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**Research in the Caspar Creek
Experimental Watersheds, Northern
California**

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For the past four decades, researchers from the Pacific Southwest Research Station's Redwood Sciences Laboratory, in cooperation with the California Department of Forestry and Fire Protection, have been studying the effects of logging in the Caspar Creek Experimental Watersheds on the Jackson Demonstration State Forest near Fort Bragg, California. Their findings have identified the extent and nature of hydrologic, erosion, and sedimentation impacts. In 1962, gaging stations were installed in both the 424-ha South Fork and 473-ha North Fork of Caspar Creek. These sites were chosen because the two drainages had roughly comparable physical characteristics and management history. The old-growth redwood forest was logged during the late 19th century, and, in 1962, both watersheds supported stands of second-growth redwood, Douglas-fir, grand fir, hemlock, and several hardwood species. The first phase was a "paired watershed" experiment, in which researchers recorded streamflow and sedimentation at both gaging stations before and after streamside road construction and selective tractor logging of 50% of the timber volume in the South Fork watershed. In phase II, which began in 1985, 13 new gaging stations were installed in the North Fork. The South Fork and three unlogged tributaries within the North Fork served as controls while 48% of the timber volume of the North Fork watershed was clearcut logged using mainly skyline yarding to a ridgetop road system. For phase III, starting in 2000, 10 new gaging stations have been installed in the South Fork. The streamside road was decommissioned in 1998 and a new ridgetop road system will be installed. Phase III will focus on the effects of both clearcut and selective logging under modern forest practice rules in third-growth stands that have been previously tractor-logged. While conducting the watershed experiments, scientists developed new methods for measuring suspended sediment yields and initiated numerous collateral studies of watershed processes.

URL: <http://www.rsl.psw.fs.fed.us/projects/water/caspar.html>