

**Northwest Forest Plan (NWFP) Interagency Regional Monitoring, 20 Year Report
Status and Trend of Northern Spotted Owl Populations**
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Objective

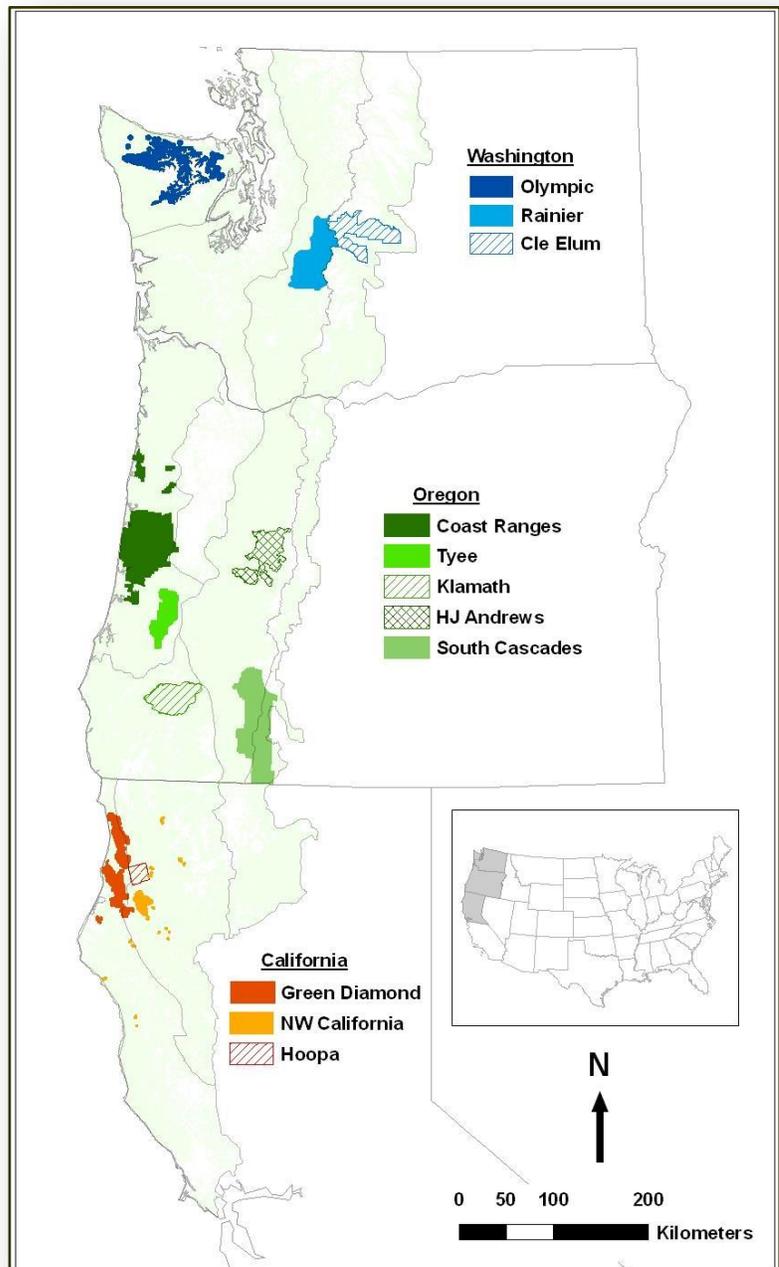
To periodically monitor the effectiveness of Northwest Forest Plan (NWFP) in arresting the downward trends in northern spotted owl populations since its implementation in 1994. Monitoring assesses changes in population trends and demographic rates of northern spotted owls on federal lands within the owl's range. It does this by evaluating: (1) vital rates for survival, reproduction, population change, recruitment, and occupancy dynamics; (2) the influence of environmental factors such as amount of habitat, habitat change, presence of barred owls, and climate on vital rates and populations trends.

Methods and New Science

There are 8 federal (or federal and nonfederal mixed) and 3 nonfederal northern spotted owl demographic study areas scattered across the NWFP area (a.k.a. the range of the northern spotted owl). Every year field crews of wildlife biologists, overseen by research scientist principle investigators, conduct territorial surveys on banded owls in these study areas to determine their occupancy and reproductive status as well as to estimate survival and movements. Every 5 years, the data from all areas is analyzed together in a meta-analysis workshop that includes participation by lead scientists in the field of population ecology and demographics. Because of our habitat monitoring efforts, for the first time we were able to look at new habitat and habitat change relationships on vital rates for the entire range of the owl. We were also able to conduct a rangewide occupancy analysis for the first time, which evaluated how environmental factors influence colonization and extinction rates at the scale of individual owl territories.

Key Results

A manuscript detailing the results of the last meta-analysis conducted in



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January 2014 was submitted to a national science journal and these results are currently undergoing rigorous scientific review. The meta-analysis workshop was organized by Dr. Katie Dugger (U.S. Geological Survey, Oregon Cooperative Fish and Wildlife Research Unit, Oregon State University), but this effort involved many other scientists and wildlife biologists from around the United States and Canada. Following best science practices, we cannot publicly disclose the meta-analysis results until they have undergone the appropriate scientific peer-review. .



The participants of the 2014 northern spotted owl demographic meta-analysis held at Oregon State University, Corvallis, OR.

Management Considerations and Next steps

Pending completion of the science publication process, we are currently unable to present in written format specific results or management considerations. Below is a photograph of a 20 year old female spotted owl that spent her entire life in the Oregon Coast Range (photo credit – Jason Mowdy).

