Alaska Research Overview

Background

The Pacific Northwest (PNW) Research Station helps managers, forest industries, and forest-dependent communities make choices informed by scientific knowledge and technology. The station conducts forest-related research including climate change, integrated watershed management, fire and smoke management, forest inventory and analysis, forest health, long-term ecological study, tourism, wood use, and monitoring.

The PNW Research Station conducts research through statewide partnership initiatives, positioning the Forest Service as a research leader in Alaska with a vibrant, motivated, and critical workforce in the state. Alaska research and development facilities are located in Anchorage, Fairbanks, Juneau, and Sitka.

Key Outcomes

- Developed a management tool for predicting postfire successional trajectories in black spruce stands in interior Alaska.
- Discovered that dissolved organic carbon in streams from Alaska coastal forest puts the carbon equivalent of 1.6 billion board feet of timber into the coastal ocean annually. This carbon may exert a significant influence on coastal fisheries productivity and may be affected by climate change.
- Produced a new version of the deer habitat model for land managers to use as they manage second-growth forests in southeast Alaska. Deer population health is critical as a large percentage of protein in rural communities is derived from deer consumption.

Future Activities

- Complete a research needs assessment for Alaska.
- Increase use and access to remote sensing capabilities within the state through the Resource Management and Productivity Program.
- Place the Assistant Station Director for Program Development in Juneau to help increase partnerships with federal and state natural resource managers.
- Use second-growth forest management prescriptions to increase subsistence opportunities for individuals and communities and provide opportunities for the forest products industry in southeast Alaska.
- Institute a multiagency statewide study on Alaska resident outdoor activities and travel to assist land managers in meeting the needs of Alaska residents.

- Construct a new lab facility in Juneau on the campus of University of Alaska Southeast. Estimated for completion in 2012.
- Conduct an annual inventory in interior Alaska to determine biomass supply and market opportunities for hardwood resources.
- Conduct an analysis of timber supply demand and opportunities for development of an alternative biomass for use in bioenergy and biorefineries throughout the state.
- Cooperate with the U.S. Geological Survey on permafrost melting studies.
- Estimate the values of nature's benefits (water, forests, etc.) to Alaskan communities and natural resource managers.
- Use the Forest Vegetation Simulator variant for boreal forest including a fire and fuels module to access climate change.
- Understand the effects of accelerating climate change on natural resources across Alaska.
- Analyze the effects of climate change on carbon export from coastal temperate rain forest.
- Integrate fuel, fire spread, and smoke models for interior Alaska forests for use by fire managers and communities.
- Understanding of the effects of accelerating climate change on natural resources across Alaska.
- Alternative location for a Juneau Lab facility when the current lease expires in 2011.
- Effects of climate change on carbon export from coastal temperate rainforest.

Who Benefits Directly

- Communities
- State and city government
- Alaska Native corporations
- Forest industry
- State and federal land managers
- Universities
- Nongovernmental organizations

More Information

Paul Brewster, Assistant Director for Program Development, PNW Research Station. Phone (907) 586-7801. E-mail: pbrewster@fs.fed.us.