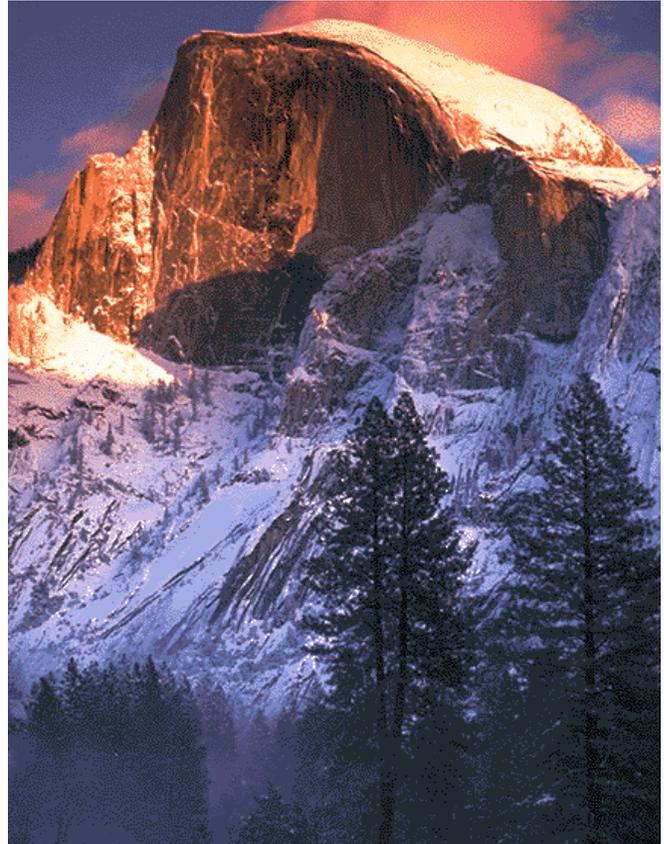


Yosemite Field Station

The **Sierra Nevada** rise from the Central Valley of California to over 14,000 feet at its crest. Its broad elevational and precipitation gradients encompass a wide range of grasslands, shrublands, woodlands and forests to its west and highly arid habitats to its east, hosting an extraordinary diversity of species. These resources are managed by the Department of the Interior, the Department of Agriculture and other federal and state agencies, whose staff must make difficult decisions daily, balancing their stewardship responsibilities with land uses such as livestock and packstock operations, resource extraction, fire management and community protection, off-highway vehicle recreation, and various other visitor uses.

So how might federal and state agencies best manage this region's resources in the face of changing conditions brought on by altered natural processes, biological invasions, climate change, and human population growth? USGS scientists can help. The core mission of the **Yosemite Field Station** is to provide credible, timely and relevant research and products to land managers and the scientific community. These products include journal articles, technical manuals, book chapters, maps, databases, websites, workshops and various



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symposia. Yosemite Field Station scientists greatly value personal interactions with land managers and other scientists, working to provide them technical support, to develop new research priorities and to implement new projects.

The Yosemite Field Station is comprised of a main office located in **El Portal** on the west side of the Sierra Nevada and two satellite offices: one in nearby **Wawona** and one on the east side of the Sierras in **Bishop**. These three locations facilitate interaction between USGS scientists and various federal, state, and non-governmental collaborators and clients. It also allows for the most effective implementation of Yosemite Field Station studies in mountain, foothill, and desert habitats. The field



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station includes office facilities, wet and dry labs, a greenhouse and an herbarium, in addition to various shared resources associated with Yosemite National Park, University of California-Merced, and the UC White Mountain Research Station.

USGS scientists at the Yosemite Field Station possess a wide range of skills and experience in:

- fire science
- invasion biology
- population/community/ecosystem ecology
- plant and animal taxonomy
- seedbank dynamics
- ecological restoration
- biogeochemistry
- experimental and monitoring design
- database management and GIS
- statistical analyses, quantitative ecology and ecological modeling
- developing varied applied science products

They apply this expertise to address a spectrum of important questions on Sierra Nevada ecosystems, evaluating short- to long-term effects on plot- to landscape-scale interactions related to:

- climate change
- fire and fire management actions
- invasive plants and animals
- carbon stocks dynamics
- land use effects
- rare plants and animals
- plant-animal interactions
- ecological restoration techniques

Current projects focus on the role of fire in Sierra Nevada and desert ecosystems; evaluating post-fire successional patterns; modeling the processes of plant invasions; developing tools to monitor plant invasions; evaluating management techniques for invasive plants and fire; assessing plant diversity in a variety of landscapes; studying mammalian and avian carnivores; assaying soil seedbanks to describe their densities and species composition; evaluating ecological restoration techniques; and identifying potential effects of climate change and its implication for land management.

To tackle these projects, scientists at the Yosemite Field Station cultivate strong collaborations with land managers, professors, students and other scientists with the National Park Service, U.S. Forest Service, U.S. Fish and Wildlife Service, Bureau of Land Management, and numerous universities and non-governmental organizations. Together, they work toward research and solutions for the future of the Sierra Nevada.

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