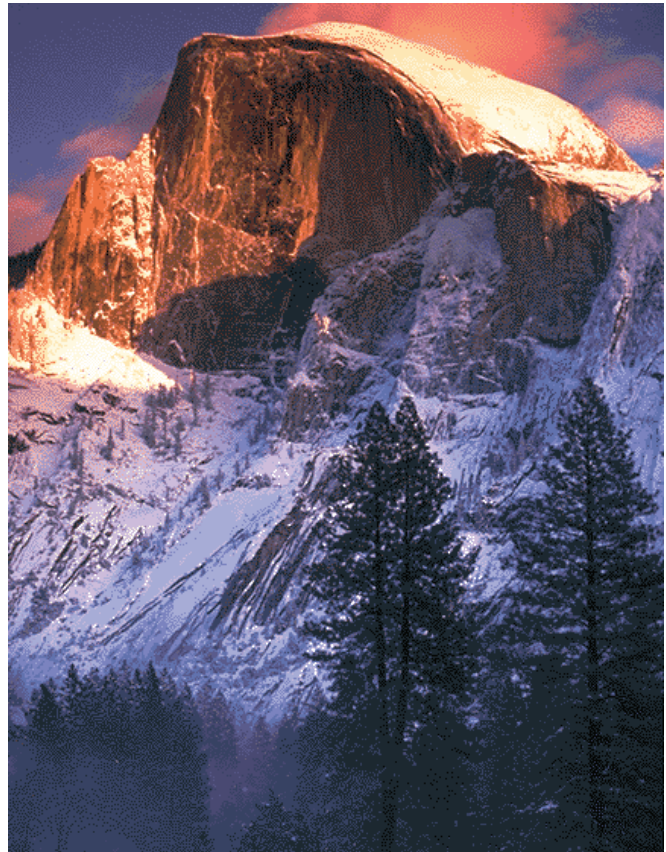


Western Ecological Research Center <http://www.werc.usgs.gov>

Yosemite Field Station

The Sierra Nevada rise from the Central Valley of California to elevations over 14,000 feet at the crest, producing a rain shadow to the east resulting in some of the most arid regions in North America. These broad elevational and precipitation gradients encompass a wide range of grasslands, shrublands, woodlands, and forests, and a very high diversity of species. These natural resources are managed by staff from the Department of the Interior, Department of Agriculture, and other federal and state agencies who 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. Especially challenging is the task of understanding how best to manage the region's resources in the face of changing conditions brought about by human population growth, biological invasions, altered natural processes, and climate change.

The purpose of the Yosemite Field Station is to provide credible, timely, and relevant science products to land managers and the broader scientific community. These products are tailored for maximum effectiveness, and range from scientific articles and



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book chapters, to technical manuals, databases, maps, and websites. Scientists at the Yosemite Field Station place a high priority on interacting at a personal level with land managers and other scientists to provide technical support and identify and develop new research priorities and projects.

The Yosemite Field Station is comprised of a main office located in El Portal on the west side of the Sierra Nevada, and a satellite office located in Bishop on the east side. These two locations facilitate interaction between USGS scientists and their 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.



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The field station includes office facilities, wet and dry labs, greenhouses, and a 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 which allows them to address a broad spectrum of scientific questions. They have expertise in:

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

They apply these skills at plot to landscape scales to evaluate short to long-term effects and interactions related to the study of:

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

Current projects focus on investigating the role of fire in Sierra Nevada and desert ecosystems, evaluating post-fire successional patterns, modeling the processes of plant invasions, developing tools for monitoring plant invasions, evaluating management techniques for invasive plants and fire, assessing plant diversity in a variety of settings, studying mammalian and avian carnivores, assaying soil seedbanks to describe their densities and species composition, evaluating ecological restora-

tion techniques, and identifying potential effects of climate change. These projects involve collaborations with land managers, academic professors, graduate students, and other scientists affiliated with the National Park Service, Bureau of Land Management, U.S. Fish and Wildlife Service, U.S. Forest Service, and numerous universities and non-governmental organizations. Scientists at the Yosemite Field Station emphasize collaboration, both within and outside of their research group.

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