



IMPROVING SCIENTIFIC TOOLS FOR MANAGING FORESTED WATERSHEDS

A McIntire-Stennis supported project

PROJECT

Water quality and availability are critical parts of life – for humans, ecosystems and every species on Earth.

Forested watersheds are an important part of this equation as they provide water, sediment, and nutrients that shape the health of aquatic ecosystems. Forested watersheds also make up a large portion of the landscape in places like the Pacific Northwest. And how water moves through forested watersheds impacts the supply of clear water – along with things like the quality of fish habitat and the well-being of hydraulic infrastructure, like culverts.

Many external factors can affect hydrologic processes including drought, wildfire, timber harvests, and urbanization. Therefore, understanding how forest management decisions, human activity, and natural disturbances influence the flow and supply of water is fundamental to sustainable management. Forested mountainous ecosystems are especially challenging because they see a complex array of physiography and the records of water data are usually sparse.

This project, led by Oregon State University Associate Professor Catalina Segura, is aiming to build knowledge about the vital process of water movement in forested watersheds – by researching how storm events affect water and sediment transport through forested watersheds.

COLLABORATION

Researchers and students from Oregon State University's College of Forestry are partnering with researchers from the Environmental Protection Agency (EPA) and the U.S. Forest Service Pacific Northwest Research Station to conduct this work.



IMPACT

This research will help inform management policies, practices, and regulations in forested watersheds by offering critical insights into hydrologic processes. It will provide valuable data and tools to better understand and predict the impacts of disturbances to forested watersheds.

About McIntire-Stennis

The McIntire-Stennis program, a unique federal-state partnership, cultivates and delivers forestry and natural resource innovations for a better future. By advancing research and education that increases the understanding of emerging challenges and fosters the development of relevant solutions, the McIntire-Stennis program has ensured healthy resilient forests and communities and an exceptional natural resources workforce since 1962.

