

Greater Yellowstone Area

An increasing number of people are drawn to live and vacation in the Greater Yellowstone Area (GYA) ecosystem, which contains the Nation's oldest National Park, unique wildlife resources, and the influences of one of the largest dormant volcanic areas in North America. Coexistence with wildlife is a delicate balance, as the area is developed and wildlife habitat is fragmented. Managing this balance requires vastly improved information on landscape attributes (geology, topography, vegetation, climate, roads and trails, and hydrology), as well as information on the use of the landscape by wildlife and people, and on the dynamic interactions among wildlife species.

In FY 2001, the USGS will develop models of habitat use for threatened species such as the grizzly bear. Scientists estimate the grizzly bear population in the GYA is between 280 and 610 bears, a significant decrease from estimates of several thousand in the 1800's. Grizzly bears roam over large

tracts of land; to thrive, they need 50 to 375 square miles of diverse habitat that encompasses forests and meadows at various elevations. Part of the decline of the grizzly can be traced to human activities such as development and the degradation, fragmentation, and loss of habitat -- effects also felt by other species, such as mule deer and wolves.

Other work in the GYA in FY 2001 will focus on historical inventories of land use and land change to document changes over time, climate data bases to show minimum and maximum temperature and precipitation, and the development of interactive software for display and analysis of climate data at various temporal scales to understand effects of climate variability on habitats and vegetation communities.

This proposed work for FY 2001 continues collaborative efforts of the Greater Yellowstone Area Initiative, developed in partnership with U.S. Fish and Wildlife Service, National Park

Service, Bureau of Land Management, and U.S. Forest Service. The Initiative was developed to conduct integrated interdisciplinary scientific analysis of the physical, chemical and biological characteristics of the region.

Resource managers in the GYA, which covers two National Parks, six National Forests, six National Wildlife refuges, and lands administered by the Bureau of Land Management, have identified integrated land information as a major requirement for integrated decision making. Existing scientific data mirror this patchwork of land and wildlife management agencies and their distinct policies and objectives. The USGS is working with its partners to bring existing and new information into a common spatial framework (geographic information system) for collaborative decision-making that reflects the needs of land and resource managers in the Greater Yellowstone area. By developing and sharing data resources with federal and state agencies, information will be consistent and useful across ownership and management boundaries, and in a form that can be applied to management decisions concerning wildlife and its habitat, local zoning, geothermal and mineral resources, and natural hazards.

(Dollars in Thousands)	
Biological Research	
Biological Research and Monitoring	+\$ 400

As the nation's largest water, earth and biological science and civilian mapping agency, the USGS works in cooperation with more than 2000 organizations across the country to provide reliable, impartial, scientific information to resource managers, planners, and other customers. This information is gathered in every state by USGS scientists to minimize the loss of life and property from natural disasters, contribute to sound economic and physical development of the nation's natural resources, and enhance the quality of life by monitoring water, biological, energy, and mineral resources.