

EVALUATION

Silvicultural Practices Supporting Northern Spotted Owl Habitat in Dry Forest Ecosystems

Numbers in parentheses following comment are footnoted at bottom to individual respondent and the days they attended the workshop, as well as their associated agency and discipline.

What is the most important idea or concept that you are taking away from this Workshop?

- Fuels and NSO habitat are not mutually exclusive but can coexist at some level on some ground (1).
- Communication between disciplines is the key to reaching our goals (2).
- Habitat requirements for spotted owls (3).
- Use of slope position to prioritize treatments based on fire behavior & owl use. Heavy thin the top third of the slope to reduce fire risk, moderately thin the middle third of the slope for prevention and forest health, and light thin the lower third of slope as owl preferred habitat by riparian areas (4)
- No action is not an option. It is OK to work in LSR/core areas (5)
- Rx for fuels & silviculture can provide short & long-term benefits for spotted owls (6)
- Composite risk map (Ray Davis) process → will look into seeing if it can be completed for NWFP area through interagency monitoring group. Integration between disciplines & terminology (fuels, silv, owls). Need for treatment of LSRs & owl cores to reduce fire risk (7)
- Increased receptiveness by biologist community to stand & fuels treatments in core & circle stands to reduce wildfire risk, also stand maintenance (health improvement) (8)
- Habitat management/maintenance is essential (9)
- It will be relatively easy to identify the areas where active management needs to be applied to maintain/improve NSO habitat. Designing and actually carrying out the prescriptions will be more difficult, including alleviating policy and administrative obstacles (10).
- There is a diverse set of opinions on managing a landscape, even when management objectives are the same. (11).
- Spatial heterogeneity is key for maintaining habitat & it is not completely random; it is somewhat predictable depending on abiotic factors of the landscape. Spherical densimeters → poor estimation of canopy cover. If young stands are not treated sufficiently prior to reaching 50 years of age, it is not likely that future trees will develop old-growth characteristics (i.e. large limbs) (12)
- FWS is willing to let us do fuels work that downgrades suitable habitat. (13)
- Calibration among the different disciplines (14).
- Checklist—common terminology (15)
- ID Teams need to work together & visit stands in the field to visually understand what each discipline desires (16)
- Different ways of viewing habitat. New information (for me) about owls (17)
- Hierarchical multi-scale analyses for identifying priorities. Broad potential for mutual attainment of fuels/silviculture & habitat objectives. HETEROGENEITY. (18)
- Learning to calibrate terminology between specialists. Thinking outside the box & understanding different points of view (19)

- A better conceptual idea of what elements are critical to spotted owl habitat & fuels reduction (20)
- Communication concepts including terminology, and objectives of several groups, which for the most part are directly related concerning fuels and species (tree, animal) treatment/enhancement (21)
- The importance of calibration & collaboration – among disciplines (wildlife, fuels, silviculture, etc) and agencies to achieve goal of reducing loss of owl habitat to fire (22)
- Interdisciplinary discussion (23)
- The idea of a photo guide for wildlife terms (24)
- Find common ground and common terminology to describe a “problem”, a project, a stand. Improve interdisciplinary communication. Work together to accomplish appropriate treatments to avoid no action (25)
- Constraints on treating habitat while retaining habitat suitability (26)
- The “Happy Place” concept diagram. It helps me think about how much “layering” is “acceptable” to all parties – fuels and owls. (27)
- Reaffirmed calibration of terms between disciplines & added intra-disciplinary (28)
- All specialists need to continue to communicate and understand different terminology. No action is not an option to protecting and maintaining owl habitat (29).
- Importance of topography, slope position etc. in predicting fire effects (30)
- Calibration of terms. Interdisciplinary development of projects. Landscape view of planning. (31)
- Talking with Larry Irwin and Joe Lint and Eric Forsman about owl habitat requirements (32)
- A different perspective at looking at a landscape from an owl point of view instead of fire & where those two points of view cross and can be mutually beneficial (33)
- Getting a reassurance that all disciplines need to work together to accomplish a multiple desired end result within a treatment area. (34)
- Considering slope location & aspect for analyzing potential habitat (GIS exercise). The track/direction we’re taking at my home unit coincides with discussions here (we’re doing good stuff). Patchiness is key which means areas of all kinds of conditions. Management for future habitat because nesting habitat is not maintainable in the long term. (35)
- Clear communication & defining objectives/function to determine what options may be available to meet multiple purposes. (36)
- The necessity of involving silviculturists & fuels specialists in spotted owl management. This session has inspired me to become more educated in fuels & silvicultural concepts. Emphasis on communication with collaboration was essential! (37)
- Calibration between disciplines. Silviculture & fire treatments may be desirable or even necessary to protect against stand-replacing fire; in some instances, even in nest stand (38).
- Habitat definition & calibration with other disciplines (39)
- That we need to do anything within our power to keep the Cal owl unlisted! (40)
- I was impressed by the info regarding how much lightning occurs on planet. Fire is so much a part of the system. Use of topo slope aspect & position – there are strategic areas to focus on – those areas more prone to fire. (41)
- Need to have a clear, articulated Desired Future Condition for a site. Treatment should take into consideration the trajectory. Continue to emphasize the multi-disciplinary and multi-agency team approach to addressing NSO habitat. The habitat and forest

ecosystems are sufficiently different that solutions must be locally driven (Forest level) but with an eye to the province level scale. Interagency owl teams should be encouraged/directed by our respective agencies. This interagency team is different from the Level I Team because it incorporates owl biologist, fuel planners, silviculturists & ecologists. This needs to be encouraged & budgeted for by the Federal agencies (42)

Will you actually practice on-the-ground implementation of the concepts you heard at this Workshop? Yes/No

If yes, describe what the actions might be. If no, what would have helped?

- Yes. Fuels treatments in and around NSO habitat (1).
- Yes, likely. Providing guidance to Level I & ID teams on fuel reduction and spotted owl projects. (2)
- Yes, if the limited spotted owl habitat in the area I work is prioritized. Actions may include designating core habitat area, commercial thinning, precommercial thinning, mowing, brush beating, prescribed fire. (3)
- Yes (4)
- Yes. Thinning within owl core areas (5)
- Yes. Implementation of a “community fire protection project” including areas in occupied suitable NSO habitat (6)
- No. I am not in the field. I work with regional planners (FS). Better understanding of owl needs for nesting, roosting, foraging, dispersal & how to integrate these needs with fuels reduction needs & silviculture. Share idea of treating owl habitat to reduce risk with regional planning team (7)
- Yes, I hope so. Thinning in cores to stimulate growth of residuals as well as to reduce risk to loss by fire. Fuels treatments to protect the core. (8)
- Already do! (9)
- No. Everything was fine; however it is not my role/job to do on-the-ground implementation; the information will be very useful to me, however, as a member of the newly formed NSO recovery team—to address the threat of range-wide habitat loss due to wildfire (10)
- N/A (11)
- Yes. Calibrate-silvicultural prescriptions in owl habitat should be reviewed on-the-ground by interdisciplinary team. Look at qualitative and quantitative aspects of prescriptions (12)
- Yes. Consider doing fuels treatments in 100 acre cores (13)
- Yes. Hopefully will be able to try pruning & ladder fuel reduction in 500 acre owl cores (14)
- Yes (16)
- Yes. More confidence in fuel treatments in dry forest (17)
- Yes. Greater attention to explicit calibration among disciplines. Focus on clear statement of fuel objectives & specific characteristics that define different types of owl habitat (18)
- Yes. The silviculturist on my district & I are working on the beginning stages of a timber sale that is in an LSR, CHU & contains 3 owl cores. We talked last night about a variety of treatments we will propose. (19)
- Yes. Irregular, variable densities will be incorporated into Rx when in owl areas. (20)

- Yes. Possible joint treatment ventures with silviculturists, bios and foresters and very importantly coordination with in our specific program (21)
- No. I will do my best to translate what I heard & learned to the creative & passionate folks who are working in the field! (22)
- No. Not in my position work. I am not in a ground-work position. (23)
- Yes. Analysis at the 500+ acre level for impacts to individual pairs, potential for fire, etc. (24)
- Yes. Work more on making prescription define, discuss problem statement in terms for biologists and fuel specialists. Collaborate more on the desired condition for stand/landscape (25)
- Yes, if possible. Important items → update/review of NSO information/different perspectives (26)
- Yes. I am working on treatments in CHU and suitable habitat. I will talk to my fuels & silv folks to make sure we see eye to eye on how much understory to leave (27)
- Yes. We're working on several NWFP fuels products/projects (28)
- Yes. Use as justification to implement treatments at the landscape level and how to prioritize your treatments. (29)
- Yes. We'll finally get to modeling of abiotic characteristics of our owl sites to better understand where to focus efforts in redeveloping owl habitat. Unfortunately, our main source of habitat loss has been insect outbreaks & subsequent harvest, which weren't addressed well here. (30)
- No. I am not implementing actions on-the-ground. Will try to incorporate concepts in management direction, policies & guidance (31)
- Yes. Checklist/tables. (32)
- Yes. In doing planning for fuel reduction within the WUI & trying to retain habitat & accomplish FR goals. (33)
- Yes. I will try and implement more of the desired conditions for wildlife when putting projects together instead of just fuel reduction or healthy tree propagation (34)
- Yes. Currently we're developing Rx's that include variable intensity thin from below/ proportional thin from below with group selection & non-treatment leave islands (35)
- Yes. Work to get definition of the components that we're managing for / or not. I believe perceived disagreement is due in large part to lack of clarity in communication (36)
- Yes. (37)
- Yes. If I can convince the people who actually implement on the ground!. Evaluate fuel loading in and near PAC's (CA spotted owls). First do local field trip with ID team to look at desired conditions for owls & fuels, and create photo series. (38)
- Yes. On our R.A. we will have the opportunity to do work in a few of the owl cores in the near future (39)
- Landscape approach to owl management in conjunction with landscape fuels planning that we already do (40)
- Yes. I will attempt to use many of these strategies, where feasible. In planning I will definitely use strategic locations to prioritize treatment areas (41)
- Yes. Key to having all specialists in the field on projects with clear objectives for the project. Use of "checklist". (42)

Value of this Workshop to your job position: Very, Moderate, Not at All

- Moderate (1)
- Moderate (2)
- Moderate (3)
- Very (4)
- Very (5)
- Very (6)
- Moderate (7)
- Very (8)
- Very (9)
- Very (10)
- Very (11)
- Very (12)
- Very (13)
- Moderate (14)
- Moderate (15)
- Very (16)
- High (17)
- Very (18)
- Very (19)
- Very (20)
- Very (21)
- Very. What was shared here is important to all positions to *give??* to management. (22)
- Very, from a larger perspective (23)
- Moderate (24)
- Very. Excellent for silviculture recertification training (25)
- Very (26)
- Moderate (27)
- Very (28)
- Very. There were a lot of opportunities for good discussion and information sharing. GREAT WORKSHOP!! All aspects tied the subject matter together very well (speakers field trip & review day) (29)
- Moderate. Would have been more helpful if conditions here (tree mortality, fuel loading) were more similar to our situation in WA with serious insect & disease issues. (30)
- Very (31)
- Very (32)
- Very (33)
- Moderate. Trying to develop my silviculture skills and realizing different objectives can be met within one Rx. (34)
- Moderate (35)
- Moderate (36)
- Moderate (37)
- Very. Great – but would be even more valuable for ID team members vs. management (38)
- Very (39)
- Very, Moderate (40)
- Very. I'm a silviculturist. Will use the info to plan, identify & implement projects (41)

- Very. Great Job! (42)

Did the workshop meet your expectations? If so, what was most effective? If not, what was missing?

- Yes, combination of presentations followed by field trip for on the ground observations. (1)
- Yes. Diversity of speakers was wonderful, although some of concepts were repeated too many times (too much overlap). (Love the disco ball). (2)
- Somewhat. The concepts were useful, but the workshop was too specific to the Klamath bioregion to be useful on the ground for eastside forests (3)
- Yes, first day-great presentations. Nice integration of different resources, silviculture, wildlife & fire. (4)
- Yes. Great presentations. Great discussion & field trip (5)
- Yes—field trip (6)
- Workshop was good. The checklist should have been fleshed out more in advance. Was difficult to use & was redundant in areas. Could be strengthened by adding types of owl habitat to checklist (roost, nesting, foraging, dispersal). A small task group could spend time working on refining checklist. Field trip was productive with case studies. Need more than a checklist as workshop product. Suggestion of strategies & framework for integrating work would be useful. Need more than tools for field. Strategies are needed; somehow summarize strategies or create a framework. (7)
- Yes, but: what I perceived as missing was more of the silvicultural perspective—particularly on how decadence could be managed, i.e., how would you maintain a stand for owl habitat while reducing stand density to retain stand health (individual tree vigor). (8)
- Larry Irwin's presentation (9)
- Yes, but would have liked some additional introductory information on extent of efforts to maintain habitat, policies governing active management, near- and long-term plans, etc. (10)
- The workshop exceeded my expectations. It was well planned and effectively implemented (11)
- Day 1 speakers were very good. Field time most effective → though having less questions to answer may facilitate better (in-depth) discussions. (12)
- Yes (13)
- It seemed it was too much oriented to Klamath Ecoregion. We have different issues like spruce budworm that did not seem to apply here but are still very important (14)
- Yes. Not quite there yet but the checklist most effective—common “language” important. (15)
- Yes, it was nice to know others struggle with the same issues (16)
- Great workshop (17)
- Impromptu poll indicating ~80% biologists suggests other disciplines don't see value in workshop. More balanced participation could help “spread the word” and expose a broader range of perspectives. (18)
- Yes. Attending this workshop with the silviculturist from my unit (19)
- Yes, very helpful & informative interacting with different specialists from different agencies (20)
- Concepts to enhance habitat and landscape areas in terms of communication (21)

- You did an excellent job of organizing the workshop from all perspectives (logistics to content). The field component was an integral part of why it was effective, to actually look at owl habitat with opportunity for discussion. The presentations provided good background information. (22)
- Yes! (23)
- As I was not at last year's meeting, I had no idea or expectation for this one. Therefore the meeting exceeded expectations. I am leaving with more than one new, good idea so it was a success (24)
- Yes. Integration of silv & fuels & bio speakers/presentations. Discussion on day 3 very interesting; would have been more valuable to accompany the discussion with slides/photos of stands/landscape being discussed (25)
- Excellent, new reaching discussion, but lacking somewhat in practical applications give constraints. Given need for 500 acres of usable habitat area, how do we manage in matrix for future habitat (26)
- Sort of. More of Larry's and other's owl telemetry data on stand use. (27)
- Yes. Van group with focused questions. Focused too tightly on SW Oregon given that many participants from elsewhere (although you did warn us in the flyer). (28)
- Yes. Confirmed value of landscape level treatments. Maybe missing more on time factor, when habitat would recover from treatments. (too bad more foresters and fuels specialists weren't here!) (29)
- Somewhat. I was hoping for more specific information (such as reasonable BA targets for instance). I liked Irwin's willingness to throw out actual numbers, but follow up discussion would have been helpful. A paper on prey response to specific treatments would have been good. And discussion of fire refugia characteristics. (30)
- Yes. Presentations on first day, discussions openness & participants. The barriers were down & participants really were ready to share & learn from each other (31)
- Yes. Good presentations and field discussions. Need more representation of fuels and silviculture and ecologists (32)
- Seeing the landscape through many different eyes and sharing different perspectives. Networking for future projects (33)
- Yes (34)
- Not as much "new information" as I hoped I might learn but it was useful to see the same conversations/debates etc go on at different units & agencies (35)
- Yes. Most effective – field day discussion. Least – checklist – it's a start in the right direction, but too short of a time to try to digest & use. (36)
- Exceeded my expectations. The field trip was invaluable (37)
- Yes. Interdisciplinary discussion. May get better fire participation at different time of year? Only thing I can think of (*that was missing?*) is that since field sites were not in slope position or stream proximity to be prime for owls, maybe habitat different downslope (but may be difficult to get there). (38)
- It exceeded my expectations. Made me think on treatment ideas, issues, etc. (39)
- Yes. Interaction with multiple agencies / disciplines. *Missing?* Case study presentation / power points of treatments that have been tried. Participant list at start—who agency, where they work. (40)
- Yes very much so. DISCUSSION ON TREATMENTS – I have a much better idea of strategies. (41)

- Yes. Several presentations were very useful. Particularly Dr. Skinner's, Cori Francis & Dr. Larry Irwin. The field trip was great for really getting into the issues and opening up dialogue. (42)

Recommendations for future Workshops:

- Recruit more fire/fuels presenters/participants (1)
- This may happen in field tomorrow, but I'd like to see a fuels treatment 5-10 years post-treatment. Seems there's lots of promise but little evidence about what works over time (2)
- It would be useful to know beforehand that the workshops are tailored to specific regions (3)
- Keep it short—3 days is just right. Nice mix of activity & class room. Very well organized—providing flip chart sheets to record field day is very thoughtful. *Providing ice water on field day was great—good organizing! (4)
- More fire folks (5)
- More time in woods. More work (by workshop planners) on evaluation checklists (6)
- More scientists needed. USGS research participation. Need better representation of managers, fuels people & science (7)
- Continue with field exercises—most valuable. (8)
- Monitoring & evaluation results. Breakout sessions in quiet rooms (9)
- Design interactive sessions to promote focused learning and problem solving, rather than general topical discussion. (10)
- Narrow the scope to provide greater focus in order to better understand the differences among professionals (11)
- Implementation/validation monitoring. How do treatments affect NSO? Case studies of implementation. Utilization of spatially explicit models that integrated NSO habitat/presence prediction models with disturbance elements (fire, insect/disease outbreaks) & generates spatial and temporal distribution of forest stands. Designing desired future condition of the landscape. (12)
- In eastern Washington (14)
- Keep on tuning checklist, perhaps more metrics (15)
- Get more fuels specialists & silviculturists to attend (16)
- More information, successes & guidelines for operating in dry forests (17)
- More shorter presentations combined with panel discussion. Pre-test the field exercise with naïve participants to refine questions & objectives (18)
- Promoting more silviculturists & fuels specialists to attend (19)
- Keep doing the field trips – very informative; spend more time on specifically defining when a stand is foraging/dispersal & what elements are critical for nesting/roosting. If possible define this in silvicultural terms (20)
- Real project or treatment exercises and more details from beginning to end and eventual follow ups. (21)
- Parallel workshops in other owl dry forest provinces (22)
- Great field trip – questions did a good job of focusing discussion. more of this was great. (23)
- Get more fire & silviculture folk here (24)

- Make this an annual workshop to continually share updates on research and projects. If you really want FS line & staff officers to attend you need to make a personal outreach and not just send out the agenda. (25)
- Workshop specific to calibrating language or . . . (26)
- More field time OFF THE ROAD! (27)
- More managers! Move around the state again. (28)
- Focus on prescriptions on young stands <50 years (plantations) and what are best methods for developing habitat (LSR areas). Look at potential treatments in the field (LSR areas). (29)
- Go further north, maybe Wenatchee, to address issues where flying squirrels are the main prey & insects are a major factor (30)
- Provincial assessment guidance. Different habitats. Riparian/fish focus – apply same tools to riparian reserves. (31)
- Beer breaks. Focus on barred owl interactions for the next workshop (32)
- Have them & possibly tie them to a real project (33)
- It seems a lack of direct knowledge/understanding of fire behavior that comes from direct observation, conducting suppression, and classroom (such as intermediate to advanced fire behavior) study makes it difficult. Seems biologists are afraid of or avoid Rx fire, natural fire & understand its potential & likelihood (35)
- Make workshop longer: ½ day start; 2 days field; ½ day wrap up. Use first half day as a set up for field exercise. Include spatial & temporal context in exercises for field. Preliminary stand info. Provided to group would be useful. (36)
- Other provinces need to conduct similar forums to get at more localized situations. Planning for future habitat – projecting long term effect of treatment.
- Field visits are very important (39)
- It would be nice to have the handouts for the folks available when the speaker is giving their presentation (41)
- How to get at/assess at a landscape level the quality of the habitat for NSO, characterize it, and determine the spatial and temporal prioritization for treatment & type of treatment. (42)

Additional comments . . .

- Post participant list on website. What is plan to share with RIEC for consideration? They are looking for strategies & tools; Think action items are needed in addition to the checklist which is a tool. (7)
- Thank you – well done! (22)
- One outcome from the workshop is my realization that we need some “cross-training for dummies.” In particular, biologists that are not on the ground, working on ID teams with project planning (such as the USFWS folks) could really use a short course (e.g. 1-2 days) explaining how fire people develop fire behavior & weather data; how they use the information to predict fire danger and likelihood. And probably also on the silvicultural side. The field trip (and some small part of the talks) was very useful but not deep enough. This would probably be useful for some field folks, and a simple discussion (like what Brian Woodbridge did but a little more detail) might be valuable for other disciplines (though most of them may get this from ID team work) (OR maybe this is just me?). Food & cold water great on the field trip (23)

- A good example of a photographic habitat guide is the lynx habitat field guide developed in WA. Gives overview of each habitat type then specific site photos & metrics (30)
- I think the concept & use of Table 2 is very good & is something to continue developing & refining. Please continue pursuing it – it can be a good tool (35)
- Please put a participant contact list on the website (40)

1=T/W/Th-Tribal-fuels
 2=T/W-FWS-wildlife consultation biologist
 3=T-Tribal-wildlife
 4=T/W/Th-FS-silviculture
 5=T/W/Th-FWS-wildlife
 6=T/W/Th-FS-wildlife
 7=T/W/Th-FS Research-planning
 8=T/W/Th-BIA-management
 9=T/W/Th-FWS
 10=T/W/Th-WA State DNR-regulation
 11=T/W/Th-other-other
 12=T/W/Th-FWS-wildlife
 13=T/W/Th-BLM-wildlife
 14=T/W/Th-Tribal-wildlife
 15=T/W/Th-FS-wildlife
 16=T/W/Th-FS-wildlife
 17=T/W/Th-BLM-management
 18=T/W/Th-FWS-wildlife
 19=T/W/Th-FS-wildlife
 20=T/W/Th-FS-silviculture
 21=T/W/Th-Tribal-wildlife
 22=T/W/Th-FS-management/wildlife
 23=T/W/Th-FWS-wildlife
 24=T/W/Th-FS-wildlife
 25=T/Th-FS-silviculture
 26=T/W/Th-BLM-wildlife
 27=T/W/Th-BLM-fuels/fire/wildlife
 28=T/W/Th-FS-wildlife
 29=T/W/Th-BLM-wildlife
 30=T/W/Th-Tribal-wildlife
 31=T/W/Th-FWS-wildlife
 32=T/W/Th-FWS-wildlife
 33=T/W/Th-BLM/ODF-fire/fuels
 34=T/W/Th-FS-prep forester
 35=FS-silviculture
 36=T/W/Th-FS-Fuels/silviculture
 37=T/W/Th-FWS-wildlife
 38=T/W/Th-FS-management
 39=T/W/Th-BLM-wildlife
 40=T/W/Th-FS-Silviculture
 41=BLM-silviculture
 42=T/W/Th-FWS-wildlife