Questions on 2011 Northern Spotted Owl Survey Protocol identified at Feb/March 2011 Rollout Meetings

General Questions/Concerns:

CONTINUED CALLING AFTER BARRED OWLS RESPOND:

1. There were quite a few questions/concerns about continuing to call once barred owls were detected. If a barred owl is detected, should surveyors keep calling the established survey route or should they skip the next station or two (or stop calling)? We fully recognize that there is a trade-off between the risk dragging the barred owl along with negative implications to NSOs that may be nearby vs. failing to detect spotted owls that may be present. This issue was brought up both in regard to regular surveys and with respect to determining the identify of juveniles (*Strix* unknowns). People provided the scenarios listed below as examples:

    a. Scenario 1A survey is conducted near a new or unknown NSO AC. The surveyor calls, and a BDOW response. The station is so close to the NSO AC that the NSO flies up silent, which may not be visually detected on one visit at night. That surveyor is now calling the BDOW directly into the NSO activity center. This NSO will most likely be detected on one of the other 5 surveys, when/if the BDOW has moved.

    Answer: If the survey detects a new NSO and a new AC is determined the surveyor should follow the direction in answer b, below. If no NSOs responding, the important aspect is to remain at the station for at least 10 minutes and listen for NSO and barred detections (7.1 #1). If NSOs do respond in tandem with barreds, you discontinue calling and the results of the subsequent follow-up (hopefully) may alleviate future additional calling and/or harassment (7.1 #2).

    b. Scenario 2: An NSO flies up silent from its AC 1/3 mile away. The NSO flies in silent because it hears the BDOW response from ¼ mile the other direction. Without an audio detection, visually detecting this NSO at night will be rare. We are now calling in the BDOW to the survey station where the NSO has also temporarily moved to. We have just influenced both owls to approach the surveyor, thus directly increasing the chance predation and/or aggressive behavior toward one another.

    Answer: Anytime you have a survey area that intersects a known home range, you should first conduct a minimum of one daytime stand search to locate that activity center, and be minimizing harassment by eliminating all the call points that would elicit a response from that pair/TS prior to initiating nighttime calling. Where NSOs are unknown, and you obtain a detection of both species, you discontinue calling, listen, then conduct a daytime follow-up to determine location and status of that activity center (7.1.2)

c. If I hear a juvenile Strix hiss and adults are not detected soon after, do I continue to play owl calls for the necessary 10-15 min. (as opposed to only listening for the duration)? I don't know how concerned I should be about potentially harassing or endangering Spotted Owl young. Guidelines say to stop calling after (spotted) owl responds (p.8) and continue calling for 10 minutes if BO responds (p.12). If Strix unknown is detected, guidelines are to continue NSO calls for 10 minutes (p.12).

Answer: If the Strix unknown is juvenile, continue to call for adults (7.2 #1-5). Again, it is important to identify species and activity center to avoid long-term loss of suitable habitat, regardless of minor risk of harassing juvenile (especially if juvenile is unknown Strix). It is acceptable to remain at the station and listen for the full ten minutes and at least five minutes more. If no more responses, call again a few more times before proceeding to the next station. Daytime follow up should occur the next day and may alleviate future calling at that site.

d. I have been conducting follow-ups on Strix unknown juveniles every time I hear or see one and was not able to hear or see an adult. If I have previously determined that juvenile barred owls are in the area during night surveys or follow-ups, should I continue to conduct follow-ups every time Strix hissing is heard and no adult is found?

Answer: In this case, it is highly likely that this is the same juvenile barred owl(s) detected earlier. Suggest continue conducting daytime follow-up and additional visits within 0.5 miles of those detections rather than nighttime visits. You have a higher likelihood of confirming species during the day (7.2 #5).

e. If I encounter Strix unknown juveniles near the end of the season and I am not able to determine their species during a follow-up or subsequent night visit are additional visits always required? For instance, if a Barred Owl pair has been detected multiple times during the season at or near a particular station where juvenile Strix unknown are found later does the situation warrant 7-8 total visits?

Answer: This is similar to (d) – it's highly likely that this is juvenile barred owl. If the ADULT detections are attributed to barred owls, it is reasonable to assume the unknown young are barred owls. If all other parameters of protocol are met, it seems that Visits 1-6 would be meeting intent (7.2 #5).

f. I have a question about section 5.4.3 "Spotted Owl Calling Procedures" bullet 3. "Varying Call Patterns Between Visits": Does the option of playing 5 minutes of barred owl calls after 10 min. of spotted owl calls during visits 5 and 6 apply to a situation where juvenile Strix unknown have been detected? (This seems to me like it might be particularly dangerous to Spotted Owl young. Would this be ethical? However, it also seems that it could greatly increase the chance of identifying the juveniles to species?)

Answer: The suggestion/option to use a barred owl call was designed to be used when no responses were heard on visits 1-4. If you have a juvenile Strix unknown, I would avoid the barred owl call in this case and conduct a daytime follow up visit (7.2 #1-5).

MULTI-YEAR PROJECTS

2. When do surveys need to be reinitiated for large, multi-year projects (e.g. >10 years)? Section 12.0
   Answer: It depends on the scope of the project(s), quality of habitat, survey history (some go beyond this current round of surveying) and how far along the projects are at the end of 5 years. This is best determined at during individual project review.

SPOT CHECKS

Place first portion of question #18 here?

3. Spot checks: What about cases where a barred owl is detected 1 mile away vs. a non-territorial spotted owl (floater) detected on the 4th visit. The BO would need spot checks, but the NSO wouldn't?

   Answer: Spot checks refer to all habitat within 0.25 mile around project (footprint) area, not simply around barred or NSO detections (10.1 #2). In this case, if there are no territorial NSOs but there are barred owls, the spot checks are intended to supplement the project level surveys where there is a higher risk to NSO (habitat modifying actions with barred owl influences). If barred owls occur within survey area during 2-year, 6-visit surveys, spot checks need to be done, since the barred owls could have influenced NSO's from responding. If there is a non-territorial NSO (determined according to protocol guidelines) then no spot checks are needed if ALL other 10.2.1 conditions met.

4. Spot checks: What about projects near a known NSO site, but where no detections are recorded during the 2-year 6-visit surveys?

   Answer: Spot checks are necessary in year 3, but operations can continue concurrent with spot check surveys (10.2.2 #2).

5. Under Spot Check section, "territorial" needs to be defined. "
   Answer: Territorial" in this context refers to pairs or territorial singles, as defined in protocol (16.1.1, 16.1.2, 16.1.3).

6. Why does barred owl presence carry as much weight as NSOs in conditional spot checks when the protocol accounts for barred owls detections?
   Answer: Consideration to presence of barred owls is made because of the known effects on detection rates and displacement. The spot checks supplement project level surveys and minimize the likelihood of incidental taking caused from disturbance or habitat modification.

7. Check for intent and consistency – are we saying detection, territorial owls, what? Example. 10.3

   Answer: 10.3 refers to the situations when you actually detect owls during your **spot check** surveys. Ceasing the activity until the location and nesting status can be confirmed will minimize the likelihood of incidental taking caused from disturbance or habitat modification. If this data represents information not previously considered during Section 7 analysis or other ESA analyses, reinitiation would be triggered. On non-federal lands, additional review by appropriate regulatory agency would be necessary.

8. Do spot checks need to occur within HRs of predicted owl sites (e.g. potential NSO sites mapped using ITS methodology)? No.

9. 10.3 –change "shall be postponed" to "should be postponed."

   Answer: This was a comment from a number of people at the March 1, 2011 rollout meeting in Springfield, OR. The change will be made in the 2012 protocol guidelines.

10. Comment about (1) in 10.2.2. With the 6-visit protocol, shouldn't the issue of NSO detection in the presence of barred owls be addressed?

    Answer: Increasing visits to 6 should increase NSO detection rates; however, detection rates will likely remain lower than under the 3-visit methodology prior to the arrival of barred owls. Survey protocol may be revised as we gain additional knowledge about barred owl effects.

11. 10.2.2.3 – why Feb 1 when March 1 is contract date?

    Answer: Breeding season activities are initiated over a range of dates throughout the range. February 1 represents the earliest portion of the breeding season "pre-laying" when pairs can begin bonding and selecting nest stands (Appendix 3). March 1 is the time when territoriality picks up. Modifications have been made in various physiographic provinces that have documented differing nesting season chronology.

12. If the units remaining in the project are outside the 1.3 miles of the historical site you have been unable to locate do you still need to conduct spot checks?

    Answer: If there are no territorial spotted owls or barred owls within the survey area, than spot checks are not necessary, if ALL other requirements of 10.2.1 have been met.

MISCELLANEOUS COMMENTS

13. Do areas surveyed under demography protocol (3 visits) count as surveyed to protocol?
    Answer: Likely, but project-specific review should confirm survey effort necessary to determine this.

14. To determine resident single status, do you need 7-day spacing between all 3 visits? This came up in the context of detecting a single owl on 2 night visits and then a follow-up day visit close to the end of the season. In this case, surveys were conducted over suggested range of dates during the breeding season, but owls were not detected until late in the season. Three detections were made, but the last (day visit) was not a week after the second.
    Answer: In 16.1.3, the text states that there is response from one owl, but none from opposite sex after complete survey indicating that 7-day spacing is needed to establish resident single status. If first detection occurs late in the season, follow guidelines for Additional Visits (5.6).

15. Inconsistency with 30 September/ 15 September dates – need to check document. Section 4.0 v 5.6.
    Answer: These actually address 2 different things. Section 4.0(3) indicates that surveys may continue as late as 15 September in western WA Cascades for the purpose of conducting complete surveys.
    Section 5.6 refers to additional visits whereby if additional visits cannot be completed prior to the end of the survey season, they may be conducted as late as September 30.

16. 5.4.3.3- what exactly is optional here? Using a barred owl call for 5 minutes following the 10 minute (NSO) calling period is optional in cases where NSOs have not been detected in visits 1-4. Otherwise, the recommendation is to mix up the recorded NSO calls by using a different "individual" the last two visits.

17. Section 5.5 "Complete Visits"

    "Three Visits by June 30."---- The term "should" leaves a lot of flexibility as to when the surveys need to be conducted. As I agree that surveys should be spread out over the entire breeding season, and that flexibility is necessary; however, active THP's/NTMP's may wish to conduct 6 surveys as soon as possible in order to commence operations. If it is necessary to have a survey(s) after a certain date, that date should be specified. Would you please consider adding language such as "At least one visit must be conducted after May 15", dates may be specific to their physiographic province.

    As currently written, the protocol states that one visit occurs in April, one in May, and one in June. This means that at least one visit will be conducted after May 15 (5.5 #4).

18. I ask that we recognize the updated AOU alpha codes when referencing Barred Owls. Barred Owls should be "BDOW" not "BAOW". Please consider adding the Spotted X Barred Owl Hybrid AOU code "SBOH"

    We will revisit this in 2012.

DISTURBANCE-ONLY PROJECTS

19. **Surveys for Disturbance-Only Projects** (Section 9.0). Section 9.0 states that for "smoke or noise-disturbance only actions" the survey effort would entail 6 visits covering all spotted owl habitat within 0.25 mile from the project area, plus 3 spot check visits in years 2 or 3. This seems fairly straightforward.

    Clarification is needed regarding Section 10.2.2, the 4 bullets related to schedule/implementation of projects. The first 2 bullets allow spot checks **concurrent with** operations. The final 2 bullets call for spot checks to be completed **prior to** operations occurring after February 1. Operationally, the difference between these 2 situations is significant. The clarification needed is the use of the term "within the survey area" for all 4 bullets.

    Answer: Survey area in this context refers to whether territorial NSOs were known to occur or were detected during the previous two years of survey within the survey area (distance of median home range from the project footprint) used for projects that propose habitat modifications.

    In this case (disturbance-only), the "survey area" for both spot checks and disturbance projects is based on 0.25 mile, not provincial radius. We will include edits in 2012 to clarify.

20. For projects that represent noise disturbance only (not affecting suitable habitat), surveys are only required for the habitat occurring 0.25 mile from the project footprint.

    a. In addition, Section 10.2.2 (the definition of bullets 1-3) states that no territorial owls are detected during year 1 or 2, while Section 9.0 allows the use of a single season of 6 visit surveys.

    Answer: Section 10.2.2 refers to habitat removing projects, where long-term harm to NSO is relatively great if NSO are not detected. Section 9.0 refers to disturbance-only projects where it is more important to find birds during the immediate nesting season of the project, and the long-term risks to NSO are significantly different. The differences are based on level of risk. Noise disturbing activities are much shorter in time and have less potential impact (or likelihood of harm) than do projects that modify or remove habitat.

    b. Does the use of a single season survey of 6 visits for Disturbance Only surveys preclude ever meeting the definitions in bullets 1-3 (10.2.2)? If the project is a disturbance only, and six visits are made in year one, three spot checks can occur in year two and three. So the area surveyed and the number of surveys is reduced.

    Answer: Section 10.2.2 (all bullets) states that owls can be detected during year 1 or 2. For disturbance-only projects, the area surveyed and the numbers of surveys is less than for projects that modify habitat.

21. If we have a Disturbance Only project and follow the survey effort under Section 9.0, and the survey area under Section 10.2.2 is the much larger area of a home range radius, virtually all projects will fall under bullet 3 and require spot checks to be **completed prior to operations occurring after February 1**. Is this the intent?

Answer: Disturbance-only projects do not require surveys for the much larger home range. Spot checks should occur only within the survey area specified for the degree of survey needed to address potential project impacts. Since disturbance-only projects only affect footprint plus 0.25 mile, spot checks need only address that area. This is not entirely clear, so section 9.0 needs some editing in 2012, and better tie to section 10 when 9 applies.

22. Recommendation for language change in Section 9.0: If the intent is to only consider the survey area defined under Section 9.0, then there should be further clarification in that Section, such as: "For Disturbance Only projects, the schedule/implementation of projects as described under Section 10.2.2 (concurrent vs prior to) would apply to the results of the area surveyed under this Section (all spotted owl habitat within 0.25 mile from the project area)."

    Answer: Disturbance projects are typically limited in time and space. For the most part it is likely the projects would be completed in one year and the Spot Check process would be unnecessary. We will revise language to clarify this in 2012.

MOUSING

23. Section 17.5—This comment references NSO AC's in which nest status was undetermined, but reproductive status may be determined so that operations may commence prior to July 9th. I am attempting to avoid feeding owls more mice than necessary in order to establish reproductive success. The current wording says nothing about "**Eating"** mice, just to offer mice until the birds "eventually cache, sit with…" Under 17.5.3, a NSO can be classified as Non- reproductive if they eat one mouse and cache the second. I do not think this is sufficient as I have then watched the owl take the third or fourth mouse to a fledgling. I suggest that we consider the "four mouse protocol" as described by Forsman '95 "Spotted Owl Monitoring Protocols for Demographic Studies". We should be able to infer Reproductive status based on how many mice one individual may eat; i.e. if one bird eats and/or caches 4 mice, one could infer Non- reproductive status. The current wording does not allow us to infer reproductive status, even if each owl eats 8 mice apiece.

    For 2012, we will recommend offering at least 4 mice to one or both owls based on Forsman et al. (1995). For 2011, we also recommend offering 4 mice when possible.