USGS
science for a changing world

USGS Biological Resources

The USGS Biological Resources Programs seek to collaborate with Federal, State, Tribal, private sector, and university organizations nationwide to provide credible science–based, biological information needed by natural resource managers and others.

AThe more than 1600 USGS-BRD employees are located at 18 Science Centers, 40 Cooperative Research Units, and numerous field stations throughout the United States. Science focuses on issues especially relevant to Federal lands, trust species and resources. Biology Programs include:

Status & Trends

Assesses and reports on the status and trends of the Nation's biological resources; develops and evaluates inventory and monitoring methods; and collects, archives and shares monitoring data to facilitate research, enable resource management and stewardship, and promote public understanding and appreciation of our living resources. Provides critical information and methods to support land management agencies and their stakeholders.

Contaminant Biology

Environmental exposure and biological effects of contaminants on fish, wildlife and plants are the focus of research in Contaminant Biology. The information is used to develop options for mitigation, restoration or prevention of contamination in mine lands and in urban, industrial and agricultural environments.

Fisheries: Aquatic and Endangered Resources

The Fisheries: Aquatic and Endangered Resources Program (FAER) focuses on the study of fishes, fisheries, fish diseases and parasites, aquatic organisms and their water based and water-dependent habitats. Endangered species and those that are imperiled receive special research interest. The Program's research on the diversity, natural history, health, and habitat requirements of fish and other aquatic organisms is carried out to support the management, conservation and restoration of our Nations aquatic resources.

Wildlife: Terrestrial & Endangered Resources

USGS scientists conduct investigations on mammals, migratory birds, amphibians, and other wildlife species. These projects complement and support the efforts of state wildlife programs. Studies of wildlife diseases help managers to understand the effects of disease outbreaks on wildlife populations. Endangered and threatened species are studied to determine the factors contributing to their decline and to provide the information and tools needed for their recovery.

Terrestrial, Freshwater, and Marine Ecosystems

Research focusing on the interactions controlling the structure, function, and condition of terrestrial, freshwater, and marine ecosystems to identify and predict the ecological consequences of short- and long term environmental changes. Emphasis on the development of techniques for restoration/rehabilitation with emphasis on the Everglades, degraded river and stream ecosystems in the Lower Mississippi River Valley, damaged Great Plain and Ozark Plateau ecosystems, degraded wetlands and oak-savannah ecosystems in the Great Lakes, Colorado River, Mojave Desert, and both aquatic and terrestrial ecosystem in the West, including Hawaii and Alaska. Ecosystem studies in South Florida, Chesapeake Bay, Platte River, Greater Yellowstone, Mojave Desert, and San Francisco Bay will help to provide the tools for resources managers to predict implications of management policies on ecosystems and rehabilitating impaired ecosystems into self-sustaining natural systems.

Invasive Species

Studies are conducted on factors influencing invasions of habitats by non-indigenous species and their effects on native species. The program develops information, methods and tools for detection, monitoring, forecasting, and assessing invasions as well as for effective prevention and control strategies.

Cooperative Research Units

Studies conducted by Unit scientists and their students focus on contemporary natural resource issues. Unit scientists also participate in the education of graduate students destined to become natural resource managers and scientists and provide technical assistance and continuing education to natural resource professionals.

Biological Information Management & Delivery

Emphasis is on dissemination and integration of information through the National Biological Information Infrastructure to meet the needs of technical and non-technical users.