

New report highlights diversity and value of Alaska's coastal forests

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A new report published by the USDA Forest Service's Pacific Northwest Research Station presents summaries of current southeast and south-central Alaska forest topics, ranging from carbon and forest products to lichens and invasive species.

The [report](#), Forests of Southeast and South-Central Alaska, 2004-2008, highlights key findings from the most recent data collected by the station's PNW Forest Inventory and Analysis (FIA) unit. Written by a group of 15 Forest Service, university, and nongovernmental scientists, the report is divided into 6 chapters and 14 summaries and is available online at <http://www.treesearch.fs.fed.us/pubs/37951> and in print by request.

Among the key findings:

- The southeast and south-central region contains 12 percent of Alaska's forest land (over 15 million acres). "That's an area about the size of West Virginia," said Glenn Christensen, an FIA analyst who helped to write the report. "About half of the state's productive timberland as well as half of the state's population is found in this region."
- Carbon flux in Alaska's coastal forests is substantial, with trees there having sequestered more than 31 million tons of carbon from the atmosphere between 1995 to 2003 and 2004 to 2008. "That's roughly equivalent to the annual emissions of more than 18 million passenger cars," said Tara Barrett, a research forester with the station and one of the authors of the report. Two-hundred-plus-year-old Sitka spruce forests stored the highest amounts of carbon, an average of 107 tons of carbon per acre.
- Over the past half century, the [coastal](#)

[region](#) described by the report has had a 2- to 3 °F increase in average annual temperature, which could affect biomass. Forests within the region's higher-elevation areas had about a 7-percent increase in biomass in live trees, but no net change was found for lower-elevation forests. Common tree species such as western hemlock and Sitka spruce did not show any net change, but increases occurred for western red cedar and some pioneering hardwoods. Shore pine (lodgepole) trees had an estimated 4.6 percent decrease in biomass.

- Re-measured inventory plots show no significant change for the yellow-cedar species between 1995-1998 and 2004-2008, suggesting that regional mortality from yellow-cedar decline was lower than in previous decades. More dead trees found at low elevations and more small live trees found at high elevations also suggests that yellow-cedar species may be "migrating," with population losses in some locations balanced by increases in other locations.
- Introduced or native noxious plants were present on less than 2 percent of plots, compared to 67 percent of plots in other parts of the United States, suggesting that the state has a window of opportunity to prevent establishment of [invasive species](#) in its forests.

"Land managers, decisionmakers, and the general public will all find this report very useful in understanding the scope and magnitude of Alaska's coastal forests, especially their value as a resource to communities at local, regional, and national levels," said Charles Peterson, manager of the station's FIA unit.

The PNW-FIA unit conducts forest inventories in California, Oregon, Washington, Hawaii, the Pacific Islands, and the coastal region of Alaska. It is one of four regional units in the research branch of the U.S. [Forest](#) Service comprising the national FIA Program, which annually monitors all of the Nation's public and private forests.

Provided by USDA Forest Service

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