP submissions.
- Agencies need field training to identify lower quality habitat, AC placement, and AC status.
- CDFW needs to be involved with timberland managers and attend California Licensed Foresters Association breakfasts and meetings.

Other Ideas

- There should be an annual license to become a certified biologist. The Commission could determine this. State licensing has more power than organization certifications.
- USFWS still has the ultimate authority; therefore, even if CDFW has the expertise they will hit a wall.
- It would be helpful to have a template explaining how to summarize NSO data for speedy review.
- For NSO there could be a certification process similar to that for the marbled murrelet.
- Can CDFW get veto power, similar to the water boards, so that CAL FIRE does not ignore their NSO recommendations?
- CDFW should come up with a NSO recovery plan. The USFWS has one, but it is viewed as guidance and is not mandatory.
- CDFW could provide TA. CAL FIRE might not be up to the wildlife biology standards. A biologist, rather than a forester, should help with determinations on acreage of owl habitat. It is hard for someone without a wildlife background to understand how NSO use habitat.
- Having CDFW more involved could be good unless they oppose timber harvest. The timber review process is overstaffed.
- USFWS should step up or defer. Further delays are reducing feasibility of projects.

- Pre-consultation is helpful because issues are resolved before the THP goes through the system.
- Would USFWS authorize CDFW to approve deviations from the Protocol?

Monitoring Ideas for the EMC

Detection Probability

- What is the detection probability of BDOW during NSO surveys? How does BDOW respond to BDOW versus NSO calling?
- Survey for BDOW on the landscape.
- Review historic NSO data. What are the response rates of NSO in Year 1 versus Year 2, and in three visits versus six visits?

Emergencies/Exemptions

- For § 1038 (b) is noise disturbance an issue for owls? Are owls even present? Are operations occurring during the NSO nesting season? Some of these questions might be answered with a spot check.
- Monitor after a fire to better understand the rate of tree mortality. Since many fires have occurred in “checkerboard” ownerships, one idea is to compare the post-fire NSO habitat conditions on United States Forest Service land (that is not subject to salvage logging) to the habitat conditions in salvage-logged forest on adjacent private timberlands.

NSO Activity Center Habitat

- Many abiotic factors such as slope, aspect, and distance to streams could be considered in managing habitat in AC core areas.
- Compare owl performance with old FPR § 919.9 (g) and (g+), SORP/Spotted Owl Management Plan (SOMP) (abiotic factors), and HCPs.
- What have we learned from habitat retention and the size of AC core areas? We need to test the rules. Are disturbance buffers effective? Monitor the habitat distribution, arrangement, and patch size. Can it be used in a prescriptive way? Re-visit sites after prescriptions are implemented.
- Investigate protection measures for NSO in THPs pre and post-harvest. How were the prescriptions implemented? Were the measures effective for NSO? Did operations “take?” Were operations in compliance with the prescription in the plan? Identify circumstances where inferences can be made with the data.
 - Another idea is to compare study areas where the Protocol has and has not been applied.

Protocol

- Review datasets for NSO surveys. Are new ACs found after the initial two survey years? Has application of the full Protocol after two years found additional NSO? Are there

false positives (of newly discovered NSO) from known NSO moving around? Is the 2-year, 6-visit survey followed by only spot checks effective?

- Compare other methods of surveying in terms of cost and results to the Protocol. One method is precisely targeting the qualitative features first for night visit calling, then eliminating areas where NSO are found. The search can get broader from there. Perform blanket coverage after the precision approach if nothing is found.
- Do recorded callings have an effect?

Other Ideas

- Look at historic long-term data sets. However, fecundity is not in most data sets, and fecundity is more important than site fidelity.
- Monitoring with timber harvest is not possible with the BDOW present.
- Perform studies on foraging habitat. If the canopy is reduced below 60%, how quickly will it grow back? If nesting and roosting habitat is converted to foraging habitat through harvest, how quickly does it return to nesting and roosting?
- What is the correlation between NSO and prey base? Study NSO prey base habitat.
- Why do NSO breed some years and not others?
- What causes abandonment? Can we try management practices (disturbance) to see if it actually helps NSO rather than just leaving the habitat alone?
- Look at banding data. Do a demography study on the distance NSO move and shift ACs.
- Keep regulations apart from monitoring. Trend monitoring is a form of effectiveness.
- Track NSO via radio tag to see what habitat they are actually using, especially when BDOW are present.

The Spotted Owl Observations Database

- The Spotted Owl Observations Database cannot be changed without a TA from the USFWS. Ten years without a detection means nothing.
- The Spotted Owl Observations Database is not always up to date. Many landowners are reluctant to submit data and do not want the information about their property out there because it may hinder them.
- Improve the Spotted Owl Observations Database with “good data” vs. “phantom ACs,” which should be called a response location not an AC. Many of these “phantom ACs” were established long ago before surveyors were experienced.
- It is a major challenge to get AC locations moved in the Spotted Owl Observations Database. If an NSO moves (e.g., in one case 1.4 miles), both ACs have to be honored.
- Why does the Spotted Owl Observations Database retain invalid ACs?
- CDFW is in charge of the NSO database. CDFW could make rules for abandoning sites in the database, and USFWS will have to come up with evidence to challenge it.
- No NSO have been detected during eight years of continuous surveys for many ACs. Leaving ACs such as these in the database does not make sense.

- Having a central data location and point person for discussing AC placement has been helpful.
- Can Assembly Bill 1492 money be used to hire someone in USFWS to work with the database? They can remove invalid ACs and get the database to reflect the true ACs on the landscape.

Miscellaneous Suggestions

- SORPs are effective tools for long-term monitoring and flexible management of NSO on the landscape.
- Small landowners cannot prepare and implement SOMPs and SORPs.
- There has been too much of a shift from biologists to foresters, who typically have no biology background, making the NSO calls.
- The timber industry does inventory, not research. Their on-the-ground data cannot compare to published sources. All they can do is provide the information and a fair argument but all it takes is one counterargument to cast doubt. There is no weight given to experience. RPF analyses are not received consistently.
- Post-fire foraging habitat is difficult to identify because it is not described in the Protocol or other official documents. Did the fire or salvage logging cause take? What ultimately causes NSO to leave the landscape after fire? The NSO might use it but that does not make it habitat. NSO show strong site fidelity.
- Banding more NSO would inform decisions about whether or where to move the locations of ACs in NTMPs. Information on the movement of banded NSO could also help assess the impact of BDOWs. Many small private landowners do not have banding permits. Can CDFW band NSO for landowners at their request, or have an organization do it? Can banded NSO give landowners flexibility in the 2-year Protocol?
- Banding is labor intensive and requires a lot of coordination between neighboring landowners. Banding can be harassment and the public in urban areas could notice NSO.
- Additional regulations lead to landowners selling their land. Therefore, we need to find a streamlined system that works for landowners and NSO.
- The CDFW Timberland Conservation Program and the Watershed Enforcement Team need to work together to address NSO and other species on cannabis cultivation. Fragmentation of NSO habitat by less-than 3-acre conversions makes the habitat not functional. There are too many CEQA categorical exemptions.
- Incidental take authorization for lands managed under HCPs is causing NSO to move to adjacent lands that do not have such authorization.
- The process of developing federal Safe Harbor Agreements for NSO can encounter permitting challenges from NOAA Fisheries.
- The biggest impact to NSO is THP-exempt logging (e.g. §1052 emergency for fire), which is resulting in “take.” NSO utilize post-fire landscapes. NSO post-fire habitat needs to be defined and considered in avoiding “take” under salvage logging emergency operations.

- The Director cannot approve a plan that results in “take.” Since emergencies are not a plan, CAL FIRE has no means to stop an emergency notice that will cause NSO “take.”
- Mixed conifer forest is being converted to pine plantations after fires. The same NSO habitat is not being replaced. Revisit replanting standards to require a diversity of species when replanting.
- The following terms and phrases need to be defined: operational rules, dead, and dying within one year. The USFS has criteria for dying trees. RFPs need more definitions, assurance, and guidance.
- Add a specific prohibition against “take” for emergency notices.
- The FPR avoid “take” of NSO and do not incentivize landowners to aid in their recovery (e.g., removal of BDOWs).
- There should be a requirement to disclose all NSO data in THPs, so that it can be reviewed for adequacy.
- The NSO functional habitat definitions (e.g., 11” DBH) in the FPR do not apply to NSO habitat in Sonoma and Marin Counties. In these counties, occupied habitat often is comprised of small hardwoods and low conifer cover. NSO also frequent riparian chaparral that has a heavy woodrat prey base.
- Look at the topography, slope, canopy cover, and other attributes to determine and protect NSO habitat. The ACs should not always be perfect circles.
- If there is a long-term commitment to grow habitat for NSO, then there should be some assurances to the landowner.
- Forestlands managed by the California Department of Parks and Recreation are a breeding source of BDOWs.
- Habitat (e.g., brush) for woodrats is not being created. There is a significant correlation between habitat and prey base. There is less competition between NSO and BDOW if there is enough food.
- Can the California Forest Improvement Program help to defray the costs of wildlife surveys?
- The woodrat is the NSO primary prey base, so unevenaged management might decrease prey availability. Group selection is not the same as clearcutting.
- In areas that are harvested the BDOWs move out but come back. Single tree selection is growing BDOW habitat. The BDOW is shy. Disturbance and operations push them out. NSO is accustomed to people and operations. BDOW can learn and over time can become accustomed to human presence similar to the NSO.
- HRAs are the best thing USFWS has done. They annually provide NSO inventory data to the database. What will happen to these agreements with the onset of USFWS disengagement?
- Timber harvesting is no longer the main issue, BDOW is. Reproduction is going down because NSO are nesting at a low rate. The non-nesting individuals are moving around

making them hard to pin down. It is easier to manage based on current NSO locations and not retain habitat they no longer occupy.

- We need to do something about the BDOW. Private parties are willing to do BDOW control. How do we get around the Fish and Game Code? Could there be operations under a state collection permit?
- The mechanisms of recovery are unclear, but the threats are staring at us in the face: salvage logging, BDOW, and forest conversion. The threats should be front and center and tackled head on.
- HRAs give landowners the flexibility they need to harvest timber in the 100-acre core while still creating nesting and roosting habitat for NSO. However, they are being phased out.

Summary of Ideas Expressed by Multiple Stakeholders

This report presents ideas from a broad spectrum of stakeholders. The overarching ideas and opinions repeated by multiple stakeholders involved with NSO on private timberlands are:

- The SOE is not used and the process/function/validity is not clear.
- Revise § 919.9 – there are many suggestions on how to do so.
- Define a process for abandonment.
- Landowners need the option to use a 1-year Protocol instead of the current 2-year Protocol in site-specific circumstances.
- There should be a clear process to provide flexibility and deviation from the Protocol.
- NSO habitat definitions should consider lower quality habitat and prey base.
- There should be a clear process in place for NSO in THP review to provide certainty and timeliness (i.e. “one-stop shop”)
 - Individuals involved in this process should be qualified with NSO experience and training.
- CDFW’s Designated Biologist and PCB Programs were effective and timely.
- The BDOW is a threat to NSO and needs to be controlled.

Acknowledgements

Angela Moran prepared this report. William Condon and Amanda Culpepper provided review of the draft document. The California Department of Fish and Wildlife would like to express gratitude to all of the stakeholders (Appendix B) that provided valuable insight and information in this report.

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Appendix A

Summary of Three Draft Rulemaking Options for NSO Regulations Presented to the Board of Forestry and Fire Protection in 2013

Option 1

- Added USFWS acronym to abbreviation section
- Updated the definitions in § 895.1 (particularly with the definition of an AC) to make consistent with the updated USFWS 2012 NSO Survey Protocol
 - Nesting and Roosting Habitat defined together like in the protocol, but the definition is not exactly the same
 - Type A,B, and C Owl Habitat deleted
 - Functional Habitat definition deleted
- Cleaned up the language
 - “prohibit take” changed to “unauthorized take”
- In § 919.9, the following were changed:
 - Added that the Director will not make an abandonment determination, state or federal agencies will (from 2008 Browder letter on abandonment)
 - Updated to identify adjoining owl habitat by distance (determined by the forest district, Attachment A and Attachment B documents)
 - Added USFWS’s “programmatically NSO take avoidance guidance”
- In § 919.10, some language was clarified

Option 2

- In § 895.1 ONLY the Activity Center definition was updated to make consistent with 2012 protocol
- § 919.9 deleted except for telling the plan submitter to follow the Protocol
- § 919.10 left intact

Option 3

- All § 895.1 NSO definitions, § 919.9, § 919.10, and § 919.11 (MAMU) are deleted.
- New paragraph added § 919.5 “Listed Species and Take Avoidance” stating to follow appropriate protocols and consult with agencies
- Alternative option added § 919.6 where an RPF can propose alternatives if developed in consultation with CDFW or USFWS. The Director would also consult with CDFW and USFWS in approving the alternative

Appendix B

Stakeholder List

Name	Affiliation
Stu Farber	WM Beaty and Associates
Rich Klug	Roseburg Forest Products
Dustin Lindler	Jefferson Resource Company
Sandra Hunt-von Arb	Pacific Northwestern Biological Resource Consultants, Inc.
Jim Able	James L. Able Forestry Consultants, Inc.
Dan Calhoon	James L. Able Forestry Consultants, Inc.
Ben Calhoon	James L. Able Forestry Consultants, Inc.
Charll Stoneman	Stoneman Forestry Services
William Kleiner	Western Timber Services
Charly Holthaus	Western Timber Services
Andy Anderson	Western Timber Services
Tom Wheeler	Environmental Protection Information Center
Rob DiPerna	Environmental Protection Information Center
Mark Andre	City of Arcata
Michael McDowall	City of Arcata
Seth Bunnell	Avocet Research Associates
Matt Greene	Matt Greene Forestry and Biological Consulting
Zach Jones	Lyme Redwood Forest Company, LLC
Scott Fullerton	Lyme Redwood Forest Company, LLC
Robert Douglas	Mendocino Redwood Company
Linwood Gill	Redwood Forest Foundation, Inc.
Bon Goodell	Redwood Forest Foundation Inc.
Mike Stephens	Strix Consulting
Tina Fabula	California Dept. of Forestry and Fire Protection
Stephanie Martin	North Coast Resource Management
Ryan Willaert	North Coast Resource Management
Estelle Clifton	North Coast Resource Management
Tom Smythe	North Coast Resource Management
Jerry Garvey	Redwood Empire
Tom Walz	Sierra Pacific Industries
Ed Murphy	Sierra Pacific Industries
Herb Baldwin	Sierra Pacific Industries
Blaine Nichols	Sierra Pacific Industries
Tom Engstrom	Sierra Pacific Industries
Nick Kroencke	Sierra Pacific Industries

Cedric Twight	Sierra Pacific Industries
Robert Feamster	Sierra Pacific Industries
George Sexton	Klamath-Siskiyou Wildlands Center
Mike Miles	Humboldt Redwood Company
Sal Chinnici	Humboldt Redwood Company
Bob Kelley	Natural Resources Management Corporation
Prairie Moore	Natural Resources Management Corporation
Randy Jacobszoon	Jacobszoon & Associates
Alicia Ives Ringstad	Jacobszoon & Associates
Madison Thomas	The Conservation Fund

Appendix C

Acronyms

AC- Activity Center

BOF- Board of Forestry and Fire Protection

BDOW- Barred Owl (*Strix varia*)

CAL FIRE- California Department of Forestry and Fire Protection

CDFW- California Department of Fish and Wildlife

CESA- California Endangered Species Act

CLFA- California Licensed Foresters Association

EMC- Effectiveness Monitoring Committee

FPR- California Forest Practice Rules

HCP- Habitat Conservation Plan

HRA- Habitat Retention Agreement

NOAA- National Oceanic and Atmospheric Administration

NSO- Northern Spotted Owl (*Strix occidentalis caurina*)

NTMP- Non-industrial Timber Management Plan

NTO- Notice of Timber Operations

MAMU- Marbled Murrelet (*Brachyramphus marmoratus*)

PCB- Private Consulting Biologist

SOE- Spotted Owl Expert

SOMP- Spotted Owl Management Plan

SORP- Spotted Owl Resource Plan

TA- Technical Assistance

THP- Timber Harvesting Plan

USFS- United States Forest Service

USFWS- United States Fish and Wildlife Service