

impact

University of Idaho Extension programs that are making a difference in Idaho.

Creating resilient forests in an era of rapid global change

AT A GLANCE

Creating forests resilient to multiple stressors and disturbances is imperative for forest landowners and managers.

The Situation

Forests in Idaho and the western U.S. are experiencing unprecedented mortality from multiple stressors and disturbances. A warmer and dryer climate during the growing season, bark beetles, fungal pathogens, the growing severity and extent of wildfires, changing tree species compositions, simplified forest structures and age compositions, and high stand densities all impinge to varying degrees on the future ability of forests to provide goods and services for society.

These mounting threats have prompted increasing research activity by ecologists, fire scientists and others on forest restoration and resiliency. Much of this research has focused on understanding historic (pre-Euro-American settlement) forest structure and processes at multiple scales. This research is providing the foundation for changing our paradigm of forest management. This new paradigm suggests moving toward forests that are more complex structurally than what resulted from previous management.

Creating greater complexity can be achieved by a variety of approaches that are specific to a site and management goals. These can include such things as avoiding even spacing of trees; retaining tree clumps and variable levels of stocking across a site; maintaining



A forest in Idaho.

forest openings; retaining older, larger trees of species that are more resistant to disturbances; creating mosaics of different age trees as well as the juxtaposition of trees of more than one age class in the same stand; and the overall reduction in tree densities.

Given the rapid advance of this science and its findings, there is a need to disseminate and translate this work to forest owners and managers. This is especially true given the urgency posed by climate change and severe wildfire.

Our Response

In keeping with the primary Extension mission to make the latest and best scientific research and research-based practices available to rural landowners

and managers, we designed a new program in 2020 called *Managing for Forest Resilience* that provides an overview of the most recent science and how these findings can be integrated and applied to address multiple forest disturbances and stress agents at the same time. Attendees are provided examples and approaches for addressing bark beetles, root disease, wildfire, biodiversity and wildlife concerns, water availability, etc. through forest management approaches that create greater complexity and resilience to change agents while also providing economic and ecological benefits.

Originally scheduled as a live program to be held in Orofino, COVID restrictions forced the program to go online in June and July.

Program Outcomes

Participants in the two-night program reported a 100% gain in knowledge with 100% stating they would be able to use what they learned. Unfortunately, only eight people were able to attend the online version of the program, and only three of the people registered for the live offering (that had to be canceled due to COVID) were able to attend the online workshop. Few rural landowners in north-central Idaho have internet speeds sufficient to allow video streaming and participation in online workshops. We plan to repeat this program in a live format sometime in 2021, as well as in future years to keep clients up to date on the science.

FOR MORE INFORMATION

Bill Warren, Associate Professor/Extension Educator • University of Idaho Extension, Clearwater County • 208-476-4434 • williamw@uidaho.edu

37-20-bwarren-forest-resilience • 10/20