



# Ecosystem Workforce Program

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## LAND MANAGER EXPERIENCES WITH RESILIENCE IN NATIONAL FOREST PLANNING AND MANAGEMENT

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**A**s the concept of resilience has gained importance as a guiding principle in land management objectives and policies in recent years, there has been some question about how the concept is operationalized in forest planning efforts. In this Joint Fire Science Program-funded research project, we surveyed 428 USDA Forest Service planners to get their perspectives on what resilience means, what it takes to plan for resilience, and the factors that complicate and encourage resilient landscape outcomes. Survey results illustrate how resilience is incorporated into planning and how well it aligns with planning processes and frameworks on a broader scale, including factors that enable or constrain managing for resilience.

### Approach

In 2020, we identified and sent online surveys to 2,213 individuals who worked on USDA Forest Service (USFS) Environmental Impact Statements from 2013 through January 2020 as Responsible Officials or Interdisciplinary Team members, 19% of whom completed the survey.

### Characteristics of survey respondents:

- Based in all nine USFS regions and at the Washington Office level, ranging from 15 to 77 respondents per region.
- Between 1 and 52 years of experience working in the agency, with an average of 21 years.
- Worked at forest (45%), district (36%), regional (10%) and national Washington Office (5%) levels, with nearly all respondents (93%) working in the National Forest System.
- GS levels ranged from 7 to 15, with most respondents at GS levels 11 and 12

### Key findings

#### Definitions of resilience:

**There was lack of consensus around use of the term “resilience” within the context of national forest management, as well as a lack of clarity in how the term is defined within the agency.** Over 55% of respondents agreed the scientific definition of resilience was clear while only about 26% of respondents agreed the definition of resilience was clear within national forest policy. At the same time, nearly all (94%) of respondents believed it was important that the USFS have a clear definition of resilience.

#### Influence of disturbance agents:

**Respondents rated each of the 11 disturbance agents we asked about as important to resilience in their management units.** Drought, wildfire, native diseases and climate change were particularly important across geographies, with non-motorized recreational impacts and floods less of a concern for respondents. Excepting Region 10, Alaska, wind

was a more important disturbance for regions in the eastern US and wildfire was a more important disturbance for regions in the western US.

### Influence of agency policies and practices:

**Most respondents identified the Good Neighbor Authority (55%), 2003 Healthy Forest Restoration Act (54%), and Collaborative Landscape Restoration Program (51%) as enabling the ability to manage for resilience.** The only listed policy that respondents rated as more constraining than enabling was the Endangered Species Act: 45% felt that it constrained their ability to achieve resilient outcomes while only 25% felt it helped enable those outcomes.

**Unlike the response to policies, respondents indicated that many common practices and concerns constrained the ability to manage for resilient outcomes at their management units.** Nearly all respondents identified budget limitations for implementation and planning as constraints to managing for resilient outcomes on their units. Approximately 70% of respondents thought that public pressure to minimize disturbance and the threat of lawsuits from public interest groups constrained unit-level resilient outcomes. The expectation to meet timber targets was also seen as a constraint. Partnerships with scientists and collaboration with non-USFS stakeholders were most often perceived as enabling the agency's ability to manage for resilient outcomes.

### Leadership priorities and agency objectives:

**Nearly all respondents (>90%) thought that across forest-, region- and Washington Office- levels, meeting flagship targets in terms of board feet sold and acres treated for hazardous fuels were high agency priorities.** Approximately 65% thought crafting simple and effective NEPA documents was a high priority for agency leadership. Respondents identified managing for resilient landscapes as a higher priority at the forest level than at regional and national levels. Most respondents did not identify incorporating climate science into analysis and planning documents as a high priority at any level.

## Implications for policy and practice

**Despite the Forest Service's establishment of an agency-wide definition of "resilience" in 2014, there is still a lack of clarity within the agency regarding its meaning for national forest management.** This discrepancy may be related to the persistence of policies, procedures, and performance metrics that emphasize measurable outputs rather than promoting the more integrative and adaptive values associated with the resilience concept.

**Respondents perceived that most of the major policies driving national forest planning and management were not significant constraints; rather, budget limitations and public perceptions and pressures were the greatest constraints on their management unit's ability to manage for resilience.** Partnerships and collaboration were seen as most enabling their ability to manage for resilient outcomes, but these are not necessarily sufficient to overcome shrinking budgets and uncertainty created by diverse public and stakeholder views on appropriate forest management. This suggests that the agency may need to allocate more resources toward the restoration and maintenance of resilient forest conditions even as it continues to invest in partnerships and collaborative processes.

**Respondents indicated that leadership is not prioritizing resilience-based management at the same level as flagship targets such as timber.** Tradeoffs exist on many management units between short-term priorities related to meeting flagship targets (timber and acres treated) and longer-term priorities related to restoring landscape resilience. The agency should consider developing a broader set of performance metrics that help to reconcile this tension and better support management for long-term forest resilience.

### For more information:

A full report of results from this survey, along with other publications from this research are available at: <http://ewp.uoregon.edu/ForestResilience>.

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