



US Forest Service R&D PNW Research Station

Project Title: Climate change and Ecological Effects in a Mountain Landscape: H.J. Andrews Experimental Forest Long-Term Ecological Research Program

Project Personnel: This work is being conducted by staff of the Andrews Forest LTER program, including scientists, field staff, and information managers of the PNW Station and Oregon State University.

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Project Description: Long-term records of climate, streamflow, vegetation, and other features of the 6400-ha Andrews Forest provide a basis for examining climate variability, effects of topography (including cold air drainage), and ecological effects. Direct observations exceed 50 years in some cases and dendrochronological records up to 800 years. Preliminary findings (December 2008) suggest that precipitation has exhibited no significant trend over this period, but some warming has occurred. Air temperature has warmed in some winter and spring months. Annual discharge from small, control watersheds appears to be declining, and the rate of tree mortality appears to be increasing, which may represent effects of warming, but further analysis is required. A key hypothesis is that cold air drainage may moderate effects of climate change in some parts of mountain landscapes. See the Andrews Forest Web page: www.fsl.orst.edu/lter.

Project Deliverables: Publications, Web page (www.fsl.orst.edu/lter), and other outlets are being used to deliver information.

Project Outcomes: This work is carried out with PNW Station and National Science Foundation support and in cooperation with the Willamette National Forest through the Central Cascades Adaptive Management Partnership. The work has both a basic science thrust of understanding effects of climate change in mountain landscapes and the applied aspect of implications for forest and watershed management.