

Additional file 1 Interview guide used to guide conversations with natural resource managers involved in red-cockaded woodpecker management in the Southeastern Coastal Plain of the United States (2015 to 2016). Interviews were semi-structured and not all questions were asked verbatim or posed to all participants.

Red-cockaded Woodpecker Interview Protocol

Thank you for participating in this project. This project is designed to explore what shapes management decisions in fire-dependent forested ecosystems that are also critical habitat for wildlife species of high conservation concern, such as the red-cockaded woodpecker (RCW). Questions examine your specific management goals and objectives for red-cockaded woodpecker habitat, the strategies you use to achieve them, and potential risks and benefits of these approaches. There are no right or wrong answers; I am simply interested in your ideas.

This is meant to be informal, but I do have a list of questions that I need to ask each participant. Your responses will be kept anonymous. If you feel that I am asking something you have already addressed, please do not hesitate to tell me to move on or to say that you have nothing additional to contribute. You may refuse to answer any question you do not feel comfortable answering and you may also end the interview at any point in time. Do you have any questions?

Is it okay if I audio record this interview for my notes? If yes, please indicate consent by answering “yes.”

If you agree to participate further, please indicate that you understand the purpose of this research and that you are a willing participant by answering “yes”.

Background Info and Characterization of the Land

1. Can you describe your job for me?
2. How long have you been with this agency?
3. How long have you been working with RCW?
4. How would you describe the current forest structure of the lands you manage?
 - a. How is that structure similar or different from pre-European settlement?
 - b. What has contributed to these similarities or differences?
5. How do you think the landscape today would be different if it hadn't been managed to provide red-cockaded woodpecker habitat?
6. Besides the red-cockaded woodpecker, how much experience do you have managing for other endangered species?
 - a. How is the decision process for managing for the RCW similar or different from the processes used for other endangered species?

Current Management Goals and Strategies for RCW

Goals

7. Can you describe some of the history of RCW management for me? How has management arrived at where it is today?
8. How are recovery goals determined for RCW?
 - a. To what degree are other government agencies involved in recovery goal setting? How do these groups work together?
9. What is the role of non-governmental organizations (NGOs) and the public in determining recovery goals?

Continued, next page.

10. What approaches are used to communicate among managers and scientists regarding RCW management?
 - a. Who is normally included (e.g., agencies, NGO's, general public)?
 - b. Is anyone not involved you feel should be?
 - c. If someone disagrees with the decisions, what actions can they take (if any)?
11. How is input from both science and applied management balanced in setting recovery goals?

Strategies

12. Could you walk me through an example of a specific management decision you made and the different steps involved in that process?
13. Could you give me an example of a time where you translated recovery goals into a management objective specific to your land unit?
 - a. What factors influence your objectives?
 - b. Is there a difference in your short-term vs. long-term objectives for managing habitat?
14. What strategies do you utilize for managing RCW habitat in your land unit currently?
 - a. What factors influence your selection of the various potential management strategies? (effectiveness, associated risk, budgets, time, other agencies, NGO's, location and size of habitat area)
15. Does fire play a role in restoring ecosystem processes and function? If so, how?
 - a. How often is wildfire utilized to achieve these objectives? What influences the frequency of its use?
 - b. How often is prescribed fire utilized to achieve these objectives? What influences the frequency of its use?
16. Where does management of RCW rank in relation to your other management objectives?
 - a. Which objectives carry the most weight?
 - b. Are there any conflicts between RCW recovery goals and your other resource management objectives?
17. In your experience, how have RCW management practices changed throughout your career?

Desired Management Strategies

18. Are there any management strategies you would like to pursue to a greater extent than you currently are able?
 - a. What are the barriers that prevent you from using these approaches as much as you'd like?
 - b. What incentives do you have to explore alternative management strategies?

Recovery

19. What policies or regulations play a role in the decisions regarding objectives and management strategies?
20. Given the goal of the Endangered Species Act is to achieve recovery of listed species, how would you personally define a recovered RCW population?
 - a. How is your definition similar or different from what is defined in the Recovery Plan?
 - b. If recovery were achieved, how would that influence your future management approaches?

Wrap-up

21. Is there anything else you feel is important that we haven't discussed?
22. Is there anyone else you feel would be a good person for me to interview?