



## US Forest Service R&D PNW Research Station

**Project Title:** Adapting Private Forest and Range Management to Mitigate Climate Change: Opportunities and Challenges

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**Project Description:** The purpose of this project is to identify how non-industrial private forest owners and ranchers can increase carbon sequestration through sustainable forest and range management practices and be financially compensated, thereby contributing to climate change mitigation and benefiting from the sale of ecosystem services.

The study has four research questions:

- What forest and range management practices are best for optimizing carbon uptake and preventing carbon release from forests and rangelands?
- How does managing for carbon sequestration, as dictated by current institutions and informed by the best available science, fit with the existing land management practices and objectives of forest owners and ranchers?
- What are the current opportunities (market mechanisms, certification/eco-labeling schemes, government subsidies or incentives) for forest owners and ranchers who would like to obtain income from carbon-oriented management; how are these opportunities perceived by them; and what are the barriers and constraints landowners face in taking advantage of these opportunities?
- What policies, incentives, market conditions, educational information, technical assistance, programs, or other things are needed to help family forest owners and ranchers manage their lands in ways that enhance carbon sequestration and global climate change mitigation?

**Project Deliverables:** Research products will include (1) a booklet for landowners containing basic information about forest and range management practices that have carbon benefits, and opportunities to receive financial compensation for carbon-friendly management; (2) a detailed synthesis document on these topics for policy-oriented community groups and agencies; (3) briefing papers; (4) local case studies; and (5) journal articles.

**Project Outcomes:** Global climate change is one of the leading environmental problems of our time. Private forest owners and ranchers can play a meaningful role in climate mitigation by sequestering more carbon through sustainable forest and range management practices, and can do so now while additional, longer-term solutions to climate change mitigation are developed. There is an information gap, however, regarding how to make carbon-friendly forestry and ranching practices viable for landowners; and whether landowners will adopt these practices if the financial benefits of doing so outweigh the costs. Our research will help fill these gaps and will inform evolving policy about how to best include and engage landowners in emerging carbon markets and other climate change mitigation incentive programs.



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