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By Ronald J. Litwin, Robert E. Weems, and Thomas R. Holtz, Jr.

Few subjects in the Earth sciences are as fascinating to the public as dinosaurs. The study of dinosaurs stretches our imaginations, gives us new perspectives on time and space, and invites us to discover worlds very different from our modern Earth.

From a scientific viewpoint, however, the study of dinosaurs is important both for understanding the causes of past major extinctions of land animals and for understanding the changes in biological diversity caused by previous geological and climatic changes of the Earth. These changes are still occurring today. A wealth of new information about dinosaurs has been learned over the past 30 years, and science's old ideas of dinosaurs as slow, clumsy beasts have been totally turned around. This pamphlet contains answers to some frequently asked questions about dinosaurs, with current ideas and evidence to correct some long-lived popular misconceptions. Although much has been discovered recently about dinosaurs, there is still a great deal more to learn about our planet and its ancient inhabitants.

- When did the first dinosaurs appear on Earth?
- Are all fossil animals dinosaurs?
- Did people and dinosaurs live at the same time?
- Where did dinosaurs live?
- Did all the dinosaurs live together, and at the same time?
- How are dinosaurs named?
- What was the biggest dinosaur? What was the smallest?
- How many types of dinosaurs are known?
- Were dinosaurs warm-blooded?
- How long could a dinosaur live?
- What did dinosaurs eat?
- How fast could dinosaurs walk or run?
- Did dinosaurs communicate?
- Why did some dinosaurs grow so big?
- Which was the smartest dinosaur?
- What colors were dinosaurs?
- Were dinosaurs social animals?
- When did dinosaurs become extinct?
- Why did the dinosaurs die out?
- Where can I find more information about dinosaurs?

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When did the dinosaurs first appear on Earth?

The oldest dinosaur types are known from rocks in Argentina and Brazil and are about 230 million years old. The most primitive of these types, *Eoraptor*, was a small meat-eating dinosaur. Because *Eoraptor*'s skeleton shows some advanced skeletal features, older dinosaurs may yet be found.

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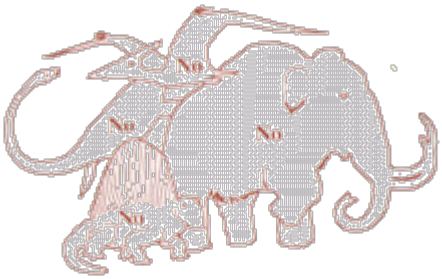
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Are all fossil animals dinosaurs?

No. Dinosaurs are a group of ancient reptiles that had a set of particular skeletal features. The hips, hind legs, and ankles were specialized and allowed the legs to move directly under the body, rather than extending out from the side of the body as in modern lizards. This arrangement enabled dinosaurs to bring their knees and ankles directly below their hips and provided the necessary attachments for very strong leg muscles. Dinosaur skeletons were well designed for supporting a large body, for standing erect (upright), and for running. The front legs were adapted for grasping prey, for supporting weight, or for walking and running. The skulls of dinosaurs were designed for maximum strength, for minimum weight, and (in some cases) for grasping, holding, or tearing at prey. These skeletal features separated dinosaurs from other ancient reptiles such as *Dimetrodon*, the plesiosaurs, and pterosaurs. Fossil mammals, like mammoths and "saber-toothed tigers" (e.g., *Smilodon*), are also often incorrectly called dinosaurs.



These ancient animals are **NOT** dinosaurs!

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Did people and dinosaurs live at the same time?

No! After the dinosaurs died out, nearly 65 million years passed before people appeared on Earth. However, small mammals (including shrew-sized primates) *were* alive at the time of the dinosaurs. Many scientists who study dinosaurs (vertebrate paleontologists) now think that birds are direct descendants of one line of carnivorous dinosaurs, and some consider that they in fact represent modern living dinosaurs. This theory remains under discussion and shows that there is still much we don't know about dinosaurs.

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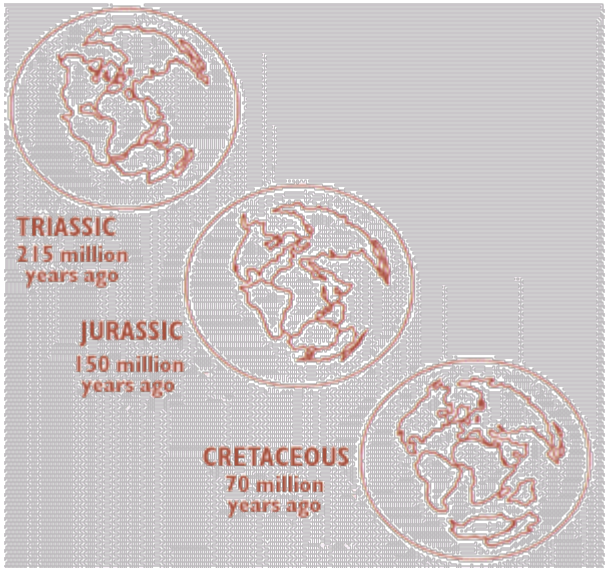
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Where did dinosaurs live?

Paleontologists now have evidence that dinosaurs lived on all of the continents. At the beginning of the age of dinosaurs (during the Triassic Period, about 230 million years ago) the continents we now know were arranged together as a single supercontinent called Pangea. During the 165 million years of dinosaur existence this supercontinent slowly broke apart. Its pieces then spread across the globe into a nearly modern arrangement by a process called plate tectonics. Volcanoes, earthquakes, mountain building, and sea-floor spreading are all part of plate tectonics, and this process is still changing our modern Earth.



Relative positions of continents during the age of dinosaurs

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Did all the dinosaurs live together, and at the same time?

Dinosaur communities were separated by both time and geography. The "age of dinosaurs" (the Mesozoic Era) included three consecutive geologic time periods (the Triassic, Jurassic, and Cretaceous Periods). Different dinosaur species lived during each of these three periods. For example, the Jurassic dinosaur *Stegosaurus* already had been extinct for approximately 80 million years before the appearance of the Cretaceous dinosaur *Tyrannosaurus*. In fact, the time separating *Stegosaurus* and *Tyrannosaurus* is greater than the time separating *Tyrannosaurus* and you. At the beginning of dinosaur history (the Triassic Period), there was one supercontinent on Earth (Pangea). Many dinosaur types were widespread across it. However, as Pangea broke apart, dinosaurs became scattered across the globe on separate continents, and new types of dinosaurs evolved separately in each geographic area.

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How are dinosaurs named?

Dinosaurs generally are named after a characteristic body feature, after the place where they were found, or after a person involved in the discovery. Usually the name consists of two Greek or Latin words (or combinations); in order, these are the genus (plural, genera) and the species name. For example, the Greek and Latin combination (binomen) *Tyrannosaurus rex* means "king of the tyrant lizards." Biologists name modern animals exactly the same way. Some examples include humans (*Homo sapiens*), domestic dogs (*Canis familiaris*), golden eagles (*Aquila chrysaetos*), box turtles (*Terrapene carolina*), and rattlesnakes (*Crotalus horridus*).

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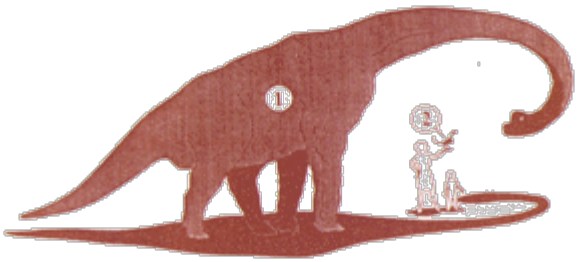
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What was the biggest dinosaur? What was the smallest?

The largest complete dinosaur we know of was *Brachiosaurus* ("arm lizard"); it reached 23 m in length and 12 m in height (about the length of two large school buses and the height of a four-story building). Fragmentary leg bones and vertebrae of even larger dinosaur species are known, but these skeletal remains are too incomplete to determine their exact size. Several of these (*Argentinasaurus* and *Amphicoelias*) might have been one and a half to two times larger than *Brachiosaurus*. The smallest dinosaurs were just slightly larger than a chicken; *Compsognathus* ("pretty jaw") was 1 m (3 ft) long and probably weighed about 2.5 kg (about 6.5 lb). These three dinosaur types all lived during the Jurassic Period. *Mussaurus* ("mouse lizard") was claimed as the smallest dinosaur, but it is now known to be the hatchling of a dinosaur type that was much larger than *Compsognathus* when fully grown. If birds **are** advanced dinosaurs, then the smallest dinosaur would be the hummingbird!



Brachiosaurus (1) and *Compsognathus* (2)

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How many types of dinosaurs are known?

Approximately 700 species have been named. However, a recent scientific review suggests that only about half of these are based on fairly complete specimens that can be shown to be unique and separate species. These species are placed in about 300 valid dinosaur genera (*Stegosaurus*, *Diplodocus*, etc.), although about 540 have been named. Recent estimates suggest that about 700 to 900 *more* dinosaur genera may remain to be discovered.

Most dinosaur genera presently contain only one species (for example, *Deinonychus*) but some have more (for example, *Iguanodon*). Even if all of the roughly 700 published species are valid, their number is still less than one-tenth the number of currently known living bird species, less than one-fifth the number of currently known mammal species, and less than one-third the number of currently known spider species.

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Were dinosaurs warm-blooded?

Scientists have conflicting opinions on this subject. Some paleontologists think that all dinosaurs were "warm-blooded" in the same sense that modern birds and mammals are: that is, they had rapid metabolic rates. Other scientists think it unlikely that any dinosaur could have had a rapid metabolic rate. Some scientists think that very big dinosaurs could have had warm bodies because of their large body size, just as some sea turtles do today. It may be that some dinosaurs were warm-blooded. The problem is that it is hard to find evidence that unquestionably shows what dinosaur metabolisms were like.

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How long could a dinosaur live?

Animal lifespans relate in part to their body size and in part to their type of metabolism. Dinosaur lifespans probably varied in length from tens of years to hundreds of years. Their possible maximum age can be estimated from the maximum lifespans of modern reptiles, such as the 66-year lifespan of the common alligator (*Alligator mississippiensis*) and the impressive lifespan of a Black Seychelles Tortoise (*Geochelone (Aldabrachelys) sumeirei*). One specimen of this now-extinct species, which was an adult when captured, lived a record 152 years in captivity (1766-1918) and had an accidental death. These estimates, based on lifespans of cold-blooded animals, would be too long if dinosaurs had metabolisms more similar to modern birds and mammals.

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What did dinosaurs eat?

Some dinosaurs ate lizards, turtles, eggs, or early mammals. Some hunted other dinosaurs or scavenged dead animals. Most, however, ate plants (but not grass, which hadn't evolved yet). Rocks that contains dinosaur bones also contain fossil pollen and spores that indicate hundreds to thousands of types of plants existed during the Mesozoic Era. Many of these plants had edible leaves, including evergreen conifers (pine trees, redwoods, and their relatives), ferns, mosses, horsetail rushes, cycads, ginkos, and in the latter part of the dinosaur age flowering (fruiting) plants. Although the exact time of origin for flowering plants is still uncertain, the last of the dinosaurs certainly had fruit available to eat.

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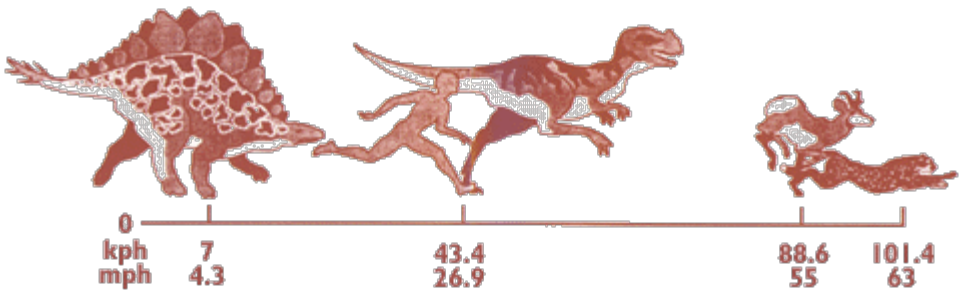
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How fast could dinosaurs walk or run?

Estimates of dinosaur speeds vary because several different methods are used to calculate them. One recent estimate suggests that an average person might have been able to to outrun an adult *Tyrannosaurus* (although you probably would not volunteer to try). The two basic approaches for estimating dinosaur speed are comparing to recorded speeds of modern animals of similar body size and build, and measuring distances between fossil footprints in a trackway and using these distances to calculate estimated speed. Walking-speed estimates for medium-sized bipedal (two-legged) dinosaurs vary from 4 kph to 6 kph, and peak running-speed estimates vary from 37 kph to 88 kph. The highest figure (88.6 kph) is the same as the peak speed of the currently fastest land animals, such as the North American pronghorn "antelope" (*Antilocapra americana*), and very probably is too high.



Speed comparison of some ancient and modern animals

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Did dinosaurs communicate?

Dinosaurs probably communicated both vocally and visually. The chambered headcrests on some dinosaurs such as *Corythosaurus* and *Parasaurolophus* might haved been used to amplify grunts or bellows. Defensive posturing, courtship behavior, and territory fights probably involved both vocal and visual displays. An angry *Triceratops* bull shaking his head at you, even silently, would have made himself very clearly understood!

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Why did some dinosaurs grow so big?

Paleontologists don't know for certain, but perhaps a large body size protected them from most predators, helped to regulate internal body temperature, or let them reach new sources of food (some probably browsed treetops, as giraffes do today). No modern animals except whales are even close in size to the largest dinosaurs; therefore, paleontologists think that the dinosaurs' world was much different from the world today and that climate and food supplies must have been favorable for reaching great size.

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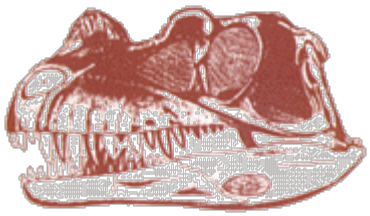
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Which was the smartest dinosaur?

Although there is no direct way to measure a dinosaur's intelligence, one of the few possible measures of intelligence might be a large brain in a small body. The genus that perhaps fits this description best was the Cretaceous bird-like dinosaur *Troodon*, which also may have had binocular vision (depth perception) and excellent eyesight and was built for speed. Even so, this dinosaur was probably not as "intelligent" as most modern birds and mammals.



Ceratosaurus nasicornis, from Marsh (1896)
Orginal specimen on display at U.S. National Museum

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What colors were dinosaurs?

Direct fossil evidence for dinosaur skin color is unknown. Paleontologists think that some dinosaurs likely had protective coloration, such as pale undersides to reduce shadows, irregular color patterns ("camouflage") to make them less visible in vegetation, and so on. Those dinosaurs that had enough armor, such as the stegosaurs and ceratopsians, may not have needed protective coloration but may have been brightly colored as a warning to predators or as a display for finding a mate. Most dinosaurs probably were as brightly colored as modern lizards, snakes, or birds.

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Were dinosaurs social animals?

Some dinosaurs were social creatures. Recently discovered evidence indicates that they travelled together and that some may even have migrated (because dinosaur fossils have been found above the Arctic Circle, where food supply would have been seasonal). Grouped hadrosaur nest sites have been found with badly crushed eggshells and skeletons of baby dinosaurs (with slightly worn teeth) still in the nests, suggesting that some babies stayed in their nests after hatching and probably were fed by parents.



Group behavior in the Triassic early dinosaur *Coelophysis*

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When did dinosaurs become extinct?

Dinosaurs went extinct about 65 million years ago (at the end of the Cretaceous Period), after living on Earth for about 165 million years. If all of Earth time from the very beginning of the dinosaurs to today were compressed into 365 days (1 calendar year), the dinosaurs appeared January 1 and became extinct the third week of September. (Using this same time scale, the Earth would have formed approximately 18.5 years earlier.) By comparison, people (*Homo sapiens*) have been on earth only since December 31 (New Year's eve). The dinosaurs' long period of dominance certainly makes them unqualified successes in the history of life on Earth.

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Why did the dinosaurs die out?

There are dozens of theories to explain a probable cause or causes. Throughout the Mesozoic Era, individual dinosaur species were evolving and becoming extinct for various reasons. The unusually massive extinction at the end of the Cretaceous exterminated the last of the dinosaurs, the flying reptiles, and the large swimming reptiles, as well as many other marine animals. There is now widespread evidence that a meteorite impact was at least the partial cause for this extinction. Impact craters are visible on most planets in our solar system. A spectacular example of this was witnessed in 1994, when Jupiter was struck by a series of cometary fragments. Some of these impact blasts were larger than the Earth's diameter. Other factors such as extensive release of volcanic gases, climatic cooling (with related changes in ocean currents and weather patterns), sea-level change, low reproduction rates, poison gases from a comet, or changes in the Earth's orbit or magnetic field may have contributed to this extinction event.

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Where can I find more information about dinosaurs?

Your local museums, public libraries, and bookstores are good places to start. Some national monuments (Dinosaur National Monument, UT and CO), national parks (Petrified Forest National Park, AZ), and state parks (for example, Dinosaur Valley State Park, TX) have outstanding displays. State geological surveys also have or can provide information on nearby dinosaur exhibits. The references below will help you get started; they provided some of the information for this pamphlet.

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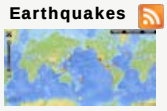
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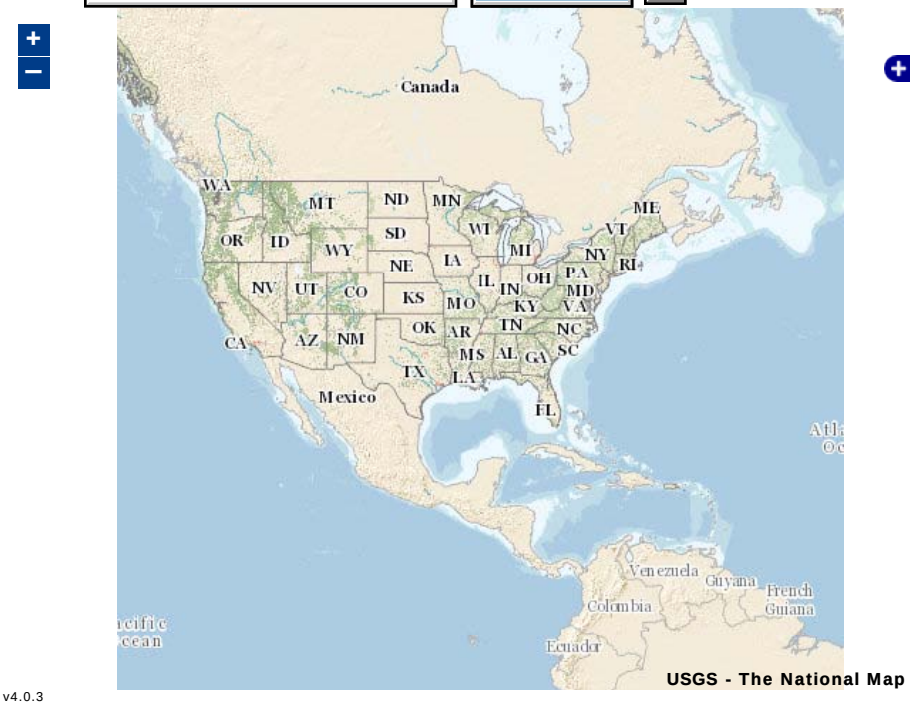


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USGS - The National Map

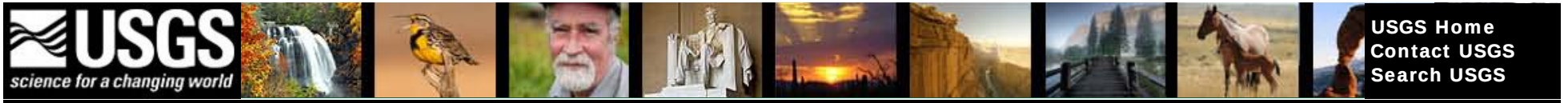
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- Covers the pass owner and three (3) accompanying adults age 16 and older at sites where per person entrance fees are charged. No entry fee charged for children 15 and under.
- Photo identification will be required to verify ownership.
- Passes are non-refundable, non-transferable and cannot be replaced if lost or stolen.
- **NEW! US military and their dependents qualify for a FREE Annual Pass. Learn more!**

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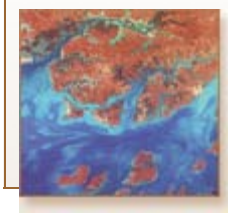
Landsat 8 Data Available!

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National Atlas
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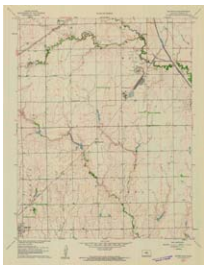
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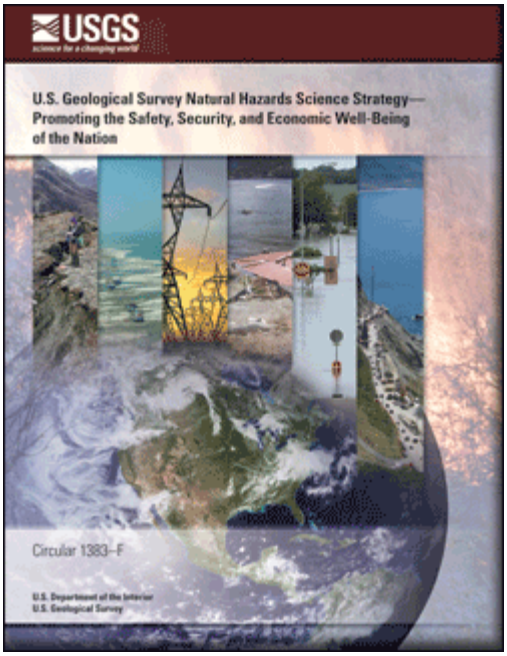


Historical Topographic Map Collection at the USGS Store!

The Historical Topographic Map Collection includes published U.S. maps of all scales and editions, and are offered as a georeferenced digital download or as a scanned print from the USGS Store. The project is part of the USGS National Geospatial Program (NGP) continuing efforts to support the mapping and location-based data needs of the Nation.

Natural Hazards Mission Programs & Activities
Coastal & Marine Geology
Earthquake Hazards
Geomagnetism
Global Seismographic Network
Landslide Hazards
Volcano Hazards
SAFRR Project
Emergency Management
Our Contacts
Other USGS Hazard Science Activities
Astrogeology
Floods & Droughts
Wildfires
Hazard Events
Hurricane Sandy (2012)
Start with Science
Climate and Land Use Change
Core Science Systems
Ecosystems
Energy and Minerals
Environmental Health
Natural Hazards
Science Quality and Integrity
Water
Our Contacts

Natural Hazards



Every year in the United States, natural hazard events threaten lives and livelihoods, resulting in deaths and billions of dollars in damage. The USGS works with many partners to monitor, assess, and conduct targeted research on a wide range of natural hazards so that policymakers and the public have the understanding they need to enhance preparedness, response and resilience.

In 2010, the USGS realigned its organizational structure around the missions identified in the USGS Science Strategy. The Natural Hazards Mission Area includes six science programs: Coastal & Marine Geology, Earthquake Hazards, Geomagnetism, Global Seismographic Network, Landslide Hazards, and Volcano Hazards. Through these programs, the USGS provides alerts and warnings of geologic hazards and supports the warning responsibilities of the National Oceanic and Atmospheric Administration (NOAA) for geomagnetic storms and tsunamis. The Coastal and Marine Geology Program supports all the missions of the USGS, characterizing and assessing coastal and marine processes, conditions, change and vulnerability.

The Natural Hazards Mission Area is responsible for coordinating USGS response following disasters and overseeing the bureau's emergency management activities. The mission area coordinates long-term planning across the full USGS hazards science portfolio, including activities funded through many other programs across the bureau, including floods, hurricanes and severe storms, and wildfires.

The future direction of the USGS hazards mission is guided by the recently released USGS Natural Hazards Science Strategy, which was developed by a team of USGS scientists with considerable input from partners and the public. This document is part of a broader USGS science strategy planning process across all our missions.

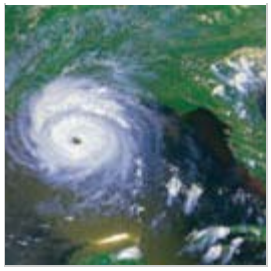
Natural Hazards Mission Area Programs & Activities

Coastal and Marine Geology

CMGP conducts research on the changes to the coastal and marine environment that

Earthquake Hazards

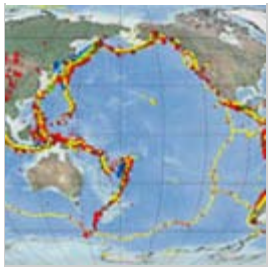
The Earthquake Hazards Program is part of the National Earthquake Hazards Reduction Program



impact lands, lives and livelihoods, and vulnerable ecosystems; providing science to inform decisions that ensure safe and resilient coastal communities and sustainable use and protection of marine resources. Supporting the Natural Hazards mission, CMGP conducts research on marine geohazards including earthquakes, tsunami, and submarine landslides and on coastal change hazards from erosion, hurricanes and other extreme storms, and sea-level rise.

- Coastal Change
- Tsunamis

Monthly Newsletter - Soundwaves

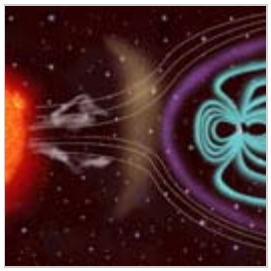


(NEHRP), a four-agency partnership led by the National Institute of Standards and Technology (NIST). Earthquakes pose significant risk to 75 million Americans in 39 States. The USGS provides research and information products for earthquake loss reduction, including hazard and risk assessments, comprehensive real-time earthquake monitoring, and public outreach.

- Earthquake Map
- Real-time RSS Feeds
- Earthquake Notification Service
- Did You Feel It?

"Earthquake Hazards – A National Threat" Fact Sheet

Geomagnetism

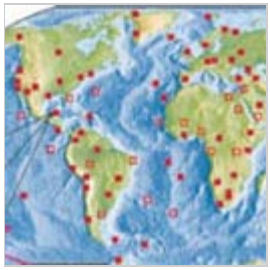


The mission of the Geomagnetism Program is to monitor the Earth's magnetic field. Using ground-based observatories, the Program provides continuous records of magnetic field variations covering long timescales; disseminates magnetic data to various governmental, academic, and private institutions; and conducts research into the nature of geomagnetic variations for purposes of scientific understanding and hazard mitigation.

- Real-time Data

"Monitoring the Earth's Magnetic Field" Fact Sheet

Global Seismographic Network



The Global Seismographic Network (GSN) is a permanent digital network of state-of-the-art seismological and geophysical sensors connected by a telecommunications network. The GSN provides near-uniform, worldwide monitoring of the Earth, with over 150 modern seismic stations distributed globally. The GSN was formed in partnership among the USGS, the National Science Foundation (NSF) and the Incorporated Research Institutions for Seismology (IRIS).

- Station Status

The Global Seismographic Network Fact Sheet

Landslide Hazards

The mission of the Landslide Hazards Program is to

Volcano Hazards

The Volcano Hazards Program advances the scientific



provide information that leads to the reduction of losses from landslides and increase in public safety through improved understanding of landslide hazards and strategies for hazard mitigation. The USGS conducts landslide hazard assessments, pursues landslide investigations and forecasts, provides technical assistance to respond to landslide emergencies, and engages in outreach activities.

- Advisories
- Real-time Monitoring

"Landslide Hazards – A National Threat" Fact Sheet
"Wildfire Hazards – A National Threat" Fact Sheet



understanding of volcanic processes in order to lessen the harmful impacts of volcanic activity. The USGS monitors active and potentially active volcanoes, assesses their hazards, responds to volcanic crises, and conducts research on how volcanoes work. The USGS also issues warnings of potential volcanic hazards to responsible emergency-management authorities and to the populace affected.

- Current Alerts for U.S. Volcanoes

"Volcano Hazards – A National Threat" Fact Sheet

Science Applications for Risk Reductions (SAFRR) Project

The SAFRR project focuses on building partnerships to improve the use of natural hazards information from the USGS, to identify needs and gaps, and to develop new products that increase the use of USGS science by emergency managers and community decisionmakers in order to promote greater resilience to natural hazards. SAFRR evolved from the Multi-Hazards Demonstration Project in Southern California, which has developed interdisciplinary, science-based products that deliver information that starts with the hazard and carries through to impacts on the community.

- USGS Natural Hazards Risk Reduction Project Goes National

USGS Emergency Management



The USGS Natural Hazards Mission Area has been given responsibility for overseeing the bureau's emergency management activities. This function includes the USGS Hazard Response Executive Committee, which provides executive direction, oversight, and support to USGS managers in responding to major hazard events. During incidents of national significance, the USGS provides support to certain National Response Framework emergency support functions.

- USGS Emergency Management

Additional USGS Hazards Science Activities

Astrogeology



The Astrogeology Science Center serves the nation, the international science community, and the general public in the pursuit of new knowledge about our Solar System. The program has participated in analyzing data from numerous missions to planetary bodies, assisting in finding potential landing sites for exploration vehicles, mapping our neighboring planets, moons, and asteroids, and conducting research to better understand the geologic processes operating on these bodies.

- Gazetteer of Planetary Nomenclature
- PILOT - Planetary Image Locator Tool

Floods and Droughts



The USGS is the Nation's primary provider of information on water. The bulk of the USGS activities related to floods and droughts are carried out through programs within the Water Mission Area. Web portals make it possible to view current water conditions and where floods and droughts are occurring.

- USGS Flood Information
- Current Conditions
- FloodWatch | DroughtWatch
- Interactive Flood Map

"Flood Hazards – A National Threat" Fact Sheet

Wildfire Hazards



The USGS carries out a wide range of wildfire-related science activities that span multiple USGS mission areas, including landscape ecology studies, geospatial support for fire response, burned area hydrology, and post-fire debris flow warnings.

- GEOMAC
- EROS Fire Science Activities
- Satellite Data Applications for Fire Science
- LANDFIRE
- Post-wildfire Debris Flow Hazards
- Fire Ecology
- Ash Contamination from Wildland-Urban Interface
- Wildfire and changing vegetation dynamics

"Wildfire Hazards – A National Threat" Fact Sheet

URL: http://www.usgs.gov/natural_hazards/default.asp
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New Maps of Afghanistan Provide "Fingerprint" of Natural Resources

Released: 3/10/2014 10:00:00 AM
A coalition of scientists from the United States and Afghanistan today released 60 high-tech maps that will help Afghanistan chart a course for future economic development.

2011 Oklahoma Induced Earthquake May Have Triggered Larger Quake

Released: 3/6/2014 5:00:00 PM
In a new study involving researchers at the U.S. Geological Survey, scientists observed that a human-induced magnitude 5.0 earthquake near Prague, Oklahoma in November 2011 may have triggered the larger M5.7 earthquake less than a day later.

Global Undiscovered Copper Resources Estimated at 3.5 Billion Metric Tons

Released: 3/6/2014 11:30:00 AM
The first-ever, geologically-based global assessment of undiscovered copper resources estimates that 3.5 billion metric tons of copper may exist worldwide.

President's 2015 Budget Proposes $1.1 Billion for the USGS

State/Local Releases

Pumping May Cause Some Groundwater Decrease in Edwards-Trinity Aquifer in Texas
Released: 2/25/2014 1:02:30 PM

Changes in Stream-Water Quality Attributed to Coalbed Methane Development
Released: 2/25/2014 11:00:00 AM

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Technical Announcements

New Permafrost... But is it Permanent?
Released: 3/10/2014 9:52:36 AM

Female Coyotes Can Have Mixed Wolf-Coyote Pups
Released: 2/26/2014 6:25:57 PM

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Employees in the News

Salmon Conservation Efforts Honored
Released: 1/16/2014 3:00:00 PM

USGS Researcher Honored for Helping Managers Save Desert Fish from Extinction
Released: 1/16/2014 3:00:00 PM

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Released: 3/4/2014 3:21:16 PM
The President's fiscal year (FY) 2015 budget request for the U.S. Geological Survey is $1.1 billion, an increase of $41.3 million above the FY 2014 enacted level. The FY 2015 Budget reflects the President's ongoing commitment to scientific discovery and innovation to support decision making in addressing critical societal needs and to support a robust economy, while protecting the health and environment of the Nation.

25 Years After the Exxon Valdez, Sea Otter Population at Pre-Spill Levels

Released: 2/28/2014 11:00:00 AM
Nearly 25 years after the Exxon Valdez oil spill injured wildlife off the coast of Alaska, a new report issued today by the U.S. Geological Survey indicates that sea otters have returned to pre-spill numbers within the most heavily oiled areas of Prince William Sound.

The National Map and National Atlas Merge

Released: 2/28/2014 11:00:00 AM
During this year, National Atlas of the United States and The National Map will transition into a combined single source for geospatial and cartographic information.

Burmese Pythons Pose Little Risk to People in Everglades

Released: 2/27/2014 2:30:00 PM
The estimated tens of thousands of Burmese pythons now populating the Everglades present a low risk to people in the park, according to a new assessment by U.S. Geological Survey and National Park Service scientists.

Pollutants Pose Threat to Mekong River Residents

Released: 2/27/2014 11:30:00 AM
Portions of the Mekong River Basin contain hotspots of persistent organic pollutants that pose a significant threat to the residents and wildlife of the Mekong Basin, according to a new U.S. Geological Survey study.

Barred Owls Ousting Spotted Owls in the Pacific Northwest

Released: 2/24/2014 11:25:09 AM
An increase in the barred owl population is contributing to the decline of threatened Northern spotted owls, according to models developed by U.S. Geological Survey and U.S. Forest Service scientists.

Media Advisory: USGS to Host Congressional Briefing: Earthquake Science and Remaining Mysteries

Released: 2/20/2014 11:20:00 AM
Come learn about the great leaps in research over the last 50 years, and the research still underway to understand the remaining mysteries of earthquake hazards.

Linking U.S. and Canadian Border Waters

Released: 2/19/2014 9:00:00 AM

Clearer views of waters along the U.S. and Canadian border are now possible with new seamless digital maps. These maps make it easier to solve complex water issues that require a thorough understanding of drainage systems on both sides of the International Boundary.

First Global Geologic Map of Largest Moon in the Solar System Details an Icy World

Released: 2/12/2014 12:00:00 PM

More than 400 years after its discovery by Galileo, the largest moon in the Solar System – Ganymede – has finally claimed a spot on the map.

Identifying Bats By Sound

Released: 2/12/2014 9:30:00 AM

Recording bats' echolocation "calls" is the most efficient and least intrusive way of identifying different species of bats in a given area, providing insight into some populations that have been decimated by white-nose syndrome.

National Scenic Trails Added to Washington State Maps

Released: 2/12/2014 9:00:00 AM

Newly released US Topo maps for Washington now feature segments of the Pacific Crest and Pacific Northwest National Scenic Trails. Several of the 1,446 new US Topo quadrangles for the state now display parts of the Trails along with other improved layers.

View more news releases

Featured Topic

Online Lecture: The 1964 Great Alaska Earthquake



March 27 marks the the 50th anniversary of the magnitude 9.2 Great Alaska Earthquake and Tsunami. Watch a new, online public lecture about the major effects of the earthquake, which provided a key that helped unlock one of the critical mysteries of plate tectonics. A new fact sheet about the earthquake and a 11-minute video are excellent supplements.

More resources, including photographs and additional videos, are on our website for the earthquake.

Featured Topics Archive

What's New and Interesting

Land Subsidence and Sea-Level Rise in Chesapeake Bay
A new publication written for a general audience explains why the southern Chesapeake Bay region has the

Education Resources

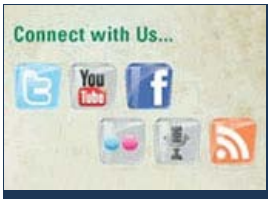
Biology, Geography, Geology, Water, and much more...

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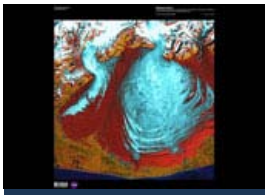

Videos and Animations

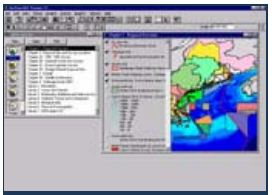

Online Lectures



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highest rates of sea-level rise on the Atlantic Coast.

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Get your toes wet at the USGS by becoming a volunteer. (Volunteer.gov)

Student Jobs
Current student job openings at the USGS. (USAJobs.gov)

Full-Time Jobs
Make USGS your big career move! Search for full-time openings today. (USAJobs.gov)

Mendenhall Postdoctoral Jobs
Looking for a postdoctoral fellowship? Take a look at our postdoctoral research options.

Need some tips on how to interview—what to do and what not to do? (USAJobs.gov)

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Training, Mentoring, Consulting, DOI Learn, Science & Technical, and more.

Organizational Development
Improving the overall organization through strategic planning and teambuilding.

Visit the USGS Human Capital site for more information related to USGS human resources.

Building a Diverse Workforce and Inclusive Work Environment

USGS Non-Discrimination Policy
The U.S. Geological Survey (USGS) is committed to the principles of Equal Employment Opportunity (EEO). All employees, former employees, applicants for employment, and members of the public who seek to participate in USGS programs, activities, and services will not be discriminated against.

USGS Diversity Statement
U.S. Geological Survey (USGS) recognizes its talented and diverse workforce as a key asset. Our success as an agency is a reflection of the quality and skill of our people. The USGS is committed to seeking out and retaining a highly skilled and diverse workforce to ensure we accomplish our mission in the most effective, efficient, and robust way possible.

USGS Anti-Harassment Policy
The U.S. Geological Survey (USGS) is committed to creating and maintaining a work environment where all employees have a fair and equitable opportunity to succeed.

USGS Diversity and Inclusion Plan
Leveraging diversity makes the USGS a more effective organization by helping us attract and retain a highly skilled workforce. The USGS Diversity Statement also recognizes the importance of the "people" aspect of diversity—"All employees bring their own unique capabilities, experiences, and characteristics to their work."

Diversity Council Fact Sheet
The Diversity Council strives to achieve a USGS workforce that reflects the demographics of our Nation, and an environment which is open and accepting of individual differences.

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Science Partnerships and Opportunities

Welcome to the USGS Partnerships Portal of the U.S. Geological Survey, a Federal bureau located within the Department of the Interior. The USGS serves the Nation as an independent fact-finding agency that collects, monitors, analyzes, and provides scientific understanding about natural resource conditions, issues, and problems. The USGS leverages its resources and expertise in partnership with more than 2,000 agencies of State, local and tribal government, the academic community, other Federal allies, non-governmental organizations, and the private sector.

- Biology Partnerships
- Connections: Partnerships in Science
- Contract and Grants Information
- Partnerships - Working Together to Build the National Map
- Domestic Memorandums of Understanding with other Federal Agencies or Entities
- Technology Transfer Information
- USGS Activities Related to American Indians and Alaska Natives

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U.S. Department of the Interior | U.S. Geological Survey
URL: http://www.usgs.gov/aboutusgs/working_with_us/partnerships.asp
Page Contact Information: Ask USGS
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USGS Libraries

Welcome to the largest earth science library in the world! Established in 1879 to build and organize a collection of scientific materials in the earth sciences, the U.S. Geological Survey Library is now the largest library for earth sciences in the world. The Libraries Program includes four central libraries and is part of Core Science Systems within the USGS.

Featured Stories



Research Services at the USGS Denver Library

By Emily C. Wild and Keith J. Van Cleave The U.S. Geological Survey (USGS) was established March 3, 1879, by the Organic Act (20 Stat. 394; 43 U.S.C. 31), which included creation of a USGS Library. In 1946, the USGS ... Continue reading →

New USGS Publications

Genetic variation in bacterial kidney disease (BKD) susceptibility in Lake Michigan Chinook Salmon and its progenitor population from the Puget Sound

Hyperspectral surface materials map of quadrangle 3468, Chak-e Wardak-Siyahgird (509) and Kabul (510) quadrangles, Afghanistan, showing carbonates, phyllosilicates, sulfates, altered minerals, and other materials

Hyperspectral surface materials map of quadrangle 3468, Chak-e Wardak-Siyahgird (509) and Kabul (510) quadrangles, Afghanistan, showing iron-bearing minerals and other materials

Hyperspectral surface materials map of quadrangles 3664 and 3764, Char Shengo (123), Shibirghan (124), Jalajin (117), and Kham-Ab (118) quadrangles, Afghanistan, showing carbonates, phyllosilicates, sulfates, altered minerals, and other materials

Hyperspectral surface materials map of quadrangles 3664 and 3764, Char Shengo (123), Shibirghan (124), Jalajin (117), and Kham-Ab (118) quadrangles, Afghanistan, showing iron-bearing minerals and other materials

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▼ Our History
USGS History
1879 - 1989
Past Directors
Speeches
Museum

About USGS

The USGS is a science organization that provides impartial information on the health of our ecosystems and environment, the natural hazards that threaten us, the natural resources we rely on, the impacts of climate and land-use change, and the core science systems that help us provide timely, relevant, and useable information.

Highlights

- Directory of Key Officials
- Employee Directory
- Professional Pages
- USGS Science Strategy
- Visitors Center
- USGS Museum
- Budget Information
- USGS IT Strategic Plan
- DOI Strategic Plan
- USGS Library
- Customer Listening Sessions

Mission

The USGS serves the Nation by providing reliable scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; manage water, biological, energy, and mineral resources; and enhance and protect our quality of life.

Who We Are

The USGS employs the best and the brightest experts who bring a range of earth and life science disciplines to bear on problems. By integrating our diverse scientific expertise, the USGS is able to understand complex natural science phenomena and provide scientific products that lead to solutions. Every day the 10,000 scientists, technicians, and support staff of the USGS are working for you in more than 400 locations throughout the United States.

What We Do

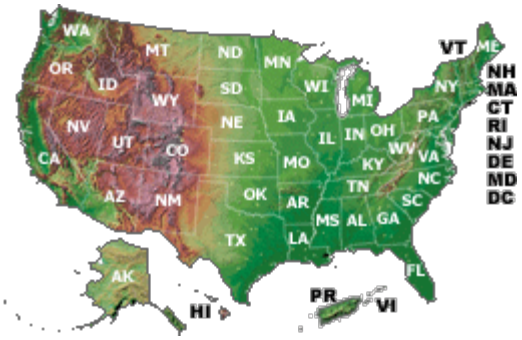
As the Nation's largest water, earth, and biological science and civilian mapping agency, the U.S. Geological Survey (USGS) collects, monitors, analyzes, and provides scientific understanding about natural resource conditions, issues, and problems. The diversity of our scientific expertise enables us to carry out large-scale, multi-disciplinary investigations and provide impartial scientific information to resource managers, planners,



and other customers.

- Our Programs and Science Topics
- Strategic Plan
- Laws, Policies & Guidelines governing USGS activities

How We Are Organized



The USGS is organized with a Headquarters in Reston, Virginia. Thousands of USGS employees are working in every State in the Nation, with Regional Executives located in the Southeast, South Central region, Northeast, Midwest, Rocky Mountains, Northwest, Southwest and Alaska.

The following links provide information about our senior leadership, how we are structured, where we are located, and how to contact USGS employees:

- Acting Director, Suzette Kimball
- Directory of Key Officials
- Organization Chart
- USGS State Offices
- Directory of USGS Employees (Electronic Phonebook)
- Professional Pages

Our Budget and Peformance

Access primary budget documents, information about performance measures, and other various management reports.

Working With Us



There are a variety of ways to interact with the USGS and its science. We invite you to explore the following information about doing business with us, partnering with our science programs, and being part of the USGS workforce.

Business Opportunities: The USGS is interested in forming cooperative partnerships with organizations from all levels of government and industry. The following links provide information about doing business and partnering with USGS.

- Contracts and Grants Information

Science Partnerships and Opportunities: Explore the collaborative work the USGS is doing with other Federal agencies, non-government organizations, State/local and tribal governments and the private sector as well as additional opportunites to partner with us and further our science mission.
Learn more.

Cooperative Agreements: The USGS works with many other Federal agencies and the private sector to accomplish its science mission through formal memorandums of understanding and memorandums of agreement.
Learn more.

International Activities: The USGS carries out international activities as a complement to its domestic programs. Learn more about the scientific and technical assistance being provided in more than 100 countries.
Learn more.

Activities Related to Native Americans: Learn more about the work USGS does in cooperation with American Indian and Alaska Native governments—including research on water and mineral resources; animals and plants important to subsistance the environment, or the economy; natural hazards; and geologic resources.
Learn more.

Employment Opportunities: Your one source for information on job openings, including senior management positions, student employment, Postdoctoral and Upward Mobility Programs, and volunteering.

- Careers
- Volunteer

News & Events

USGS uses a variety of traditional and new media tools, including social media, to share information and help the public understand how science addresses some of our Nation's most pressing issues. We invite you to stay up-to-date with events and news using our Newsroom and various social media tools, and to join our community, tell us what you think, and let us know how we can better serve you!



Our History

The United States Geological Survey was established on March 3, 1879, just a few hours before the mandatory close of the final session of the 45th Congress, when President Rutherford B. Hayes signed the bill appropriating money for sundry civil expenses of the Federal Government for the fiscal year beginning July 1, 1879. Learn more.



Social Media at the USGS

The USGS has several social media presences*. The sites listed below are those that are considered official USGS presences. Any site found that is not listed is considered a non-USGS presence.

- DOI Social Media Policy
- USGS Easy Guidelines for Employee Use of Social Media (March 2013)
- GSA's Social Media Registry

Bureau-Level

USGS	✓	✓	✓	✓	✓	✓	✓	✓
USGS Science In Action Public Flickr Group for anyone to contribute their fantastic photos to related to USGS science.			✓					
USGS News: Everything We've Got This is every single news item we post. If you want it all, here it is. One-way only.	✓	✓					✓	
USGS News: Biology News about ecosystems, plants, animals, and wildlife health. One-way only.	✓	✓					✓	
USGS News: Climate Change News about global warming, carbon storage, and sea level rise. One-way only.	✓	✓					✓	
USGS News: Data, Tools and Technology News about new data sets, websites, hardware and software advancements, etc. One-way only.	✓	✓					✓	
USGS News: Energy News about energy. One-way only.	✓	✓					✓	
USGS News: Environmental Health News about contaminants, and toxics. One-way only.	✓	✓					✓	
USGS News: Mapping News about topographic maps, The National Map, remote sensing, geography, and GIS. One-way only.	✓	✓					✓	
USGS News: Minerals News about minerals. One-way only.	✓	✓					✓	
USGS News: Natural Hazards News about earthquakes, landslides, volcanoes, etc. One-way only.	✓	✓					✓	
USGS News: Planetary Science News about astrogeology, geomagnetism, etc. One-way only.	✓	✓					✓	

USGS News: Water News about floods, droughts, water quality, and oceans. One-way only.				
USGS Live Live-tweeting only				
USGS Store Products created and distributed by USGS Store to promote natural sciences and outdoorsmanship.				
Libraries Provides support for scientific research in earth and natural sciences.				
USGS Ethics				
USGS Podcasts				
Climate Change and Land Use				
Land Cover Institute The USGS Land Cover Institute (LCI) is a focal point for advancing the science, knowledge, and application of land use and land cover information.				
Land Cover Analysis Tool Updates made to the Land Cover Analysis Tool (LCAT) which is used to access the USGS's National Land Cover Database.				
Arctic This feed follows the USGS scientific team on the USCG Healy in the Arctic Ocean from Aug 15 to Sept 28, 2011.				
Ecosystems				
Aquatic Life Explore the science of aquatic life without getting your feet wet. USGS research findings, news, and the general science of life in the nation's waterscapes.				
Nonindigenous Aquatic Species A central repository for spatially referenced biogeographic accounts of introduced aquatic species.				
Wetlands Follow USGS as we explore the science of wetlands: the unsung heroes of the world's ecosystems!				
Wildlife Advancing wildlife and ecosystems health.				
DISCOVRE Researching the biology, ecology, and connectivity of deep-sea coral environments to provide the science necessary for their effective conservation and management.				
Bee Inventory and Monitoring Laboratory Designs and develops large and small scale surveys for native bees. Identifies tools and keys for native bee species.				
Energy and Minerals				

Energy News and information related to energy resources (coal, oil, natural gas, geothermal) and assessments from the USGS		
Minerals Information on mineral resource potential, production, consumption, and the environment.		
Mining USGS mining-related science and activities.		
Environmental Health		
Mercury in the Environment		
Silverlake Nutrient Study Information, news, and observations from the USGS Silver Lake nutrient study.		
Maps, Products, and Services		
The National Map News and information related to The National Map, the National Geospatial Program and general geospatial issues.		
The National Map Research Project A research project about the usability of geographic information in support of USGS's The National Map		
National Hydrography Dataset The National Hydrography Dataset (NHD) is the surface water component of The National Map.		
National Atlas Delivers products and services that make it easier to find, get, and use authoritative maps, geographic information, and data about America.		
Landsat The Landsat operational mission, future missions, and the Landsat Science Team are co-managed by USGS and NASA.		
Publications The Publications Warehouse provides access to recent and historic publications written by USGS scientists.		
Hydrologic Instrumentation Services Providing hydrologic instrumentation support to the USGS.		
Hydrologic Instrumentation Services — Local Internal HIF account for communication among HIF Employees Only.		
Natural Hazards		
Big Quakes USGS earthquake alerts for M 5.5 and higher.		
Tweet Earthquake Dispatch USGS Twitter Earthquake Dispatch (TED): Distributes notifications for earthquakes worldwide with magnitudes of 5.5 and above.		

Coastal and Marine Geology				
Hazards Data Distribution Hazards Data Distribution System (HDDS) provides access to aerial and satellite imagery for emergency response.				
Scientific Advancement				
Powell Center The Powell Center supports collaborative research to explore complex earth system and natural resource questions.				
ScienceBase An open-source project creating data and information cataloging capabilities for scientists.				
Geo Data Portal Product updates related to the Geo Data Portal data mapping application.				
Location-Specific				
California				
Colorado USGS sciences related events happening in Colorado. A forum for sharing outdoor experiences in Colorado and learning about our world!				
Idaho				
Illinois				
Indiana				
Iowa				
Kentucky				
Maine				
Minnesota				
Montana				
Nevada				
Oregon				

Nebraska			
North Carolina			
North Dakota			
South Carolina			
Washington			
Wyoming			
Event-Specific			
9th Annual National Monitoring Conference			

* This page uses various logos from the social media services that USGS delivers content through. The use of the USGS's efforts are not endorsed or certified by the various services or their parent companies. All logos and trademarks displayed on this page are property of their respective companies. The services used are not endorsed by the U.S. Geological Survey or any other Federal Government agency.
* DOI and USGS link policies apply.



RSS and Data Feeds

The USGS provides a variety of RSS, CAP, MediaRSS, KMZ, and other feeds and data content.

Newsroom	
News Releases (full story)	
News Releases (summary only)	
State Releases	Get local news
Technical Announcements	
Frequently Asked Questions	
Latest FAQs	
Multimedia Gallery	
Latest 50 Photography and Images	
Latest 50 Videos and Animations	
Latest 50 Audio and Podcasts	
Earthquakes	
Hazards Data Distribution System (HDDS)	
Remote Sensing	
Remote Sensing news items	

Featured Image gallery	
Landsat	
Latest Headline	
Recent Imagery	
Landsat Imagery (GeoRSS) - Recent Terrain-Corrected Images	
Landsat 7 Scences (GeoRSS) - Newest available Landsat 7 scenes	
Landslides	
Landslides	
Mineral Resources	
Minerals Periodicals	
National Cooperative Geologic Mapping Program (NCGMP)	
Latest Program News	
National Wildlife Health Center (NWHC)	
Avian Influenza Updates	
Publications Warehouse	
Latest publications (last 7 days)	
Volcano Hazards Program	
Last 7 days—Volcano Updates (includes Mariana Islands)	
Water Related	
Groundwater Software Updates	
Project Alerts — USGS field activities in response to floods, droughts, chemical spills, and hurricanes.	

View USGS catalogs on Data.gov DATA.GOV

	Latest Earthquakes: Feeds & Data Include items such as: Google Earth KML, RSS, CSV, Cube catalogs, ShakeMaps, 1906 virtual tour, weekly seismic reports, and much more.
	WaterWatch Site includes Google Earth (KMZ), real-time streamflow, and regional streamflow data all in KML format.

How do we make smart decisions about a changing world?

Start with Science



There are 7 billion people on Earth, and that number is increasing every day — human influence on our planet is ever more apparent. Changes to the natural world combined with growing human demands threaten our health and safety, our national security, our economy, and our quality of life.

Thank you to those that participated in helping us shape the future of USGS science!

Click on the mission areas to the right to read the strategies

The USGS is focused on some of the most significant issues society faces, in which natural science can make a substantial contribution to the well-being of the Nation and the world. The USGS Science Strategy outlines the major societal issues that USGS science is poised to address. We've also created specific strategies for each of those areas to expand and advance the actions we can take in the next decade. ***Thank you to all who offered input!*** SHARE

- Core Science Systems
- Climate and Land Use Change
- Energy and Minerals
- Environmental Health
- Ecosystems
- Natural Hazards
- Water

Learn more about what we are doing.

The Science Strategy Planning Process | Our Science Strategy | Our Mission Areas

In 2010, the USGS aligned itself with the broad science themes outlined in our 10-year Bureau-level Science Strategy. ***Teams of USGS scientists*** also led the creation of 10-year science strategies for each of the USGS Mission Areas:

- Climate and Land Use Change
- Core Science Systems
- Ecosystems
- Energy and Minerals
- Environmental Health

Send other questions, comments, or ideas to sciencestrategy@usgs.gov .

- Natural Hazards
- Water

USGS employees, external partners and stakeholders, Indian Tribes, and the public are being asked to weigh in on these strategies and major questions informing their creation.

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Climate and Land Use Change

The USGS undertakes scientific research, monitoring, remote sensing, modeling, synthesis, and forecasting to address the effects of climate and land use change on the Nation's resources. The resulting research and products are provided as the scientific foundation upon which policymakers, natural resource managers, and the public make informed decisions about the management of natural resources on which they and others depend.

Climate and Land Use Change Programs

Land Change Science (LCS)



The goal of the USGS Land Change Science (LCS) Program, formerly Geographic Analysis and Monitoring, is to understand the patterns, processes, and consequences of changes in land use, land condition, and land cover at multiple spatial and temporal scales, resulting from the interactions between human activities and natural systems.

Land Remote Sensing (LRS)



The Land Remote Sensing Program operates the Landsat satellites and provides the Nation's portal to the largest archive of remotely sensed land data in the world, supplying access to current and historical images. These images serve many purposes from assessing the impact of natural disasters to monitoring global agricultural production.

National Climate Change and Wildlife Science Center (NCCWSC)



The National Climate Change and Wildlife Science Center responds to the research and management needs of partners and provides science and technical support regarding the impacts of climate change on fish, wildlife and ecological process. The Center is taking the lead on establishing the Department of the Interior regional Climate Science Centers.

Research and Development Program (R&D)



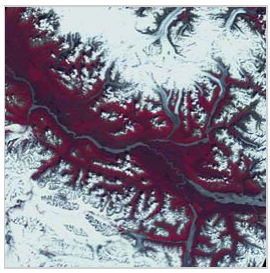
The USGS Climate and Land Use Change Research and Development Program supports fundamental scientific research to: 1) understand processes controlling Earth system responses to global change over broad temporal and spatial scales; and 2) understand and model impacts of climate and land-cover change on ecosystems and other natural resources.

Carbon Sequestration



Scientists at the U.S. Geological Survey (USGS) are working to assess both the potential capacities and the potential limitations of the various forms of carbon sequestration and to evaluate their geologic, hydrologic, and ecological consequences. In accordance with the Energy Independence and Security Act of 2007, the USGS has developed scientifically based methods for assessment of biologic and geologic carbon sequestration.

Earth Resources Observation and Science Center (EROS)



The USGS Earth Resources Observation and Science Center (EROS) contributes to the Climate and Land Use Change Mission Area through research and operational activities that enable the understanding of local to global land change. The EROS multidisciplinary staff uses their unique expertise in remote sensing-based science and technologies to carry out basic and applied research, data acquisition, systems engineering, information access and management, and archive preservation to address the Nation's most critical needs.

Start with Science

- Climate and Land Use Change
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Core Science Systems

Data about Earth and its resources are only useful if available in a format that is understandable and accessible. The U.S. Geological Survey (USGS) provides the Nation with ready access to natural science information that supports smart decisions about how to respond to natural risks and manage natural resources. Core Science Systems includes the following programs: Core Science Analytics and Synthesis, National Geospatial Program, Libraries, National Cooperative Geologic Mapping Program, and National Geological and Geophysical Data Preservation Program.

- Mission Overview (Fact Sheet 2012-3009)
- CSS Access Newsletter

- USGS Core Science Systems Strategy—Characterizing, Synthesizing, and Understanding the Critical Zone through a Modular Science Framework

Core Science Systems

Core Science Analytics and Synthesis



With expertise in technology, informatics, and science, CSAS leads the management and delivery of scientific data and information for the USGS. CSAS implements and promotes standards and best practices to enable efficient, data-driven science for decision making at multiple scales. Critical relationships are established and fostered to identify and access data, and to develop and deploy appropriate technological solutions that support rapid response to emerging natural resource issues. CSAS facilitates the USGS Community for Data Integration (CDI) and supports the John Wesley Powell Center for Analysis and Synthesis, which allows USGS researchers and their colleagues to address complex earth system and natural resource questions in intensive, short-term research focus groups.

National Geospatial Program



The National Geospatial Program (NGP) organizes, maintains, and publishes the geospatial baseline of the Nation's topography, natural landscape, and built environment. The baseline is *The National Map*, a set of databases of map data and information from which customers can download data and derived map products and use web-based map services. Through the Geospatial Liaison Network, the NGP works with cooperators to share the costs of acquiring and maintaining these geospatial data. *The National Atlas of the United States of America®*, the small-scale component of *The National Map*, fosters an understanding of broad geographic patterns, trends, and conditions useful for national assessments. The Federal Geographic Data Committee promotes consistent data and metadata standards, system

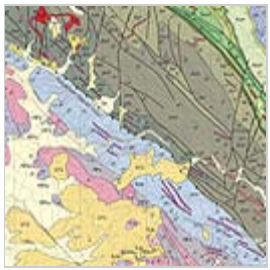
interoperability, and cross-government best business practices for geospatial resources, policies, standards, and technology as part of the National Spatial Data Infrastructure.

Libraries



The USGS Library program supports all of the fundamental scientific research conducted within the USGS. The library serves both internal and external users with comprehensive access to the literature, data, and information necessary to understand the mission areas of the USGS and make critical decisions about how to proceed with research initiatives and investigations in the earth and natural sciences.

National Cooperative Geologic Mapping Program



The National Cooperative Geologic Mapping Program (NCGMP) produces accurate geologic maps and 3-D geologic frameworks that provide critical data for sustaining and improving the quality of life and economic vitality of the Nation. Geologic maps are indispensable to understanding earth surface processes and ground-water availability and quality, supporting DOI land management decisions, mitigating hazards, assisting in ecological and climatic monitoring and modeling, and understanding onshore-offshore sediment processes. NCGMP is unique in the Federal Government as it supports the production of most geologic maps in the United States through a successful Federal-State-university partnership.

National Geological and Geophysical Data Preservation Program



The Energy Policy Act of 2005 (Public Law 109-58, Sec. 351) established the National Geological and Geophysical Data Preservation Program in the USGS and outlined the following goals:

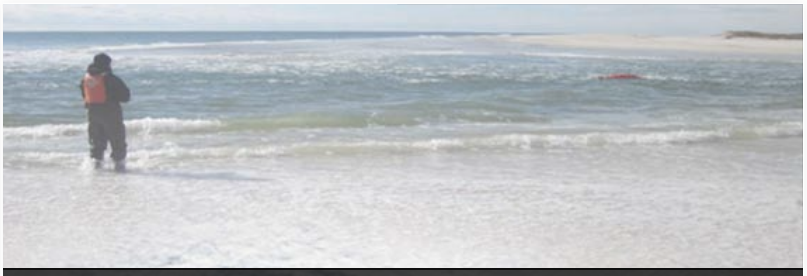
- Archive geological, geophysical, and engineering data, maps, well logs, and samples
- Provide a national catalog of archived materials
- Provide technical and financial assistance to State geological

surveys and relevant Department of the Interior bureaus for archived materials

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Ecosystems Mission Area



Meeting the Science Needs of the Nation in the Wake of Hurricane Sandy

Ecosystems Science

Invasive Species Program



Provides methodologies and information to reduce threats from invasive species.

Cooperative Research Units

Supports natural resource management decisions through research, education and technical assistance.

Fisheries Program



Supports management, conservation, and restoration of the Nation's fish and aquatic resources.

Environments Program



Conducts ecosystem science and develops models for restoration and adaptive management.

Priority Ecosystem Science

Status & Trends Program



Monitors the Nation's living resources and their habitats.

Wildlife Program



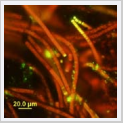
Conducts research on wildlife and their habitats.

Genetics & Genomics



Applies genetics and genomics to answer questions of endangered species, wildlife populations, captive breeding and reintroductions, sources of nonnative species introductions and hybridization and functional genomics.

Microbiology



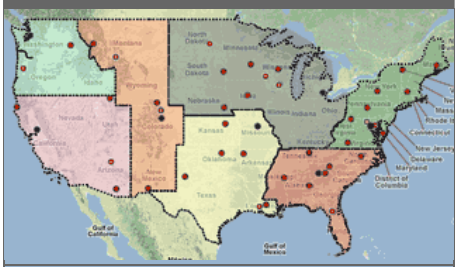
Research in fish and wildlife health and disease, geomicrobiology, ecosystem function, climate change, water quality for drinking and in recreation, bioremediation, nanotechnology, energy and geographic patterns of microbial distribution.

International

Facilitates synergistic

USA National Phenology Network

Browse by Location



Science Feature: When Floods Hit, the USGS is There



Photo: USGS crews install a rapid deployment streamgage on the Boise River near Parma, Idaho, in 2012. Credit: Tim Merrick, USGS.

As soon as water starts to rise, specially trained USGS scientists and hydrologic technicians measure water levels, streamflows, and high water marks using state-of-the-art instrumentation. All of this information is crucial for National Weather Service (NWS) flood forecasts, for decisions by the U.S. Army Corps of Engineers (USACE) to operate spillways and levees, and for the planning of Federal, state, and local emergency managers, first responders, and many other groups.

More...

News & Highlights

New Permafrost But is it Permanent?

President's 2015 Budget Proposes $1.1 Billion for the USGS

Burmese Pythons Pose Little Risk to People in Everglades

Female Coyotes Can Have Mixed Wolf-Coyote Pups

More...

Products & Resources

- SAGEMAP
- Raptor Information System (RIS)
- Integrated Taxonomic Information System
- Fisheries and Aquatic Resources Data Access Wizard

More...

What We Do

The USGS Ecosystem Mission Area serves our Department of the Interior partners and other resource managers by conducting research and monitoring to understand freshwater, terrestrial and marine ecosystems and the fish and wildlife within them. More...



international collaboration because ecoregions and species span and cross boundaries.



Organizes and centralizes monitoring and scientific information to document changing seasonal patterns.

Science and Decisions Center



An interdisciplinary organization advancing the use of science in natural resource decision making. SDC focuses on research and applications in three science areas: decision science (adaptive management and structured decision making), ecosystem services, and resilience/sustainability.

Energy and Wildlife



USGS science can help allow for renewable energy growth while lessening conflicts between renewable energy, ecosystems and wildlife.

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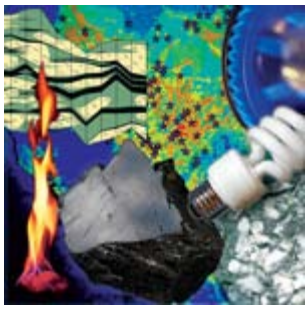
Energy and Minerals

The Energy and Minerals Mission Area conducts research and assessments on the location, quantity, and quality of mineral and energy resources, including the economic and environmental effects of resource extraction and use.

Find out how we make smart decisions about a changing world in the "U.S. Geological Survey Energy and Minerals Science Strategy—A Resource Lifecycle Approach".

Energy and Minerals Programs

Energy Resources



The mission of the USGS Energy Resources Program is to understand the processes critical to the formation, accumulation, occurrence, and alteration of geologically based energy resources; to conduct scientifically robust assessments of those resources; and to study the impact of energy resource occurrence and/or production and use on both environmental and human health.

Mineral Resources



The USGS Mineral Resources Program (MRP) provides scientific information for objective resource assessments and unbiased research results on mineral potential, production, consumption, and environmental effects. The MRP is the sole Federal source for this information.

USGS Science and Decisions Center



The Science and Decisions Center is a multidisciplinary and open architecture focal point for advancing science-based resource management decisions through the use of USGS

National Laboratories



The USGS maintains a variety of high quality, state-of-the-art scientific facilities that provide analytical capabilities, scientific support functions, experimental and modeling expertise, and field capabilities.

	scientific information and tools such as ecosystem services, adaptive management, and resilience.	Two of these facilities along with scientific staff are housed in Denver, Colorado at the Federal Center and at Stanford University near the Menlo Park USGS campus. Detailed information on these facilities is available at: **SHRIMP-RG** (Sensitive High-Resolution Ion Microprobe with Reverse Geometry) **TRIGA** (reactor facility)

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Environmental Health

U.S. Geological Survey environmental health science focuses on the interface between health and the environment, where interactions among people, the environment, and other living organisms affect the risk of toxicologic and infectious disease.

Headlines



Pesticides Common in California Estuary

More ...

Environmental Health Programs

Contaminant Biology



The USGS Contaminant Biology Program investigates the effects and exposure of environmental contaminants to the Nation's living resources, particularly those under the stewardship of the Department of the Interior.

Toxic Substances Hydrology



The USGS Toxic Substances Hydrology Program provides objective scientific information on environmental contamination to improve characterization and management of contaminated sites, to protect human and

Environmental Health Information

USGS Environmental Health Science Strategy



U.S. Geological Survey Environmental Health Science Strategy--Providing Environmental Health Science for a Changing World

Environmental Health Science at the U.S. Geological Survey

The USGS Environmental Health Newsletter



USGS Human Health Related Activities



environmental health, and to reduce potential future contamination problems.





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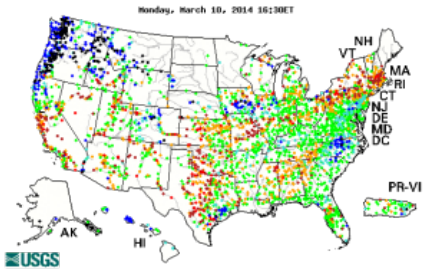
Water Resources of the United States

Water is one of six science mission areas of the U.S. Geological Survey (USGS). Water's mission is to collect and disseminate reliable, impartial, and timely information that is needed to understand the Nation's water resources.



Water Data for the Nation

Current streamflow conditions



Use a form: Select a State...

Use a map: Select a State...

Real-time, recent, and past water data for the United States

WaterWatch: Surface Water | Groundwater | Water Quality

Discover more USGS water data.

Have USGS send water data to you

- WaterAlert automatic alerts
- WaterNow water data query

Automated data access (Web services)

- Water Data Web services
- GIS: National Hydrography Dataset



Science to observe, analyze, and understand the movement and condition of surface water.

- USGS Surface Water Information
- USGS Flood Information
- Flood inundation mapping
- Estimating streamflow statistics
- Suspended sediment
- Watershed modeling



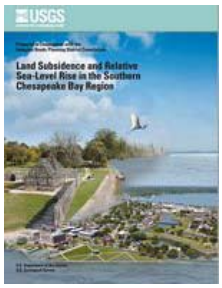
Science to discover and describe the location, condition, and behavior of water in the ground.

- USGS Groundwater information
- What is groundwater?
- Groundwater and drought
- How do I find USGS groundwater information?
- Selected USGS groundwater publications

Search USGS Water
Search

In the News
- President's 2015 Budget Proposes $1.1 Billion for the USGS
- The National Map and the National Atlas Merge
- Linking U.S. and Canadian Border Waters
- Drought Affects Streamflow Across California
- Growing Science in Agricultural Wetlands

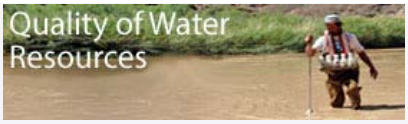
New Publications
1 2 3 4 5



Circular 1392

Land Subsidence and Relative Sea-Level Rise in the Southern Chesapeake Bay Region

Learn About Water
- USGS Water Science School
- USGS water education
- Water education posters
- Photos, videos, and podcasts
- Water-resources glossaries



Science to monitor and evaluate biological, chemical, and environmental factors affecting water quality.

- USGS Water Quality information
- What is water quality?
- Popular water-quality topics and issues
- Selected water-quality publications



Information about how water is used now and in the past.

- National Water Use home page
- 2005 National water-use publication
- Download water-use data
- Publications
- Water-Science School: Water use

Start with Science

- Climate and Land Use Change
- Core Science Systems
- Ecosystems
- Energy and Minerals
- Environmental Health
- Natural Hazards
- Science Quality and Integrity
- Water

Our Contacts

Office of Science Quality and Integrity

The Office of Science Quality and Integrity monitors and enhances the integrity, quality, and health of USGS science. The office is subdivided into six components: 1. Education and Development, 2. The Office of Tribal Relations, 3. Evaluation, Review, and Recognition, 4. Fundamental Science Practices, 5. Youth Program and 6. Ethics.

Announcements:

- 2013 version of the Ethics Guide for DOI Employees can be downloaded at http://www.usgs.gov/quality_integrity/downloads/Ethics Guide for DOI Employees (2013).docx.
- Archive

Office of Science Quality and Integrity

Education and Development



This unit is devoted to strengthening the earth- and biological-science communities through educational outreach, internships, postdoctoral fellowships, scientist emeritus, and youth programs.

- Education
- Mendenhall Research Fellowship (Postdoctoral) Program
- Scientist Emeritus
- Student employment

Evaluation, Review, and Recognition



This unit administers the evaluation processes for USGS research, development, and senior scientists. It provides monitoring and oversight of internal and external review of USGS science programs. This unit also supports administration of USGS quality and honor award programs, as well as participation in external award programs.

The Office of Tribal Relations

Fundamental Science Practices (FSP)



This unit facilitates USGS activities with Native American governments, organizations, and people. The USGS recognizes the importance of Native sciences knowledge and living in harmony with nature as complements to the USGS mission to better understand the Earth. The bureau provides information to tribes as part of our basic mission to provide unbiased scientific information to the Nation, and as part of the Federal Trust Responsibility to tribes.

- U.S. Geological Survey Native American Tribal Liaison Team



This unit houses USGS scientific integrity activities. FSP clarifies how USGS science is carried out and how the resulting information products are developed, reviewed, approved, and released. FSP oversees the USGS Peer Review Process; implementation of publication, data, laboratory policy and practices; and allegations of scientific misconduct.

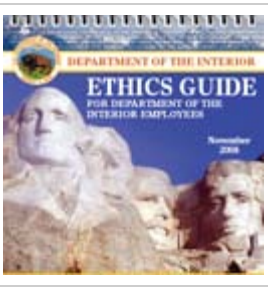
- Fundamental Science Practices (FSP)
  - U.S. Geological Survey Fundamental Science Practices, Circular 1367 (http://pubs.usgs.gov/circ/1367/)
- U.S. Geological Survey Information Quality Guidelines
- Information Quality - Peer Review Agenda
- USGS policy on scientific integrity
  - Allegations of scientific misconduct may be submitted following the guidelines in the USGS policy on scientific integrity using the following e-mail address: gs_science_integrity@usgs.gov
- Department of the Interior policy on integrity of scientific and scholarly activities (http://elips.doi.gov/app_dm/act_getfiles.cfm?relnum=3889)
- Bureau Approving Officials (BAOs) for USGS Information Products

USGS Youth Program



The U.S. Geological Survey (USGS) has a proud history of mentoring and engaging the youth of our country. The USGS provides a broad array of research and learning experiences to young people in the geosciences, aimed at inspiring them to pursue a scientific career and increase science literacy. we have expanded our Youth programs and made exciting progress in engaging youth in science, technology,

Ethics Office



The U.S. Geological Survey (USGS) has a historical commitment to provide the Nation with impartial, objective earth and natural science information. A tradition of responsible, ethical conduct underlies all USGS activities. Continuing this tradition is of paramount importance to the continued relevance of the USGS and to maintaining our long, honored reputation. All USGS employees and volunteers are expected to maintain high standards of honesty, integrity, impartiality, and conduct to ensure the proper performance of USGS business and to enhance the trust and confidence of citizens in their Government. USGS employees and volunteers are expected to comply with all Federal statutes, regulations, Executive Orders, and Departmental and Survey Manual chapters.

- Ethics Guide for DOI Employees (2013)

engineering, and mathematics (STEM) activities and the natural resources.

[.docx, 100 KB]
- USGS Ethics Office contact and specialization chart (Nov 2010) [.doc, 14 KB]
- Financial Guide for USGS Employees #34 (Dec 01, 2013)[.doc, 157 KB]

2013 Annual Ethics Training

2013 USGS Annual Ethics Training [.pptx, 196 KB]

This presentation references the criminal ethics statutes, the Standards of Ethical Conduct for Employees of the Executive Branch, DOI-specific supplemental ethics regulations, the 14 general principles of ethical conduct, and provides contact information for the USGS Ethics Office. It also contains information on the requirement to obtain an authorization of assignment to serve as an officer, board member or similar position of a professional scientific organization in official USGS capacity, acceptance of travel expenses from non-Federal sources, contributions of travel expenses to conduct field work or research, gifts from outside sources and between employees, the requirement to obtain Ethics Office approval to engage in outside work or activities (paid or unpaid) that are related to USGS job duties or the mission of the USGS, selling and soliciting on Government owned or leased property, restrictions on natural gas leases, and seeking employment/post-Government employment restrictions.

2012 Annual Ethics Training

2012 USGS Annual Ethics Training [.doc, 119 KB]

In accordance with Office of Government Ethics (OGE) regulations, all annual ethics training must include the 14 Principles of Ethical Conduct; the Standards of Ethical Conduct for Employees of the Executive Branch (5 C.F.R. 2635); criminal ethics statutes (18 U.S. Code §§ 201, 203, 205, 207, 208, 209, and 1913); agency-specific supplemental regulations; and contact information for the Ethics Office. It also addresses the requirement to obtain a 18 U.S.C. § 208(b)(1) conflict of interest waiver to serve as an officer or member of the board of directors of a professional scientific organization in official USGS capacity; the Financial Guide for USGS Employees # 33; Guidance from the Ethics Office and the Congressional Affairs Office on the Anti-Lobbying Statute; Federal Acquisition Regulation (FAR) 3.101-1; restrictions on endorsements and selling and soliciting on DOI-owned or -leased property; as well as important "seeking employment" and post-Government employment restrictions.

2011 Annual Ethics Training

2011 USGS Annual Ethics Training [.pdf, 121 KB]

This document discusses the 14 Principles of Ethical Conduct; the Standards of Ethical Conduct for Employees of the Executive Branch; criminal ethics statutes; agency-specific supplemental regulations; and provides contact information for the Ethics Office. It also contains the "Hatch Act Restrictions on Political Activity by USGS Employees," USGS Ethics Office Memorandum (August 12, 2011), "Restrictions on Holding Oil, Gas and Mineral Leases and Receipt of Royalties," USGS Ethics Office Memorandum (September 1, 2011), the Employee Financial Interests Certification Form 9-1909, and a link to the most recent Financial Guide for USGS Employees, Version #32 (December 1, 2011). Additionally, it provides information on a change in interpretation of sector mutual fund investment restrictions; reports of acceptance of travel expenses from non-Federal entities; outside work and activities; procurement integrity; and scientific integrity.

2010 Annual Ethics Training

2010 USGS annual ethics training (Nov 2010) [ppt, 921 KB]

This training contains an overview of the Federal criminal ethics statutes (18 U.S.C. §§ 201 to 209), the Standards of Ethical Conduct for Employees of the Executive Branch (5 C.F.R. 2635), the 14 Principles of Ethical Conduct, and DOI supplemental ethics regulations (5 C.F.R. 3501). Information is also provided on how to access ethics resources — the USGS Ethics Office webpage, the Financial Guide for USGS Employees, the Departmental Ethics Office website, and the Office of Government Ethics (OGE) website and the Ethics Guide for DOI Employees. Annual ethics training is required for all financial disclosure report filers and encouraged for all USGS employees.

- Seeking Employment and Post-Government Employment Restrictions [.docx, 21 KB]
- Ethics Approval of Outside Work or Activities [.docx, 16 KB]
- Acceptance of Travel Expenses from Non-Federal entities [.docx, 14 KB]
- USGS Gift Acceptance Authority [.docx, 15 KB]

Formats
ATOM
GeoJSON Summary
GeoJSON Detail
KML
Spreadsheets
QuakeML
Web Service
API Documentation
Search Earthquake Archives
Glossary
Change Log
Feed Life Cycle Policy

Real-time Feeds & Notifications



Tweet Earthquake Dispatch

Tweet Earthquake Dispatch (TED) offers two Twitter accounts. On average, each account will produce about one tweet per day.



Earthquake Notification Service

The Earthquake Notification Service (ENS) is a free service that sends you automated notifications to your email or cell phone when earthquakes happen.



Atom Syndication

A basic syndication format supported by a variety of feed readers. This is a good option for casually subscribing to earthquake information.



Google Earth KML

This feed format is suitable for loading into applications that understand Keyhole Markup Language (KML) such as Google Earth™.



Spreadsheet Applications

A simple text format suitable for loading data into spreadsheet applications like Microsoft Excel™. This is a good option for manual scientific analysis.



Programmatic Access

A well-structured format readily parsed by most programming languages. This is a good option for software developers wishing to use earthquake data.



QuakeML

A flexible, extensible and modular XML representation of seismological data which is intended to cover a broad range of fields of application in modern seismology.

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Found 35 matching results Events - Last 24 Hours

MMI	Mag	Location	Event Time	Event ID	Response
I	5.9	EASTERN NEW GUINEA REG, PAPUA NEW GUINEA 5.49°S 147.94°E 267Km Deep	2014-03-10 17:33:29 UTC 2014-03-11 03:33:29 LOCAL	USC000N6PX	0
I	5.2	KEPULAUAN BABAR, INDONESIA 7.05°S 129.89°E 120Km Deep	2014-03-10 17:31:31 UTC 2014-03-11 02:31:31 LOCAL	USC000N6PI	0
I	3.6	ALASKA PENINSULA 56.55°N -156.43°W 58Km Deep	2014-03-10 17:04:46 UTC 2014-03-10 09:04:46 LOCAL	AK11182359	0
III	1.9	CENTRAL CALIFORNIA 36.19°N -120.76°W 7Km Deep	2014-03-10 16:13:55 UTC 2014-03-10 09:13:55 LOCAL	NC72182491	1
I	3.6	DOMINICAN REPUBLIC REGION 19.61°N -67.90°W 10Km Deep	2014-03-10 15:47:13 UTC 2014-03-10 11:47:13 LOCAL	PR14069001	0
V	2.6	OHIO 41.01°N -80.53°W 5Km Deep	2014-03-10 15:44:06 UTC 2014-03-10 11:44:06 LOCAL	LD60065316	10
III	3.6	OFFSHORE NORTHERN CALIFORNIA 40.46°N -125.01°W 22Km Deep	2014-03-10 15:16:29 UTC 2014-03-10 08:16:29 LOCAL	NC72182456	4
III	2.2	OHIO 41.01°N -80.53°W 5Km Deep	2014-03-10 15:03:47 UTC 2014-03-10 11:03:47 LOCAL	LD60034408	1
III	3.0	OKLAHOMA 36.13°N -96.91°W 5Km Deep	2014-03-10 14:47:45 UTC 2014-03-10 09:47:45 LOCAL	USC000N6G1	3
I	2.9	CENTRAL ALASKA 63.12°N -150.39°W 100Km Deep	2014-03-10 14:43:20 UTC 2014-03-10 06:43:20 LOCAL	AK11182007	0
III	3.0	OFFSHORE NORTHERN CALIFORNIA 40.59°N -125.05°W 1Km Deep	2014-03-10 14:42:56 UTC 2014-03-10 07:42:56 LOCAL	NC72182421	2
I	4.8	KAMCHATKA PENINSULA, RUSSIA 52.27°N 157.47°E 136Km Deep	2014-03-10 14:32:51 UTC 2014-03-11 02:32:51 LOCAL	USC000N6DP	0
I	2.5	ISLAND OF HAWAII, HAWAII 19.07°N -155.38°W 35Km Deep	2014-03-10 14:15:28 UTC 2014-03-10 04:15:28 LOCAL	HV60652946	0
I	4.8	RYUKYU ISLANDS, JAPAN 29.25°N 130.41°E 38Km Deep	2014-03-10 14:13:27 UTC 2014-03-10 23:13:27 LOCAL	USC000N6E2	0
III	3.3	OKLAHOMA 36.13°N -96.92°W 5Km Deep	2014-03-10 14:11:20 UTC 2014-03-10 09:11:20 LOCAL	USC000N6D7	65
I	2.6	NEVADA 38.03°N -118.01°W 15Km Deep	2014-03-10 14:07:20 UTC 2014-03-10 07:07:20 LOCAL	NN00440643	0
II	3.3	OFFSHORE NORTHERN CALIFORNIA	2014-03-10 13:58:39 UTC	NC72182391	1

		40.65°N -125.29°W 5Km Deep	2014-03-10 06:58:39 LOCAL		
I	4.6	NORTHERN COLOMBIA 6.52°N -71.66°W 43Km Deep	2014-03-10 13:51:04 UTC 2014-03-10 08:51:04 LOCAL	USC000N6CV	0
I	4.9	SOUTH OF THE FIJI ISLANDS 22.31°S -178.21°W 330Km Deep	2014-03-10 13:47:22 UTC 2014-03-11 01:47:22 LOCAL	USC000N6CU	0
I	5.1	VANUATU 14.45°S 167.38°E 202Km Deep	2014-03-10 13:28:22 UTC 2014-03-11 00:28:22 LOCAL	USC000N6CJ	0
I	4.8	FIJI REGION 20.14°S -178.51°W 575Km Deep	2014-03-10 13:25:24 UTC 2014-03-11 01:25:24 LOCAL	USC000N6CH	0
IV	4.5	OFFSHORE NORTHERN CALIFORNIA 40.76°N -125.24°W 5Km Deep	2014-03-10 10:28:16 UTC 2014-03-10 03:28:16 LOCAL	NC72182306	15
II	3.6	OFFSHORE NORTHERN CALIFORNIA 40.84°N -125.25°W 2Km Deep	2014-03-10 09:54:22 UTC 2014-03-10 02:54:22 LOCAL	NC72182276	3
III	2.6	NORTHERN CALIFORNIA 40.33°N -124.18°W 4Km Deep	2014-03-10 07:15:48 UTC 2014-03-10 00:15:48 LOCAL	NC72182176	4
III	3.0	OHIO 41.01°N -80.54°W 2Km Deep	2014-03-10 06:26:45 UTC 2014-03-10 02:26:45 LOCAL	LD60034308	38
IV	4.6	OFFSHORE NORTHERN CALIFORNIA 40.60°N -125.17°W 2Km Deep	2014-03-10 05:51:11 UTC 2014-03-09 22:51:11 LOCAL	NC72182106	21
II	3.4	OFFSHORE NORTHERN CALIFORNIA 40.38°N -124.44°W 27Km Deep	2014-03-10 05:32:25 UTC 2014-03-09 22:32:25 LOCAL	NC72182081	2
III	3.7	SOUTHERN CALIFORNIA 34.90°N -118.48°W 30Km Deep	2014-03-10 05:20:04 UTC 2014-03-09 22:20:04 LOCAL	CI15474513	4
VI	6.8	OFFSHORE NORTHERN CALIFORNIA 40.83°N -125.13°W 16Km Deep	2014-03-10 05:18:13 UTC 2014-03-09 22:18:13 LOCAL	NC72182046	4314
II	3.3	OFFSHORE NORTHERN CALIFORNIA 40.84°N -125.19°W 5Km Deep	2014-03-10 05:04:09 UTC 2014-03-09 22:04:09 LOCAL	NC72182031	2
III	1.9	GREATER LOS ANGELES AREA, CALIFORNIA 34.45°N -118.58°W 0Km Deep	2014-03-10 01:58:11 UTC 2014-03-09 18:58:11 LOCAL	CI15474417	8
VI	5.8	OFFSHORE OAXACA, MEXICO 16.08°N -98.27°W 10Km Deep	2014-03-10 00:38:15 UTC 2014-03-09 18:38:15 LOCAL	USC000N65Q	12
II	2.2	SOUTHERN CALIFORNIA 35.53°N -117.50°W 8Km Deep	2014-03-10 00:36:14 UTC 2014-03-09 17:36:14 LOCAL	CI15474369	2
III	2.0	NEVADA 37.88°N -118.23°W 6Km Deep	2014-03-09 22:34:02 UTC 2014-03-09 15:34:02 LOCAL	NN00440609	3
III	2.9	OKLAHOMA 35.87°N -97.30°W 5Km Deep	2014-03-09 21:40:26 UTC 2014-03-09 16:40:26 LOCAL	USC000N63M	5

Found 39 matching results Felt Events - Last 7 Days

MMI	Mag	Location	Event Time	Event ID	Response
III	3.6	ISLAND OF HAWAII, HAWAII 19.39°N -155.25°W 2Km Deep	2014-03-09 20:44:07 UTC 2014-03-09 10:44:07 LOCAL	HV60652561	11
V	3.1	OKLAHOMA 35.46°N -97.24°W 5Km Deep	2014-03-09 17:05:54 UTC 2014-03-09 12:05:54 LOCAL	USC000N5ZH	35
III	3.7	SOUTHERN ALASKA 61.05°N -150.73°W 64Km Deep	2014-03-09 16:11:23 UTC 2014-03-09 08:11:23 LOCAL	AK11180235	28
III	5.3	JAVA, INDONESIA 8.89°S 113.08°E 81Km Deep	2014-03-09 13:42:19 UTC 2014-03-09 20:42:19 LOCAL	USC000N5WC	26
IV	4.7	CUBA REGION 23.18°N -80.75°W 9Km Deep	2014-03-09 11:26:17 UTC 2014-03-09 06:26:17 LOCAL	USC000N5V0	115
IV	2.5	OKLAHOMA 35.48°N -97.22°W 5Km Deep	2014-03-09 10:15:06 UTC 2014-03-09 05:15:06 LOCAL	USC000N5UM	5
III	3.0	NORTHERN CALIFORNIA 38.81°N -122.80°W 3Km Deep	2014-03-09 04:25:40 UTC 2014-03-08 20:25:40 LOCAL	NC72181351	6
V	2.7	OKLAHOMA 35.50°N -97.27°W 4Km Deep	2014-03-09 01:50:46 UTC 2014-03-08 19:50:46 LOCAL	USC000N5Q0	26
IV	2.9	OKLAHOMA 35.49°N -97.24°W 5Km Deep	2014-03-09 00:05:23 UTC 2014-03-08 18:05:23 LOCAL	USC000N5MX	30
V	3.2	OKLAHOMA 35.80°N -96.97°W 5Km Deep	2014-03-08 21:50:55 UTC 2014-03-08 15:50:55 LOCAL	USC000N5JN	10

III	2.3	NORTHERN CALIFORNIA 39.41°N -123.36°W 1Km Deep	2014-03-08 17:46:56 UTC 2014-03-08 09:46:56 LOCAL	NC72181031	5
IV	3.4	CENTRAL CALIFORNIA 36.40°N -121.93°W 3Km Deep	2014-03-08 12:53:19 UTC 2014-03-08 04:53:19 LOCAL	NC72180946	194
II	2.4	CENTRAL CALIFORNIA 35.66°N -118.47°W 10Km Deep	2014-03-08 06:55:13 UTC 2014-03-07 22:55:13 LOCAL	CI15473745	6
IV	3.1	GREATER LOS ANGELES AREA, CALIFORNIA 33.97°N -118.43°W 9Km Deep	2014-03-08 04:16:31 UTC 2014-03-07 20:16:31 LOCAL	CI15473729	2388
III	3.2	OKLAHOMA 35.85°N -97.30°W 1Km Deep	2014-03-08 01:34:13 UTC 2014-03-07 19:34:13 LOCAL	USC000N59S	5
IV	2.8	SAN FRANCISCO BAY AREA, CALIFORNIA 37.60°N -122.02°W 6Km Deep	2014-03-07 21:38:23 UTC 2014-03-07 13:38:23 LOCAL	NC72180656	313
II	3.0	OFFSHORE FALCON, VENEZUELA 12.27°N -70.00°W 23Km Deep	2014-03-07 17:31:41 UTC 2014-03-07 17:31:41 LOCAL	USC000N5BB	6
IV	4.6	DOMINICAN REPUBLIC REGION 19.47°N -67.92°W 52Km Deep	2014-03-06 21:56:45 UTC 2014-03-06 17:56:45 LOCAL	PR14065002	29
II	2.6	EASTERN TENNESSEE 35.68°N -84.26°W 21Km Deep	2014-03-06 08:29:37 UTC 2014-03-06 03:29:37 LOCAL	SE030614A	9
VI	5.3	VALPARAISO, CHILE 33.33°S -71.37°W 58Km Deep	2014-03-06 04:37:06 UTC 2014-03-06 01:37:06 LOCAL	USC000N3W0	397
III	3.1	CENTRAL CALIFORNIA 35.71°N -121.06°W 9Km Deep	2014-03-06 00:55:55 UTC 2014-03-05 16:55:55 LOCAL	NC72179616	17
IV	4.7	COSTA RICA 10.21°N -85.35°W 34Km Deep	2014-03-05 21:15:53 UTC 2014-03-05 15:15:53 LOCAL	USC000N3LW	5
IV	3.3	OKLAHOMA 35.64°N -97.37°W 6Km Deep	2014-03-05 14:17:06 UTC 2014-03-05 08:17:06 LOCAL	USB000N1IM	72
IV	3.1	SOUTHERN CALIFORNIA 33.93°N -116.35°W 6Km Deep	2014-03-05 09:17:01 UTC 2014-03-05 01:17:01 LOCAL	CI15472609	26
IV	4.4	CENTRAL ALASKA 62.08°N -149.46°W 38Km Deep	2014-03-05 03:13:19 UTC 2014-03-04 18:13:19 LOCAL	AK11176369	61
III	5.0	OFF THE WEST COAST OF BAJA CALIFORNIA 31.38°N -119.36°W 2Km Deep	2014-03-05 02:24:23 UTC 2014-03-04 18:24:23 LOCAL	USB000N1B3	7
II	2.1	OKLAHOMA 36.15°N -96.96°W 3Km Deep	2014-03-05 02:02:57 UTC 2014-03-04 20:02:57 LOCAL	USB000N1DN	5
III	2.4	OKLAHOMA 36.15°N -96.97°W 5Km Deep	2014-03-05 01:53:01 UTC 2014-03-04 19:53:01 LOCAL	USB000N1DL	11
IV	2.9	OKLAHOMA 35.80°N -96.98°W 4Km Deep	2014-03-04 17:44:10 UTC 2014-03-04 11:44:10 LOCAL	USB000N1DG	6
III	2.6	OKLAHOMA 35.80°N -96.97°W 5Km Deep	2014-03-04 16:39:38 UTC 2014-03-04 10:39:38 LOCAL	USB000N0WW	6
IV	5.7	OFFSHORE VALPARAISO, CHILE 33.57°S -72.06°W 9Km Deep	2014-03-04 10:51:13 UTC 2014-03-04 07:51:13 LOCAL	USB000N0MP	78
IV	2.6	GREATER LOS ANGELES AREA, CALIFORNIA 34.12°N -117.42°W 4Km Deep	2014-03-04 06:48:00 UTC 2014-03-03 22:48:00 LOCAL	CI15471937	46
IV	2.6	GREATER LOS ANGELES AREA, CALIFORNIA 34.11°N -117.41°W 4Km Deep	2014-03-04 05:59:46 UTC 2014-03-03 21:59:46 LOCAL	CI15471921	185
IV	2.6	NORTHERN CALIFORNIA 39.00°N -123.39°W 6Km Deep	2014-03-04 00:48:30 UTC 2014-03-03 16:48:30 LOCAL	NC72178631	7
IV	5.1	OFFSHORE VALPARAISO, CHILE 33.10°S -71.93°W 10Km Deep	2014-03-03 03:17:46 UTC 2014-03-03 00:17:46 LOCAL	USB000MZTZ	29
III	2.8	OKLAHOMA 35.79°N -97.47°W 6Km Deep	2014-03-03 02:53:19 UTC 2014-03-02 20:53:19 LOCAL	USB000MZTU	21
IV	5.2	RYUKYU ISLANDS, JAPAN 26.28°N 127.33°E 56Km Deep	2014-03-03 02:27:31 UTC 2014-03-03 11:27:31 LOCAL	USB000MZTM	30
III	2.6	OKLAHOMA 36.16°N -96.96°W 5Km Deep	2014-03-03 01:54:22 UTC 2014-03-02 19:54:22 LOCAL	USB000MZT9	14
		GREATER LOS ANGELES AREA,			

IV	2.7	CALIFORNIA 34.29°N -118.54°W 7Km Deep	2014-03-03 00:12:09 UTC 2014-03-02 16:12:09 LOCAL	CI15471641	166

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Summary
ShakeMap
Instrumental Intensity
PGA (%g)
PGV (cm/s)
PSA 0.3s (%g)
PSA 1.0s (%g)
PSA 3.0s (%g)
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PAGER
Impact Estimates
Historic Seismicity
City Exposure List
Did You Feel It?
Tell Us!
Intensity Maps
Graphs
Responses
Scientific
Summary
Contributed Solutions
Moment Tensor
Focal Mechanism
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M6.8 - 77km WNW of Ferndale, California

2014-03-10 05:18:13 UTC

PAGER - GREEN ShakeMap - VII DYFI? - VI



Earthquake location 40.829°N. 125.134°W
Return to the EQ List/Map/Search

Google Earth KML

Summary

Location and Magnitude contributed by: Northern California Seismic System, UC Berkeley and USGS Menlo Park

General

Nearby Cities

Nearby Cities

Related Links

- Additional earthquake information for United States
- Additional earthquake information for California
- Aftershock Warning
- View location in Google Maps

Additional Data Contributors

- USGS National Earthquake Information Center
- Northern California Seismic System, UC Berkeley and USGS Menlo Park
- Pacific Tsunami Warning Center
- Alaska Tsunami Warning Center

ShakeMap

Contributed by Northern California Seismic System, UC Berkeley and USGS Menlo Park

Instrumental Intensity

ShakeMap Intensity Image

PGA (%g)

ShakeMap PGA Image

PGV (cm/s)

ShakeMap PGV Image

PSA 0.3s (%g)

Spectral Response - 0.3 Second Period

PSA 1.0s (%g)

Spectral Response - 1.0 Second Period

PSA 3.0s (%g)

Spectral Response - 3.0 Second Period

Uncertainty

ShakeMap Uncertainty Image

Station List

Text
XML

Scientific Background on the ShakeMap Process

PAGER

Download Alert PDF

Pager XML

Impact Estimates

Estimated Fatalities

Histogram of Estimated Fatalities
Population Exposure Map

Estimated Economic Losses

Histogram of Estimated Economic Losses

Historic Seismicity

Historic Earthquakes

City Exposure List

See PAGER XML link (above).

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty. PAGER results are generally available within 30 minutes of the earthquake's occurrence. However, information on the extent of shaking will be uncertain in the minutes and hours following an earthquake and typically improves as additional sensor data and reported intensities are acquired and incorporated into models of the earthquake's source. Users of PAGER estimates should account for uncertainty and always seek the most current PAGER release for any earthquake.

Scientific Background on the PAGER Process
Read Additional PAGER Disclaimers

Did You Feel It? Tell Us!

Contributed by USGS National Earthquake Information Center

Tell Us!

Did you feel this earthquake? Tell Us!

Intensity Maps

Intensity MapGeocoded Map

Graphs

Intensity vs. Distance
Responses vs. Time

Responses

Response Data (88)

Scientific Background on the Did You Feel It? Process

Scientific

Location and Magnitude contributed by: Northern California Seismic System, UC Berkeley and USGS Menlo Park

Summary

Preferred Location Parameters

Parameter	Value	Uncertainty
Magnitude	6.8 Mw	Not Specified
Location	40.829°N, 125.134°W	± 0.6 km
Depth	16.6 km	± 1.9 km
Number of Stations Used	Not Specified	
Number of Phases Used	116	
Minimum Distance	73.0 km (0.66°)	
Travel Time Residual	0.15 sec	
Azimuthal Gap	230°	
Review Status	MANUAL	
Event ID	nc72182046	

See the "Contributed Solutions" for a list of all contributed location parameters.

Moment Tensor

Moment Tensor EQXML

Focal Mechanism

Focal Mechanism EQXML

Scientific and Technical Links

- NCSS Moment Tensor Solution
- Waveforms
- NCSS First Motion Mechanism 1

Contributed Solutions

Moment Tensor

Focal Mechanism

Technical Terms used on Event Pages

Downloads

All Downloads

Product	Title	Links	ID
cap (NC)	CAP Alert	XML (6 KB)	nc72182046
dyfi (US)	DYFI City Map	JPG (126 KB) PDF (439 KB) PS (750 KB) HTML (171 KB)	nc72182046
dyfi (US)	DYFI Geocoded Map	JPG (114 KB) PDF (354 KB) PS (654 KB) HTML (104 KB)	nc72182046
dyfi (US)	Intensity vs. Distance Plot	JPG (79 KB) PS (54 KB)	nc72182046
dyfi (US)	Responses vs. Time Plot	JPG (45 KB) PS (29 KB)	nc72182046
dyfi (US)	Intensity Summary	TXT (22 KB) XML (88 KB)	nc72182046
dyfi (US)	Intensity Summary (Geocoded)	TXT (37 KB) XML (99 KB)	nc72182046
dyfi (US)	DYFI Combined Geospatial Data	KMZ (1 KB)	nc72182046
focal-mechanism (NC)	NCSS First Motion Mechanism 1	GIF (15 KB) XML (10 KB)	nc72182046
losspager (US)	Exposure Map	PNG (71 KB) PDF (87 KB)	nc72182046
losspager (US)	onePAGER summary	PDF (421 KB)	nc72182046
losspager (US)	PAGER XML results	XML (20 KB)	nc72182046
losspager (US)	PAGER Exposure KML	KMZ (69 KB)	nc72182046
moment-tensor (NC)	NCSS Moment Tensor Solution	XML (7 KB) JPG (14 KB)	nc72182046
moment-tensor (NC)	Waveform Plot	JPG (64 KB)	nc72182046
origin (NC)	Earthquake XML (EQXML)	XML (1 KB)	nc72182046
phase-data (NC)	Earthquake XML (Quakeml)	XML (784 KB)	nc72182046
shakemap (NC)	XML Grids	XML (796 KB) ZIP (131 KB)	nc72182046
shakemap (NC)	Rock Grid	ZIP (106 KB)	nc72182046
shakemap (NC)	Uncertainty Grid	ZIP (51 KB)	nc72182046
shakemap (NC)	Text Grids	ZIP (115 KB)	nc72182046
shakemap (NC)	KML File	KML (2 KB)	nc72182046
shakemap (NC)	Contour KMZ File	KMZ (36 KB)	nc72182046
shakemap (NC)	Epicenter KMZ File	KMZ (746 B)	nc72182046
shakemap (NC)	Fault KMZ File	KMZ (602 B)	nc72182046
shakemap (NC)	Intensity Overlay KMZ File	KMZ (21 KB)	nc72182046
shakemap (NC)	Stations KMZ File	KMZ (33 KB)	nc72182046
shakemap (NC)	GIS Files	ZIP (357 KB)	nc72182046
shakemap (NC)	HAZUS Data	ZIP (104 KB)	nc72182046

shakemap (NC)	ESRI Raster Files	ZIP (447 KB)	nc72182046
shakemap (NC)	Station Lists	TXT (104 KB) XML (460 KB)	nc72182046
shakemap (NC)	Metadata	TXT (30 KB) XML (26 KB) HTML (42 KB)	nc72182046
shakemap (NC)	Supplemental Information	XML (2 KB)	nc72182046
shakemap (NC)	TV Info Sheet	TXT (8 KB)	nc72182046
shakemap (NC)	Intensity Thumbnail	JPG (2 KB)	nc72182046
shakemap (NC)	Intensity Map	JPG (75 KB) ZIP (331 KB)	nc72182046
shakemap (NC)	PGA Map	JPG (54 KB) ZIP (1 MB)	nc72182046
shakemap (NC)	PGV Map	JPG (55 KB) ZIP (1 MB)	nc72182046
shakemap (NC)	PSA03 Map	JPG (54 KB) ZIP (1 MB)	nc72182046
shakemap (NC)	PSA10 Map	JPG (54 KB) ZIP (1 MB)	nc72182046
shakemap (NC)	PSA30 Map	JPG (54 KB) ZIP (1 MB)	nc72182046
shakemap (NC)	TV Map	JPG (91 KB) ZIP (742 KB)	nc72182046
shakemap (NC)	Bare TV Map	JPG (92 KB) ZIP (740 KB)	nc72182046
shakemap (NC)	Uncertainty Map	JPG (46 KB) ZIP (38 KB)	nc72182046
shakemap (NC)	Intensity Contours	XYZ (47 KB)	nc72182046
shakemap (NC)	PGA Contours	XYZ (11 KB)	nc72182046
shakemap (NC)	PGV Contours	XYZ (16 KB)	nc72182046
shakemap (NC)	PSA03 Contours	XYZ (16 KB)	nc72182046
shakemap (NC)	PSA10 Contours	XYZ (18 KB)	nc72182046
shakemap (NC)	PSA30 Contours	XYZ (18 KB)	nc72182046
shakemap (NC)	Intensity Contours (JSON)	JSON (50 KB)	nc72182046
shakemap (NC)	PGA Contours (JSON)	JSON (12 KB)	nc72182046
shakemap (NC)	PGV Contours (JSON)	JSON (17 KB)	nc72182046
shakemap (NC)	PSA03 Contours (JSON)	JSON (18 KB)	nc72182046
shakemap (NC)	PSA10 Contours (JSON)	JSON (19 KB)	nc72182046
shakemap (NC)	PSA30 Contours (JSON)	JSON (19 KB)	nc72182046

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- Northern California Seismic System, UC Berkeley and USGS Menlo Park
- USGS National Earthquake Information Center
- Pacific Tsunami Warning Center
- Alaska Tsunami Warning Center

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- Search EQ Archives
- "Top 10" Lists & Maps
- Info by Region
- US Seismicity Map
- World Seismicity Maps

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- Hazard Maps & Data
- Seismic Design
- Hazard Analysis Tools
- EQ Scenarios

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- EQ Glossary
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- ANSS – United States
- GSN – World
- Volunteer Monitoring
- ASL – Albuquerque
- Network Operations
- Seismogram Displays
- Buildings
- NSMP – Strong Motion
- Crustal Deformation

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- Projects
- Science Centers
- DYFI?
- PAGER
- ShakeMap
- Early Warning
- External Support

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Summary
Did You Feel It?
Tell Us!
Intensity Maps
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Responses
Scientific
Summary
Contributed Solutions
Downloads

M5.3 - 31km S of Villa Alemana, Chile

2014-03-06 04:37:06 UTC

DYFI? - **VI**

Earthquake location 33.328°S, 71.373°W
Return to the EQ List/Map/Search

Google Earth KML

Summary

Location and Magnitude contributed by: USGS National Earthquake Information Center

General

Nearby Cities

Nearby Cities

Related Links

- Additional earthquake information for Chile
- View location in Google Maps

Tectonic Summary

1. Tectonic Summary

Did You Feel It? Tell Us!

Contributed by USGS National Earthquake Information Center

Tell Us!

Did you feel this earthquake? Tell Us!

Intensity Maps

Intensity MapGeocoded Map

Graphs

Intensity vs. Distance
Responses vs. Time

Responses

Response Data (6)

Scientific Background on the Did You Feel It? Process

Scientific

Location and Magnitude contributed by: USGS National Earthquake Information Center

Summary

Preferred Location Parameters

Parameter	Value	Uncertainty
Magnitude	5.3 mb	± 0.03
Location	33.328°S, 71.373°W	Not Specified
Depth	58.9 km	± 5.8 km
Number of Stations Used	Not Specified	
Number of Phases Used	71	
Minimum Distance	51.3 km (0.46°)	
Travel Time Residual	1.15 sec	
Azimuthal Gap	62°	
Review Status	MANUAL	
Event ID	usc000n3w0	

See the “Contributed Solutions” for a list of all contributed location parameters.

Contributed Solutions

Technical Terms used on Event Pages

Downloads

All Downloads

Product	Title	Links	ID
cap (US)	CAP Alert	XML (4 KB)	usc000n3w0
dyfi (US)	DYFI City Map	JPG (204 KB) PDF (264 KB) PS (460 KB) HTML (5 KB)	usc000n3w0
dyfi (US)	DYFI Geocoded Map	JPG (199 KB) PDF (276 KB) PS (503 KB) HTML (16 KB)	usc000n3w0
dyfi (US)	Intensity vs. Distance Plot	JPG (61 KB) PS (44 KB)	usc000n3w0
dyfi (US)	Responses vs. Time Plot	JPG (44 KB) PS (29 KB)	usc000n3w0

dyfi (US)	Intensity Summary	TXT (2 KB) XML (6 KB)	usc000n3w0
dyfi (US)	Intensity Summary (Geocoded)	TXT (5 KB) XML (14 KB)	usc000n3w0
dyfi (US)	DYFI Combined Geospatial Data	KMZ (1 KB)	usc000n3w0
origin (US)	Earthquake XML (Quakeml)	XML (3 KB)	usc000n3w0
phase-data (US)	Earthquake XML (Quakeml)	XML (557 KB)	usc000n3w0

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World Seismicity Maps

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Faults
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Volunteer Monitoring
ASL – Albuquerque
Network Operations
Seismogram Displays
Buildings
NSMP – Strong Motion
Crustal Deformation

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Summary
ShakeMap
Instrumental Intensity
PGA (%g)
PGV (cm/s)
PSA 0.3s (%g)
PSA 1.0s (%g)
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Did You Feel It?
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Moment Tensor
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M6.3 - 262km ESE of Sola, Vanuatu

2014-03-05 09:56:58 UTC

PAGER - GREEN ShakeMap - III

Earthquake location 14.735°S, 169.822°E
Return to the EQ List/Map/Search

Google Earth KML

Summary

Location and Magnitude contributed by: USGS National Earthquake Information Center

General

Nearby Cities

Nearby Cities

Related Links

- View location in Google Maps

Tectonic Summary

1. Tectonic Summary

ShakeMap

Contributed by USGS National Earthquake Information Center

Instrumental Intensity

ShakeMap Intensity Image

PGA (%g)

ShakeMap PGA Image

PGV (cm/s)

ShakeMap PGV Image

PSA 0.3s (%g)

Spectral Response - 0.3 Second Period

PSA 1.0s (%g)

Spectral Response - 1.0 Second Period

PSA 3.0s (%g)

Spectral Response - 3.0 Second Period

Uncertainty

ShakeMap Uncertainty Image

Station List

Text
XML

Scientific Background on the ShakeMap Process

PAGER

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Pager XML

Impact Estimates

Estimated Fatalities

Histogram of Estimated Fatalities
Population Exposure Map

Estimated Economic Losses

Histogram of Estimated Economic Losses

Historic Seismicity

Historic Earthquakes

City Exposure List

See PAGER XML link (above).

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Scientific Background on the PAGER Process
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Did You Feel It? Tell Us!

Tell Us!

Did you feel this earthquake? Tell Us!

Scientific Background on the Did You Feel It? Process

Scientific

Location and Magnitude contributed by: USGS National Earthquake Information Center

Summary

Preferred Location Parameters

Parameter	Value	Uncertainty
Magnitude	6.3 mwp	± 0.04
Location	14.735°S, 169.822°E	Not Specified
Depth	636.8 km	± 7.6 km
Number of Stations Used	Not Specified	
Number of Phases Used	414	
Minimum Distance	887.2 km (7.97°)	
Travel Time Residual	0.83 sec	
Azimuthal Gap	29°	
Review Status	MANUAL	
Event ID	usb000n1ex	

Moment Tensor

Moment Tensor EQXML

See the "Contributed Solutions" for a list of all contributed location parameters.

Contributed Solutions

Moment Tensor

Technical Terms used on Event Pages

Downloads

All Downloads

Product	Title	Links	ID
cap (US)	CAP Alert	XML (4 KB)	usb000n1ex
losspager (US)	Exposure Map	PNG (38 KB) PDF (47 KB)	usb000n1ex
losspager (US)	onePAGER summary	PDF (376 KB)	usb000n1ex
losspager (US)	PAGER XML results	XML (104 KB)	usb000n1ex
losspager (US)	PAGER Exposure KML	KMZ (63 KB)	usb000n1ex
moment-tensor (US)	Earthquake XML (Quakeml)	XML (4 KB)	usb000n1ex
origin (US)	Earthquake XML (Quakeml)	XML (3 KB)	usb000n1ex
phase-data (US)	Earthquake XML (Quakeml)	XML (898 KB)	usb000n1ex
shakemap (US)	XML Grids	XML (7 MB) ZIP (432 KB)	usb000n1ex
shakemap (US)	Rock Grid	ZIP (419 KB)	usb000n1ex
shakemap (US)	Uncertainty Grid	ZIP (344 KB)	usb000n1ex
shakemap (US)	Text Grids	ZIP (424 KB)	usb000n1ex
shakemap (US)	KML File	KML (2 KB)	usb000n1ex
shakemap (US)	Contour KMZ File	KMZ (100 KB)	usb000n1ex

shakemap (US)	Epicenter KMZ File	KMZ (745 B)	usb000n1ex
shakemap (US)	Fault KMZ File	KMZ (601 B)	usb000n1ex
shakemap (US)	Intensity Overlay KMZ File	KMZ (18 KB)	usb000n1ex
shakemap (US)	Stations KMZ File	KMZ (608 B)	usb000n1ex
shakemap (US)	GIS Files	ZIP (564 KB)	usb000n1ex
shakemap (US)	HAZUS Data	ZIP (7 KB)	usb000n1ex
shakemap (US)	ESRI Raster Files	ZIP (1 MB)	usb000n1ex
shakemap (US)	Station Lists	TXT (513 B) XML (2 KB)	usb000n1ex
shakemap (US)	Metadata	TXT (30 KB) XML (26 KB) HTML (42 KB)	usb000n1ex
shakemap (US)	Supplemental Information	XML (3 KB)	usb000n1ex
shakemap (US)	TV Info Sheet	TXT (8 KB)	usb000n1ex
shakemap (US)	Intensity Thumbnail	JPG (2 KB)	usb000n1ex
shakemap (US)	Intensity Map	JPG (51 KB) ZIP (72 KB)	usb000n1ex
shakemap (US)	PGA Map	JPG (41 KB) ZIP (87 KB)	usb000n1ex
shakemap (US)	PGV Map	JPG (41 KB) ZIP (86 KB)	usb000n1ex
shakemap (US)	PSA03 Map	JPG (41 KB) ZIP (88 KB)	usb000n1ex
shakemap (US)	PSA10 Map	JPG (41 KB) ZIP (86 KB)	usb000n1ex
shakemap (US)	PSA30 Map	JPG (41 KB) ZIP (86 KB)	usb000n1ex
shakemap (US)	TV Map	JPG (44 KB) ZIP (140 KB)	usb000n1ex
shakemap (US)	Bare TV Map	JPG (45 KB) ZIP (140 KB)	usb000n1ex
shakemap (US)	Uncertainty Map	JPG (38 KB) ZIP (25 KB)	usb000n1ex
shakemap (US)	Intensity Contours	XYZ (1 KB)	usb000n1ex
shakemap (US)	PGA Contours	XYZ (122 KB)	usb000n1ex
shakemap (US)	PGV Contours	XYZ (79 KB)	usb000n1ex
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shakemap (US)	PSA10 Contours	XYZ (88 KB)	usb000n1ex
shakemap (US)	PSA30 Contours	XYZ (80 KB)	usb000n1ex
shakemap (US)	Intensity Contours (JSON)	JSON (1 KB)	usb000n1ex
shakemap (US)	PGA Contours (JSON)	JSON (117 KB)	usb000n1ex
shakemap (US)	PGV Contours (JSON)	JSON (77 KB)	usb000n1ex
shakemap (US)	PSA03 Contours (JSON)	JSON (136 KB)	usb000n1ex
shakemap (US)	PSA10 Contours (JSON)	JSON (86 KB)	usb000n1ex
shakemap (US)	PSA30 Contours (JSON)	JSON (75 KB)	usb000n1ex

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WaterWatch

Search WaterWatch ...

Home

Current Streamflow

Flood

Drought

Past Flow/Runoff

Animation

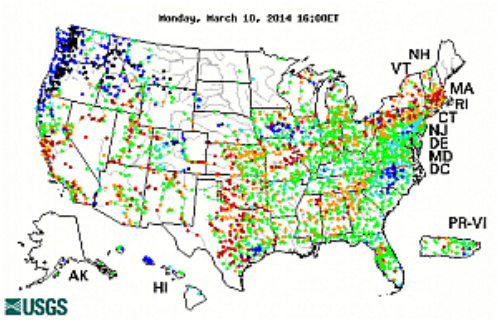
Toolkit

Annual Summaries

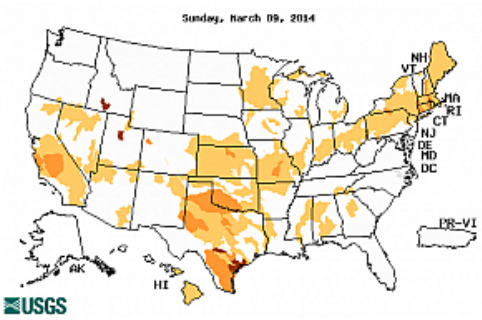
Additional Information

About WaterWatch

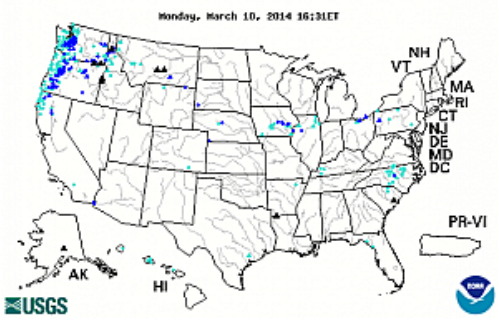
Current Streamflow



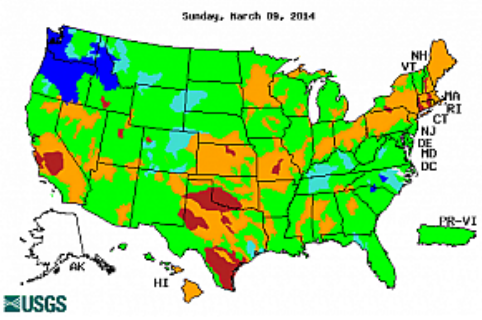
Drought



Flood



Past Flow / Runoff



U.S. Department of the Interior | U.S. Geological Survey
URL: http://waterwatch.usgs.gov
Page Contact Information: Contact USGS
Page Last Modified: Monday, March 10, 2014

Monitoring Home

California

Gap Fire, California

Highway 50, California

Jesusita Fire, Santa Barbara, California

Station Fire, Arroyo Seco, Pasadena, California

Station Fire, Dunsmore Canyon Site 1, Glendale, California

Station Fire, Dunsmore Canyon Site 2, Glendale, California

Colorado

Chalk Cliffs, Colorado

Oregon

Carmel Knoll Landslide, Lincoln County, Oregon

Devil's Punchbowl Landslide, Lincoln County, Oregon

Elliott State Forest, Oregon

Johnson Creek Landslide, Coastal Oregon

Portland, Oregon

Washington

Seattle Area, Washington

Landslide Monitoring

Monitoring is essential to predicting the behavior of landslides and forecasting which storms can trigger large numbers of landslides. Scientists in the USGS Landslide Hazards Program monitor selected landslides and hillsides in order to learn more about the physical processes that trigger landslides or control their movement.

Current Monitoring Sites

(Click a site's marker for more information.)



Continuous, real-time monitoring occurs at some sites and periodic monitoring occurs at others; the most recent measurements are provided on-line for a few of our monitoring sites.

Graphs showing the most recent data are updated regularly with update cycles ranging from 15 minutes to 24 hours. Landslide monitoring data and information provided on this web site are preliminary and have not been reviewed for accuracy; therefore the data are subject to revision.

Links

Capturing landslide dynamics and hydrologic triggers using near-real-time monitoring (PDF)

What to do and look for during and immediately after heavy rains

Landslide Preparedness & Safety Information

Real-Time Monitoring of Landslides


Monitoring basin at Chalk Cliffs, CO

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U.S. Department of the Interior | U.S. Geological Survey
Page URL: http://landslides.usgs.gov/monitoring/
Page Contact Information: EHP Web Team
Page Last Modified: December 18, 2013 22:00:09 UTC

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References to non-U.S. Department of the Interior (DOI) products do not constitute an endorsement by the DOI. By viewing the Google Maps API on this web site the user agrees to these Terms of Service set forth by Google.

U.S. Volcano Alerts
Elevated Status Volcanoes
VONA
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About Alerts
Alert Icons
Alert Creation
Volcano Notification Service
Worldwide Volcanoes
Russian Volcanoes
Monitoring Volcanoes
Seismic
Example Signatures
Deformation
GPS
Tilt
EDM
InSAR
Gas Measurements
Hydrologic
Monitoring Data

Current Alerts for U.S. Volcanoes

All | AVO | CalVO | CVO | HVO | NMI | YVO

Kilauea Watch Orange	2014-03-10 07:28:51
Cleveland Advisory Yellow	2014-03-10 12:11:41
Shishaldin Advisory Yellow	2014-03-10 12:11:41
Veniaminof Advisory Yellow	2014-03-10 12:11:41
Pagan Advisory Yellow	2014-03-07 11:12:23
Mauna Loa Normal Green	2014-03-09 07:54:05
Hualalai Normal Green	2014-03-09 07:54:05
Haleakala Normal Green	2014-03-09 07:54:05
Mauna Kea Normal Green	2014-03-09 07:54:05
Cascade Range Normal Green	2014-03-07 11:33:28
Yellowstone Normal Green	2014-03-03 11:58:41
Lo`ihi Unassigned Unassigned	2014-03-09 07:54:05
Fourpeaked Unassigned Unassigned	2014-02-07 15:45:35

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U.S. Department of the Interior | U.S. Geological Survey
URL: http://volcanoes.usgs.gov/activity/status.php
Page Contact Information: vhpweb@usgs.gov
Page Last Modified: Saturday, 15 December 2012 06:05:21 UTC



n/a

(Geomagnetism Home)

UTC Time

3/9 21:06
-
3/10 21:06

2000nT
1000nT
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200nT
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50nT
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5nT
2nT
1nT
Auto

dB/dt

H
E
Z
F
⏢F

Normal plot
Top wrap
Bottom wrap
Spike
Gap/ No data

UTC 24hr Time of
last update: 3/10 21:06

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to default settings.

EarthNow! Landsat Image Viewer

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Start with Science

- Climate and Land Use Change
- Core Science Systems
- Ecosystems
- Energy and Minerals
- Environmental Health
- Natural Hazards
- Science Quality and Integrity
- Water

Our Contacts

Emergency Management

During incidents of national significance, the U.S. Geological Survey (USGS) provides support to certain National Response Framework emergency support functions. The National Reponse Framework sets forth guidelines for all response partners to prepare for, and provide a unified response in the event of any domestic incident.

The USGS serves the Nation by providing reliable scientific information to describe and understand the Earth; minimize loss of life and property from natural disasters; and manage water, biological, energy and mineral resources. The USGS has a special scientific focus for FY 07 and beyond on lessening the adverse impacts of natural hazards - - volcanoes, earthquake, hurricanes, landslides, wild fires, and floods.

See also United States Geological Survey (USGS) Natural Hazards Response Factsheet

Real-time Resources

Imagery and GIS Related to Emergency Operations

Earthquakes

- Earthquake Hazards Program (Latest Earthquakes)
- Did You Feel It?
- More Real-time Earthquake Sites

Landslides

- Landslides Information
- Advisories

Volcanoes

- Volcano Information

Water

- Water Data for the Nation
- Current Streamflow Conditions
- More Real-time Water Sites

Emergency Resources

Disease - National Wildlife Health Center

- Avian Influenza
  - DOI Information
  - PandemicFlu.gov

Emergency Management Programs & Resources

- Partners with more than 2,000 state, local and tribal governments, the academic community, federal allies, non-governmental organizations, and the private sector.
- Maintains the Global Seismographic Network in collaboration with international partners/the National Earthquake Information Center in Colorado where earthquake activity is monitored and reported globally.
- Maintains the volcano monitoring networks: the Alaska Volcano Observatory, the Cascades Volcano Observatory and the Hawaiian Volcano Observatory where USGS scientist lead the world in the study of how volcanoes work; how to forecast them and warn the public about an eruption; and how to mitigate potential volcanic disasters from occurring.
- Assesses and monitors potential landslide hazards, providing warning information on landslide activity and rapid monitoring response to events.

- West Nile

Drought

USGS & DOI Documents

USGS Emergency Response Documents

- **USGS Charters, Procedures and Plans**
  - Hazard Response Executive Committee (HREC) Charter
  - Geospatial Information Response Team (GIRT)
  - Geospatial Information Response Team (GIRT) Charter
  - Geospatial Information Response Team (GIRT) Standard Operating Procedures
  - USGS Storm Response Plan
- **International Charter**
  - Disasters Charter

DOI Emergency Policy

DOI Emergency Management

Departmentwide policy relating to emergency management is found in the Department's Manual, Part 900:

Chapter 1: Policy, Functions & Responsibilities
Chapter 2: Continuity of Operations Program
Chapter 3: National Security Emergency Preparedness
Chapter 4: Coordination of Emergency Incidents
Chapter 5: National Response Plan Coordination

- Maintains Satellite Land Remote Sensing Data with federal agency partners (Landsat 7; NASA's TERRA Satellite; NOAA's satellites; and declassified intelligence photos).
- Maintains the National Mapping Facilities where geographic research is conducted. The National Mapping Facilities are: The EROS Data Center in Sioux Falls SD; the Mid-Continent Mapping Center in Rolla MO; the Rocky Mountain Mapping Center in Lakewood, CO; the Western Mapping Center in CA; and the Headquarters and Mapping Applications Center in Reston, VA.
- Provides unbiased scientific information to characterize and manage contaminated sites and protect human and environmental health.
- Provides real-time flood warnings to promote safer communities.
- Houses Biological Science and Technology Centers nationwide such as the Patuxent Wildlife Research Center in MD; the Alaska Biological Science Center; the Northern Prairie Wildlife Research Center in ND; and the Florida Caribbean Science Center.
- Houses the Columbia Environmental Research Center in Columbia MO to provide scientific information on environmental contaminants and assessments of the effects on habitat alterations on aquatic and terrestrial ecosystems.
- USGS is the Department of the Interior Planner for ESF-11 (Animal & Plant Disease and Pest Response), and ESF-14 (Economic Stabilization, Community Recovery & Mitigation).

Other Emergency Management Links

- Data Sources & Web Mapping Applications
- ReadyAmerica
- USGS Emergency Operations

- FEMA
- Department of Homeland Security
- National Weather Service
- OSHA Significant Guidance Documents





USGS Oil Spill Response

Note: We will be continually updating this page as more information is made available.

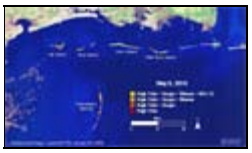
The USGS continues to mobilize equipment and personnel to gather scientific data and information on the environmental impacts of the oil spill to affected coastal habitats.

USGS scientists will be:

- Collecting satellite imagery to assess the impact on wetlands and coasts
- Developing maps showing NOAA projections of spill trajectory with respect to DOI Lands
- Collecting samples to ascertain source and levels of toxicity to soils and water systems
- Conducting tests to determine cause of mortality of wildlife
- Developing models that depict how local tidal and current conditions will interact with seafloor bathymetry to carry oil over barrier islands
- Providing decision support tools to help DOI land managers mitigate the effects of the oil spill and assist in restoration efforts

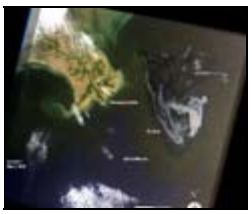
Some documents on this page may require Adobe Reader.

Coastal Impacts



- Barrier-Island Inundation and Overwash

Satellite Imagery and other Geospatial Data



- Northern Gulf of Mexico Map Products
  Lidar topography, bathymetry, aerial imagery
- Hazards Data Distribution System (HDDS)
  Full-resolution GeoTIFF and JPEG images.
- Deepwater Horizon Oil Spill 2010 gallery (continually updated)

Sampling Efforts



The U.S. Geological Survey (USGS) as part of the U.S. Department of the Interior (DOI) is responding to the Deepwater Horizon Oil Spill by establishing baseline conditions in water chemistry, bottom sediments, and aquatic invertebrates prior to landfall of the oil spill. Over the past several weeks teams of scientists have been

collecting samples in Texas, Louisiana, Mississippi, Alabama, and Florida at over 60 locations unaffected as yet by the oil spill. These locations include barrier islands and coastal wetlands. These areas are critical to fish and wildlife in the Gulf of Mexico and could suffer severe environmental damage if oil from this spill comes ashore.

- Sampling sites (2/28/2011) (Google Earth KMZ) | ZIP file | JPG

Wildlife Issues



In the past 30 years, there has been considerable research on the impacts of oil on birds and their habitats. In particular, the USGS Patuxent Wildlife Research Center has undertaken a wide range of experimental studies on the effects of oil on birds. Much of that information is relevant to the current situation in the Gulf of Mexico.

- Biological Impacts
- Oil Pollution Impacts on Birds

News Releases and Congressional Testimonies



- Admiral Allen, Dr. McNutt Provide Updates on Progress of Scientific Teams Analyzing Flow Rates from BP's Well (June 10, 2010)
- Salazar Continues Oversight of BP Response Efforts and Activities at Houston Command Center
- Flow Rate Group Provides Preliminary Best Estimate Of Oil Flowing from BP Oil Well
  - Press conference tweet chat (May 27, 2010)
- Statement of Marcia McNutt, Director, U.S. Geological Survey, May 27, 2010
  before the House Appropriations Subcommittee on Interior, Environment and Related Agencies, May 27, 2010, on USGS Science in Response to the Deepwater Horizon Oil Spill

Publications



- Open-File Report 2012-1234: Application of a Hydrodynamic and Sediment Transport Model for Guidance of Response Efforts Related to the Deepwater Horizon Oil Spill in the Northern Gulf of Mexico Along the Coast of Alabama and Florida (Sept. 20, 2013) NEW
- DOI Strategic Sciences Working Group, Mississippi Canyon 252/Deepwater Horizon Oil Spill Progress Report 2, April 2012 (May 04, 2012)
- OFR 2011-1078: Sediment Pore-Water Toxicity Test Results and Preliminary Toxicity Identification of Post-Landfall Pore-Water Samples Collected Following the Deepwater Horizon Oil Release, Gulf of Mexico, 2010
- OFR 2010-1318: Determination of the Anionic

Surfactant Di(Ethylhexyl) Sodium Sulfosuccinate in Water Samples Collected from Gulf of Mexico Coastal Waters Before and After Landfall of Oil from the Deepwater Horizon Oil Spill, May to October, 2010

- OFR 2011-1022: Shoreline Surveys of Oil-Impacted Marsh in Southern Louisiana, July to August 2010
- OFR 2011-1014: Petroleum Hydrocarbons in Sediment from the Northern Gulf of Mexico Shoreline, Texas to Florida
- OFR 2010-1290: Reconnaissance of Macondo-1 Well Oil in Sediment and Tarballs from the Northern Gulf of Mexico Shoreline, Texas to Florida
- Science Supporting Gulf of Mexico Oil-Spill Response, Mitigation, and Restoration—Assessment, Monitoring, Mapping, and Coordination
- Assessment of Flow Rate Estimates for the Deepwater Horizon / Macondo Well Oil Spill (March 10, 2011)
    - Appendix A - Hsieh 2010; Reservoir Depletion Report
    - Appendix B - Labson et al. 2010; Mass Balance Team Report
    - Appendix C - Camilli 2010; Woods Hole Oceanographic Institution Acoustics Analysis Report
    - Appendix D - Plume Calculation Team 2010; Particle Image Velocimetry Report
    - Appendix E - Reservoir Modeling Team 2010; Reservoir Modeling Report
    - Appendix F - Guthrie et al. 2010; Nodal Analysis Team Repor
- Plume Team Report: Deepwater Horizon Release Estimate of Rate by PIV (July 21, 2010)
- DOI Strategic Sciences Working Group, Mississippi Canyon 252/Deepwater Horizon Oil Spill Progress Report, June 9, 2010 (August 24, 2010)
    - "Scenario-Building for the Deepwater Horizon Oil Spill" -- *Science Magazine*
      Summary Full Text Reprint
- A Method for Quantitative Mapping of Thick Oil Spills Using Imaging Spectroscopy (August 13, 2010)
- A Rapid Method for Creating Qualitative Images Indicative of Thick Oil Emulsion on the Ocean's Surface from Imaging Spectrometer Data (July 21, 2010)
- A Role for Analytical Chemistry in Advancing our Understanding of the Occurrence, Fate, and Effects of Corexit Oil Dispersants (July 27, 2010)
- Estimated Minimum Discharge Rates of the Deepwater Horizon Spill-Interim Report to the Flow Rate Technical Group from the Mass Balance Team (June 21, 2010)
- Effects of Building a Sand Barrier Berm to Mitigate the Effects of the Deepwater Horizon Oil Spill on Louisiana Marshes (June 2, 2010)
- A Method for Qualitative Mapping of Thick Oil Spills Using Imaging Spectroscopy (May 14, 2010)

Video

Compared to What?

The video relates how a team of scientists conducted rapid response sampling of coastal environments before any oil had reached land, following up in October 2010 with post-landfall sampling for comparison. USGS hydrologist Dennis Demcheck describes details of the work and explains the importance and value of having pre-landfall data for assessing impacts of the oil spill.

Full transcript, additional formats, and details available in the Multimedia Gallery.

Photos

Deepwater Horizon Oil Spill 2010 Collection











Next > Total Results: 117

Additional Information

- Twitter

Related Links

Joint Information Center (JIC)

Department of the Interior (DOI)

U.S. Fish and Wildlife Service (FWS)

Minerals Management Service (MMS)

National Park Service (NPS)

Department of Homeland Security (DHS)

U.S. Coast Guard (USCG)

Environmental Protection Agency (EPA)

National Oceanic and Atmospheric Administration (NOAA)

U.S. Air Force (USAF)

Science Features

Top Stories



National Groundwater Awareness Week

ADDED: MARCH 10, 2014
UPDATED: MARCH 10, 2014

Groundwater is one of the Nation's most valuable natural resources. Read more


National Groundwater Awareness Week


USGS Turns 135: Continues Mission of Science for America


Names on the Land: The Role of the U.S. Board on Geographic Names


River of Grass Revival


Battling Botulism in Birds

Science Picks

USGS Science Pop Quiz

ADDED: TUESDAY, JANUARY 7TH, 2014
FILED UNDER: NATURAL HAZARDS
JESSICA ROBERTSON, JROBERTSON@USGS.GOV

Test your knowledge on natural hazards and share this with friends too.

Join Nature's Notebook and Have Fun with Phenology



ADDED: TUESDAY, SEPTEMBER 17TH, 2013
FILED UNDER: GLOBAL CHANGE
BY: ETHAN ALPERN, EALPERN@USGS.GOV

More

Get ready to fall in love as the fall season approaches.



Is “The Impossible” Possible in the Pacific Northwest? – Coastal Community Tsunami Hazards and Risk Free USGS Public Lecture February 28

ADDED: MONDAY, FEBRUARY 25TH, 2013
FILED UNDER: FEATURED, NATURAL HAZARDS, WATER
BY: NATHAN WOOD (NWOOD@USGS.GOV)

February 28th at 7 p.m. (PST) — Public Lecture information: http://online.wr.usgs.gov/calendar

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Panorama from the top of Amazon Observation Tower

From the Natural and Man-Made Structures Collection

Panorama (360 degree) view from the top of a 148-foot (45-meter) observation tower at the ...

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Videos and Animations



Franz Lake Slough, Columbia River (B-roll)

From the Water Collection

Footage of USGS crew boating to and retrieving water-quality monitor

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Other Collections

Additional photo collections not currently included within the Multimedia Gallery.

Webcams

USGS Science in Action Screensavers

What is RSS?

What is Media RSS?

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Audio and Podcasts



ShakeOut Podcast 2013

From the Podcasts Collection

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Maps >>



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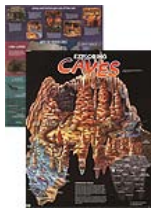
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water supply, water quality, USGS programs, and other subjects.



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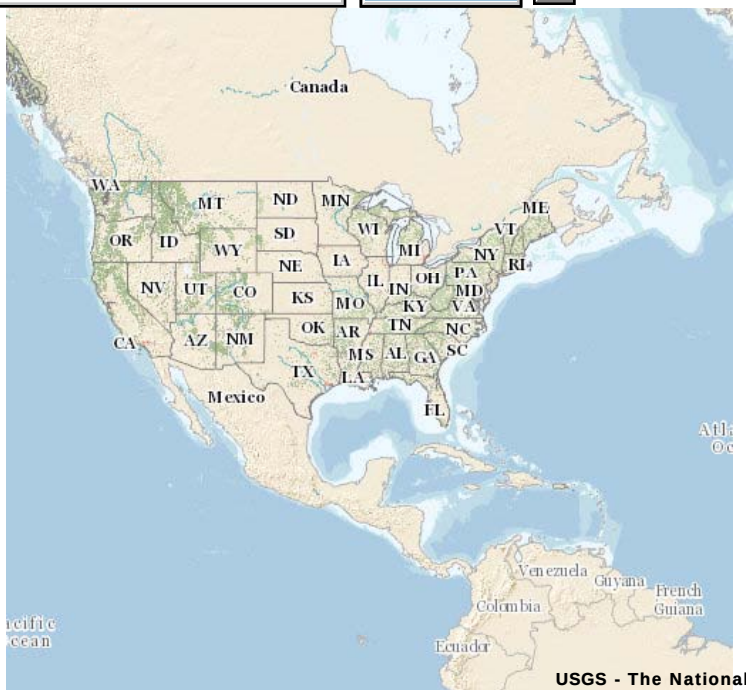


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Science Topics

How to use Science Topics
About the USGS Thesaurus

USGS mission areas and programs
Geographic indexes: States -- Ecosystems -- Coastal/Offshore -- International

The topical directory below provides another way to browse USGS science programs and activities. This directory categorizes science topics using a thesaurus of related terms with definitions and links to science content.

[Expand all categories]

Atmosphere and Climate
acid rain, climate change, droughts, global change, precipitation, ... [more]

Earth Characteristics
earth structure, geologic history, geologic structure, gravity, land surface, magnetic field, rocks and deposits, snow and ice cover, stratigraphy, ... [more]

Ecology and Environment
biodiversity, biogeography, ecological processes, ecosystems, habitats, ... [more]

Environmental Issues
contamination and pollution, health and disease, human impacts, land use, mine drainage, oil spills, recreation, water quality, ... [more]

Geographic Analysis and Mapping
aerial photography, cartography, geologic mapping, geospatial analysis, maps and atlases, remote sensing, ... [more]

Geologic Processes
erosion, geochemistry, geologic mapping, land subsidence, plate tectonics, sedimentation, ... [more]

Hydrologic Processes
glaciation, ground-water flow, runoff, sediment transport, streamflow, ... [more]

Natural Hazards
earthquakes, fires, floods, hurricanes, landslides, tsunamis, volcanoes, ... [more]

Natural Resources
energy resources, fishery resources, mineral resources, resource exploration, resource extraction, water resources, ... [more]

Oceans and Coastlines
coastal zones, marine geology, marine geophysics, ocean characteristics, ocean processes, ... [more]

Planets
impact cratering, meteorites, planetary bodies, ... [more]

Plants and Animals
animals, endangered species, invasive species, microbiology, plants, vegetation, wildlife, ... [more]

Techniques and Methods
geographic information systems (GIS), mathematical modeling, real-time monitoring and reporting, remote sensing, ... [more]

Water Resources
groundwater, surface water, water properties, water quality, water supply and demand, water use, ... [more]

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Alphabetical Index of Topics

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Find a topic in this index: Go!

Specific things by name

ANWR, Deepwater Horizon oil spill, DEM, Galeras, Katrina, Krakatoa, Mississippi River, MODFLOW, Mount Merapi, Mount Pinatubo, Mount St. Helens, Mount Vesuvius, Pangea, Richter scale, Ring of fire, Rock cycle, San Andreas Fault, Yellowstone,

Avian influenza

A virulent disease of poultry and wild birds that has spread throughout a large geographic area in Asia and Eastern Europe since it was first documented in 1997 in Asia.

Subtopics:
(none)

Results 1 - 7 of 7 listed by similarity [list alphabetically]

Avian influenza news and disease information [More info]
News regarding US efforts to monitor the spread of highly pathogenic avian influenza, with links to bulletins, FAQ list, field guides, and other resources.

Avian Influenza: Information and on-going research at the USGS Alaska Science Center [More info]
Maps and information about potential spread of avian influenza in migratory birds in Alaska. Includes descriptions and photos of the waterfowl that are being monitored.

Surveillance for asian H5N1 avian influenza in the United States [More info]
General description of US government efforts to monitor the occurrence of highly pathogenic avian influenza in wild migratory birds.

The avian influenza H5N1 threat [More info]
Describes highly pathogenic avian influenza and explains why this wildlife disease is of concern to health scientists and the public. Diagram shows potential pathways by which the disease could be transmitted to other animals, including humans.

Global Wildlife Disease News Map [More info]
Displays news articles from the Wildlife Disease News Digest. Users can see wildlife disease headlines both locally and globally. The Map displays Wildlife Disease News Digest articles that have been posted within the last 45 days.

Wildlife Data Integration Network [More info]
A web-based monitoring and reporting system that provides access to data on wildlife and zoonotic diseases, mortality events, and other critical related information.

Wildlife Disease News Digest [More info]
This news service focuses on wildlife diseases and wildlife morbidity/mortality, especially as they relate to human and ecosystem health.

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URL: http://www.usgs.gov/science//science/science.php?term=1732
Page Contact Information: Ask USGS



Climate change

Long-term alteration in the characteristic weather conditions of a region, such as changes in precipitation and temperature.

Subtopics:
Desertification (5 items)

Related topics:
- Climatology
- Effects of climate change
- Greenhouse gases

Refine results by state: Alabama Refine

Results 1 - 10 of 69 listed by similarity [list alphabetically]

USGS Global Change Science [More info]
Broad overview of USGS research and monitoring designed to understand current changes in the context of prehistoric and recent earth processes, distinguishing between natural and human-influenced changes, and recognizing ecological and physical responses

Climate Change and Wildlife Health: Direct and Indirect Effects [More info]
Addresses geographic range and distribution of wildlife diseases, plant and animal phenology, wildlife host-pathogen interactions, and disease patterns in wildlife.

Climate change in mountain ecosystems [More info]
Overview of interdisciplinary research studies in Glacier National Park to understand how this mountain wilderness responds to present climatic variability and other external stressors, such as air pollution, and links to detailed reports.

Biological resource status and trends: Climate change [More info]
Information concerning status and trends of biological resources, focusing on climate change

Effects of climate change and land use on water resources in the Upper Colorado River Basin [More info]
Information from climate model forecasts, projections of future flows, paleoclimatic indicators, timing of snowmelt, airborne dust, and the effects on vegetation of troublesome pest species indicate the nature and severity of problems looming.

Forecasting the effects of land-use and climate change on wildlife communities and habitats in the lower Mississippi Valley [More info]
Describes the analytical process by which spatial scientific information contributes to forecasts and models in support of regional and local decision-making.

National Climate Change and Wildlife Science Center [More info]
Coordinates our efforts to address challenges resulting from climate change and to empower natural resource managers with rigorous scientific information and effective tools for decision-making.

Prehistoric packrats piled up clues to climate change [More info]
Hoarding behavior preserved prehistoric materials we can use as clues to ancient climate and ecosystem changes.

Quantifying effects of climate change on the snowmelt-dominated groundwater resources of northern New

England [More info]
Planned analysis of the sensitivity of groundwater levels to changes in air temperature and precipitation. Changes in groundwater recharge and discharge also will be correlated with other hydrologic indicators.

Regional climate change--Science in the Southeast [More info]
Research projects intended to create regional and national data that conform to conditions predicted by general circulation models, so that land and wildlife managers can understand the likely consequences of climatic changes in their areas of study.

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Contamination and pollution

Introduction of harmful substances into the environment by human action or natural processes.

Subtopics:

Industrial pollution (25 items)
Nonpoint-source pollution (11 items)
Pesticide and herbicide contamination (24 items)
Pharmaceutical contamination (3 items)
Toxic radionuclide contamination (12 items)
Toxic trace element contamination (40 items)

Water pollution (13 items)
Soil pollution (1 items)
Air pollution (7 items)

Related topics:

- Human impacts
- Waste treatment and disposal
- Ecotoxicology
- Hazards
- Water quality

Refine results by state: Alabama Refine

Results 1 - 10 of 182 listed by similarity [list alphabetically]

Toxic Substances Hydrology Program [More info]
Homepage for the Toxic Substances Hydrology Program, which provides scientific information on contaminated sites and on human and environmental health. Links to news, topical information, investigations, meetings, publications, and photos.

Pesticide National Synthesis Project: national assessment of pesticides in streams, rivers, and ground water of the United States [More info]
An assessment of pesticides in national water resources, with links to national reports, national statistics, national data, pesticide use, analytical strategy, and standards for the U.S.

National analysis of trace elements in ground water, streams, stream and reservoir sediment, and fish and clam tissue across the United States [More info]
Trace elements are inorganic chemicals occurring in small amounts in nature. This web site of the National Water Quality Assessment links to U.S. data, publications, news, and other sites on trace metals, metalloids and radionuclides in water.

Nutrients National Synthesis Project: nutrients in rivers, streams, and aquifers in the United States [More info]
This Nutrients National Synthesis Project site on the U.S. study of nutrients, especially nitrogen and phosphorus, as contaminants in high concentrations links to an overview, study team, featured reports, publications, and national datasets.

National assessment of volatile organic chemicals (VOCs) in water resources of the United States [More info]
Links to online data retrieval, information on MTBE and gasoline oxygenates, VOCs analysis, VOC publications, news features, and featured online publications.

Pollution and waste disposal [More info]
Lists priority survey areas and objectives of these programs.

Algal toxins [More info]
Chapter of Field Manual of Wildlife Diseases on algal toxins, red tide toxins, phycotoxins, dinoflagellates, cyanobacterium, and bird mortality due to algal toxicosis.

Water quality information pages [More info]
Homepage of the Office of Water Quality programs on the quality of the Nation's surface water and ground water resources, with links to general information, quality assurance, software, data, publications, USGS facilities, techniques, and programs.

National Water Quality Assessment urban studies portal [More info]
Multiple studies addressing urban water-quality issues, to describe biological, chemical, and physical characteristics of urban water resources over time, and relate those characteristics to natural processes and human activities

Human Health Database [More info]
Central site providing links to USGS databases and homepages providing significant data and information on research related to human health.

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Droughts

Extended periods of moisture deficit over a sizeable area sufficient to have an adverse effect on vegetation, animals, or man.

Subtopics:
(none)

Related topics:
- Atmospheric sciences
- Hazards

Refine results by state: Georgia Refine

Results 1 - 10 of 30 listed by similarity [list alphabetically]

Drought watch - USGS state information on drought [More info]
Map display that highlights states where the streamflow index at USGS streamgages, averaged statewide, were below normal for the past seven days with links to comparison of recent streamflow values with historic values.

Drought Monitoring with VegDRI [More info]
The Vegetation Drought Response Index is a drought monitoring and mapping tool integrating satellite observations of vegetation and climate with land cover, soil characteristics, and other environmental factors.

Drought watch Pacific Northwest states: Washington, Oregon, Idaho [More info]
Drought water homepage with links to maps showing streamflow conditions, drought definitions, resources, publications, and answers to Frequently Asked Questions (FAQs).

Extreme drought to extreme floods: summary of hydrologic conditions in Georgia, 2009 [More info]
Discusses the nature and extent of extreme hydrologic events, with supporting observations of the water conditions and their effects on human activities.

Hydrologic conditions for Illinois: Drought perceptions, effects, and assessment [More info]
Map of stream conditions and links to precipitation data, drought statistics, and information on floods and droughts in Illinois.

Kansas drought watch [More info]
Drought map of Kansas link to real-time data for stream gaging stations and links to historic droughts of Kansas, ground water, drought definitions, and references.

Maine drought information: drought watch [More info]
Daily streamflow data and drought conditions for Maine.

New Jersey drought watch [More info]
Update on daily streamflow conditions and drought situation in New Jersey.

Wyoming drought watch [More info]
Gives map of streamflow conditions in Wyoming with access to streamflow data, real-time, daily and historic, plus information on drought analysis and management.

Coral mortality and African dust [More info]
Report with mini-movie and photos on the hypothesis that the atmospheric transport of dust arising from

the desertification in northern Africa led to algal infestation of corals, coral diseases, and the near extinction of associated sea urchins.

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Earthquakes

Ground shaking caused by the sudden release of accumulated strain by an abrupt shift of rock along a fracture in the earth or by volcanic or magmatic activity, or other sudden stress changes in the earth.

Subtopics:

Earthquake occurrences (42 items)

Earthquake hazards (50 items)

Related topics:

- Tsunamis
- Earthquake probabilities
- Hazards
- Seismology
- Tectonic processes
- Tectonophysics
- Volcanic activity

Refine results by state: Alaska Refine

Results 1 - 10 of 93 listed by similarity [list alphabetically]

Earthquake Hazards Program [More info]
Information on earthquake activity, earthquake science, and earthquake hazard reduction with links to news reports, products and services, educational resources for teachers, glossary, and current U.S. earthquake activity map.

Earthquakes: Frequently Asked Questions [More info]
Answers to a wide variety of questions (FAQs) about earthquakes, such as dictionary of terms, earthquake activity and probabilities, common myths, faults, plate tectonics, and earthquake measurement techniques.

Earthquake information by topic [More info]
Information on earthquakes by topic including faults, tsunami, seismic waves, and plate tectonics.

Earthquake notification services [More info]
Sign up for USGS real-time earthquake notification services.

Earthquake preparedness information [More info]
Links to web sites, publications, and fact sheets on earthquake preparedness.

Earthquake search [More info]
Search interface allowing searches of earthquake databases by various parameters including date, depth, intensity, area, and magnitude and download data in a variety of formats.

Earthquake hazard maps [More info]
National seismic hazards maps, global seismic hazards map, predictive intensity maps, shaking hazards maps and probabilities for California, and a variety of fact sheets on earthquakes.

Earthquake: Did you feel it? Report it here. [More info]
Place to provide information about ground shaking associated with significant earthquakes. A questionnaire to let us know what you felt following an earthquake in the United States or in other countries.

Earthquakes for kids [More info]
Links to various earthquake projects, facts, science fair ideas, earthquake science, becoming an earthquake scientist, image glossary, earthquake facts, and puzzles and games for children.

Earthquake glossary [More info]

Dictionary of terms associated with earthquakes with simple definitions and photographs especially suited for students.

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Energy resources

Natural resources that are used for heat and power generation, including oil, natural gas, coal, and geothermal energy.

Subtopics:
Coal resources (15 items)
Geothermal resources (10 items)
Natural gas resources (96 items)
Oil resources (90 items)
Wind energy (5 items)

Related topics:
- Economic geology

Refine results by state: Alabama Refine

Results 1 - 10 of 144 listed by similarity [list alphabetically]

Energy Resources Program [More info]
Research program conducting basic and applied research on geologic energy resources and on the environmental, economic, and human health impacts of their production and use.

Energy Resources Program - Western Region [More info]
Home page for the Western Region Energy Resources Program with links to Alaska petroleum studies project, coal, oil and gas, other energy sources, environment and human health, and publications.

Eastern Energy Resources Team (EERT) [More info]
Links to overview, major programs, products and publications on coal, oil & gas, environment & human health, and resource economics, and special applications

2010 updated assessment of undiscovered oil and gas resources of the National Petroleum Reserve in Alaska (NPRA) [More info]
We estimate mean volumes of 896 million barrels of oil and about 53 trillion cubic feet of nonassociated natural gas in conventional, undiscovered accumulations within this area, a reduction of our 2002 estimate due to new geologic information.

Alaska petroleum resources [More info]
Information on Alaskan energy resources in oil, petroleum, and natural gas with links to publications and other research.

An estimate of undiscovered conventional oil and gas resources of the world, 2012 [More info]
Using a geology-based assessment methodology, we estimated means of 565 billion barrels of conventional oil and 5,606 trillion cubic feet of undiscovered conventional natural gas in 171 priority geologic provinces of the world, exclusive of the U.S.

Assessment of coal geology, resources, and reserve base in the Powder River Basin, Wyoming and Montana [More info]
We estimated in-place resources of 1.07 trillion short tons of coal in this area using a geology-based assessment methodology. Of that total, recoverable coal was 162 billion tons, 25 billion economically recoverable.

Assessment of Gas Hydrate Resources on the North Slope, Alaska, 2008 [More info]
We estimate that there are about 85 trillion cubic feet (TCF) of undiscovered, technically recoverable gas

resources within gas hydrates in northern Alaska.

Assessment of in-place oil shale resources of the Green River Formation, Greater Green River Basin in Wyoming, Colorado, and Utah [More info]

Using the Fischer assay measure of oil yield, we estimated a total of 1.44 trillion barrels of oil in three assessed units. There is currently no economic method to recover oil from this geologic unit.

Assessment of In-Place Oil Shale Resources of the Green River Formation, Piceance Basin, Western Colorado [More info]

We estimated a total of 1.525 trillion barrels of oil are in place in seventeen oil shale zones in this area using a geology-based assessment methodology.

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Mineral resources

Natural occurrences of useful inorganic elements or compounds.

Subtopics:
Metallic mineral resources (25 items)
Nonmetallic mineral resources (16 items)

Related topics:
- Economic geology
- Mineralogy

Refine results by state: Alaska Refine

Results 1 - 10 of 66 listed by similarity [list alphabetically]

Mineral Resources Program [More info]
Homepage of the Mineral Resources Program that provides current, impartial information on the occurrence, quality, quantity, and availability of mineral resources with links to projects, publications, spatial data, teams, issues, and news.

Mineral Resources Data System (MRDS) [More info]
MRDS is a worldwide database of metallic and industrial mineral sites. Links to portions of the database that are available online.

Mineral resources online spatial data [More info]
Website for geospatial data on mineral resources of the U.S. or the world that users can locate by geographic area, view, and download.

Mineral resources spatial data [More info]
Geochemical, geological, geophysical, mineral, and general reference spatial datasets that users can locate and download.

Alaska mineral resources [More info]
Reports, data, and current research on mineral resources in Alaska

Central Colorado Assessment Project - application of integrated geologic, geochemical, biologic, and mineral resource studies [More info]
Diverse geoscientific and biological data collected in anticipation of ecological, land-management, and mineral resource-related problems.

Central Region Mineral Resources Team [More info]
Site for programs of the Central Region Mineral Resources Team with links to products, personnel, projects and programs of land stewardship, regional geochemistry, analytical chemistry, geology and resources assessment and remote sensing.

Eastern Mineral Resources [More info]
Home page for Eastern Mineral Resources Team conducting research on the occurrence, quality, quantity, and availability of mineral resources. Links to products, descriptions of research projects, and staff.

Preliminary Assessment of Non-Fuel Mineral Resources of Afghanistan, 2007 [More info]
Estimates of known and undiscovered copper resources total nearly 60 million metric tons of copper. Iron resources in known deposits total 2200 million metric tons of ore. Twenty mineralized areas meriting further study were identified.

Selected Western Region Mineral Resources on-line publications [More info]
Links to digital publications on minerals and mineral resources research in the western United States.

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Floods

Relatively high water that overflows the natural or artificial banks of a stream or coastal area that submerges land not normally below water level.

Subtopics:
Storm surge (8 items)

Flood preparedness (7 items)

Related topics:
- Controlled flooding
- Hazards
- Hydrology
- Surface water (non-marine)
- Watershed management

Refine results by state: Alabama Refine

Results 1 - 10 of 61 listed by similarity [list alphabetically]

Large floods in the United States: where they happen and why [More info]
Discussion of large floods and occurrence in relationship to regional climatology, topography, and basin size.

Natural Hazards - Floods [More info]
News and related information focusing on the hazards associated with floods in the United States.

An overview of coastal land loss with emphasis on the southeastern United States [More info]
Comprehensive background information on coastal land loss, discussing the influence of waves and storms, the intrinsic characteristics of the shoreline materials, and the role of human activities.

USGS news and information on El Nino [More info]
Information sources on El Nino effects such as landslides, coastal hazards, floods. Includes links to maps and images.

Water Watch: current water resources conditions [More info]
U.S. map of real-time streamflow compared to historical values with links to U.S. maps and data of surface water, ground water, precipitation, river conditions and floods and other information on current and past water resources conditions.

Assessment of potential coastal impacts: Hurricane Rita [More info]
Areas susceptible to inundation during landfall of Hurricane Rita are assessed by comparing lidar-derived dune elevations to simulated storm surge values. Results shown on pictorial maps.

Mississippi River flood: April 2001 [More info]
A large collection of photographs showing the historic flooding of the upper Mississippi River near LaCrosse, Wisconsin and points south during April of 2001. Includes video footage as well.

The Great Flood of 1993 [More info]
Photos, publicatons and recordbreaking flood peaks from the flood that included 9 states, the Mississippi and Missouri Rivers, and completely inundated 75 towns.

Upper Mississippi River basin: water quality, water elevation, and discharge [More info]
Information on flood potential and water quality in the upper Mississipi River, including downloadable data and map images.

Flood frequency [More info]
Links to Office of Surface Water memos, reference publications, training guides, and software for

computing flood frequency.

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Geospatial analysis

Detailed study of information such as measurements, counts, and computations as a function of geographical location.

Subtopics:
(none)

Related topics:
- Image analysis
- Topological analysis

Refine results by state: Alaska Refine

Results 1 - 10 of 28 listed by similarity [list alphabetically]

Geographic Analysis and Monitoring Program [More info]
Geographic Analysis and Monitoring Program (GAM) conducts studies about land surface change, environmental and human health, fire and urban ecology, and natural hazards to help decision-makers in land-use planning and land management.

A spatial analysis of cultural ecosystem service valuation by regional stakeholders in Florida: a coastal application of the social values for ecosystem services (SolVES) tool [More info]
Research project to close gaps in our knowledge about the attitudes and perceptions, or nonmonetary values, held by coastal residents for ecosystem services, particularly for cultural services.

Alaska Geospatial Data Clearinghouse [More info]
Clearinghouse for the description and availability of multiple geospatial datasets relating to Alaska from many federal, state and local cooperating agencies under the coordination of the Alaska Geographic Data Committee.

Spatial Analysis Branch, National Wetlands Research Center [More info]
Home page for National Wetlands Research Center's (NWRC) Spatial Analysis Branch (SAB), which uses state-of-the-art technology to assist the work of natural resource managers with spatial data and computerized analysis techniques.

A New Method for Mapping Population Distribution [More info]
With the addition of elevation and land use and land cover data, we can show population density on a map much more effectively than if we simply color census areas. The resulting maps should allow better planning, especially in highly developed areas.

A program for the conversion of The National Map data from proprietary format to resource description framework (RDF) [More info]
To expand data functionality and capabilities for users of The National Map of the U.S. Geological Survey, data sets for six watersheds and three urban areas were converted from the Best Practices vector data model formats to Semantic Web data formats.

Advanced Remote Sensing Research [More info]
New and experimental methods of analyzing geospatial imagery, including detailed spectral analysis of land surface materials, historical image analysis, and long wave infrared image analysis.

An Overview of the GIS Weasel [More info]
Software system designed to aid users in preparing spatial information as input to lumped and distributed parameter environmental simulation models.

Columbia Environmental Research Center [More info]
Website for the Columbia Environmental Research Center with links to staff, publications, databases, field stations, and projects including those on the Rio Grande, burrowing owls, sea turtles, and geospatial technology.

Columbia River USGS Interdisciplinary Science Explorer WebSite [More info]
Web site for an Internet Map Service (IMS) serving base cartographic data, USGS data, science applications and real time modelling analyses for the Columbia River basin using geospatial analysis technology.

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Groundwater

All water that exists beneath the land surface, but more commonly applied to water in fully saturated soils and geologic formations.

Subtopics:
Groundwater level (27 items)

Related topics:
- Freshwater ecosystems
- Groundwater flow
- Groundwater quality
- Hydrogeology

Refine results by state: Alabama Refine

Results 1 - 10 of 200 listed by similarity [list alphabetically]

Ground water information pages [More info]
Lead page to connect to ground water information on the Nation's ground water resources and ground water activities of the USGS. Includes links to ground-water data, news reports, publications, field techniques, models, programs, and issues.

Ground-water data for the Nation [More info]
National Water Information System (NWIS) real-time data on selected ground water sites, ground water level data, site inventory of wells, test holes, drains, springs and excavations and ground water-quality data for the United States.

BRASS: Bedrock Regional Aquifer Systematics Study [More info]
Description of the project to publish new bedrock geologic maps in the United States to advance the understanding of the region's bedrock aquifers. Includes list of projects.

Ground water atlas of the United States [More info]
The U.S. ground water atlas consists of information on ground water resources of 13 regions covering the 50 States, Puerto Rico, and the U.S. Virgin Islands. Text and maps can be viewed online and downloaded as ASCII, GIF, and *.eps files.

Ground water climate response network [More info]
Map showing a network of selected ground water wells in the U.S. The water levels in these wells are used to monitor the effects of droughts and other climate variability.

Water science for schools: the Earth's water - ground water [More info]
Educational site for elementary schools students on ground water sources, ground water flow, and aquifers.

Assessing ground-water vulnerability to contamination: providing scientifically defensible information for decision makers [More info]
The information, citations, and hypothetical examples provided in this report highlight how basic principles and assessments are essential components of the regulatory and policy decision-making process. Link to PDF version.

Measuring human-induced land subsidence from space [More info]
Examples of the use of Satellite Interferometric Synthetic Aperture Radar to measure and map changes on the Earth's surface as an aid to understanding how ground-water pumping, hydrocarbon production, or other human activities cause land subsidence.

Aquifer basics [More info]

Links to general information on water supply by aquifers based on rock types and to principal national aquifers by name.

Water-Level Changes in the High Plains Aquifer, Predevelopment to 2002, 1980 to 2002, and 2001 to 2002 [More info]

Data from some 7,000 wells monitoring annual water level changes in the High Plains aquifer indicting changes in water level 1980 to 2002.

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Surface water (non-marine)

Open bodies of water, such as lakes, rivers, or streams. All non-marine waters on the surface of the earth, including fresh, brackish, and salt water.

Subtopics:
River systems (34 items)
Surface-water level (7 items)

Related topics:
- Floods
- Freshwater ecosystems
- Hydrology
- Limnology
- Ocean characteristics
- Ocean processes
- Stream discharge
- Snow and ice cover
- Streamflow
- Surface water quality

Refine results by state: Alabama Refine

Results 1 - 10 of 182 listed by similarity [list alphabetically]

Surface water information pages [More info]
Lead page for detailed United States surface water information with links to real-time and historic streamflow data, suspended sediment data, USGS programs and facilities, publications, techniques, and featured news releases.

Surface-water data for the Nation [More info]
Homepage for USGS national surface-water data with more than 850,000 station years of time-series data for stream levels, streamflow (discharge), reservoir and lake levels, surface-water quality, and rainfall plus real-time data and tutorial.

National Hydrography Dataset (NHD) [More info]
Main page for National Hydrography Dataset (NHD), a comprehensive set of digital spatial data about surface water features, with links to references, data, software tools, applications, tutorials, technical support, and data maintenance.

Water science for schools: Earth's water - surface water [More info]
Educational site for elementary school students with information on surface water (rivers, streams, lakes, floods).

National Streamflow Information Program [More info]
National Streamflow Information Program home page describing the operation and maintenance of 7000 streamgages, overview of the program, system for collection of streamflow data, maintaining of historic streamflow data, and available reports.

Hydrologic unit maps [More info]
Overview of hydrologic unit maps adapted from USGS Water-Supply Paper 2294 giving description of hydrologic units, link to list of hydrologic units, paper maps and digital spatial data sets.

River corridor habitat dynamics, Lower Missouri River [More info]
Detailed description of The Lower Missouri River Corridor Habitat Dynamics Project studying river habitat in a heavily engineered river.

Pesticides in Midwestern rivers, 1989-2002 [More info]
Overview of aspects of research on pesticides and herbicides in Midwestern rivers with collection of data, results over a period of time, online publications, and bibliography.

Columbia Environmental Research Center [More info]
Website for the Columbia Environmental Research Center with links to staff, publications, databases, field stations, and projects including those on the Rio Grande, burrowing owls, sea turtles, and geospatial technology.

Large floods in the United States: where they happen and why [More info]
Discussion of large floods and occurrence in relationship to regional climatology, topography, and basin size.

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Find a topic in this index: Go!

Environmental health (human)

Effects of the environment on human health.

Subtopics:
Human environmental safety (12 items)

Related topics:
- Human impacts
- Social sciences
- Toxic radionuclide contamination
- Toxic trace element contamination
- Virology

Refine results by state: Alaska Refine

Results 1 - 10 of 29 listed by similarity [list alphabetically]

Environment and human health [More info]
Home page for USGS research on the relationship of environment and health with links to fact sheets, reports, projects and programs, Human Health database and meeting and conferences.

Human Health Database [More info]
Central site providing links to USGS databases and homepages providing significant data and information on research related to human health.

Coal-tar-based pavement sealcoat, polycyclic aromatic Hydrocarbons (PAHs), and environmental health [More info]
Pavement sealant contains chemicals that are known carcinogens, which get into nearby homes, lakes, and the air. Sealants based on coal tar release more dangerous chemicals than those based on asphalt.

Environmental health science at the U.S. Geological Survey [More info]
Explains the USGS strategy for research directed towards preventing or reducing the adverse impacts of toxicologic and infectious disease.

U.S. - Mexico Border Environmental Health Initiative: interactive maps [More info]
Geographic and scientific information focused on health issues in the area of the US-Mexico border

Alaska Interagency Ecosystem Health Work Group [More info]
A community of practice that recognizes the interconnections between the health of ecosystems, wildlife, and humans and meets to facilitate the exchange of ideas, data, and research opportunities.

Great Lakes Beach Health Initiative [More info]
Research and development efforts to improve our ability to provide scientific information needed by local beach managers faced with questions about environmental quality and possible beach closure or resource usage.

Health effects of mineral dusts [More info]
Overview of project to develop and apply a variety of earth science methods to interpret the geologic links between mineral dusts such as silica and asbestos and human health problems with links to contacts, tasks, and products.

Understanding beach health throughout the Great Lakes-Entering a new era of investigations [More info]
People who manage recreational areas need better, more timely estimates of the likelihood that the beach and lake waters will be hazardous to human health, and which factors cause those hazards.

USGS Science Serves Public Health [More info]

Studies showing how human activities affect environmental and ecological health and how the quality of our environment and wildlife affects human health.

Result pages: **1** 2 3 Next All

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Invasive species

Plant, animal, or microbe species that is non-native (or alien) to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm, or harm to human health.

Subtopics:
(none)

Biological invasions (0 items)

Related topics:
- Biodiversity
- Ecology
- Human impacts
- Life sciences

Refine results by state: Arizona Refine

Results 1 - 10 of 28 listed by similarity [list alphabetically]

Invasive species program [More info]
This program provides management-oriented research and delivers information needed to prevent, detect, control, and eradicate invasive species, and to restore impaired ecosystems.

Invasive Species Program -- Snakeheads, aquatic invaders [More info]
Snakeheads, aggressive airbreathing freshwater fishes that are not native to North America, are considered injurious to certain native North American fish and other aquatic wildlife.

Invasive species research [More info]
Links to research projects that will improve the ability to detect, monitor, and predict the effects of invasive species, including exotic animals, on native ecosystems of the Pacific Southwest (California, Nevada, Utah, and Arizona).

Applying remote sensing to invasive species science-A tamarisk example [More info]
Explains how remote sensing data are used to understand the current extent and likely future of an invasive plant, in this case a bush.

Patuxent's effects of ecological processes and human impacts on biological resources--invasive species [More info]
List and brief abstracts on research projects on invasive species, the ecology of introduced species, and developing management strategies at Patuxent Wildlife Research Center.

Using genetic research to inform imperiled and invasive species management [More info]
Describes investigative techniques focused on genetic characteristics of individuals and populations, and explains how this information helps improve existing natural populations and potentially impede invasive populations.

Biological resource status and trends: Aquatic invasive organisms [More info]
Information concerning status and trends of biological resources, focusing on aquatic invasive organisms

Biological resource status and trends: Invasive organisms [More info]
Information concerning status and trends of biological resources, focusing on invasive organisms

Biological resource status and trends: Terrestrial invasive organisms [More info]
Information concerning status and trends of biological resources, focusing on terrestrial invasive organisms

South Florida Restoration Science Forum: Invasive exotic species [More info]
Posters on the distribution and control of nonindigenous species introduced into southern Florida.

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Map interfaces

Online interfaces showing interactive maps and geospatial information

Subtopics:
Web map services (5 items)

Refine results by state: Alabama Refine

Results 1 - 10 of 26 listed by similarity [list alphabetically]

Coastal and Marine Geology Program interactive map server [More info]
Interactive map server to view and create maps using available coastal and marine geology data sets of offshore and coastal U.S. and the Gulf of Mexico. Links to available data and metadata that can be downloaded.

Gulf of Maine internet map [More info]
Gulf of Maine regional overview interactive map depicting research activities of the U.S. Geological Survey showing surficial sample sites, bathymetry, continental margin and coastal areas.

Mississippi Fan internet map [More info]
Mississippi River alluvial fan interactive map with GIS data and imagery depicting core sites, depositional and channel interpretation, Gloria and SeaMarc datasets.

National Atlas Map Maker - Map layers [More info]
Links to hundreds of map layers of geospatial information listed by subjects for use with the National Atlas Map Maker to assemble, view, and print customized maps using one or more of the layers.

Tampa Bay Estuary Interactive Mapping System (IMS) [More info]
Interactive Mapping Service (IMS) is an Internet based Geographic Information System designed to provide users with online mapping capability of habitats, land use and land cover, and seagrass for areas of Tampa Bay.

The National Map Viewer [More info]
National Map Viewer, a GIS application, is a Web-enabled portal to the geospatial information contained in The National Map. It supports on-line access and allows the download of digital data and creation of cartographic products.

U.S. - Mexico Border Environmental Health Initiative: interactive maps [More info]
Geographic and scientific information focused on health issues in the area of the US-Mexico border

U.S. Pacific West Coast internet map server [More info]
Interactive map of the U.S. Pacific West Coast with data layers of Gloria sidescan data, multibeam backscatter and shaded relief imagery.

Columbia River USGS Interdisciplinary Science Explorer WebSite [More info]
Web site for an Internet Map Service (IMS) serving base cartographic data, USGS data, science applications and real time modelling analyses for the Columbia River basin using geospatial analysis technology.

EarthExplorer [More info]
Query and order satellite images, aerial photographs, and cartographic products through the U.S. Geological Survey. Log in as a guest or as a registered user with more privileges. Uses Java Script or Applet Versions for PC, MacIntosh, and Unix programs.

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Maps and atlases

Representation, usually on a flat surface, of a part or whole of the Earth or other parts of the universe. Collections of maps linked digitally or bound together in a book are called atlases.

Subtopics:
Geologic maps (28 items)
Topographic maps (5 items)

Cadastral maps (0 items)
Earthquake activity maps (14 items)
Ground motion maps (14 items)
Seismic hazard maps (14 items)
Shaking maps (seismic) (14 items)
Earthquake epicenter maps (14 items)
Engineering geology maps (2 items)
Geotechnical properties maps (2 items)
Rock mechanics maps (2 items)
Subsurface maps (93 items)
Geophysical maps (30 items)
Land subsidence maps (0 items)
Slope stability maps (2 items)
Aeromagnetic maps (4 items)
Basement maps (8 items)
Depth-to maps (2 items)
Earthquake occurrence maps (14 items)
Geochemical anomaly maps (9 items)
Gravity anomaly maps (5 items)
Hydrologic maps (28 items)
Landslide maps (5 items)
Landslide susceptibility maps (2 items)
Lithologic maps (18 items)
Magnetic anomaly maps (8 items)
Paleotectonic maps (6 items)
Seismic reflection survey maps (2 items)
Species distribution maps (12 items)
Surficial geologic maps (14 items)
Tectonic maps (6 items)
Thickness maps (2 items)
Seismicity maps (7 items)

Related topics:
- Cartography

Refine results by state: Alabama Refine

Results 1 - 10 of 217 listed by similarity [list alphabetically]

30 day animations of US daily streamflow maps [More info]

Animated WaterWatch streamflow maps showing daily highs and lows.

Digital representation of tree species range maps from "Atlas of United States trees" by Elbert L. Little, Jr. (and other publications) [More info]
Maps of the ranges of tree species in North America compiled by Elbert Little and others were digitized for use in USGS vegetation and climate modeling studies. Can be downloaded as ArcView shapefiles and in PDF graphic files.

Earthquake hazard maps [More info]
National seismic hazards maps, global seismic hazards map, predictive intensity maps, shaking hazards maps and probabilities for California, and a variety of fact sheets on earthquakes.

FAQs - National Seismic Hazard Maps [More info]
Provides detailed technical information on earthquake hazards in the form of frequently asked questions. Designed for the technical audience, including building and safety planners.

Geomagnetic charts [More info]
Links to charts of the Earth's magnetic field in different projections showing declination, inclination, and total, horizontal and vertical intensities plus references and note on limitations.

Hydrologic unit maps [More info]
Overview of hydrologic unit maps adapted from USGS Water-Supply Paper 2294 giving description of hydrologic units, link to list of hydrologic units, paper maps and digital spatial data sets.

Magnetic and gravity anomaly maps of West Virginia [More info]
Colored map in two parts and text in PDF files requiring Adobe Acrobat Reader 3.0 to view.

Maps of distribution and abundance of selected species of birds on uncultivated native upland grasslands and shrubsteppe in the northern Great Plains [More info]
Links to maps of breeding distributions of bird species on grasslands and shrublands in the northern Great Plains. Maps can also be downloaded from *.zip files in HTML format.

Maps of recent earthquake activity in California-Nevada [More info]
Near-real-time maps of location, ground motion, and shaking intensity of earthquakes in California and Nevada for the past hour, past day, and past week and links to other earthquake information.

Maps of the distribution and occurrence of ground water quality constituents and early 1970's land use in New Jersey [More info]
Links to maps of New Jersey showing nitrate levels, pesticides, Total Volatile Organic Compounds (VOCs), and radium in wells and land use of the 1970s.

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Microbiology

Branch of biology dealing with organisms too small to be seen without the use of a microscope.

Subtopics:
Virology (4 items)

Related topics:
- Archaea
- Bacteria
- Culturing (specimens)
- Faunal and floral census (microscopic)
- Plankton
- Protists

Results 1 - 12 of 12 listed by similarity [list alphabetically]

Microbiology research [More info]
Highlights scientific studies in which microbiology plays an important role; includes a listing of USGS scientists with expertise in microbiology.

Ohio District's Microbiology Program [More info]
Overview of microbiology projects related to water quality investigating bacteria, viral and protozoan pathogens and indicators in the environment with links to publications, analytical and field methods, laboratory, and current projects.

Biochemistry/Physiology Branch, Columbia Environmental Research Center (CERC) [More info]
Homepage for the Biochemistry and Physiology Branch in Columbia, MO, which develops analytical techniques (cell bioassay/immunoassay) on toxicity related to fish and wildlife; and conducts research in microbiology and physiology.

Biological soil crusts [More info]
Explains biological soil crusts, organism-produced soil formations commonly found in semiarid and arid environments, with special reference to their biological composition, physical characteristics, and ecological significance.

Biological soil crusts: webs of life in the desert [More info]
Fact sheet on the need to protect biological soil crusts in the desert. These crusts are most of the soil surface in deserts not covered by green plants and are inhabited by cyanobacterium (blue-green algae) and other organisms useful to the ecosystem.

Emerging diseases in wildlife [More info]
News releases on adenovirus, West Nile Virus, foot and mouth disease, iridovirus, chronic wasting disease, and other emerging health issues in wildlife.

Field manual of wildlife diseases: general field procedures and diseases of birds [More info]
Manual listing field procedures for bird specimen collecting, bacterial, fungal, parasitic, and viral diseases, biotoxins, chemical toxins, common and scientific names of birds, and glossary. Manual can be downloaded or viewed in PDF format.

Microbial ecology of deep-water mid-Atlantic canyons [More info]
Plan for an upcoming study, at the microbiological scale, of the benthic communities (including corals) that reside in and around mid-Atlantic canyons, which are located at the edge of the continental shelf.

Microbial production of natural gas from coal and organic-rich shale [More info]

Explains how natural gas can be formed by microorganisms from geological materials, and how we plan to assess the potential value of this process for improving energy resources.

National Wildlife Health Center [More info]

The National Wildlife Health Center (NWHC) is a biomedical laboratory assessing the impact of disease on wildlife and identifying the role of various pathogens in wildlife losses. Site has links to news, programs, publications and metadata.

Scientists discover analog for extraterrestrial life in Idaho Hot Springs [More info]

Report on a community of microscopic organisms, Archaea, found deep in an Idaho hot spring living on hydrogen and carbon dioxide that could possibly exist on other planets. Includes links to related studies, investigators, and microbiology.

West Nile Virus (WNV) [More info]

National Wildlife Health Center studies the West Nile Virus to learn the current geographic extent, to understand how the virus moves between birds, mosquitoes, and humans, and to predict future movements of the virus.

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Real-time monitoring and reporting

Gathering information through periodic or continuous measurement in the field to provide a view of current conditions. In some instances, observations may not be subject to rigorous review before release; this will be noted in the documentation accompanying the data.

Subtopics:
(none)

Refine results by state: Alabama Refine

Results 1 - 10 of 174 listed by similarity [list alphabetically]

Earthquake Hazards Program [More info]
Information on earthquake activity, earthquake science, and earthquake hazard reduction with links to news reports, products and services, educational resources for teachers, glossary, and current U.S. earthquake activity map.

Earthquake: Did you feel it? Report it here. [More info]
Place to provide information about ground shaking associated with significant earthquakes. A questionnaire to let us know what you felt following an earthquake in the United States or in other countries.

Water resources real-time data for the Nation [More info]
Access to national water resources real-time data typically recorded at 15-60 minute intervals, stored onsite, and then transmitted to USGS offices every 4 hours. Select for site information, ground water, surface water, and water quality.

Water Watch: current water resources conditions [More info]
U.S. map of real-time streamflow compared to historical values with links to U.S. maps and data of surface water, ground water, precipitation, river conditions and floods and other information on current and past water resources conditions.

Volcano Hazards Program [More info]
Homepage for USGS Volcano Hazards Program with feature stories, and links to worldwide volcano updates, volcanic hazards, reducing volcanic risk, USGS international programs, and resources such as educator's page, videos, and online reports.

Landslide events [More info]
Current, regularly updated reports of landslides nationwide

Ground water climate response network [More info]
Map showing a network of selected ground water wells in the U.S. The water levels in these wells are used to monitor the effects of droughts and other climate variability.

National Geomagnetism Program [More info]
Overview of USGS programs related to geomagnetism including observatories, data, program services, links to models, charts, and movies, program contacts, Intermagnet, Geomag, publications, and bibliographies.

30 day animations of US daily streamflow maps [More info]
Animated WaterWatch streamflow maps showing daily highs and lows.

Alaska Volcano Observatory [More info]

Homepage for Alaska Volcano Observatory (AVO) with offices in Anchorage and Fairbanks monitors and studies Alaska's hazardous volcanoes. Links to featured news, updates, publications and products, and a volcano atlas for Alaska.

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Remote sensing

The process of detecting and monitoring the physical characteristics of an area by measuring its reflected and emitted radiation at a distance from the targeted area. Remote sensing is used in this thesaurus to refer to methods that are solely or primarily deployed through air or space. Included in this concept are studies of biological populations using remote imaging techniques. Related methods which are used most frequently on the ground (e.g. photography), whether underwater, from airplanes or satellites, are not included in the term remote sensing.

Subtopics:
IFSAR (4 items)
LIDAR (17 items)
Aeromagnetic surveying (10 items)
Aeroradiometric surveying (1 items)
Hyperspectral imaging (5 items)
Infrared imaging (20 items)
Microwave imaging (1 items)
Multispectral imaging (26 items)
Radar imaging (4 items)
Thermal imaging (2 items)
Visible light imaging (5 items)

Remote-sensing data (28 items)
Remote-sensing images (28 items)
Composite burn index (1 items)
Normalized burn ratio (1 items)
Satellite altimetry (2 items)
Satellite images (28 items)

Related topics:
- Aerial photography
- Geography
- Seismic methods
- Telemetry
- Videography

Refine results by state: Alabama Refine

Results 1 - 10 of 117 listed by similarity [list alphabetically]

Land Remote Sensing Program [More info]
Land Remote Sensing Program (LRS) provides a primary source of remotely sensed data and applications of land remote sensing, nationally and internationally.

Remote sensing phenology [More info]

Advanced Remote Sensing Research [More info]
New and experimental methods of analyzing geospatial imagery, including detailed spectral analysis of land surface materials, historical image analysis, and long wave infrared image analysis.

Applying remote sensing to invasive species science-A tamarisk example [More info]
Explains how remote sensing data are used to understand the current extent and likely future of an invasive plant, in this case a bush.

[More info]

Assessment of least tern and piping plover habitats on the Missouri River using remote sensing
Analysis and modeling of multispectral imagery helps to predict the suitability of sand bars for nesting of these migratory birds.

National Satellite Land Remote Sensing Data Archive [More info]
USGS Archive for preservation and access for satellite remote sensing data and imagery (Landsat and AVHRR). Links to locating and ordering imagery, international collaborators, advisory committee, and Earthshots (satellite photos.).

Post-fire burn assessment by remote sensing on Federal lands [More info]
Remote sensing and field sampling techniques to support national assessment of burned areas

Wetland fire remote sensing research -- The Greater Everglades example [More info]
The U.S. Geological Survey uses remote sensing to improve fire-management databases in the Everglades, gain insights into post-fire land-cover dynamics, and develop spatial and temporal fire-scar data for habitat and hydrologic modeling.

Earthshots, satellite images of environmental change [More info]
Satellite images of geographic areas of interest, cities, deserts, glaciers, geologic features, disaster areas, water bodies, and wildlife linked with articles, maps, and other images such as AVHRR, photographs, and special project images.

A rapid method for creating qualitative images indicative of thick oil emulsion on the ocean's surface from imaging spectrometer data [More info]
Technical details explaining how remotely sensed visible and infrared data can help recognize the extent of oil spills.

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Volcanoes

Vents in the surface of the Earth through which magma and associated gases erupt; also, the forms or structures, usually conical, that are produced by the erupted material. [Glossary of Geology, 4th ed.]

Alexandria Digital Library Feature Type Thesaurus

Subtopics:
(none)

Related topics:
- Craters
- Mountains

Refine results by state: Alaska Refine

Results 1 - 10 of 51 listed by similarity [list alphabetically]

Volcano Hazards Program [More info]
Homepage for USGS Volcano Hazards Program with feature stories, and links to worldwide volcano updates, volcanic hazards, reducing volcanic risk, USGS international programs, and resources such as educator's page, videos, and online reports.

Volcanoes [More info]
This booklet presents a generalized summary of the nature, workings, publications, and hazards of the common types of volcanoes around the world, along with a brief introduction to the techniques of volcano monitoring and research.

Volcanoes of Hawaii feature stories archive [More info]
Archive of feature stories on volcanic features on the Big Island, guided tours of Hawaii Volcanoes National Park, eruptions and eventful earthquakes, and other topics about the work of scientists at the Hawaiian Volcano Observatory.

Volcanoes of Hawaii photo gallery [More info]
Images of Hawaiian volcanoes and the islands they've built in the past few million years, and images of recent eruptions.

Volcanoes of the United States [More info]
Booklet detailing plate tectonics, eruptions, hazards, and monitoring of U.S. volcanoes with black and white photos.

Alaska volcanoes guidebook for teachers [More info]
The lessons and activities in this guidebook are meant to supplement and enhance existing science content already being taught to Alaskan students in grade levels 6-12.

Cascades Volcano Observatory - Learn about volcanoes [More info]
Educational volcano site providing answers to frequently asked volcano questions with links to other general information on volcanoes and to information on specific volcanoes including the Cascade Range volcanoes.

Eruptions of Hawaiian volcanoes - past, present, and future [More info]
Originally published in 1987, this general-interest booklet has been revised in anticipation of the Centennial of the Hawaiian Volcano Observatory (HVO) in January 2012.

Geologic hazards at volcanoes [More info]
Poster diagram showing the various hazards that accompany volcanic activity as they relate to the

structure of the volcano.

Most recent updates for U.S. volcanoes [More info]
Short descriptions of recent volcanic activity in the US.

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Water quality

The chemical, physical, and biological characteristics of water, usually in respect to its suitability for a particular purpose.

Subtopics:
Groundwater quality (80 items)
Marine water quality (14 items)
Surface water quality (66 items)

Water-quality data (83 items)

Related topics:
- Aquatic biology
- Drinking water use
- Hydrology
- Water chemistry
- Water properties
- Contamination and pollution

Refine results by state: Alabama Refine

Results 1 - 10 of 341 listed by similarity [list alphabetically]

National Water-Quality Assessment (NAWQA) Program [More info]
Primary homepage for the National Water Quality Assessment (NAWQA) Program studying water quality in river, aquifer and coastal water basins throughout the nation. Links to reports, data, models, maps and national synthesis studies.

Water quality information pages [More info]
Homepage of the Office of Water Quality programs on the quality of the Nation's surface water and ground water resources, with links to general information, quality assurance, software, data, publications, USGS facilities, techniques, and programs.

Water-quality data for the Nation [More info]
Homepage for USGS water quality information. The NWISWeb discrete sample database is a compilation of over 3.5 million historical water quality analyses in the USGS district databases. Also includes access to real-time data and a tutorial.

Water science for schools: water quality [More info]
Educational site for elementary school students on water quality with links to related topics including pesticides in ground water, kid's view, urbanization and water and others.

Toxic Substances Hydrology Program [More info]
Homepage for the Toxic Substances Hydrology Program, which provides scientific information on contaminated sites and on human and environmental health. Links to news, topical information, investigations, meetings, publications, and photos.

The USGS role in Total Maximum Daily Load (TMDL) assessments [More info]
Detailed information on Total Maximum Daily Load, the total quantity of a pollutant that a stream can carry and still conform to water quality standards, used as a measurement in the monitoring, assessment, and remediation of polluted waters.

Hypoxia [More info]
A brief definition and explanation of hypoxia with special reference to the Gulf of Mexico hypoxic zone along the Louisiana-Texas coast as well as extensive links to USGS and other related information resources.

Agricultural chemicals [More info]
Overview of the Toxic Substances Hydrology Program role in investigating the occurrence and fate of

agricultural chemicals with links to investigations, headlines, on-line fact sheets, new publications, bibliographies and photo gallery.

National highway runoff water quality data and methodology synthesis [More info]

Cooperative national project with the Federal Highway Administration (FHWA) to evaluate FHWA's guidelines for highway-runoff quality. Links to searchable online bibliography of related publications by the USGS, EPA, FHWA, and state agencies.

Primer on water quality [More info]

Fact sheet on what "water quality" means, how it is determined, and the natural processes and human activities that affect it.

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Fires

Combustion, marked by flames or intense heat, in natural settings, often ignited by lightning or human activities. For fires set as part of natural resource management, use 'controlled fires'.

Subtopics:
(none)

Fire preparedness (4 items)

Related topics:
- Atmospheric sciences
- Controlled fires
- Ecology
- Hazards
- Human impacts

Refine results by state: Alabama Refine

Results 1 - 10 of 24 listed by similarity [list alphabetically]

Natural Hazards - Wildfires [More info]
News and related information focusing on the importance of wildfire hazards in the United States.

Fire ecology research [More info]
Study of wildland fire history and fire ecology such as plants in the Sierra Nevada forests, California shrublands, the Mojave, and Sonoran deserts to develop management techniques that will reduce hazards.

Bibliography of fire effects and related literature applicable to the ecosystems and species of Wisconsin [More info]
The bibliography provides citations pertinent to the effects of fire and its prescribed use on the ecosystems and species of Wisconsin and the upper Midwest. Three separate subject indexes are provided: general, species, and geographic location.

Biological resource status and trends: Fire [More info]
Information concerning status and trends of biological resources, focusing on fire

Born of fire: restoring sagebrush steppe [More info]
USGS Forest and Rangeland Ecosystem Science Center: fact sheet in Adobe PDF about the studies to restore sagebrush steppe

Emissions from Coal Fires and Their Impact on the Environment [More info]
Reviews how coal fires occur, how they can be detected by airborne and remote surveys, and, most importantly, the impact coal-fire emissions may have on the environment and human health, especially mercury, carbon dioxide, carbon monoxide, and methane.

Geospatial Multi-Agency Coordination (GeoMAC) wildland fire perimeters, 2008 [More info]
Where the fires were, as GIS data in shapefile format, geographic coordinates, NAD83.

Geospatial Multi-Agency Coordination (GeoMAC) wildland fire support [More info]
Description of the Geospatial Multi-Agency Coordination (GeoMAC) project, online maps of current wildland fire locations using Netscape Communicator or Microsoft Internet Explorer, and user guide on how to use mapping application.

Hazards Management in Grand County, Colorado-Fire Fuels Characterization [More info]
Using land cover, vegetation, vegetation health, and other characteristics derived from remote-sensing imagery, we develop geospatial models depicting the susceptibility of this area to wildfires.

Housing arrangement and location determine the likelihood of housing loss due to wildfire [More info]

Using a geographic dataset of structures, with more than 5500 structures that were destroyed or damaged by wildfire since 2001, we identified the main contributors to property loss in two extensive, fire-prone regions in southern California.

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Science in the News

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- Climate of Genghis Khan's ancient
- Lawns across America: Is the US
- Energy Department Awards $2.2
- Be an Asteroid Hunter in NASA's First
- Herbivores + light = more plant
- New Maps of Afghanistan Provide
- New Permafrost But is it Permanent?

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The *Natural Inquirer* is a middle school science education journal! ... more

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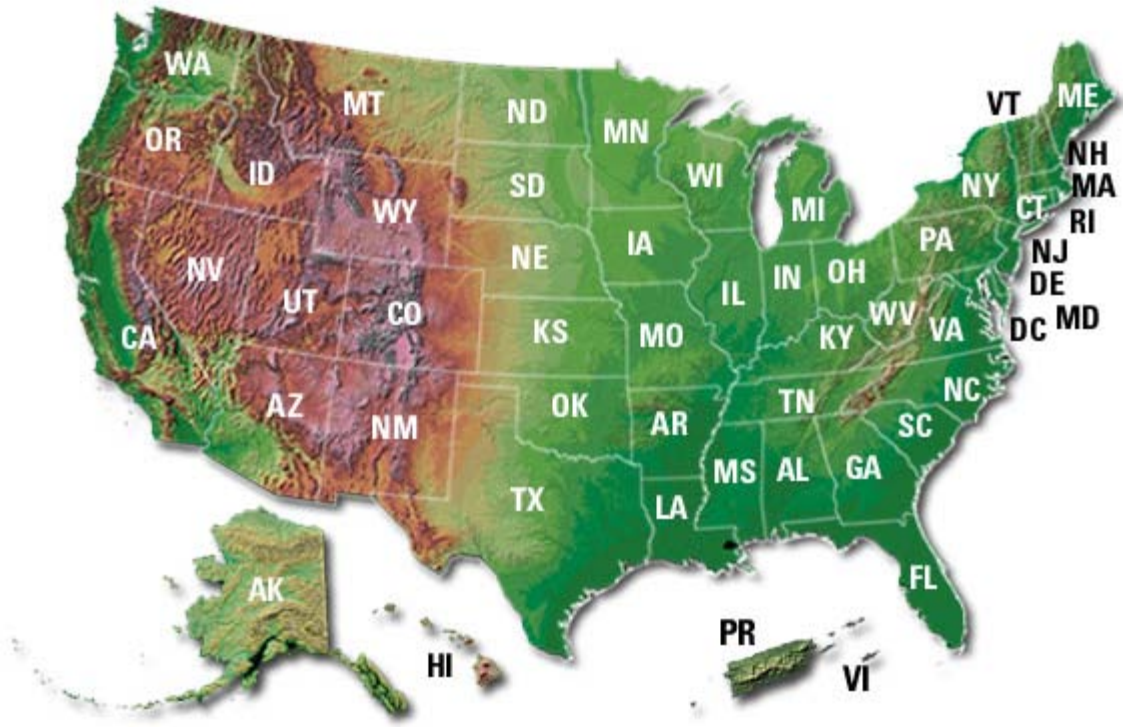
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Maine (ME)
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Minnesota (MN)
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New Mexico (NM)
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Oklahoma (OK)
Oregon (OR)
Pennsylvania (PA)
Puerto Rico (PR)
Rhode Island (RI)
South Carolina (SC)
South Dakota (SD)
Tennessee (TN)
Texas (TX)
Utah (UT)
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Virgin Islands (VI)
Virginia (VA)
Washington (WA)
West Virginia (WV)
Wisconsin (WI)
Wyoming (WY)

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Science In Your Backyard: Wyoming

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Wyoming:

- Changes in Stream-Water Quality Attributed to Coalbed Methane Development (new window)
  (Released: 2/25/2014 11:00:00 AM)
- The Yellowstone Volcano: Past, Present and Future (new window)
  (Released: 1/21/2014 1:00:00 PM)
- Low Concentrations of De-icing Chemicals Reaching Jackson Hole Groundwater (new window)
  (Released: 1/8/2014 4:48:14 PM)
- Interior's Secretary Jewell Announces New Wildlife and Climate Studies at the Southwest Climate Science Center (new window)
  (Released: 12/19/2013 12:00:00 PM)
- Interior's Secretary Jewell Announces New Wildlife and Climate Studies at the North Central Climate Science Center (new window)
  (Released: 12/19/2013 11:00:00 AM)

View more news releases of interest for Wyoming (new window)

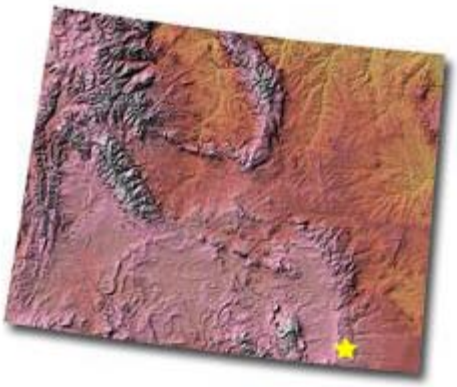
Wyoming Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Wyoming Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity

Wyoming State Facts



Locations on image are approximate

Capital: Cheyenne(★)
Land Area: 97,100 sq. miles
(source: 2010 Census)
Population: 563,626
(source: 2010 Census estimate)
Highest Point:
Gannett Peak at 13,804 feet, located in the county/subdivision of Fremont
(source: U.S. Geological Survey)
Lowest Point:
Belle Fourche River at 3,099 feet, located in the county/subdivision of Crook
(source: U.S. Geological Survey)
Geographic Center:
Located in Fremont County approx. 58 miles east-northeast of Lander
(source: U.S. Geological Survey)

- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment
- National Geospatial Program Partnerships (new window)
  A network that cultivates and maintains long-term relationships with partners and develops agreements which advance the National Spatial Data Infrastructure (NSDI) and support USGS science.
- Recreational Information (new window)
  Looking for recreation? General information on tourist sites, trails, byways, maps, passes, and more
- Water Resources Information (new window)
  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: Wisconsin

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Wisconsin:

- National Scenic Trails Added to Washington State Maps (new window)
  (Released: 2/12/2014 9:00:00 AM)
- Limited Food May be Significantly Changing Great Lakes Ecosystems (new window)
  (Released: 12/12/2013 11:45:00 AM)
- Instant Bacteria Forecasts Make Swimmers at Great Lakes Beaches Safer (new window)
  (Released: 11/21/2013 12:48:25 PM)
- Household Products May Harm Tree Swallows in Minnesota and Wisconsin (new window)
  (Released: 10/23/2013 12:35:16 PM)
- Real-time Monitoring Pays Off for Tracking Nitrate Pulse in Mississippi River Basin to the Gulf of Mexico (new window)
  (Released: 8/21/2013 2:00:00 PM)

View more news releases of interest for Wisconsin (new window)

Wisconsin Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
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  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Wisconsin Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity

Wisconsin State Facts



Locations on image are approximate

Capital: Madison(★)
Land Area: 54,310 sq. miles
(source: 2010 Census)
Population: 5,686,986
(source: 2010 Census estimate)
Highest Point:
Timms Hill at 1,951 feet, located in the county/subdivision of Price
(source: U.S. Geological Survey)
Lowest Point:
Lake Michigan at 579 feet
(source: U.S. Geological Survey)
Geographic Center:
Located in Wood County approx. 9 miles southeast of Marshfield
(source: U.S. Geological Survey)

- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment
- National Geospatial Program Partnerships (new window)
  A network that cultivates and maintains long-term relationships with partners and develops agreements which advance the National Spatial Data Infrastructure (NSDI) and support USGS science.
- Protecting Wisconsin Groundwater Through Comprehensive Planning (new window)
  Learn more about groundwater, find groundwater data and policies, and plans to protect groundwater in your area.
- Recreational Information (new window)
  Looking for recreation? General information on tourist sites, trails, byways, maps, passes, and more
- Water Resources Information (new window)
  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: West Virginia

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for West Virginia:

- Crowd-Sourcing the Nation: Using Volunteers for Enhanced Data Collection (new window)
  (Released: 4/1/2013 6:41:01 PM)
- Mining Waste Byproduct Capable of Helping Clean Water (new window)
  (Released: 12/17/2012 1:49:17 PM)
- Groundwater Quality Generally Good in West Virginia (new window)
  (Released: 12/6/2012 1:23:13 PM)
- USGS Releases First Assessment of Shale Gas Resources in the Utica Shale: 38 trillion cubic feet (new window)
  (Released: 10/4/2012 5:24:04 PM)
- A Big Day for Science: Citizens Have Contributed One Million Observations to Top Nature Database (new window)
  (Released: 5/3/2012 9:00:00 AM)

View more news releases of interest for West Virginia (new window)

West Virginia Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
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- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted West Virginia Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)

West Virginia State Facts



Locations on image are approximate

Capital: Charleston()
Land Area: 24,078 sq. miles
(source: 2010 Census)
Population: 1,852,994
(source: 2010 Census estimate)
Highest Point:
Spruce Knob at 4,863 feet, located in the county/subdivision of Pendleton
(source: U.S. Geological Survey)
Lowest Point:
Potomac River at 240 feet, located in the county/subdivision of Jefferson
(source: U.S. Geological Survey)
Geographic Center:
Located in Braxton County approx. 4 miles east of Sutton
(source: U.S. Geological Survey)

Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment

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Science In Your Backyard: Washington

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Washington:

- Barred Owls Ousting Spotted Owls in the Pacific Northwest (new window)
  (Released: 2/24/2014 11:25:09 AM)
- Linking U.S. and Canadian Border Waters (new window)
  (Released: 2/19/2014 9:00:00 AM)
- National Scenic Trails Added to Washington State Maps (new window)
  (Released: 2/12/2014 9:00:00 AM)
- Elwha Sediment Detailed in New Document (new window)
  (Released: 2/11/2014 1:00:00 PM)
- Salmon Conservation Efforts Honored (new window)
  (Released: 1/16/2014 3:00:00 PM)

View more news releases of interest for Washington (new window)

Washington Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Current Volcanic Activity in the Cascade Range (new window)
  Current volcanic activity from the Cascades Volcano Observatory.
- Earthquake Activity (new window)
  Real-time and historical earthquake information
- Landslide Activity (new window)
  Real-time monitoring of selected landslides and hillsides.

Highlighted Washington Links:

- Coastal Habitats in Puget Sound (CHIPS) (new window)
  Critical science dedicated to helping solve problems related to the Puget Sound ecosystem.
- Biological Resource Information (new window)

Washington State Facts



Locations on image are approximate

Capital: Olympia(★)
Land Area: 66,544 sq. miles
(source: 2010 Census)
Population: 6,724,540
(source: 2010 Census estimate)
Highest Point:
Mt. Rainier at 14,411 feet, located in the county/subdivision of Pierce
(source: U.S. Geological Survey)
Lowest Point:
Pacific Ocean at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in Chelan County approx. 10 miles west-southwest of Wenatchee
(source: U.S. Geological Survey)

Activities to support the sound management and conservation of our Nation's biological resources

- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)
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Science In Your Backyard: Virginia

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Virginia:

- Media Advisory: USGS to Host Congressional Briefing: Earthquake Science and Remaining Mysteries (new window)
  (Released: 2/20/2014 11:20:00 AM)
- New Sensor Network to Detail Virginia Earthquakes (new window)
  (Released: 1/8/2014 3:00:00 PM)
- Tsunami on the Delaware River? Study of Historical Quake and Early East Coast Seismicity (new window)
  (Released: 9/3/2013 3:00:00 PM)
- Remapping Coastal Areas Damaged by Hurricane Sandy (new window)
  (Released: 8/20/2013 11:00:00 AM)
- Largemouth Bass Virus Found in Northern Snakeheads in Virginia (new window)
  (Released: 8/13/2013 9:00:00 AM)

View more news releases of interest for Virginia (new window)

Virginia Real-Time Information:

- Real-Time Water Data (new window)
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Highlighted Virginia Links:

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- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for,

Virginia State Facts



Locations on image are approximate

Capital: Richmond()
Land Area: 39,594 sq. miles
(source: 2010 Census)
Population: 8,001,024
(source: 2010 Census estimate)
Highest Point:
Mt. Rogers at 5,729 feet, located in the county/subdivision of Grayson-Smyth
(source: U.S. Geological Survey)
Lowest Point:
Atlantic Ocean at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in Buckingham County approx. 5 miles southwest of Buckingham
(source: U.S. Geological Survey)

and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment

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Science In Your Backyard: Virgin Islands

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Virgin Islands:

- Extent and Speed of Lionfish Spread Unprecedented (new window)
  (Released: 3/14/2011 8:30:00 AM)
- The Good, the Bad, and the Smelly: USGS at the 2008 Coral Reef Symposium (new window)
  (Released: 7/7/2008 12:43:56 PM)
- Media Advisory: USGS To Host Congressional Briefings on How Science is Used to Respond to Hurricanes (new window)
  (Released: 1/24/2008 12:04:56 PM)
- Research Needed on Imperiled Coral Ecosystems (new window)
  (Released: 7/30/2007 8:08:21 AM)
- Supertyphoon Pongsona Damages Guam's Water Supplies (new window)
  (Released: 12/19/2002)

View more news releases of interest for Virgin Islands (new window)

Virgin Islands State Facts



Locations on image are approximate

Capital: Charlotte Amalie(★)
Highest Point:
Crown Mtn. at 1,556 feet, located in the county/subdivision of St. Thomas Island
(source: U.S. Geological Survey)
Lowest Point:
Atlantic Ocean at Sea Level
(source: U.S. Geological Survey)

Virgin Islands Real-Time Information:

- Real-Time Water Data (new window)
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Science In Your Backyard: Vermont

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Vermont:

- Linking U.S. and Canadian Border Waters (new window)
  (Released: 2/19/2014 9:00:00 AM)
- Crowd-Sourcing the Nation: USGS Seeking More Volunteers (new window)
  (Released: 6/19/2013 12:00:00 PM)
- Study Confirms Presence of Contaminants in Some New England Bedrock Groundwater, ID's New Concerns, Determines Likely Locations (new window)
  (Released: 6/25/2012 6:26:36 PM)
- Low April Streamflows Not Necessarily an Indicator of Summer Drought (new window)
  (Released: 5/21/2012 2:00:00 PM)
- A Big Day for Science: Citizens Have Contributed One Million Observations to Top Nature Database (new window)
  (Released: 5/3/2012 9:00:00 AM)

View more news releases of interest for Vermont (new window)

Vermont Real-Time Information:

- Real-Time Water Data (new window)
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- WaterWatch—Current Streamflow Conditions (new window)
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Highlighted Vermont Links:

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  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity

Vermont State Facts



Locations on image are approximate

Capital: Montpelier(★)
Land Area: 9,250 sq. miles
(source: 2010 Census)
Population: 625,741
(source: 2010 Census estimate)
Highest Point:
Mt. Mansfield at 4,393 feet, located in the county/subdivision of Chittenden
(source: U.S. Geological Survey)
Lowest Point:
Lake Champlain at 95 feet
(source: U.S. Geological Survey)
Geographic Center:
Located in Washington County approx. 3 miles east of Roxbury
(source: U.S. Geological Survey)

- Mineral Information (new window)
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Science In Your Backyard: Utah

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Utah:

- Interior's Secretary Jewell Announces New Wildlife and Climate Studies at the Southwest Climate Science Center (new window)
  (Released: 12/19/2013 12:00:00 PM)
- Parts of Sonoran Desert May Become Unsuitable for Tortoise Survival Due to Climate and Drought (new window)
  (Released: 12/13/2013 11:43:20 AM)
- New Insight on Vulnerability of Public-Supply Wells to Contamination (new window)
  (Released: 8/5/2013 10:00:00 AM)
- Invasive Snails are Target of UI, USGS Environmental DNA Study (new window)
  (Released: 6/19/2013 1:03:55 PM)
- Crowd-Sourcing the Nation: Using Volunteers for Enhanced Data Collection (new window)
  (Released: 4/1/2013 6:41:01 PM)

View more news releases of interest for Utah (new window)

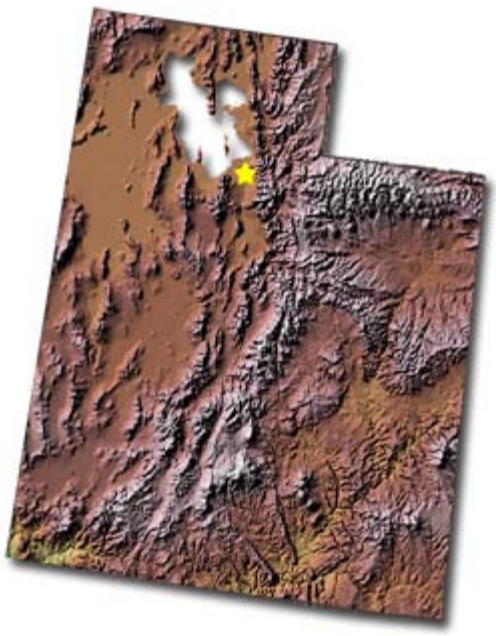
Utah Real-Time Information:

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- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Utah Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity

Utah State Facts



Locations on image are approximate

Capital: Salt Lake City()
Land Area: 82,144 sq. miles
(source: 2010 Census)
Population: 2,763,885
(source: 2010 Census estimate)
Highest Point:
Kings Peak at 13,528 feet, located in the county/subdivision of Duchesne
(source: U.S. Geological Survey)
Lowest Point:
Beaverdam Wash at 2,000 feet, located in the county/subdivision of Washington
(source: U.S. Geological Survey)
Geographic Center:
Located in Sanpete County approx.

3 miles north of Manti
(source: U.S. Geological Survey)

- Mineral Information (new window)
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Science In Your Backyard: Texas

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Texas:

- Pumping May Cause Some Groundwater Decrease in Edwards-Trinity Aquifer in Texas (new window)
  (Released: 2/25/2014 1:02:30 PM)
- PAH Levels in Runoff from Coal-Tar Sealcoated Pavement Remain Elevated for Months After Application (new window)
  (Released: 2/21/2014 8:00:00 AM)
- Causes of Toxic Golden Algal Blooms Determined (new window)
  (Released: 1/17/2014 1:11:35 PM)
- Earthquake Events on Par For 2013 (new window)
  (Released: 1/8/2014 3:37:55 PM)
- Interior's Secretary Jewell Announces New Wildlife and Climate Studies for the South Central Climate Science Center (new window)
  (Released: 12/19/2013 11:00:00 AM)

View more news releases of interest for Texas (new window)

Texas Real-Time Information:

- Real-Time Water Data (new window)
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- WaterWatch—Current Streamflow Conditions (new window)
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Highlighted Texas Links:

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- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for,

Texas State Facts



Locations on image are approximate

Capital: Austin()
Land Area: 261,797 sq. miles
(source: 2010 Census)
Population: 25,145,561
(source: 2010 Census estimate)
Highest Point:
Guadalupe Peak at 8,749 feet, located in the county/subdivision of Culberson
(source: U.S. Geological Survey)
Lowest Point:
Gulf of Mexico at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in McCulloch County approx. 15 miles northeast of Brady
(source: U.S. Geological Survey)

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Science In Your Backyard: Tennessee

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Tennessee:

- Threat of Earthquakes Occurring in Central United States Still Alive (new window)
  (Released: 1/23/2014 2:00:00 PM)
- Streamflow Alteration Impacts Fish Diversity in Local Rivers (new window)
  (Released: 1/16/2014 10:00:00 AM)
- Aircraft Studying New Madrid Seismic Zone on Display (new window)
  (Released: 7/15/2013 12:57:59 PM)
- Low-Flying Airplane to "Look" Underground for Clues about New Madrid Earthquakes (new window)
  (Released: 7/9/2013 11:04:22 AM)
- Revised Kentucky and Tennessee Maps Reveal New Design (new window)
  (Released: 5/15/2013 12:00:00 PM)

View more news releases of interest for Tennessee (new window)

Tennessee State Facts



Locations on image are approximate

Capital: Nashville(★)
Land Area: 41,217 sq. miles
(source: 2010 Census)
Population: 6,346,105
(source: 2010 Census estimate)
Highest Point:
Clingmans Dome at 6,643 feet, located in the county/subdivision of Sevier
(source: U.S. Geological Survey)
Lowest Point:
Mississippi River at 178 feet, located in the county/subdivision of Shelby
(source: U.S. Geological Survey)
Geographic Center:
Located in Rutherford County approx. 5 miles northeast of Murfreesboro
(source: U.S. Geological Survey)

Tennessee Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Tennessee Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity

- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment
- National Geospatial Program Partnerships (new window)
  A network that cultivates and maintains long-term relationships with partners and develops agreements which advance the National Spatial Data Infrastructure (NSDI) and support USGS science.
- Recreational Information (new window)
  Looking for recreation? General information on tourist sites, trails, byways, maps, passes, and more
- Water Resources Information (new window)
  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: South Dakota

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for South Dakota:

- Linking U.S. and Canadian Border Waters (new window)
  (Released: 2/19/2014 9:00:00 AM)
- Landsat 8 Celebrates First Year of Success (new window)
  (Released: 2/11/2014 9:51:06 AM)
- Interior's Secretary Jewell Announces New Wildlife and Climate Studies at the North Central Climate Science Center (new window)
  (Released: 12/19/2013 11:00:00 AM)
- Crowd-Sourcing the Nation: USGS Seeking More Volunteers (new window)
  (Released: 6/19/2013 12:00:00 PM)
- USGS Releases New Oil and Gas Assessment for Bakken and Three Forks Formations (new window)
  (Released: 4/30/2013 12:59:32 PM)

View more news releases of interest for South Dakota (new window)

South Dakota State Facts



Locations on image are approximate

Capital: Pierre()
Land Area: 75,885 sq. miles
(source: 2010 Census)
Population: 814,180
(source: 2010 Census estimate)
Highest Point:
Harney Peak at 7,242 feet, located in the county/subdivision of Pennington
(source: U.S. Geological Survey)
Lowest Point:
Big Stone Lake at 966 feet, located in the county/subdivision of Roberts
(source: U.S. Geological Survey)
Geographic Center:
Located in Hughes County approx. 8 miles northeast of Pierre
(source: U.S. Geological Survey)

South Dakota Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted South Dakota Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity
- Land Remote Sensing Information - EROS (new window)

Timely and ready access to global land remote sensing and other Earth surface data and information from USGS Earth Resource Observation and Science (EROS).

- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment
- National Geospatial Program Partnerships (new window)
  A network that cultivates and maintains long-term relationships with partners and develops agreements which advance the National Spatial Data Infrastructure (NSDI) and support USGS science.
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U.S. Department of the Interior | U.S. Geological Survey
URL: http://www.usgs.gov/state/state.asp?State=SD
Page Contact Information: Ask USGS
Page Last Modified: Friday, October 02, 2009

Science In Your Backyard: South Carolina

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for South Carolina:

- Tsunami on the Delaware River? Study of Historical Quake and Early East Coast Seismicity (new window)
  (Released: 9/3/2013 3:00:00 PM)
- New Tools to Help Manage Saltwater Intrusion (new window)
  (Released: 4/3/2013 3:21:18 PM)
- Crowd-Sourcing the Nation: Using Volunteers for Enhanced Data Collection (new window)
  (Released: 4/1/2013 6:41:01 PM)
- Photos Reveal Severity of Hurricane Sandy's Coastal Impacts (new window)
  (Released: 11/9/2012 3:20:00 PM)
- USGS Releases Unconventional Gas Estimates for Five East Coast Basins (new window)
  (Released: 6/20/2012 11:04:29 AM)

View more news releases of interest for South Carolina (new window)

South Carolina Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted South Carolina Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity

South Carolina State Facts



Locations on image are approximate

Capital: Columbia(★)
Land Area: 30,109 sq. miles
(source: 2010 Census)
Population: 4,625,364
(source: 2010 Census estimate)
Highest Point:
Sassafras Mtn. at 3,560 feet, located in the county/subdivision of Pickens
(source: U.S. Geological Survey)
Lowest Point:
Atlantic Ocean at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in Richland County approx. 13 miles southeast of Columbia
(source: U.S. Geological Survey)

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  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: Rhode Island

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Rhode Island:

- Crowd-Sourcing the Nation: USGS Seeking More Volunteers (new window)
  (Released: 6/19/2013 12:00:00 PM)
- USGS Storm-Surge Sensors Deployed Ahead of Tropical Storm Sandy (new window)
  (Released: 10/27/2012 2:01:41 PM)
- Study Confirms Presence of Contaminants in Some New England Bedrock Groundwater, ID's New Concerns, Determines Likely Locations (new window)
  (Released: 6/25/2012 6:26:36 PM)
- Sea Level Rise Accelerating in U.S. Atlantic Coast (new window)
  (Released: 6/24/2012 1:00:00 PM)
- Low April Streamflows Not Necessarily an Indicator of Summer Drought (new window)
  (Released: 5/21/2012 2:00:00 PM)

View more news releases of interest for Rhode Island (new window)

Rhode Island Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Rhode Island Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)

Rhode Island State Facts



Locations on image are approximate

Capital: Providence()
Land Area: 1,045 sq. miles
(source: 2010 Census)
Population: 1,052,567
(source: 2010 Census estimate)
Highest Point:
Jerimoth Hill at 812 feet, located in the county/subdivision of Providence
(source: U.S. Geological Survey)
Lowest Point:
Atlantic Ocean at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in Kent County approx. 1 mile south-southwest of Crompton
(source: U.S. Geological Survey)

The latest information on earthquake related activity

- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment
- National Geospatial Program Partnerships (new window)
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  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: Puerto Rico

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Puerto Rico:

- Invasive Boa Constrictor Thriving on Puerto Rico (new window)
  (Released: 11/29/2012 4:29:15 PM)
- Isolation of Puerto Rico's Manatees Affects Survival Odds (new window)
  (Released: 10/23/2012 9:00:00 AM)
- Extent and Speed of Lionfish Spread Unprecedented (new window)
  (Released: 3/14/2011 8:30:00 AM)
- Manatee Subspecies Genetically Confirmed, But Diversity Challenge Looms (new window)
  (Released: 9/13/2010)
- Report Documents the Risks of Giant Invasive Snakes in the U.S. (new window)
  (Released: 10/13/2009 12:00:00 PM)

View more news releases of interest for Puerto Rico (new window)

Puerto Rico Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
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  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Puerto Rico Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for,

Puerto Rico State Facts



Locations on image are approximate

Capital: San Juan()
Highest Point:
Cerro de Punta at 4,390 feet, located in the county/subdivision of Ponce District
(source: U.S. Geological Survey)
Lowest Point:
Atlantic Ocean at Sea Level
(source: U.S. Geological Survey)

and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment

- National Geospatial Program Partnerships (new window)
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  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: Pennsylvania

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Pennsylvania:

- Limited Food May be Significantly Changing Great Lakes Ecosystems (new window)
  (Released: 12/12/2013 11:45:00 AM)
- Instant Bacteria Forecasts Make Swimmers at Great Lakes Beaches Safer (new window)
  (Released: 11/21/2013 12:48:25 PM)
- Measuring Landscape Disturbance of Gas Exploration in Four More Pennsylvania Counties: (new window)
  (Released: 11/21/2013 10:23:40 AM)
- Media Advisory: Upper Delaware River Basin Listening Sessions (new window)
  (Released: 9/30/2013 9:52:52 AM)
- Measuring Landscape Disturbance of Gas Exploration in Four Pennsylvania Counties (new window)
  (Released: 9/18/2013 12:06:07 PM)

View more news releases of interest for Pennsylvania (new window)

Pennsylvania Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Pennsylvania State Facts



Locations on image are approximate

Capital: Harrisburg()
Land Area: 44,817 sq. miles
(source: 2010 Census)
Population: 12,702,379
(source: 2010 Census estimate)
Highest Point:
Mt. Davis at 3,213 feet, located in the county/subdivision of Somerset
(source: U.S. Geological Survey)
Lowest Point:
Delaware River at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in Centre County approx. 2 1/2 miles southwest of Bellefonte
(source: U.S. Geological Survey)

Highlighted Pennsylvania Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)

The latest information on earthquake related activity

- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment
- National Geospatial Program Partnerships (new window)
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- Water Resources Information (new window)
  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: Oregon

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Oregon:

- Barred Owls Ousting Spotted Owls in the Pacific Northwest (new window)
  (Released: 2/24/2014 11:25:09 AM)
- Nutrient Ratios Could Affect Microcystin Occurrence (new window)
  (Released: 2/3/2014 9:00:00 AM)
- Salmon Conservation Efforts Honored (new window)
  (Released: 1/16/2014 3:00:00 PM)
- 20 Years After Northridge Quake, Buildings Remain Vulnerable (new window)
  (Released: 1/15/2014 6:30:00 PM)
- Interior's Secretary Jewell Announces New Wildlife and Climate Studies at the Northwest Climate Science Center (new window)
  (Released: 12/19/2013 12:00:00 PM)

View more news releases of interest for Oregon (new window)

Oregon Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Current Volcanic Activity in the Cascade Range (new window)
  Current volcanic activity from the Cascades Volcano Observatory.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Oregon Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity

Oregon State Facts



Locations on image are approximate

Capital: Salem()
Land Area: 95,997 sq. miles
(source: 2010 Census)
Population: 3,831,074
(source: 2010 Census estimate)
Highest Point:
Mt. Hood at 11,239 feet, located in the county/subdivision of Clackamas-Hood River
(source: U.S. Geological Survey)
Lowest Point:
Pacific Ocean at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in Crook County approx. 25 miles south-southeast of Prineville
(source: U.S. Geological Survey)

- Mineral Information (new window)
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  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: Oklahoma

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Oklahoma:

- **2011 Oklahoma Induced Earthquake May Have Triggered Larger Quake** (new window)
  (Released: 3/6/2014 5:00:00 PM) NEW
- Earthquake Events on Par For 2013 (new window)
  (Released: 1/8/2014 3:37:55 PM)
- Interior's Secretary Jewell Announces New Wildlife and Climate Studies for the South Central Climate Science Center (new window)
  (Released: 12/19/2013 11:00:00 AM)
- Earthquake Swarm Continues in Central Oklahoma (new window)
  (Released: 10/22/2013 1:07:59 PM)
- New USGS Report Updates Decline of High Plains Aquifer Groundwater Levels (new window)
  (Released: 2/22/2013 7:48:52 AM)

View more news releases of interest for Oklahoma (new window)

Oklahoma Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
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- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Oklahoma Links:

- Biological Resource Information (new window)
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- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)

Oklahoma State Facts



Locations on image are approximate

Capital: Oklahoma City(★)
Land Area: 68,667 sq. miles
(source: 2010 Census)
Population: 3,751,351
(source: 2010 Census estimate)
Highest Point:
Black Mesa at 4,973 feet, located in the county/subdivision of Cimarron
(source: U.S. Geological Survey)
Lowest Point:
Little River at 289 feet, located in the county/subdivision of McCurtain
(source: U.S. Geological Survey)
Geographic Center:
Located in Oklahoma County approx. 8 miles north of Oklahoma City
(source: U.S. Geological Survey)

Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment

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  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: Ohio

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Ohio:

- Huron-Erie Corridor Initiative partners receive prestigious Secretary of the Interior honor (new window)
  (Released: 1/16/2014 7:05:24 PM)
- Limited Food May be Significantly Changing Great Lakes Ecosystems (new window)
  (Released: 12/12/2013 11:45:00 AM)
- Instant Bacteria Forecasts Make Swimmers at Great Lakes Beaches Safer (new window)
  (Released: 11/21/2013 12:48:25 PM)
- Buckeye Quads Released (new window)
  (Released: 11/13/2013 1:00:00 PM)
- First Evidence of Grass Carp Reproduction in the Great Lakes (new window)
  (Released: 10/28/2013 11:00:00 AM)

View more news releases of interest for Ohio (new window)

Ohio State Facts



Locations on image are approximate

Capital: Columbus()
Land Area: 40,948 sq. miles
(source: 2010 Census)
Population: 11,536,504
(source: 2010 Census estimate)
Highest Point:
Campbell Hill at 1,550 feet, located in the county/subdivision of Logan
(source: U.S. Geological Survey)
Lowest Point:
Ohio River at 455 feet, located in the county/subdivision of Hamilton
(source: U.S. Geological Survey)
Geographic Center:
Located in Delaware County approx. 25 miles north-northeast of Columbus
(source: U.S. Geological Survey)

Ohio Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
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- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Ohio Links:

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- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)

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Science In Your Backyard: North Dakota

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for North Dakota:

- Linking U.S. and Canadian Border Waters (new window)
  (Released: 2/19/2014 9:00:00 AM)
- Climate Change Could Negatively Affect Chase Lake Pelican Population (new window)
  (Released: 1/8/2014 5:15:00 PM)
- Interior's Secretary Jewell Announces New Wildlife and Climate Studies at the North Central Climate Science Center (new window)
  (Released: 12/19/2013 11:00:00 AM)
- Rural Well-Being in the Prairie Pothole Region (new window)
  (Released: 9/12/2013 9:47:58 AM)
- USGS Releases New Oil and Gas Assessment for Bakken and Three Forks Formations (new window)
  (Released: 4/30/2013 12:59:32 PM)

View more news releases of interest for North Dakota (new window)

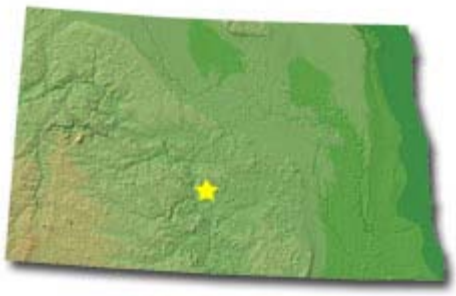
North Dakota Real-Time Information:

- Real-Time Water Data (new window)
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Highlighted North Dakota Links:

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  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)

North Dakota State Facts



Locations on image are approximate

Capital: Bismarck()
Land Area: 68,976 sq. miles
(source: 2010 Census)
Population: 672,591
(source: 2010 Census estimate)
Highest Point:
White Butte at 3,506 feet, located in the county/subdivision of Slope
(source: U.S. Geological Survey)
Lowest Point:
Red River at 750 feet, located in the county/subdivision of Pembina
(source: U.S. Geological Survey)
Geographic Center:
Located in Sheridan County approx. 5 miles southwest of McClusky
(source: U.S. Geological Survey)

Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment

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  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: North Carolina

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for North Carolina:

- Interior's Secretary Jewell Announces New Wildlife and Climate Studies at the Southeast Climate Science Center (new window)
  (Released: 12/19/2013 11:00:00 AM)
- Tsunami on the Delaware River? Study of Historical Quake and Early East Coast Seismicity (new window)
  (Released: 9/3/2013 3:00:00 PM)
- Nearly 3,900 New Maps in Time for Summer (new window)
  (Released: 7/30/2013 11:00:00 AM)
- Photos Reveal Severity of Hurricane Sandy's Coastal Impacts (new window)
  (Released: 11/9/2012 3:20:00 PM)
- Students at USGS: As A USGS Geographer Kitty Kolb Helps Protect People's Lives and Property (new window)
  (Released: 10/1/2012 7:00:00 AM)

View more news releases of interest for North Carolina (new window)

North Carolina State Facts



Locations on image are approximate

Capital: Raleigh(☆)
Land Area: 48,711 sq. miles
(source: 2010 Census)
Population: 9,535,483
(source: 2010 Census estimate)
Highest Point:
Mt. Mitchell at 6,684 feet, located in the county/subdivision of Yancey
(source: U.S. Geological Survey)
Lowest Point:
Atlantic Ocean at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in Chatham County approx. 10 miles northwest of Sanford
(source: U.S. Geological Survey)

North Carolina Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted North Carolina Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity

- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment
- National Geospatial Program Partnerships (new window)
  A network that cultivates and maintains long-term relationships with partners and develops agreements which advance the National Spatial Data Infrastructure (NSDI) and support USGS science.
- Recreational Information (new window)
  Looking for recreation? General information on tourist sites, trails, byways, maps, passes, and more
- Water Resources Information (new window)
  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: New York

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for New York:

- Identifying Bats By Sound (new window)
  (Released: 2/12/2014 9:30:00 AM)
- A Tough Balance: Brown Trout Can Interfere with Brook Trout Conservation (new window)
  (Released: 12/18/2013 12:00:00 PM)
- Methane is Common in Groundwater from Valleys in South-Central New York State (new window)
  (Released: 12/17/2013 10:28:24 AM)
- Decade of Fire Island Research Available to Help Understand Future Coastal Changes (new window)
  (Released: 12/17/2013 9:00:00 AM)
- Limited Food May be Significantly Changing Great Lakes Ecosystems (new window)
  (Released: 12/12/2013 11:45:00 AM)

View more news releases of interest for New York (new window)

New York Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted New York Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity

New York State Facts



Locations on image are approximate

Capital: Albany(★)
Land Area: 47,214 sq. miles
(source: 2010 Census)
Population: 19,378,102
(source: 2010 Census estimate)
Highest Point:
Mt. Marcy at 5,344 feet, located in the county/subdivision of Essex
(source: U.S. Geological Survey)
Lowest Point:
Atlantic Ocean at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in Madison County approx. 12 miles south of Oneida and 26 miles southwest of Utica
(source: U.S. Geological Survey)

- Mineral Information (new window)
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Science In Your Backyard: New Mexico

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for New Mexico:

- Latest Idaho and New Mexico Quads Available (new window)
  (Released: 1/22/2014 8:00:00 AM)
- Interior's Secretary Jewell Announces New Wildlife and Climate Studies at the Southwest Climate Science Center (new window)
  (Released: 12/19/2013 12:00:00 PM)
- Interior's Secretary Jewell Announces New Wildlife and Climate Studies for the South Central Climate Science Center (new window)
  (Released: 12/19/2013 11:00:00 AM)
- New Insight on Vulnerability of Public-Supply Wells to Contamination (new window)
  (Released: 8/5/2013 10:00:00 AM)
- Lesser Prairie-Chicken Nest Survival May Decline by 2050 (new window)
  (Released: 7/11/2013 5:10:00 PM)

View more news releases of interest for New Mexico (new window)

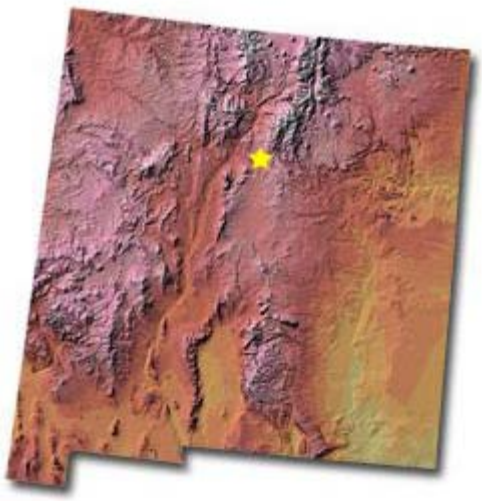
New Mexico Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
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- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted New Mexico Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)

New Mexico State Facts



Locations on image are approximate

Capital: Santa Fe()
Land Area: 121,356 sq. miles
(source: 2010 Census)
Population: 2,059,179
(source: 2010 Census estimate)
Highest Point:
Wheeler Peak at 13,161 feet, located in the county/subdivision of Taos
(source: U.S. Geological Survey)
Lowest Point:
Red Bluff Reservoir at 2,842 feet, located in the county/subdivision of Eddy
(source: U.S. Geological Survey)
Geographic Center:
Located in Torrance County approx. 12 miles south-southwest of Willard
(source: U.S. Geological Survey)

Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment

- National Geospatial Program Partnerships (new window)
  A network that cultivates and maintains long-term relationships with partners and develops agreements which advance the National Spatial Data Infrastructure (NSDI) and support USGS science.
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  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: New Jersey

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for New Jersey:

- Hurricane Sandy Eroded Half of Fire Island's Beaches and Dunes: New Report Quantifies Coastal Change (new window)
  (Released: 8/27/2013 9:16:01 AM)
- Remapping Coastal Areas Damaged by Hurricane Sandy (new window)
  (Released: 8/20/2013 11:00:00 AM)
- New Insight on Vulnerability of Public-Supply Wells to Contamination (new window)
  (Released: 8/5/2013 10:00:00 AM)
- Crowd-Sourcing the Nation: Using Volunteers for Enhanced Data Collection (new window)
  (Released: 4/1/2013 6:41:01 PM)
- Come Test the Waters at the USGS (new window)
  (Released: 12/3/2012 10:12:17 AM)

View more news releases of interest for New Jersey (new window)

New Jersey Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
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  Real-time and historical earthquake information

Highlighted New Jersey Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)

New Jersey State Facts



Locations on image are approximate

Capital: Trenton(★)
Land Area: 7,417 sq. miles
(source: 2010 Census)
Population: 8,791,894
(source: 2010 Census estimate)
Highest Point:
High Point at 1,803 feet, located in the county/subdivision of Sussex
(source: U.S. Geological Survey)
Lowest Point:
Atlantic Ocean at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in Mercer County approx. 5 miles southeast of Trenton
(source: U.S. Geological Survey)

Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment

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Science In Your Backyard: New Hampshire

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for New Hampshire:

- Crowd-Sourcing the Nation: USGS Seeking More Volunteers (new window)
  (Released: 6/19/2013 12:00:00 PM)
- Arsenic Likely in Nearly 40 Percent of New Hampshire's Groundwater (new window)
  (Released: 12/4/2012 1:26:35 PM)
- Birds at Sea and Offshore Wind Energy (new window)
  (Released: 12/4/2012 11:59:28 AM)
- New Flood Mapping Tool Helps Prepare Suncook Area for Future Floods (new window)
  (Released: 8/14/2012 8:30:00 AM)
- Study Confirms Presence of Contaminants in Some New England Bedrock Groundwater, ID's New Concerns, Determines Likely Locations (new window)
  (Released: 6/25/2012 6:26:36 PM)

View more news releases of interest for New Hampshire (new window)

New Hampshire Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted New Hampshire Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)

New Hampshire State Facts



Locations on image are approximate

Capital: Concord(★)
Land Area: 8,968 sq. miles
(source: 2010 Census)
Population: 1,316,470
(source: 2010 Census estimate)
Highest Point:
Mt. Washington at 6,288 feet, located in the county/subdivision of Coos
(source: U.S. Geological Survey)
Lowest Point:
Atlantic Ocean at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in Belknap County approx. 3 miles east of Ashland
(source: U.S. Geological Survey)

The latest information on earthquake related activity

- Mineral Information (new window)
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  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: Nevada

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Nevada:

- USGS Researcher Honored for Helping Managers Save Desert Fish from Extinction (new window)
  (Released: 1/16/2014 3:00:00 PM)
- Interior's Secretary Jewell Announces New Wildlife and Climate Studies at the Southwest Climate Science Center (new window)
  (Released: 12/19/2013 12:00:00 PM)
- Parts of Sonoran Desert May Become Unsuitable for Tortoise Survival Due to Climate and Drought (new window)
  (Released: 12/13/2013 11:43:20 AM)
- Study Evaluates Elevated Nitrate Levels in Carson Valley Groundwater (new window)
  (Released: 12/3/2013 1:00:00 PM)
- New Insight on Vulnerability of Public-Supply Wells to Contamination (new window)
  (Released: 8/5/2013 10:00:00 AM)

View more news releases of interest for Nevada (new window)

Nevada Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
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- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Nevada Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity

Nevada State Facts



Locations on image are approximate

Capital: Carson City()
Land Area: 109,826 sq. miles
(source: 2010 Census)
Population: 2,700,551
(source: 2010 Census estimate)
Highest Point:
Boundary Peak at 13,140 feet, located in the county/subdivision of Esmeralda
(source: U.S. Geological Survey)
Lowest Point:
Colorado River at 479 feet, located in the county/subdivision of Clark
(source: U.S. Geological Survey)
Geographic Center:
Located in Lander County approx. 26 miles southeast of Austin
(source: U.S. Geological Survey)

- Mineral Information (new window)
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Science In Your Backyard: Nebraska

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Nebraska:

- Interior's Secretary Jewell Announces New Wildlife and Climate Studies at the North Central Climate Science Center (new window)
  (Released: 12/19/2013 11:00:00 AM)
- Real-time Monitoring Pays Off for Tracking Nitrate Pulse in Mississippi River Basin to the Gulf of Mexico (new window)
  (Released: 8/21/2013 2:00:00 PM)
- New Insight on Vulnerability of Public-Supply Wells to Contamination (new window)
  (Released: 8/5/2013 10:00:00 AM)
- Crowd-Sourcing the Nation: USGS Seeking More Volunteers (new window)
  (Released: 6/19/2013 12:00:00 PM)
- Iowa Meteorite Crater Confirmed (new window)
  (Released: 3/5/2013 9:01:00 AM)

View more news releases of interest for Nebraska (new window)

Nebraska State Facts



Locations on image are approximate

Capital: Lincoln()
Land Area: 76,872 sq. miles
(source: 2010 Census)
Population: 1,826,341
(source: 2010 Census estimate)
Highest Point:
Panorama Point at 5,424 feet, located in the county/subdivision of Kimball
(source: U.S. Geological Survey)
Lowest Point:
Missouri River at 840 feet, located in the county/subdivision of Richardson
(source: U.S. Geological Survey)
Geographic Center:
Located in Custer County approx. 10 miles northwest of Broken Bow
(source: U.S. Geological Survey)

Nebraska Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
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  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
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- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Nebraska Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity

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Science In Your Backyard: Montana

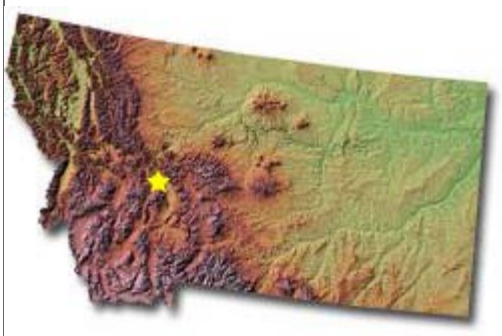
Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Montana:

- Changes in Stream-Water Quality Attributed to Coalbed Methane Development (new window)
  (Released: 2/25/2014 11:00:00 AM)
- The Yellowstone Volcano: Past, Present and Future (new window)
  (Released: 1/21/2014 1:00:00 PM)
- Interior's Secretary Jewell Announces New Wildlife and Climate Studies at the Northwest Climate Science Center (new window)
  (Released: 12/19/2013 12:00:00 PM)
- Interior's Secretary Jewell Announces New Wildlife and Climate Studies at the North Central Climate Science Center (new window)
  (Released: 12/19/2013 11:00:00 AM)
- Rural Well-Being in the Prairie Pothole Region (new window)
  (Released: 9/12/2013 9:47:58 AM)

View more news releases of interest for Montana (new window)

Montana State Facts



Locations on image are approximate

Capital: Helena()
Land Area: 145,552 sq. miles
(source: 2010 Census)
Population: 989,415
(source: 2010 Census estimate)
Highest Point:
Granite Peak at 12,799 feet, located in the county/subdivision of Park
(source: U.S. Geological Survey)
Lowest Point:
Kootenai River at 1800 feet, located in the county/subdivision of Lincoln
(source: U.S. Geological Survey)
Geographic Center:
Located in Fergus County approx. 11 miles west of Lewistown
(source: U.S. Geological Survey)

Montana Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
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- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Montana Links:

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- Earthquake Information (new window)
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Science In Your Backyard: Missouri

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Missouri:

- Helicopter Survey to Map Potential Mineral Resources in Southeast Missouri (new window)
  (Released: 2/5/2014 1:20:18 PM)
- Threat of Earthquakes Occurring in Central United States Still Alive (new window)
  (Released: 1/23/2014 2:00:00 PM)
- Nitrate Levels Continue to Increase in Mississippi River; Signs of Progress in the Illinois River (new window)
  (Released: 10/30/2013 12:41:43 PM)
- Real-time Monitoring Pays Off for Tracking Nitrate Pulse in Mississippi River Basin to the Gulf of Mexico (new window)
  (Released: 8/21/2013 2:00:00 PM)
- Aircraft Studying New Madrid Seismic Zone on Display (new window)
  (Released: 7/15/2013 12:57:59 PM)

View more news releases of interest for Missouri (new window)

Missouri Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
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  Real-time and historical earthquake information

Highlighted Missouri Links:

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  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)

Missouri State Facts



Locations on image are approximate

Capital: Jefferson City(★)
Land Area: 68,886 sq. miles
(source: 2010 Census)
Population: 5,988,927
(source: 2010 Census estimate)
Highest Point:
Taum Sauk Mtn. at 1,772 feet, located in the county/subdivision of Iron
(source: U.S. Geological Survey)
Lowest Point:
St. Francis River at 230 feet, located in the county/subdivision of Dunklin
(source: U.S. Geological Survey)
Geographic Center:
Located in Miller County approx. 20 miles southwest of Jefferson City
(source: U.S. Geological Survey)

Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment

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Science In Your Backyard: Mississippi

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Mississippi:

- New Tool Available to Help Track Spilled Oil (new window)
  (Released: 2/6/2014 1:30:10 PM)
- Nitrate Levels Continue to Increase in Mississippi River; Signs of Progress in the Illinois River (new window)
  (Released: 10/30/2013 12:41:43 PM)
- Crowd-Sourcing the Nation: USGS Seeking More Volunteers (new window)
  (Released: 6/19/2013 12:00:00 PM)
- New Insight on Gas Hydrates in Gulf of Mexico (new window)
  (Released: 5/14/2013 10:00:00 AM)
- New Map Tool Helps Prepare Hattiesburg for Floods (new window)
  (Released: 11/8/2012 10:06:53 AM)

View more news releases of interest for Mississippi (new window)

Mississippi Real-Time Information:

- Real-Time Water Data (new window)
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Highlighted Mississippi Links:

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- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for,

Mississippi State Facts



Locations on image are approximate

Capital: Jackson()
Land Area: 46,907 sq. miles
(source: 2010 Census)
Population: 2,967,297
(source: 2010 Census estimate)
Highest Point:
Woodall Mtn. at 806 feet, located in the county/subdivision of Tishomingo
(source: U.S. Geological Survey)
Lowest Point:
Gulf of Mexico at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in Leake County approx. 9 miles west-northwest of Carthage
(source: U.S. Geological Survey)

and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment

- National Geospatial Program Partnerships (new window)
  A network that cultivates and maintains long-term relationships with partners and develops agreements which advance the National Spatial Data Infrastructure (NSDI) and support USGS science.
- Recreational Information (new window)
  Looking for recreation? General information on tourist sites, trails, byways, maps, passes, and more
- Water Resources Information (new window)
  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: Minnesota

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Minnesota:

- Linking U.S. and Canadian Border Waters (new window)
  (Released: 2/19/2014 9:00:00 AM)
- Interior's Secretary Jewell Announces New Wildlife and Climate Studies at the North Central Climate Science Center (new window)
  (Released: 12/19/2013 11:00:00 AM)
- Limited Food May be Significantly Changing Great Lakes Ecosystems (new window)
  (Released: 12/12/2013 11:45:00 AM)
- Instant Bacteria Forecasts Make Swimmers at Great Lakes Beaches Safer (new window)
  (Released: 11/21/2013 12:48:25 PM)
- Household Products May Harm Tree Swallows in Minnesota and Wisconsin (new window)
  (Released: 10/23/2013 12:35:16 PM)

View more news releases of interest for Minnesota (new window)

Minnesota Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Minnesota Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity

Minnesota State Facts



Locations on image are approximate

Capital: Saint Paul(★)
Land Area: 79,610 sq. miles
(source: 2010 Census)
Population: 5,303,925
(source: 2010 Census estimate)
Highest Point:
Eagle Mtn. at 2,301 feet, located in the county/subdivision of Cook
(source: U.S. Geological Survey)
Lowest Point:
Lake Superior at 601 feet
(source: U.S. Geological Survey)
Geographic Center:
Located in Crow Wing County approx. 10 miles southwest of Brainerd
(source: U.S. Geological Survey)

- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment
- National Geospatial Program Partnerships (new window)
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- Water Resources Information (new window)
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Science In Your Backyard: Michigan

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Michigan:

- Huron-Erie Corridor Initiative partners receive prestigious Secretary of the Interior honor (new window)
  (Released: 1/16/2014 7:05:24 PM)
- Limited Food May be Significantly Changing Great Lakes Ecosystems (new window)
  (Released: 12/12/2013 11:45:00 AM)
- Instant Bacteria Forecasts Make Swimmers at Great Lakes Beaches Safer (new window)
  (Released: 11/21/2013 12:48:25 PM)
- Invasive Snails are Target of UI, USGS Environmental DNA Study (new window)
  (Released: 6/19/2013 1:03:55 PM)
- Determining Rivers Vulnerable to Asian Carp Spawning in the Great Lakes Basin (new window)
  (Released: 6/18/2013 11:00:00 AM)

View more news releases of interest for Michigan (new window)

Michigan Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
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- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Michigan Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)

Michigan State Facts



Locations on image are approximate

Capital: Lansing(★)
Land Area: 56,804 sq. miles
(source: 2010 Census)
Population: 9,883,640
(source: 2010 Census estimate)
Highest Point:
Mt. Arvon at 1,979 feet, located in the county/subdivision of Baraga
(source: U.S. Geological Survey)
Lowest Point:
Lake Erie at 571 feet
(source: U.S. Geological Survey)
Geographic Center:
Located in Wexford County approx. 5 miles north-northwest of Cadillac
(source: U.S. Geological Survey)

The latest information on earthquake related activity

- Mineral Information (new window)
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Science In Your Backyard: Massachusetts

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Massachusetts:

- Interior's Secretary Jewell Announces New Wildlife and Climate Studies for the Northeast Climate Science Center (new window)
  (Released: 12/19/2013 11:00:00 AM)
- Remapping Coastal Areas Damaged by Hurricane Sandy (new window)
  (Released: 8/20/2013 11:00:00 AM)
- Crowd-Sourcing the Nation: USGS Seeking More Volunteers (new window)
  (Released: 6/19/2013 12:00:00 PM)
- Birds at Sea and Offshore Wind Energy (new window)
  (Released: 12/4/2012 11:59:28 AM)
- Photos Reveal Severity of Hurricane Sandy's Coastal Impacts (new window)
  (Released: 11/9/2012 3:20:00 PM)

View more news releases of interest for Massachusetts (new window)

Massachusetts State Facts



Locations on image are approximate

Capital: Boston(★)
Land Area: 7,840 sq. miles
(source: 2010 Census)
Population: 6,547,629
(source: 2010 Census estimate)
Highest Point:
Mt. Greylock at 3,491 feet, located in the county/subdivision of Berkshire
(source: U.S. Geological Survey)
Lowest Point:
Atlantic Ocean at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in Worcester County approx. North part of City of Worcester
(source: U.S. Geological Survey)

Massachusetts Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
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  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)

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Science In Your Backyard: Maryland

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Maryland:

- Media Advisory: USGS to Host Congressional Briefing: Earthquake Science and Remaining Mysteries (new window)
  (Released: 2/20/2014 11:20:00 AM)
- Tsunami on the Delaware River? Study of Historical Quake and Early East Coast Seismicity (new window)
  (Released: 9/3/2013 3:00:00 PM)
- Remapping Coastal Areas Damaged by Hurricane Sandy (new window)
  (Released: 8/20/2013 11:00:00 AM)
- Largemouth Bass Virus Found in Northern Snakeheads in Virginia (new window)
  (Released: 8/13/2013 9:00:00 AM)
- AMERICA'S GREAT OUTDOORS: USGS Economic Analysis of Anacostia River Shows Potential Value of Restoring Urban Streams Nationwide (new window)
  (Released: 5/2/2013 9:44:14 AM)

View more news releases of interest for Maryland (new window)

Maryland State Facts



Locations on image are approximate

Capital: Annapolis(★)
Land Area: 9,774 sq. miles
(source: 2010 Census)
Population: 5,773,552
(source: 2010 Census estimate)
Highest Point:
Backbone Mtn. at 3,360 feet, located in the county/subdivision of Garrett
(source: U.S. Geological Survey)
Lowest Point:
Atlantic Ocean at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in Prince Georges County approx. 4 1/2 miles northwest of Davidsonville
(source: U.S. Geological Survey)

Maryland Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
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- Floods & High Water Flows (new window)
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The latest information on earthquake related activity

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Science In Your Backyard: Maine

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Maine:

- Rising Seas Could Threaten Many Acadia NP Marshes (new window)
  (Released: 4/29/2013 2:06:12 PM)
- Birds at Sea and Offshore Wind Energy (new window)
  (Released: 12/4/2012 11:59:28 AM)
- Photos Reveal Severity of Hurricane Sandy's Coastal Impacts (new window)
  (Released: 11/9/2012 3:20:00 PM)
- Study Confirms Presence of Contaminants in Some New England Bedrock Groundwater, ID's New Concerns, Determines Likely Locations (new window)
  (Released: 6/25/2012 6:26:36 PM)
- Low April Streamflows Not Necessarily an Indicator of Summer Drought (new window)
  (Released: 5/21/2012 2:00:00 PM)

View more news releases of interest for Maine (new window)

Maine Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
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- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Maine Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)

Maine State Facts



Locations on image are approximate

Capital: Augusta(★)
Land Area: 30,862 sq. miles
(source: 2010 Census)
Population: 1,328,361
(source: 2010 Census estimate)
Highest Point:
Mt. Katahdin at 5,268 feet, located in the county/subdivision of Piscataquis
(source: U.S. Geological Survey)
Lowest Point:
Atlantic Ocean at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in Piscataquis County approx. 18 miles north of Dover
(source: U.S. Geological Survey)

Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment

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Science In Your Backyard: Louisiana

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Louisiana:

- New Tool Available to Help Track Spilled Oil (new window)
  (Released: 2/6/2014 1:30:10 PM)
- Real-time Monitoring Pays Off for Tracking Nitrate Pulse in Mississippi River Basin to the Gulf of Mexico (new window)
  (Released: 8/21/2013 2:00:00 PM)
- New Tool for Evaluation of Baton Rouge's Saltwater Intrusion (new window)
  (Released: 7/15/2013 11:08:08 AM)
- Crowd-Sourcing the Nation: USGS Seeking More Volunteers (new window)
  (Released: 6/19/2013 12:00:00 PM)
- New Insight on Gas Hydrates in Gulf of Mexico (new window)
  (Released: 5/14/2013 10:00:00 AM)

View more news releases of interest for Louisiana (new window)

Louisiana Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
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  Real-time tracking of drought information within this location
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- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Louisiana Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)

Louisiana State Facts



Locations on image are approximate

Capital: Baton Rouge(★)
Land Area: 43,562 sq. miles
(source: 2010 Census)
Population: 4,533,372
(source: 2010 Census estimate)
Highest Point:
Driskill Mtn. at 535 feet, located in the county/subdivision of Bienville
(source: U.S. Geological Survey)
Lowest Point:
New Orleans at -8 feet, located in the county/subdivision of Orleans
(source: U.S. Geological Survey)
Geographic Center:
Located in Avoyelles County approx. 3 miles southeast of Marksville
(source: U.S. Geological Survey)

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Science In Your Backyard: Kentucky

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Kentucky:

- Threat of Earthquakes Occurring in Central United States Still Alive (new window)
  (Released: 1/23/2014 2:00:00 PM)
- Hydraulic Fracturing Fluids Likely Harmed Threatened Kentucky Fish Species (new window)
  (Released: 8/28/2013 3:50:56 PM)
- Revised Kentucky and Tennessee Maps Reveal New Design (new window)
  (Released: 5/15/2013 12:00:00 PM)
- New Water Science Tools Help Communities Prepare for Floods (new window)
  (Released: 3/18/2013 4:48:05 PM)
- A Big Day for Science: Citizens Have Contributed One Million Observations to Top Nature Database (new window)
  (Released: 5/3/2012 9:00:00 AM)

View more news releases of interest for Kentucky (new window)

Kentucky Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
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- Earthquake Activity (new window)
  Real-time and historical earthquake information

Kentucky State Facts



Locations on image are approximate

Capital: Frankfort()
Land Area: 39,728 sq. miles
(source: 2010 Census)
Population: 4,339,367
(source: 2010 Census estimate)
Highest Point:
Black Mtn. at 4,145 feet, located in the county/subdivision of Harlan
(source: U.S. Geological Survey)
Lowest Point:
Mississippi River at 257 feet, located in the county/subdivision of Fulton
(source: U.S. Geological Survey)
Geographic Center:
Located in Marion County approx. 3 miles north-northwest of Lebanon
(source: U.S. Geological Survey)

Highlighted Kentucky Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)

The latest information on earthquake related activity

- Mineral Information (new window)
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Science In Your Backyard: Kansas

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Kansas:

- Nutrient Ratios Could Affect Microcystin Occurrence (new window)
  (Released: 2/3/2014 9:00:00 AM)
- Interior's Secretary Jewell Announces New Wildlife and Climate Studies at the North Central Climate Science Center (new window)
  (Released: 12/19/2013 11:00:00 AM)
- Real-time Monitoring Pays Off for Tracking Nitrate Pulse in Mississippi River Basin to the Gulf of Mexico (new window)
  (Released: 8/21/2013 2:00:00 PM)
- Helping to Preserve Water Resources around Wichita, Kansas with New Groundwater Model (new window)
  (Released: 4/30/2013 10:00:00 AM)
- Flood Plains Contaminated by Historical Mining in Cherokee County (new window)
  (Released: 3/14/2013 2:30:00 PM)

View more news releases of interest for Kansas (new window)

Kansas State Facts



Locations on image are approximate

Capital: Topeka(★)
Land Area: 81,815 sq. miles
(source: 2010 Census)
Population: 2,853,118
(source: 2010 Census estimate)
Highest Point:
Mt. Sunflower at 4,039 feet, located in the county/subdivision of Wallace
(source: U.S. Geological Survey)
Lowest Point:
Verdigris River at 679 feet, located in the county/subdivision of Montgomery
(source: U.S. Geological Survey)
Geographic Center:
Located in Barton County approx. 15 miles northeast of Great Bend
(source: U.S. Geological Survey)

Kansas Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
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  Real-time tracking of flood conditions within the State
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  Real-time tracking of drought information within this location
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- Earthquake Activity (new window)
  Real-time and historical earthquake information

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Science In Your Backyard: Iowa

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Iowa:

- Interior's Secretary Jewell Announces New Wildlife and Climate Studies at the North Central Climate Science Center (new window)
  (Released: 12/19/2013 11:00:00 AM)
- Real-time Monitoring Pays Off for Tracking Nitrate Pulse in Mississippi River Basin to the Gulf of Mexico (new window)
  (Released: 8/21/2013 2:00:00 PM)
- Nearly 3,900 New Maps in Time for Summer (new window)
  (Released: 7/30/2013 11:00:00 AM)
- Three Iowa Streamgages Shutting Down on Friday (new window)
  (Released: 5/15/2013 1:21:27 PM)
- USGS Continues to Provide Critical Flood Information (new window)
  (Released: 5/2/2013 4:15:43 PM)

View more news releases of interest for Iowa (new window)

Iowa State Facts



Locations on image are approximate

Capital: Des Moines()
Land Area: 55,869 sq. miles
(source: 2010 Census)
Population: 3,046,355
(source: 2010 Census estimate)
Highest Point:
Hawkeye Point at 1,670 feet, located in the county/subdivision of Osceola
(source: U.S. Geological Survey)
Lowest Point:
Mississippi River at 480 feet, located in the county/subdivision of Lee
(source: U.S. Geological Survey)
Geographic Center:
Located in Story County approx. 5 miles northeast of Ames
(source: U.S. Geological Survey)

Iowa Real-Time Information:

- Real-Time Water Data (new window)
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Highlighted Iowa Links:

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- Earthquake Information (new window)
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Science In Your Backyard: Indiana

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Indiana:

- Threat of Earthquakes Occurring in Central United States Still Alive (new window)
  (Released: 1/23/2014 2:00:00 PM)
- Limited Food May be Significantly Changing Great Lakes Ecosystems (new window)
  (Released: 12/12/2013 11:45:00 AM)
- Instant Bacteria Forecasts Make Swimmers at Great Lakes Beaches Safer (new window)
  (Released: 11/21/2013 12:48:25 PM)
- Real-time Monitoring Pays Off for Tracking Nitrate Pulse in Mississippi River Basin to the Gulf of Mexico (new window)
  (Released: 8/21/2013 2:00:00 PM)
- Nearly 3,900 New Maps in Time for Summer (new window)
  (Released: 7/30/2013 11:00:00 AM)

View more news releases of interest for Indiana (new window)

Indiana Real-Time Information:

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Highlighted Indiana Links:

- Biological Resource Information (new window)
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  The latest information on earthquake related activity
- Mineral Information (new window)

Indiana State Facts



Locations on image are approximate

Capital: Indianapolis(★)
Land Area: 35,867 sq. miles
(source: 2010 Census)
Population: 6,483,802
(source: 2010 Census estimate)
Highest Point:
Hoosier Hill at 1,257 feet, located in the county/subdivision of Wayne
(source: U.S. Geological Survey)
Lowest Point:
Ohio River at 320 feet, located in the county/subdivision of Posey
(source: U.S. Geological Survey)
Geographic Center:
Located in Boone County approx. 14 miles north-northwest of Indianapolis
(source: U.S. Geological Survey)

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- Recreational Information (new window)
  Looking for recreation? General information on tourist sites, trails, byways, maps, passes, and more
- Water Resources Information (new window)
  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: Illinois

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Illinois:

- Threat of Earthquakes Occurring in Central United States Still Alive (new window)
  (Released: 1/23/2014 2:00:00 PM)
- Earthquake Events on Par For 2013 (new window)
  (Released: 1/8/2014 3:37:55 PM)
- Limited Food May be Significantly Changing Great Lakes Ecosystems (new window)
  (Released: 12/12/2013 11:45:00 AM)
- Instant Bacteria Forecasts Make Swimmers at Great Lakes Beaches Safer (new window)
  (Released: 11/21/2013 12:48:25 PM)
- Nitrate Levels Continue to Increase in Mississippi River; Signs of Progress in the Illinois River (new window)
  (Released: 10/30/2013 12:41:43 PM)

View more news releases of interest for Illinois (new window)

Illinois Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Illinois Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)

Illinois State Facts



Locations on image are approximate

Capital: Springfield()
Land Area: 55,584 sq. miles
(source: 2010 Census)
Population: 12,830,632
(source: 2010 Census estimate)
Highest Point:
Charles Mound at 1,235 feet, located in the county/subdivision of Jo Daviess
(source: U.S. Geological Survey)
Lowest Point:
Mississippi River at 279 feet, located in the county/subdivision of Alexander
(source: U.S. Geological Survey)
Geographic Center:
Located in Logan County approx. 28 miles northeast of Springfield
(source: U.S. Geological Survey)

Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment

- National Geospatial Program Partnerships (new window)
  A network that cultivates and maintains long-term relationships with partners and develops agreements which advance the National Spatial Data Infrastructure (NSDI) and support USGS science.
- Recreational Information (new window)
  Looking for recreation? General information on tourist sites, trails, byways, maps, passes, and more
- Water Resources Information (new window)
  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: Idaho

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Idaho:

- Nutrient Ratios Could Affect Microcystin Occurrence (new window)
  (Released: 2/3/2014 9:00:00 AM)
- Latest Idaho and New Mexico Quads Available (new window)
  (Released: 1/22/2014 8:00:00 AM)
- Salmon Conservation Efforts Honored (new window)
  (Released: 1/16/2014 3:00:00 PM)
- New Tools to Address Boise River's Phosphorus Problem (new window)
  (Released: 1/13/2014 2:00:32 PM)
- Interior's Secretary Jewell Announces New Wildlife and Climate Studies at the Northwest Climate Science Center (new window)
  (Released: 12/19/2013 12:00:00 PM)

View more news releases of interest for Idaho (new window)

Idaho Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Idaho Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment

Idaho State Facts



Locations on image are approximate

Capital: Boise()
Land Area: 82,747 sq. miles
(source: 2010 Census)
Population: 1,567,582
(source: 2010 Census estimate)
Highest Point:
Borah Peak at 12,662 feet, located in the county/subdivision of Custer
(source: U.S. Geological Survey)
Lowest Point:
Snake River at 710 feet, located in the county/subdivision of Nez Perce
(source: U.S. Geological Survey)
Geographic Center:
Located in Custer County approx. at Custer, southwest of Challis
(source: U.S. Geological Survey)

- National Geospatial Program Partnerships (new window)
  A network that cultivates and maintains long-term relationships with partners and develops agreements which advance the National Spatial Data Infrastructure (NSDI) and support USGS science.
- Recreational Information (new window)
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  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: Hawaii

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Hawaii:

- Some Good News Amid Bad News, for Hawai`i's Endangered Honeycreepers (new window)
  (Released: 1/30/2014 2:00:00 PM)
- Stories of Lava Flows and Volcanic Landscapes from Ka`u to North Kona Featured in Public Talk (new window)
  (Released: 1/8/2014 3:00:00 PM)
- Two Talks about Kilauea Volcano at UH-Hilo (new window)
  (Released: 12/27/2013 3:00:00 PM)
- Mauna Loa: How Well Do You Know the Volcano in Your Backyard? (new window)
  (Released: 12/26/2013 3:00:00 PM)
- Pacific Islands Climate Science Center Director Announced (new window)
  (Released: 12/20/2013 1:00:00 PM)

View more news releases of interest for Hawaii (new window)

Hawaii State Facts



Locations on image are approximate

Capital: Honolulu(★)
Land Area: 6,423 sq. miles
(source: 2010 Census)
Population: 1,360,301
(source: 2010 Census estimate)
Highest Point:
Pu'u Wekiu, Mauna Kea at 13,796 feet, located in the county/subdivision of Hawaii
(source: U.S. Geological Survey)
Lowest Point:
Pacific Ocean at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located approx. off the southwestern shore of Molokai west of Lanai
(source: U.S. Geological Survey)

Hawaii Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Current Volcanic Activity in the Hawaii Range (new window)
  Current volcanic activity from the Hawaiin Volcano Observatory.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Hawaii Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity

- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment
- National Geospatial Program Partnerships (new window)
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- Water Resources Information (new window)
  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: Georgia

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Georgia:

- Flood Chart Aids in Evacuation Decisions (new window)
  (Released: 2/10/2014 9:00:00 AM)
- New River Gauge Provides Steady Stream of Information (new window)
  (Released: 11/20/2013 3:00:00 PM)
- Tsunami on the Delaware River? Study of Historical Quake and Early East Coast Seismicity (new window)
  (Released: 9/3/2013 3:00:00 PM)
- Georgia Groundwater Levels Decline During 2010-2011 (new window)
  (Released: 6/12/2013 7:00:00 AM)
- New Tools to Help Manage Saltwater Intrusion (new window)
  (Released: 4/3/2013 3:21:18 PM)

View more news releases of interest for Georgia (new window)

Georgia Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Georgia Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment

Georgia State Facts



Locations on image are approximate

Capital: Atlanta()
Land Area: 57,906 sq. miles
(source: 2010 Census)
Population: 9,687,653
(source: 2010 Census estimate)
Highest Point:
Brasstown Bald at 4,784 feet, located in the county/subdivision of Towns-Union
(source: U.S. Geological Survey)
Lowest Point:
Atlantic Ocean at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in Twiggs County approx. 18 miles southeast of Macon
(source: U.S. Geological Survey)

- National Geospatial Program Partnerships (new window)
  A network that cultivates and maintains long-term relationships with partners and develops agreements which advance the National Spatial Data Infrastructure (NSDI) and support USGS science.
- Recreational Information (new window)
  Looking for recreation? General information on tourist sites, trails, byways, maps, passes, and more
- Water Resources Information (new window)
  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: Florida

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Florida:

- Burmese Pythons Pose Little Risk to People in Everglades (new window)
  (Released: 2/27/2014 2:30:00 PM)
- New Tool Available to Help Track Spilled Oil (new window)
  (Released: 2/6/2014 1:30:10 PM)
- Hurricane Sandy Eroded Half of Fire Island's Beaches and Dunes: New Report Quantifies Coastal Change (new window)
  (Released: 8/27/2013 9:16:01 AM)
- New Insight on Vulnerability of Public-Supply Wells to Contamination (new window)
  (Released: 8/5/2013 10:00:00 AM)
- New Approach to Measuring Coral Growth Offers Valuable Tool for Reef Managers (new window)
  (Released: 7/10/2013 1:13:06 PM)

View more news releases of interest for Florida (new window)

Florida Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information
- Everglades Depth Estimation Network (EDEN) (new window)
  Provides real-time, hydrologic data and tools for biological and ecological assessments for adaptive management in the greater Everglades.

Highlighted Florida Links:

- Florida Water Science Center (new window)
- Southeast Ecological Science Center (new window)
- St. Petersburg Science Center (new window)

Florida State Facts



Locations on image are approximate

Capital: Tallahassee(★)
Land Area: 53,927 sq. miles
(source: 2010 Census)
Population: 18,801,310
(source: 2010 Census estimate)
Highest Point:
Britton Hill at 345 feet, located in the county/subdivision of Walton
(source: U.S. Geological Survey)
Lowest Point:
Atlantic Ocean at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in Hernando County approx. 12 miles north-northwest of Brooksville
(source: U.S. Geological Survey)

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment
- National Geospatial Program Partnerships (new window)
  A network that cultivates and maintains long-term relationships with partners and develops agreements which advance the National Spatial Data Infrastructure (NSDI) and support USGS science.
- Recreational Information (new window)
  Looking for recreation? General information on tourist sites, trails, byways, maps, passes, and more
- South Florida Information Access (SOFIA) (new window)
  Provides access supporting research, decision making, and resource management for the South Florida ecosystem restoration.
- Water Resources Information (new window)
  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: District of Columbia

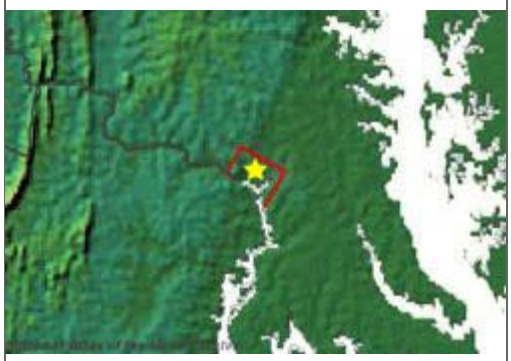
Maps & Tools | Additional Links | State Contacts

News Releases of Interest for District of Columbia:

- President's 2015 Budget Proposes $1.1 Billion for the USGS (new window)
  (Released: 3/4/2014 3:21:16 PM) NEW
- Media Advisory: USGS to Host Congressional Briefing: Earthquake Science and Remaining Mysteries (new window)
  (Released: 2/20/2014 11:20:00 AM)
- Largemouth Bass Virus Found in Northern Snakeheads in Virginia (new window)
  (Released: 8/13/2013 9:00:00 AM)
- Landsat 8 Satellite Begins Watch (new window)
  (Released: 5/30/2013 3:00:00 PM)
- Interior Appoints New Climate Change Advisory Committee (new window)
  (Released: 5/8/2013 12:31:13 PM)

View more news releases of interest for District of Columbia (new window)

District of Columbia State Facts



Locations on image are approximate

Capital: D.C.(★)
Land Area: 61 sq. miles
(source: 2010 Census)
Population: 601,723
(source: 2010 Census estimate)
Lowest Point:
Potomac River at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located approx. at Fourth and L Streets N.W.
(source: U.S. Geological Survey)

District of Columbia Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted District of Columbia Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity

- National Geospatial Program Partnerships (new window)
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  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: Delaware

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Delaware:

- Tsunami on the Delaware River? Study of Historical Quake and Early East Coast Seismicity (new window)
  (Released: 9/3/2013 3:00:00 PM)
- Remapping Coastal Areas Damaged by Hurricane Sandy (new window)
  (Released: 8/20/2013 11:00:00 AM)
- Crowd-Sourcing the Nation: Using Volunteers for Enhanced Data Collection (new window)
  (Released: 4/1/2013 6:41:01 PM)
- Birds at Sea and Offshore Wind Energy (new window)
  (Released: 12/4/2012 11:59:28 AM)
- North Carolina, Delmarva Coastlines Changed by Hurricane Sandy (new window)
  (Released: 11/15/2012 2:10:57 PM)

View more news releases of interest for Delaware (new window)

Delaware Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Delaware Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)

Delaware State Facts



Locations on image are approximate

Capital: Dover(★)
Land Area: 1,954 sq. miles
(source: 2010 Census)
Population: 897.934
(source: 2010 Census estimate)
Highest Point:
On Ebright Road at Delaware-Pennsylvania State line at 448 feet, located in the county/subdivision of New Castle
(source: U.S. Geological Survey)
Lowest Point:
Atlantic Ocean at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in Kent County approx. 11 miles south of Dover
(source: U.S. Geological Survey)

Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment

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  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: Connecticut

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Connecticut:

- New Insight on Vulnerability of Public-Supply Wells to Contamination (new window)
  (Released: 8/5/2013 10:00:00 AM)
- Crowd-Sourcing the Nation: USGS Seeking More Volunteers (new window)
  (Released: 6/19/2013 12:00:00 PM)
- Photos Reveal Severity of Hurricane Sandy's Coastal Impacts (new window)
  (Released: 11/9/2012 3:20:00 PM)
- USGS Storm-Surge Sensors Deployed Ahead of Tropical Storm Sandy (new window)
  (Released: 10/27/2012 2:01:41 PM)
- Study Confirms Presence of Contaminants in Some New England Bedrock Groundwater, ID's New Concerns, Determines Likely Locations (new window)
  (Released: 6/25/2012 6:26:36 PM)

View more news releases of interest for Connecticut (new window)

Connecticut State Facts



Locations on image are approximate

Capital: Hartford()
Land Area: 4,845 sq. miles
(source: 2010 Census)
Population: 3,574,097
(source: 2010 Census estimate)
Highest Point:
Mt. Frissell on south slope at State line at 2,380 feet, located in the county/subdivision of Litchfield
(source: U.S. Geological Survey)
Lowest Point:
Long Island Sound at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in Hartford County approx. at East Berlin
(source: U.S. Geological Survey)

Connecticut Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Connecticut Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources

- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment
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Science In Your Backyard: Colorado

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Colorado:

- Interior's Secretary Jewell Announces New Wildlife and Climate Studies at the Southwest Climate Science Center (new window)
  (Released: 12/19/2013 12:00:00 PM)
- Interior's Secretary Jewell Announces New Wildlife and Climate Studies at the North Central Climate Science Center (new window)
  (Released: 12/19/2013 11:00:00 AM)
- Crowd-Sourcing the Nation: 25,000 Manmade Map Features Edited (new window)
  (Released: 12/18/2013 12:30:00 PM)
- Buckeye Quads Released (new window)
  (Released: 11/13/2013 1:00:00 PM)
- New Maps for Colorado and Minnesota (new window)
  (Released: 9/12/2013 9:00:00 AM)

View more news releases of interest for Colorado (new window)

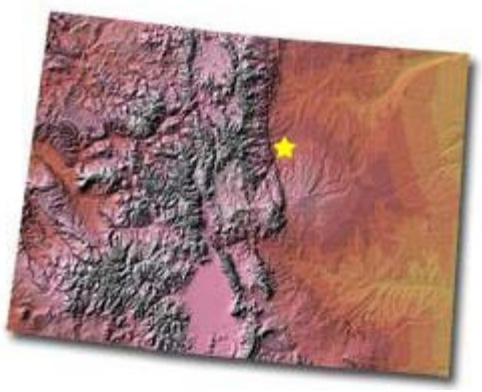
Colorado Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Colorado Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)

Colorado State Facts



Locations on image are approximate

Capital: Denver()
Land Area: 103,718 sq. miles
(source: 2010 Census)
Population: 5,029,196
(source: 2010 Census estimate)
Highest Point:
Mt. Elbert at 14,433 feet, located in the county/subdivision of Lake
(source: U.S. Geological Survey)
Lowest Point:
Arikaree River at 3,315 feet, located in the county/subdivision of Yuma
(source: U.S. Geological Survey)
Geographic Center:
Located in Park County approx. 30 miles northwest of Pikes Peak
(source: U.S. Geological Survey)

Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment

- National Geospatial Program Partnerships (new window)
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- Recreational Information (new window)
  Looking for recreation? General information on tourist sites, trails, byways, maps, passes, and more
- Water Resources Information (new window)
  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: California

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for California:

- The 1964 Great Alaska Earthquake and Tsunami (new window)
  (Released: 2/24/2014 4:00:00 PM)
- Drought Affects Streamflow Across California (new window)
  (Released: 2/13/2014 12:55:10 PM)
- The Yellowstone Volcano: Past, Present and Future (new window)
  (Released: 1/21/2014 1:00:00 PM)
- USGS Researcher Honored for Helping Managers Save Desert Fish from Extinction (new window)
  (Released: 1/16/2014 3:00:00 PM)
- 20 Years After Northridge Quake, Buildings Remain Vulnerable (new window)
  (Released: 1/15/2014 6:30:00 PM)

View more news releases of interest for California (new window)

California Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- California Volcano Observatory (new window)
  Current volcanic activity from the California Volcano Observatory.
- Current Volcanic Activity in the Cascade Range (new window)
  Current volcanic activity from the Cascades Volcano Observatory.
- Earthquake Activity (new window)
  Real-time and historical earthquake information
- Landslide Activity (new window)
  Real-time monitoring of selected landslides and hillsides.

Highlighted California Links:

- Biological Resource Information (new window)

California State Facts



Locations on image are approximate

Capital: Sacramento(★)
Land Area: 155,959 sq. miles
(source: 2010 Census)
Population: 37,253,956
(source: 2010 Census estimate)
Highest Point:
Mt. Whitney at 14,494 feet, located in the county/subdivision of Inyo-Tulare
(source: U.S. Geological Survey)
Lowest Point:
Death Valley at -282 feet, located in the county/subdivision of Inyo
(source: U.S. Geological Survey)
Geographic Center:
Located in Madera County approx. 38 miles east of Madera
(source: U.S. Geological Survey)

Activities to support the sound management and conservation of our Nation's biological resources

- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment
- National Geospatial Program Partnerships (new window)
  A network that cultivates and maintains long-term relationships with partners and develops agreements which advance the National Spatial Data Infrastructure (NSDI) and support USGS science.
- Recreational Information (new window)
  Looking for recreation? General information on tourist sites, trails, byways, maps, passes, and more
- Water Resources Information (new window)
  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: Arkansas

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Arkansas:

- Threat of Earthquakes Occurring in Central United States Still Alive (new window)
  (Released: 1/23/2014 2:00:00 PM)
- Earthquake Events on Par For 2013 (new window)
  (Released: 1/8/2014 3:37:55 PM)
- New Details Available on 2010 Little Missouri River Flood (new window)
  (Released: 11/14/2013 11:36:10 AM)
- Real-time Monitoring Pays Off for Tracking Nitrate Pulse in Mississippi River Basin to the Gulf of Mexico (new window)
  (Released: 8/21/2013 2:00:00 PM)
- Aircraft Studying New Madrid Seismic Zone on Display (new window)
  (Released: 7/15/2013 12:57:59 PM)

View more news releases of interest for Arkansas (new window)

Arkansas Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Arkansas Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for,

Arkansas State Facts



Locations on image are approximate

Capital: Little Rock()
Land Area: 52,068 sq. miles
(source: 2010 Census)
Population: 2,915,918
(source: 2010 Census estimate)
Highest Point:
Magazine Mtn. at 2,753 feet, located in the county/subdivision of Logan
(source: U.S. Geological Survey)
Lowest Point:
Ouachita River at 55 feet, located in the county/subdivision of Ashley-Union
(source: U.S. Geological Survey)
Geographic Center:
Located in Pulaski County approx. 12 miles northwest of Little Rock
(source: U.S. Geological Survey)

and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment

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Science In Your Backyard: Arizona

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Arizona:

- First Global Geologic Map of Largest Moon in the Solar System Details an Icy World (new window)
  (Released: 2/12/2014 12:00:00 PM)
- Interior's Secretary Jewell Announces New Wildlife and Climate Studies at the Southwest Climate Science Center (new window)
  (Released: 12/19/2013 12:00:00 PM)
- Parts of Sonoran Desert May Become Unsuitable for Tortoise Survival Due to Climate and Drought (new window)
  (Released: 12/13/2013 11:43:20 AM)
- Studying Potential Debris Flow in Yarnell Hill Burn Area (new window)
  (Released: 8/8/2013 11:55:43 AM)
- Research Aims to Appraise Value of Changes to a Binational Ecosystem's River in Southern Arizona (new window)
  (Released: 7/29/2013 1:19:38 PM)

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Arizona Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
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- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Arizona Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)

Arizona State Facts



Locations on image are approximate

Capital: Phoenix(★)
Land Area: 113,635 sq. miles
(source: 2010 Census)
Population: 6,392,017
(source: 2010 Census estimate)
Highest Point:
Humphreys Peak at 12,633 feet, located in the county/subdivision of Coconino
(source: U.S. Geological Survey)
Lowest Point:
Colorado River at 70 feet, located in the county/subdivision of Yuma
(source: U.S. Geological Survey)
Geographic Center:
Located in Yavapai County approx. 55 miles east-southeast of Prescott
(source: U.S. Geological Survey)

Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment

- National Geospatial Program Partnerships (new window)
  A network that cultivates and maintains long-term relationships with partners and develops agreements which advance the National Spatial Data Infrastructure (NSDI) and support USGS science.
- Recreational Information (new window)
  Looking for recreation? General information on tourist sites, trails, byways, maps, passes, and more
- Water Resources Information (new window)
  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: Alaska

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Alaska:

- **New Permafrost... But is it Permanent?** (new window) NEW
  (Released: 3/10/2014 9:52:36 AM)
- 25 Years After the Exxon Valdez, Sea Otter Population at Pre-Spill Levels (new window)
  (Released: 2/28/2014 11:00:00 AM)
- The 1964 Great Alaska Earthquake and Tsunami (new window)
  (Released: 2/24/2014 4:00:00 PM)
- Media Advisory: USGS to Host Congressional Briefing: Earthquake Science and Remaining Mysteries (new window)
  (Released: 2/20/2014 11:20:00 AM)
- Latest Idaho and New Mexico Quads Available (new window)
  (Released: 1/22/2014 8:00:00 AM)

View more news releases of interest for Alaska (new window)

Alaska Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
  Real-time tracking of flood conditions within the State
- Drought Watch (new window)
  Real-time tracking of drought information within this location
- Ground Water—Climate Response Network (new window)
  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Current Volcanic Activity in Alaska (new window)
  Current volcanic activity from the Alaska Volcano Observatory.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Alaska Links:

- Alaska Science Center (new window)
  A source of diverse information about Alaska's natural resources issues and hazards assessments, including circumpolar regions.
- Alaska Science Portal (new window)
  Search for USGS science in Alaska
- Biological Resource Information (new window)

Alaska State Facts



Locations on image are approximate

Capital: Juneau()
Land Area: 571,951 sq. miles
(source: 2010 Census)
Population: 710,231
(source: 2010 Census estimate)
Lowest Point:
Pacific Ocean at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located approx. 63°50' N., 152°00' W., 60 miles northwest of Mt. McKinley
(source: U.S. Geological Survey)

Activities to support the sound management and conservation of our Nation's biological resources

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  The latest information on earthquake related activity
- Mineral Information (new window)
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  Timely information essential to understanding the Nation's water resources

Science In Your Backyard: Alabama

Maps & Tools | Additional Links | State Contacts

News Releases of Interest for Alabama:

- New Tool Available to Help Track Spilled Oil (new window)
  (Released: 2/6/2014 1:30:10 PM)
- Crowd-Sourcing the Nation: USGS Seeking More Volunteers (new window)
  (Released: 6/19/2013 12:00:00 PM)
- 3-D Mapping of Isaac Water Levels (new window)
  (Released: 9/1/2012 11:34:38 AM)
- Media Advisory: Measuring the Impact of Isaac (new window)
  (Released: 8/30/2012 10:45:21 AM)
- USGS Storm-Surge Sensors Deployed Ahead of Isaac (new window)
  (Released: 8/28/2012 5:59:21 PM)

View more news releases of interest for Alabama (new window)

Alabama Real-Time Information:

- Real-Time Water Data (new window)
  Real-time water information
- WaterWatch—Current Streamflow Conditions (new window)
  Real-time tracking of changes to rivers and streams within this location
- Floods & High Water Flows (new window)
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  Real-time monitoring of the effects of droughts and other climate variability on ground-water levels.
- Earthquake Activity (new window)
  Real-time and historical earthquake information

Highlighted Alabama Links:

- Biological Resource Information (new window)
  Activities to support the sound management and conservation of our Nation's biological resources
- Earthquake Information (new window)
  The latest information on earthquake related activity
- Mineral Information (new window)
  Statistics and information on the worldwide supply of, demand for, and flow of minerals and materials essential to the U.S. economy, national security, and protection of the environment

Alabama State Facts



Locations on image are approximate

Capital: Montgomery(★)
Land Area: 50,744 sq. miles
(source: 2010 Census)
Population: 4,779,736
(source: 2010 Census estimate)
Highest Point:
Cheaha Mtn. at 2,407 feet, located in the county/subdivision of Cleburne
(source: U.S. Geological Survey)
Lowest Point:
Gulf of Mexico at Sea Level
(source: U.S. Geological Survey)
Geographic Center:
Located in Chilton County approx. 12 miles southwest of Clanton
(source: U.S. Geological Survey)

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Science In Your Backyard: Coastal and Offshore Activities

Go to Science In Your Backyard

Coastal and Offshore Activities



The map projection above shows the United States, Puerto Rico, and Virgin Islands in relation to the North American continent. The red boundary lines show the major coastal and ocean areas for USGS work. These ocean areas around the United States and its territories are part of the U.S. Exclusive Economic Zone (EEZ).

- Alaska
- California (Central & Southern)
- Caribbean
- East Coast
- Florida
- Great Lakes
- Gulf of Mexico
- Hawaii
- International
- Pacific Northwest
- U.S. Inland

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U.S. Department of the Interior | U.S. Geological Survey
URL: http://www.usgs.gov/state/coastal_offshore.asp
Page Contact Information: Ask USGS
Page Last Modified: Tuesday, March 22, 2011





INTERNATIONAL PROGRAMS

Welcome to the U.S. Geological Survey Office of International Programs

The U.S. Geological Survey Office of International Programs is dedicated to high quality, timely, scientific study that is international in scope and that focuses on the USGS Science Strategy's themes. These themes include ecosystems and predicting ecosystem change; climate variability and change; energy and minerals; national hazards, risk and resilience assessment; the role of environment and wildlife in human health; and a water census of the United States including collaboration in developing methods for quantifying, forecasting and securing freshwater for the future.

As one of the world's premier science agencies, the USGS has long recognized the mutual benefits resulting from interaction with scientific partners abroad and extending research and investigations to other countries. Much can be learned about fundamental principles of science and applications of science and technology by looking at global perspectives. In fact the strategic science themes of USGS are inherently global in nature and need international collaboration in order to make scientific progress.

The work of the USGS Office of International Programs provides significant benefits to the nation. By providing reliable scientific information about the earth and its resources from an international perspective, the Office supports US foreign policy and national security; provides a basis for science diplomacy, improves the scientific basis for managing ecosystems and natural resources, and promotes the competitiveness of the USGS private sector. For more about the benefits provided by the USGS Office of International Programs, click here to go to information on how USGS accomplishes the international mission.





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New Maps of Afghanistan Provide "Fingerprint" of Natural Resources

Released: 3/10/2014 10:00:00 AM

Contact Information:
U.S. Department of the Interior, U.S. Geological Survey
Office of Communications and Publishing
12201 Sunrise Valley Dr, MS 119
Reston, VA 20192

Mike Jarvis
Phone: 571-428-9432

Diane Noserale
Phone: 703-648-4333

Employee Directory
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Latest Releases

New Maps of Afghanistan Provide "Fingerprint" of Natural Resources

2011 Oklahoma Induced Earthquake May Have Triggered Larger Quake

Global Undiscovered Copper Resources Estimated at 3.5 Billion Metric Tons

Tweet

A coalition of scientists from the United States and Afghanistan today released 60 high-tech maps that will help Afghanistan chart a course for future economic development. These maps represent a milestone as Afghanistan is the first country to be almost completely mapped using hyperspectral imaging data.

The coalition of the U.S. Geological Survey, the Afghanistan Ministry of Mines and Petroleum, and the Task Force for Business and Stability Operations (TFBSO), was created by the U.S. Department of Defense, to share American international science and technology as a strategic tool for promoting economic development.

"Hyperspectral data from this research provides a fingerprint that identifies Afghanistan's natural resources," said Dr. Suzette Kimball, acting USGS director. "This detailed data serves as the backbone of crucial scientific information needed for economic development of natural resources as well as the potential to identify water, biological and natural hazard information."

Hyperspectral imaging is an advanced imaging technique that measures visible and near-infrared light reflecting off the Earth's surface. Researchers use hyperspectral imaging

spectrometer data to identify and characterize mineral deposits, vegetation, and other land surface features.

Data were collected in 28 flights that commenced from Kandahar Air Field in 2007. Because of great advances in technology, this information was gathered in just two months where in the past, it would have likely taken up to 25 years to acquire.

The project utilized NASA's WB-57 high altitude research jet outfitted with an imaging spectrometer. Flying at an altitude of 50,000 feet, the spectrometer captured hyperspectral images over 400,000 square kilometers. Scientists using data from the flights have mapped an area that covers more than 70 percent of Afghanistan.

The maps are the newest and most detailed addition to a series of hyperspectral data from the USGS and the TFBSO. In July 2012, the hyperspectral data team released two surface materials maps of Afghanistan produced in partnership with the Afghan Geological Survey and TFBSO.

Learn more about USGS projects in Afghanistan.

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2011 Oklahoma Induced Earthquake May Have Triggered Larger Quake

Released: 3/6/2014 5:00:00 PM

Contact Information:
U.S. Department of the Interior, U.S. Geological Survey
Office of Communications and Publishing
12201 Sunrise Valley Dr, MS 119
Reston, VA 20192

Susan Garcia
Phone: 650-346-0998

Employee Directory
Print/Email

Latest Releases

New Maps of Afghanistan Provide "Fingerprint" of Natural Resources

2011 Oklahoma Induced Earthquake May Have Triggered Larger Quake

Global Undiscovered Copper Resources Estimated at 3.5 Billion Metric Tons

Tweet

PASADENA, Calif. — In a new study involving researchers at the U.S. Geological Survey, scientists observed that a human-induced magnitude 5.0 earthquake near Prague, Oklahoma in November 2011 may have triggered the larger M5.7 earthquake less than a day later. This research suggests that the M5.7 quake was the largest human-caused earthquake associated with wastewater injection.

"The observation that a human-induced earthquake can trigger a cascade of earthquakes, including a larger one, has important implications for reducing the seismic risk from wastewater injection," said USGS seismologist and coauthor of the study Elizabeth Cochran.

Historically, earthquakes in the central United States have been uncommon. Yet in the year 2011 alone, numerous moderate-size earthquakes occurred in Colorado, Texas, Oklahoma, Ohio and Arkansas. Many of these earthquakes occurred near waste-water injection wells, and some have been shown to be caused by human activities.

The 2011 Oklahoma earthquake sequence included the November 6, 2011, M5.7 earthquake that ruptured a part of the Wilzetta fault system, a complex fault zone about 200 km (124 mi) in

length near Prague, Oklahoma. Less than 24 hours prior to the M5.7 earthquake, a M5.0 foreshock occurred on November 5, 2011. That foreshock occurred near active waste-water disposal wells, and was linked in a previously published study to fluid injection in those wells. The earthquakes have not been directly linked to hydrofracturing.

The research published this week suggests that the foreshock, by increasing stresses where M5.7 mainshock ruptured, may have triggered the mainshock, which in turn, triggered thousands of aftershocks along the Wilzetta fault system, including a M5.0 aftershock on November 8, 2011. If this hypothesis is correct, the M5.7 earthquake would be the largest and most powerful earthquake ever associated with wastewater injection. All three earthquakes of magnitude 5.0 and greater along the Wilzetta fault exhibited strike-slip motion at three independent locations along the fault, suggesting that three separate portions of the Wilzetta fault system were activated.

The paper, "Observations of Static Coulomb Stress Triggering of the November 2011 M5.7 Oklahoma Earthquake Sequence," by D.F. Sumy, E.S. Cochran, K.M. Keranen, M. Wei, G.A. Abers, from the University of Southern California, USGS, Cornell University, Brown University, and the Lamont Doherty Earth Observatory at Columbia University, was published in the "Journal of Geophysical Research" this week.

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Global Undiscovered Copper Resources Estimated at 3.5 Billion Metric Tons

Released: 3/6/2014 11:30:00 AM

Contact Information:
U.S. Department of the Interior,
U.S. Geological Survey
Office of Communications and Publishing
12201 Sunrise Valley Dr, MS 119
Reston, VA 20192

Diane Noserale
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Latest Releases

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2011 Oklahoma Induced Earthquake May Have Triggered Larger Quake

Global Undiscovered Copper Resources Estimated at 3.5 Billion Metric Tons

Tweet

e first-ever, geologically-based global assessment of undiscovered copper resources imates that 3.5 billion metric tons of copper may exist worldwide. The U.S. Geological vey outlined 225 areas for undiscovered copper in 11 regions of the world. The ount of undiscovered global copper estimated by the USGS would be enough to satisfy rent world demand for more than 150 years.

According to the assessment, South America is the dominant source for both identified and undiscovered copper resources. Particularly important, several regions of Asia including China have a large potential for undiscovered copper resources.

"This ground-breaking USGS assessment of future copper resources identifies a huge potential supply that is roughly six times greater than all the copper mined throughout human history," said Interior Assistant Secretary for Water and Science, Anne Castle. "If enough of this copper can be developed in an environmentally responsible and economical way, it will be a boon to new manufacturing and other initiatives that rely on the availability of copper such as the Administration's energy efficiency initiative."

Copper is one of the first metals ever extracted and its first use in coins dates back to about 8000 B.C. It continues to be the material of choice for a variety of industrial needs.

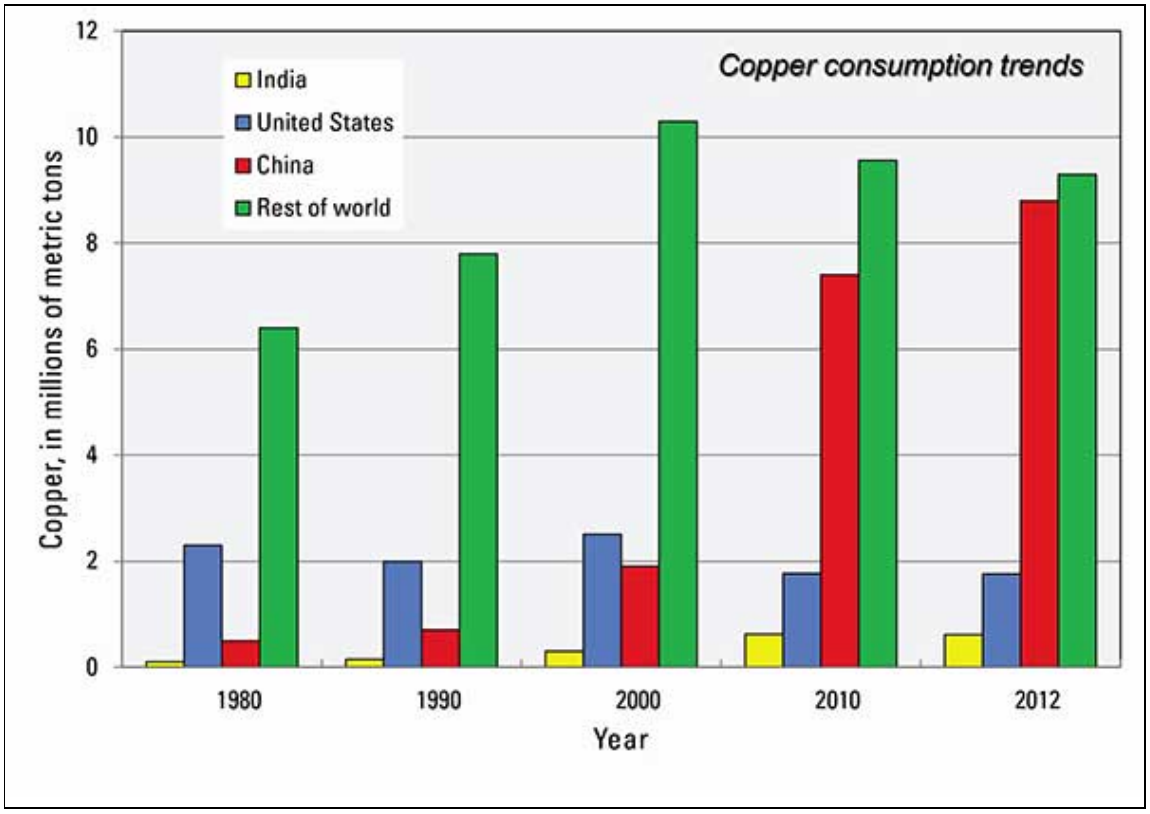
"Copper is one of the building blocks of civilization and is used in almost every aspect of modern life such as plumbing, electrical wiring, cars, cell phones, and energy systems such as wind turbines. In fact, copper has become so valuable that it is even being stolen from construction sites and out of backyards," said Larry Meinert, USGS Mineral Resources Program Coordinator.

U.S. consumption is 2 million metric tons of copper per year whereas world consumption is about 20 million metric tons per year.

The USGS Global Copper Assessment was completed in cooperation with numerous international collaborators from national geological surveys, industry, and academia. The USGS is the principal Federal provider of research and information on nonfuel mineral resources.

Supporting studies, including documentation of the assessment methodology, descriptions

of individual tracts, and spatial data for use in geographic information systems (GIS) are available from the USGS Mineral Resources Program. Information on production and consumption of copper as well as general information about copper is available from the USGS.



Global copper consumption. (High resolution image)

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River of Grass Revival

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CATEGORIES: ENVIRONMENTAL HEALTH, FEATURED
POSTED ON FEBRUARY 26, 2014 AT 5:05 PM
LAST UPDATE 5:10 PM BY: CHRISTIAN QUINTERO CQUINTERO@USGS.GOV

Before there was the glamour of South Beach, South Florida was better known for its River of Grass. There is no other place quite like the Everglades on this Earth. Its unique, interdependent ecosystems stretch from the headwaters of the Kissimmee River south through Florida Bay, and east and west to the coastal estuaries.

Scenes of native birds, animals and plants abound, and it's the only place where you have the possibility to see an alligator and a crocodile sunbathe beside one another in the wild.

The Everglades are threatened, however, by a lack of freshwater inflow, degraded water quality, invasive plants and animals, urban and agricultural development, and climate change. And although its beauty and uniqueness cannot be quantified, its shrinking size can be. Over the last 100 years, the Everglades has lost about half of its original size — more than 2 million acres –mostly due to drainage of land for agriculture, and urban and suburban development.



The setting sun casts an orange hue over Taylor Slough in the Everglades. Photo credit to Alan Cressler, USGS.

The United States Geological Survey is heavily involved — along with numerous federal, state and local partners – in ongoing efforts to restore the Everglades. More than 30 USGS scientists spend a large part of their time contributing to the science that is supporting projects to protect and restore these irreplaceable wetlands. A few of the efforts include the development of a much needed tool for tracking water depth, the battle against invasive species, and a multi-year water flow restoration research project. All of the efforts are essential to support the Comprehensive Everglades Restoration Plan — the largest ecosystem restoration effort on the planet.

…

Everglades' restoration was once riddled with uncertainty about water depths and distribution through this complex patchwork of wetlands, so the development of the Everglades Depth Estimation Network has been a game changer for resource managers. The network is an integrated system of water-level gauges, computer models, and applications that generate daily water-level data and derive hydrologic data across the freshwater part of the greater Everglades.

This tool has allowed researchers and resource managers to see the Everglades in a way that was previously impossible. Its goal is to provide

consistent, documented, and readily accessible hydrologic and ground elevation data, even where there are no water level gauges. Water depth is a key measurement of restoration efforts in a water-based ecosystem like the Everglades. For example, adult wading birds depend on a certain range of water depths at a specific time of the year to successfully find food for their young.

The EDEN surface-water model uses water-level data from 238 gauges to estimate water level and water depth on a daily basis for the entire freshwater Everglades.

The models developed using the network, along with the data generated by them, help scientists identify and monitor hydrological and ecological response to changes in the water delivery system resulting from Everglades restoration efforts. The data from EDEN are essential to scientists and water managers working in the Everglades because they help them correlate and assess the impacts of the changes.

…

Invasive species represent a significant threat to global biodiversity and a substantial economic burden. Florida has 56 established, nonnative reptile and amphibian species; that number alone makes the United States the country with the largest number of invasive reptiles and amphibians in the world.

Burmese pythons, giant constricting snakes native to Asia, are now found throughout much of South Florida, including Everglades National Park.

Pythons have increased dramatically in both abundance and geographic range since 2000. They consume a wide variety of native mammals and birds. One study suggests the population of raccoons, opossums, and bobcats have declined significantly in the regions of Everglades National Park where pythons have been established the longest. When pythons reduce mammal populations, other predators that depend on those populations are affected, as is the vegetation that mammals would normally consume. Ultimately, this reduction has the potential to impact the entire ecosystem.

Burmese pythons are very cryptic, so it's hard to find them in the vast wilderness of the Everglades. The USGS leads a multi-pronged scientific program to understand the snake's movements, habitat use, thermal biology, and impacts, as well as to test range-expansion hypotheses. The overall goal for USGS python research in the Everglades is to identify aspects of python biology and ecology that will help detect the snakes and to assist resource managers design scientifically-based control and removal methods.

Pythons in the Everglades easily capture the public's attention, but there are other invaders that also are damaging to the ecosystem. The Argentine black and white tegu is a large lizard that feeds on alligator and crocodile eggs, and invasive nonnative plants such as melaleuca, Brazilian pepper, and old-world climbing fern, can completely displace native species.



A scientist captures a female Burmese python, a giant constricting snake native to Asia, on her egg-filled nest. These pythons are now found across more than 1,000 square miles of South Florida, including all of Everglades National Park.

Nonnative fish species are also on the rise, bringing concerns that they too may displace native species and alter the food web. In a recent USGS experiment, just one of the species — the African jewelfish — caused native snails and shrimp to disappear. This change, were it to occur outside of the lab, would likely have had an impact on wading birds — such as the roseate spoonbill — that count on these small animals as a food source.

…

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Before there was the glamour of South Beach, South Florida was better known for its River of Grass. There is no other place quite like the Everglades on this Earth. Its unique, interdependent ecosystems stretch from the headwaters of the Kissimmee River south through Florida Bay, and east and west to the coastal estuaries.

Scenes of native birds, animals and plants abound, and it's the only place where you have the possibility to see an alligator and a crocodile sunbathe beside one another in the wild.

The Everglades are threatened, however, by a lack of freshwater inflow, degraded water quality, invasive plants and animals, urban and agricultural development, and climate change. And although its beauty and uniqueness cannot be quantified, its shrinking size can be. Over the last 100 years, the Everglades has lost about half of its original size — more than 2 million acres –mostly due to drainage of land for agriculture, and urban and suburban development.



The setting sun casts an orange hue over Taylor Slough in the Everglades. Photo credit to Alan Cressler, USGS.

The United States Geological Survey is heavily involved — along with numerous federal, state and local partners – in ongoing efforts to restore the Everglades. More than 30 USGS scientists spend a large part of their time contributing to the science that is supporting projects to protect and restore these irreplaceable wetlands. A few of the efforts include the development of a much needed tool for tracking water depth, the battle against invasive species, and a multi-year water flow restoration research project. All of the efforts are essential to support the Comprehensive Everglades Restoration Plan — the largest ecosystem restoration effort on the planet.

…

Everglades' restoration was once riddled with uncertainty about water depths and distribution through this complex patchwork of wetlands, so the development of the Everglades Depth Estimation Network has been a game changer for resource managers. The network is an integrated system of water-level gauges, computer models, and applications that generate daily water-level data and derive hydrologic data across the freshwater part of the greater Everglades.

This tool has allowed researchers and resource managers to see the Everglades in a way that was previously impossible. Its goal is to provide

consistent, documented, and readily accessible hydrologic and ground elevation data, even where there are no water level gauges. Water depth is a key measurement of restoration efforts in a water-based ecosystem like the Everglades. For example, adult wading birds depend on a certain range of water depths at a specific time of the year to successfully find food for their young.

The EDEN surface-water model uses water-level data from 238 gauges to estimate water level and water depth on a daily basis for the entire freshwater Everglades.

The models developed using the network, along with the data generated by them, help scientists identify and monitor hydrological and ecological response to changes in the water delivery system resulting from Everglades restoration efforts. The data from EDEN are essential to scientists and water managers working in the Everglades because they help them correlate and assess the impacts of the changes.

…

Invasive species represent a significant threat to global biodiversity and a substantial economic burden. Florida has 56 established, nonnative reptile and amphibian species; that number alone makes the United States the country with the largest number of invasive reptiles and amphibians in the world.

Burmese pythons, giant constricting snakes native to Asia, are now found throughout much of South Florida, including Everglades National Park.

Pythons have increased dramatically in both abundance and geographic range since 2000. They consume a wide variety of native mammals and birds. One study suggests the population of raccoons, opossums, and bobcats have declined significantly in the regions of Everglades National Park where pythons have been established the longest. When pythons reduce mammal populations, other predators that depend on those populations are affected, as is the vegetation that mammals would normally consume. Ultimately, this reduction has the potential to impact the entire ecosystem.

Burmese pythons are very cryptic, so it's hard to find them in the vast wilderness of the Everglades. The USGS leads a multi-pronged scientific program to understand the snake's movements, habitat use, thermal biology, and impacts, as well as to test range-expansion hypotheses. The overall goal for USGS python research in the Everglades is to identify aspects of python biology and ecology that will help detect the snakes and to assist resource managers design scientifically-based control and removal methods.



A scientist captures a female Burmese python, a giant constricting snake native to Asia, on her egg-filled nest. These pythons are now found across more than 1,000 square miles of South Florida, including all of Everglades National Park.

Pythons in the Everglades easily capture the public's attention, but there are other invaders that also are damaging to the ecosystem. The Argentine black and white tegu is a large lizard that feeds on alligator and crocodile eggs, and invasive nonnative plants such as melaleuca, Brazilian pepper, and old-world climbing fern, can completely displace native species.

Nonnative fish species are also on the rise, bringing concerns that they too may displace native species and alter the food web. In a recent USGS experiment, just one of the species — the African jewelfish — caused native snails and shrimp to disappear. This change, were it to occur outside of the lab, would likely have had an impact on wading birds — such as the roseate spoonbill — that count on these small animals as a food source.

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Tapajós National Forest, near Santarém, Pará, Brazil

Location: , Santarém, Brazil

Date Taken: 7/23/2012

Photographer: Dennis Dye , USGS

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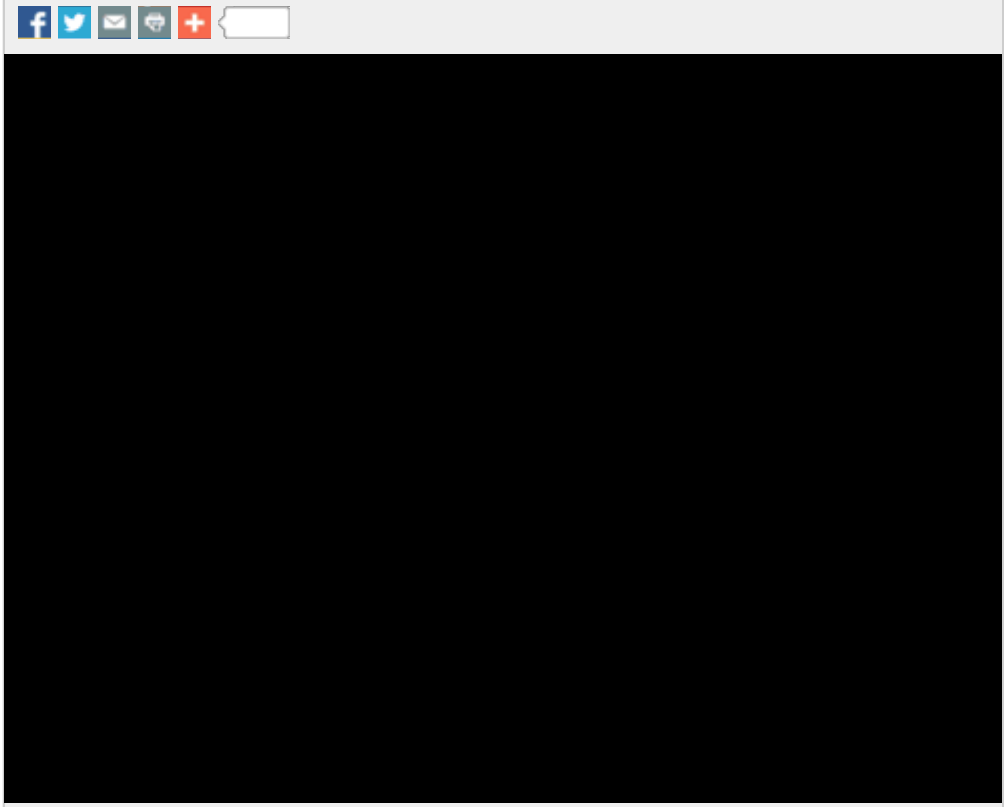


In: Natural and Man-Made Structures collection

Tags: Amazon Brazil CarbonDioxide NR2014_03_11 ObservationTower RainForest RemoteSensing atmosphere carbon climate photosynthesis

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Franz Lake Slough, Columbia River (B-roll)



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Details

Title: Franz Lake Slough, Columbia River (B-roll)

Description:

Footage of USGS crew boating to and retrieving water-quality monitor from Franz Lake Slough, Columbia River

Location: WA, Franz Lake National Wildlife Refuge, USA

Date Taken: 6/30/2013

Length: 2:27

Video Producer: Stormi Hoebelheinrich , U.S. Geological Survey

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Additional Video Credits:

Steven Sobieszczyk, Producer
Whitney Temple, Hydrologist
Michelle Robinson, NAGT intern

Source:

For more information, please visit:
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File Details:

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Streamgages (Set)




In: Water collection

Tags: ColumbiaRiver Conductance FieldWork Island Monitor NAGT Oxygen SpecificConductivity Temperature Turbidity WaterQuality Youth pH

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ShakeOut Podcast 2013

Play the audio

Ethan Alpern: Hello and welcome to USGS CoreCast. I'm your host, Ethan Alpern. A worldwide earthquake drill, known as the Great ShakeOut, will be held on Thursday, October 17 at 10:17AM local time. You are all invited to sign up and participate. The drill is your chance to practice how to protect yourself in the event of an earthquake.

To give us some details on ShakeOut, we are joined today by two guests. First is Mike Blanpied, the Associate Program Coordinator for the USGS Earthquake Hazards Program. Our second guest is Mark Benthien, the Director of Communication, Education and Outreach with the Southern California Earthquake Center, also referred to as SCEC. Mark also coordinates the Great ShakeOut worldwide. Welcome, Mike and Mark. Thanks for joining us.
Mike Blanpied: Great to be here.

Mark Benthien: Ethan, thanks for having us.

Ethan Alpern: Mike, what is ShakeOut and why is this drill so important?

Mike Blanpied: Well ShakeOut is the opportunity to learn and prepare how to stay safe during an earthquake. Earthquakes spring upon us at any time. We never know that they're about to hit. The key component of the ShakeOut is a drop, cover, and hold on exercise. So at 10:17, we will pretend that an earthquake is just beginning to hit, and that's the moment to dive underneath a desk, a table, or another strong

Embed this audio file

Details

Title: ShakeOut Podcast 2013

Description:

A worldwide earthquake drill, known as the Great ShakeOut, will be held on Thursday, October 17 at 10:17AM local time. The drill is your chance to practice how to protect yourself in the event of an earthquake. Mike Blanpied, the Associate Program Coordinator for the USGS Earthquake Hazards Program, and Mark Benthien, the Director of Communication, Education and Outreach with the Southern California Earthquake Center and coordinator of the Great ShakeOut worldwide, have come to discuss the importance of earthquake preparedness.

Location: Reston, VA, USA

Date Recorded: 10/9/2013

Audio Producer: Ethan Alpern , U.S. Geological Survey

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Audio Credits:

Producer: Ethan Alpern
Associate Producer: Jessica Robertson
Host: Ethan Alpern
Guest: Michael Blanpied, Associate Program Coordinator - Earthquake Hazards, USGS
Guest: Mark Benthien, Director of Communication, Education and Outreach with the Southern California Earthquake Center

File Details:

- Embedded audio (MP3 Format Sound - 7.38 MB)

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In: Podcasts collection

PODCAST

Tags: Earthquake GreatShakeOut NaturalHazards USGS

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Hazards: Geomagnetic Storms



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~Music & Intro~
Jeffrey J. Love: During a magnetic storm, we have very beautiful displays of aurora at high latitudes. But there are also hazards that are associated with those magnetic storms. A large magnetic storm can interfere with radio communication, with GPS systems. They can interfere with the operation and orientation of satellites. During a large magnetic storm, high altitude pilots and astronauts can be subjected to enhanced levels of radiation. And during a large magnetic storm, there are occasional power blackouts. Large storms can be an operational challenge and a hazard for the operation of electric power grids.
David Applegate: Magnetic storms—they are a hard concept to get one's head around. But essentially we are looking at a tremendous

Details

Title: Hazards: Geomagnetic Storms

Description:

Space weather can have important consequences for our lives, such as interference with radio communication, GPS systems, electric power grids, the operation and orientation of satellites, oil and gas drilling, and even air travel as high altitude pilots and astronauts can be subjected to enhanced levels of radiation. It is also during magnetic storms that beautiful aurora borealis — or "northern lights" — are visible at high latitudes. The USGS Geomagnetism Program monitors variations in the Earth's magnetic field through a network of 14 ground-based observatories around the United States and its territories, providing data in real-time to a variety of customers.

Video Sections:

- What is Space Weather?
- Discovery of the Compass
- Start with Science
- USGS Expertise
- Drilling Operations and Power Grids
- Continued Challenge

Location: Reston, VA, USA

Date Taken: 12/17/2013

Length: 7:33

Video Producer: Don Becker , U.S. Geological Survey

burst of energy coming from the Sun. We might not feel that ourselves, but our electrical infrastructure absolutely does.
Jeffrey J. Love: Space weather starts with the Sun. It's brought to the Earth by solar wind from the Sun, and the solar wind interacts with the Earth's magnetic field. Sometimes when the Sun is disturbed, it can therefore cause the Earth's magnetic field to be disturbed. It's a period of time we call a magnetic storm.
Jeffrey J. Love: Geomagnetism is a very old science, and it traces its history back to the discovery of the compass, which was of course useful for navigating the world's oceans. It is really nothing more than a magnetized needle, which can orient itself in response to the

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Camera and Post Production: Don Becker
Special Thanks to: A.B. Wade, NASA/Goddard Space Flight Center, Schlumberger, Stephane Vetter, Jeffrey Fox
Interviews: Jeffrey J. Love, David Applegate

Source:

For more information, please visit: USGS Geomagnetism Program

File Details:

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Volunteer.gov

America's Natural and Cultural Resources Volunteer Portal



2011 National Award Winners

National Volunteer Award - Sharon Glock

National Youth Volunteer Award - Carrie Ann Johnston

Public Private Partnership -- Vecinos de Rio - Mesa Prieta Petroglyth Project

Non-Profil Organization -- American Academy of Orthopaedic Surgeons

Youth Program -- Inspiring Young Emerging Leaders (I-YEL)

School Program -- Grove Valley Elementary

Federal Volunteer Program -- Channel Islands Naturalist Corps Volunteer Program

Corporation -- Close the Loop, LLC

State Program -- Florida State Park Service and National Forests in Florida

Outstanding Partner -- San Diego River Park Foundation

Federal Land Manager -- U.S. Army Corps of Engineers - Billy Samuels

Federal Land Manager -- National Park Service - James E. Miculka

Federal Land Manager -- Bureau of Land Management - Joe Kraayenbrink

Federal Land Manager -- U.S. Fish and Wildlife Service - James Gray

2011 Take Pride in America® National Awards



WASHINGTON -- Volunteer conservationists who contributed more than $5 million in economic benefits to federally-managed lands were honored at the White House today with the 2011 Take Pride in America® National Award.

"The contributions made by the 14 Take Pride in America award winners are a prime example of the President's call to service to enhance and promote America's Great Outdoors," said Secretary Salazar. "Their hard work and determination to support our public lands demonstrates that caring for our nation's natural and cultural resources helps to strengthen our communities, our public lands, and our commitment to making our country a world leader in conservation."

The 14 individuals and groups dedicated more than 250,000 hours, building trails and enhancing public lands; restoring and protecting fish and wildlife habitat; caring for and ensuring appropriate use of our cultural and historic landmarks; and expanding outdoor recreation and sustainable tourism. The total economic benefit of the volunteer efforts recognized today is approximately $5,340,000.[1] The lands that benefitted are managed by the Department of the Interior and other federal agencies, including the U.S. Forest Service, the National Oceanic and Atmospheric Administration, and the U.S. Army Corps of Engineers.

"In 2010 more than 300,000 volunteers contributed 9.5 million volunteer hours on Department of Interior lands, totaling $192 million in economic benefit," said Rhea Suh, Assistant Interior Secretary for Policy, Management and Budget. "That's an incredible return on investment for the government, all made possible by the enthusiasm and energy of citizens who want to make a difference. Their dedication is admirable."

Other land managing agencies, including the U.S. Forest Service, the National Oceanic and Atmospheric Administration, and the U.S. Army Corps of Engineers have reported comparable numbers.

The volunteer's actions included protecting loggerhead sea turtles, planting over 1000 trees, recording ancient petroglyphs, building multi-generational and accessible parks, and the building and planting of an outdoor classroom and wetlands, among many other significant achievements. These individuals, groups, and partnerships, representing 6,000 volunteers, were honored at an awards ceremony today at the White House.

"This year there were thousands of volunteers doing incredible things to support the environment," Interior's Director of Youth in the Great Outdoors Julie Rodriguez said. "We've seen phenomenal achievements from the men, women and young people who gave their time and energy to make this great nation a better place for all to enjoy, and we are extremely grateful for their service."

Each year, the award winners are selected by a panel of judges from hundreds of qualified nominations representing outstanding examples of stewardship across the country. This year, there are 14 national award winners, from 12 states.

"The amount of work accomplished by this year's award recipients is truly awe-inspiring and reminds us that we can all do our part to be good stewards of our public lands," Take Pride in America Director Lisa Young said. "They deserve today's recognition and the heartfelt thanks from the entire nation."

Take Pride in America is a national partnership program authorized by Congress to promote the appreciation and stewardship of public lands, including parks, forests, historic sites, and schools. The Take Pride in America program is administered by the U.S. Department of the Interior for the benefit of all public lands at all levels of government nationwide. Citizen stewards know and count on Take Pride in America for the most comprehensive online portal of public lands volunteer opportunities and for showcasing the most outstanding public lands stewardship



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RECOVERY.GOV

The official U.S. Government website for the Recovery Accountability and Transparency Board.

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WHAT IS RECOVERY.GOV?

The site, created by the American Recovery and Reinvestment Act of 2009, displays information about the Recovery Accountability and Transparency Board's activities, as well as data related to the $840 billion stimulus bill and information about the distribution and spending of Hurricane Sandy funds.

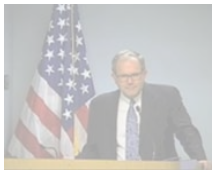
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Richard Ginman, chairman of the GATBoard, opens the public meeting to solicit input on ways to improve transparency of federal spending.
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The Recovery Accountability and Transparency Board provides oversight of federal funds, including those distributed under ARRA and the Disaster Relief Appropriations Act of 2013 to aid victims of Hurricane Sandy. Learn more...

Department of the Interior Recovery Investments

Investing in America's Economic Recovery

Highlights and News

Interior Commits $14.6 Million in Economic Recovery Funding to Delta-Mendota Canal/California Aqueduct Intertie Pumping Plant, Underground Pipeline

With this ARRA award, Reclamation is initiating the construction phase of the project. The $14.6 million award was issued to Shimmick Construction of Oakland, Calif. for building a pumping station and underground pipeline connection, installing four pumps and motors and building an electrical switchyard. Construction is expected to begin in fall 2010 and be completed by early 2012. Learn more

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EPISODE 186 ShakeOut Podcast 2013
Host: Ethan Alpern | Date: 10/9/2013

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Host: Alex Demas | Date: 9/18/2013

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Host: Alex Demas | Date: 4/30/2013

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EPISODE 181 ShakeOut Drill: Preparing for Earthquakes
Host: Jessica Robertson | Date: 10/11/2012

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EPISODE 187 Hazards: Geomagnetic Storms
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EPISODE 182 Diamonds and Dusty Pages
Videographer: Kara Capelli | Date: 12/18/2012

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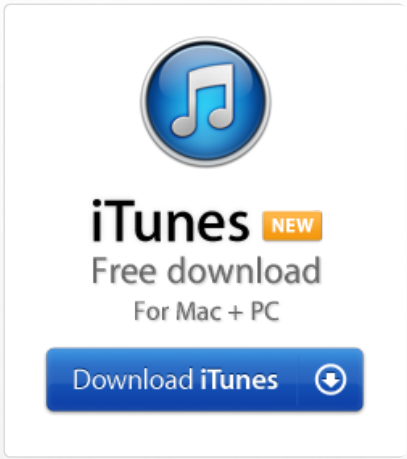


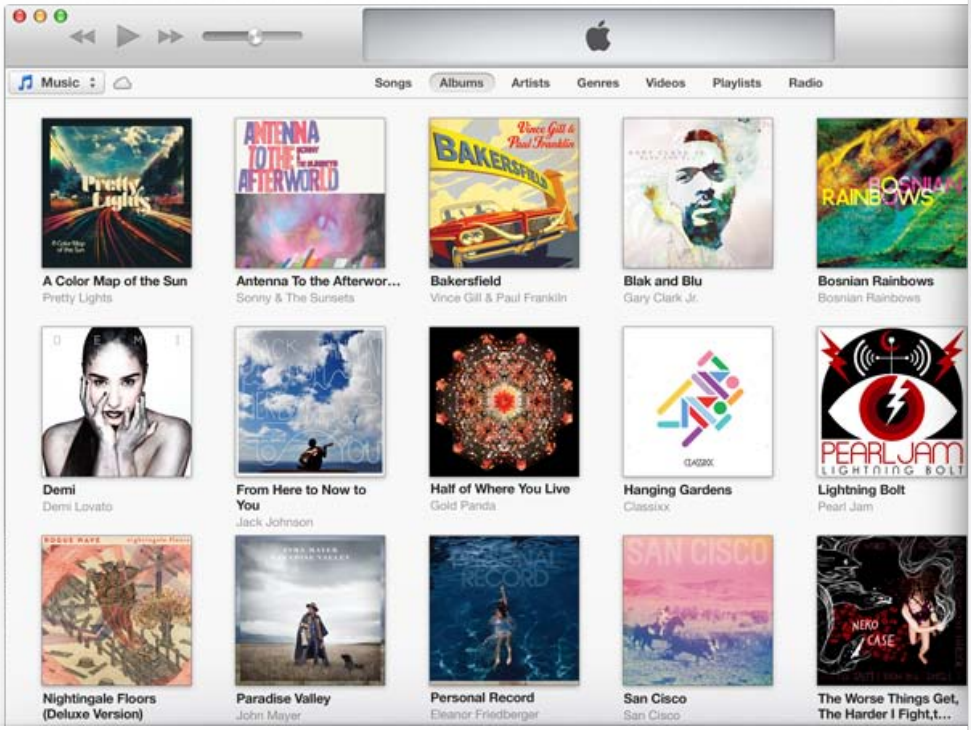


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Monitoring and Studying Volcanoes - 11 of 10

How are ground movements associated with volcanic activity measured?

Ground deformation (swelling, subsidence, or cracking) is measured with a variety of techniques, including Electronic Distance Meters (EDM), the Global Positioning System (GPS), precise leveling surveys, strainmeters, and tiltmeters. EDMs use lasers to accurately measure changes in distance between benchmarks (fixed points) with repeated measurements. GPS makes use of satellites orbiting the Earth to determine and track the locations of points. Strainmeters and tiltmeters are used to monitor subtle changes in shape of the ground surface. For more information, please see Monitoring Volcano Ground Deformation in our Activity Section.

Tags: Geothermal Resources, Earthquakes, Tectonics, Monitoring, Volcanoes, Lava, Seismicity, Ring of Fire

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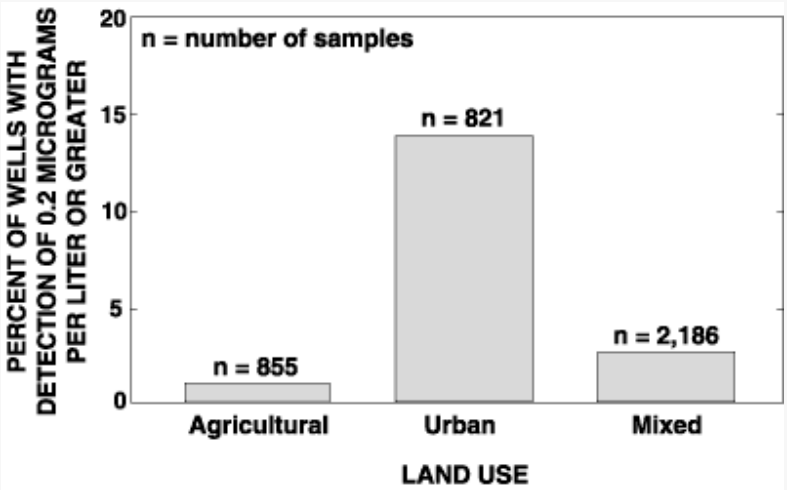
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Contamination and Pollution - 26 of 25

Where is MTBE most likely found?

NAWQA findings indicate that MTBE is most frequently detected in ground water underlying urban areas in comparison to agricultural and mixed land-use settings. MTBE was detected in about 14 percent of wells sampled in urban areas. In addition, incidence of MTBE increases in high-use areas. Most of MTBE's high use occurs in Reformulated Gasoline (RFG) areas, where gasoline contains 11-percent MTBE by volume. MTBE has been detected about 4 to 6 times more frequently in the high-use areas than elsewhere.



The detection frequency of MTBE in ambient ground water is highest in urban land use.

Tags: Ecosystems, Groundwater, Contamination, Rivers, Water, Streams, Quality, Chemistry, Aquifers

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What is USGS doing to address methane in groundwater?
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National Atlas - 21 of 20

Does the National Atlas include a map showing the regions of the United States?

- NOTICE: The National Atlas of the United States will be taken offline on September 30, 2014.

We have not included a "Regions" map layer because the definition of regions is highly subjective. The definition of a particular region depends on the perspective of the user, the purpose of the map, or other factors. The following sites contain more information on the determination of regions.

Helping Your Child Learn Geography, U.S. Department of Education
Regions Defined, Library of Congress

Tags: Maps, National Atlas, Geospatial

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I heard that the National Atlas program is ending. Where do I go for more information about this?

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U.S. Geological Survey Freedom of Information Act (FOIA) Electronic Reading Room



Welcome to the USGS FOIA Electronic Reading Room, which contains documents related to the Flow Rate Technical Group (FRTG) lead by USGS Director Marcia McNutt in response to the Deepwater Horizon Oil Spill. These documents have been cleared for public release and please note that USGS will be publishing additional documents to this collection regularly as we continue to identify responsive records associated with the FRTG. We recommend that you search this site before filing a FOIA request as well as other Federal Government Deepwater electronic reading rooms for documents or information that you are seeking.

Please note that the current posted inventory of FRTG Deepwater Horizon documents is not all inclusive and should not be interpreted as such.

Deepwater Horizon Oil Spill

- BOEMRE Deepwater Horizon FOIA Reading Room
- USGS Deepwater Horizon Oil Spill Response
- USGS Deputy Director Emails
- Flow Rate Technical Group Emails and Reports
- BP Deepwater Horizon Budget: What Happened to the Oil?
- Deepwater Horizon Illustrations and Graphics

FOIA Background

The Freedom of Information Act (FOIA), 5 U.S.C. 552, as amended, is based on the principle of openness in government and generally provides that any person has a right, enforceable in court, of access to Federal agency records, except to the extent that such records (or portions thereof) are protected from disclosure by one of nine exemptions or by one of three special law enforcement record exclusions. Under the spirit and provisions of the FOIA, Federal agencies are to make their records available to the public to the greatest extent possible.

FOIA requests for a copy of U. S. Geological Survey (USGS) records can be made by any individual or public or private organization other than a Federal agency. The request must: (1) be in writing or by e-mail to foia@usgs.gov, (2) specifically cite the Freedom of Information Act, (3) reasonably describe the records sought, and (4) indicate a willingness to pay fees, (specify the amount they are willing to pay) or ask for a fee waiver. The request will be sent to the USGS FOIA Officer, Mail Stop 807, National Center, Reston, VA

Department of the Interior

- Department of Interior FOIA
- Department of the Interior's (DOI) Freedom of Information Act Handbook, 383 DM 15*
- DOI Search and Review Fees
- DOI Guide for Obtaining Information
- DOI FOIA Library
- DOI FOIA Contacts
- DOI FOIA Annual Reports

U.S. Geological Survey

- Survey Manual 318.1 - Freedom of Information Act - General, provides USGS Guidance on the Freedom of Information Act.
- USGS Organization Chart
- USGS Directory of Key Officials
- USGS Phone Book
- Contact USGS
- Laws, Policies, and Guidelines Governing USGS Activities
- USGS Science Strategy
- Guidelines for Ensuring the Quality of

20192.

Process

Upon receipt, the FOIA Officer will direct the request to the appropriate USGS FOIA Representative. The FOIA representative or an assigned liaison officer will respond to the request no later than 20 workdays after receipt, as required by the FOIA statute. When it is necessary to forward a request to another installation such as a field office for response, the time limit begins upon receipt by the field office. A time extension, not to exceed an additional 10 workdays, may be taken in certain circumstances. However, the requester must be notified in writing that an extension is being taken, the reason(s) for taking the extension, and the anticipated date of the FOIA response.

A FOIA response must advise the requester of the records that the bureau intends to disclose or to withhold, the exemption(s) authorizing the withholding (including a citation or summary of each exemption), and a strong justification for withholding the record(s). Normally the records to be disclosed will be provided with the response letter. If the records are not provided with the letter, they will be sent as soon as possible thereafter.

USGS Uses Multi-track Processing of FOIA Requests

In accordance with 43 CFR 2.26, the USGS uses three processing tracks based on the amount of time required for a request to be processed: Simple, 1-5 workdays, Normal, 20 workdays, and Complex, over 20 workdays. Visit the DOI FOIA Guidance website for more information.

Denials

Headquarters USGS FOIA responses involving a denial or partial denial of records must be coordinated with the FOIA Officer. In the central, eastern and western regions, denials are usually signed by the Regional Geospatial Information Officer (RGIO), after consultation with the regional solicitor. A denial or partial denial letter will contain a paragraph advising the requester of the right to file an appeal with the Department of the Interior's FOIA Appeals Officer.

Contact

If you have questions on the USGS FOIA process, please contact:

Christina Bartlett
Acting USGS FOIA Officer
12201 Sunrise Valley Drive
Mail Stop 807
Reston, VA 20192

Information Disseminated to the Public
- U.S. Geological Survey Manual
- Instructional Memoranda
- About USGS

Other Resources

- Department of Justice FOIA
- Attorney General's Memorandum Concerning the Freedom of Information Act (March 19, 2009)
- DOJ Email Concerning President Obama's Memorandum on the Freedom of Information Act (January 23, 2009)
- President Obama's Memorandum Concerning the Freedom of Information Act (January 21, 2009)
- Open Government Act of 2007
- FOIA Policy and Guidance

*Note: Download the free Adobe Reader to view PDF files from the Adobe Systems. Or go to access.adobe.com for free tools that allow visually impaired users to read PDF files.

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Page Last Modified: 28-Jan-2014@06:53

Privacy Policies

The information on these pages is provided to assist you in finding information that will help you understand the Privacy Act (Public Law 5 U.S.C. § 552a, as amended), as it relates to privacy policies of the U.S. Geological Survey, a bureau of the Department of the Interior. See DOI Privacy Policy.

How We Handle the Information We Gather When You Visit Our Website

The type of information that we receive from your visit to our Web sites depends upon what you do when visiting our sites. We use this information to measure the number of visitors to the different sections of our sites and to help us make our sites more useful to visitors.

Child Privacy - The USGS values the privacy and protection of children in the use of its Web sites. We adhere to the privacy policies stated below in dealing with children 13 years and younger and for all visitors to USGS Web sites. (for more information see "Children's Online Privacy Protection Act of 1998."

It is the policy of the USGS that we will not obtain personal identifying information about you when you visit our Web sites, unless you choose to provide the information to us (for example, through a questionnaire in which you willingly provide such information, or in which you are requesting a publication or other information to be transmitted to you by the USGS).

Identification for Law Enforcement or Unauthorized Use - The only time that we will attempt to identify individual users or to share any information we receive with any parties outside of the USGS is (1) in the course of officially authorized law enforcement investigations or (2) in the event of a suspected attempt to deliberately circumvent our system's security with the intent to gain unauthorized access or to do physical damage (for example, an attack by hackers). In the latter case, information collected about a suspected intruder may be shared with the USGS Information Technology Security Manager (see Contact information below).

Web Server Activity - Like most Web servers on the Internet, USGS servers collect and store within Web access logs all of the information that your Web browser sends when it requests a Web page, including:

- the name, domain, and numerical internet address of the host computer (typically a computer belonging to your Internet Service Provider and not your personal computer) from which you access the Internet;
- the date and time you accessed our site;
- the Internet address of the Web page that you came from;
- the page you requested from our site and the number of characters sent to your computer; and
- the information your Web browser software sends as its so-called “User Agent,” which typically identifies the browser software and may also indicate the operating system used in your personal computer and the type of computer.

It is impossible to determine the actual identity of an individual user from this information. The logs are periodically summarized and analyzed to study site usage over time and to perform other studies to help us improve the site's organization, performance, and usefulness. Monthly extracts of the log files are archived and stored offline at our discretion for an indefinite period of time. Some statistical summaries derived from these data may be retained online or offline at our discretion for an indefinite period of time.

Cookies - Some applications may save a “cookie” on your computer's hard disk to provide a

temporary history of actions taken. Cookies are small text files that a web site transfers to your computer to allow the site to remember specific information. If you do not want cookies to be transferred to your computer, you may choose to opt out by modifying your browser options. Opting out of cookies in no way diminishes your access to information or services.

Session cookies do not contain Personally Identifiable Information. Once a browser is closed, the cookies disappear. An example of a session cookie used on some USGS Web sites is the ForeSee Results' American Customer Satisfaction Index survey.

Persistent cookies store information on your computer for longer periods of time. USGS may use persistent cookies on some web sites to improve online services. These persistent cookies do not contain personally identifiable information. USGS does not use persistent cookies that contain Personally Identifiable Information unless specifically stated on the Web page and the visitor has provided explicit consent.

Email or Web Forms - When you send us personal identifying information by contacting us via e-mail (that is, in a message containing a question or comment) or by filling out a form that e-mails us this information, we use it to respond to your requests. We may forward your e-mail or information to other Government employees or contract personnel who are better able to answer your questions.

We do not retain or distribute lists of e-mail addresses to any parties outside the USGS, except as necessary to conduct official U.S. Government business, and we do not distribute lists of e-mail addresses to non-Government entities. Information collected via e-mail or Web form will be retained at our discretion in a readable form for as long as necessary to complete our response. The e-mail or information may be retained in an archival form as required by Federal laws and regulations governing the retention of historical records of Government agencies. For more information, please refer to the National Archives and Records Administration's Records Management Program.

File Transfer Protocol (FTP) - Many USGS sites using the file transfer protocol may also store your e-mail address if your Web browser is configured to provide it. By default, most Web browser software does not send your e-mail address; this option is configured through your browser preferences.

Online Surveys - When you voluntarily provide us with personal information as part of an online survey, we use it to perform various quantitative and qualitative analyses to improve customer service and satisfaction. We may forward the information collected to other Government employees or contract personnel to perform the actual analysis. You are under no obligation to participate in such surveys. Non-participation will not inhibit your use of our Web site in any way. If you provided the information to us in error, you may request its removal at any time. Information collected via online surveys may be retained at our discretion for an indefinite period of time.

Ordering Products Online - When you voluntarily provide us with personal information such as name, shipping and billing address, and credit card number when ordering products online, we use the information to fulfill your order. We may forward the information collected to other Government employees or contract personnel or to other computer systems (such as secure electronic commerce servers) to complete the requested transaction.

Third Party Websites and Applications

The USGS utilizes some third-party websites and applications that are not exclusively operated or controlled by a government entity and are not subject to the USGS Privacy Policy. Often these technologies are located on a ".com" website or other location that is not part of an official government domain. All users are encouraged to review the applicable third-party privacy policy, evaluate any potential risks and assess periodically thereafter. Personal Identifiable Information (PII) as defined by the Office of Management and Budget (OMB) may be minimally collected by USGS to accomplish a purpose required by statute, regulation or executive order. In the event that USGS collects PII from a third-party website or application, the USGS Privacy Officer must approve the collection, and the public will be notified via a Federal Register comment period which will contain the type of information being collected, the intended purpose of the collection, the retention period, as well as any other specifics.

Facebook - The USGS maintains official Facebook Pages. Our intention with these Pages is to encourage conversation between the USGS and the public as well as sharing real time information. Your use of Facebook, and the privacy of your information on Facebook, is outlined in the Facebook

Privacy page (http://www.facebook.com/privacy/explanation.php). Facebook provides a number of privacy settings and controls to allow you to manage how your personal information is shared with others. The USGS does have access to a subset of this information in the form of basic statistics for the Pages that we maintain. We may use this information in order to improve the effectiveness of our Facebook content to better support the needs of our visitors to those Pages. We do not use or maintain any personally identifiable information related to those statistics. We may, from time to time, run contests or free giveaways using our account(s) where the winner(s) may receive some prize which is delivered by postal carrier. In these cases, the USGS personnel responsible for running that USGS account(s) will request your mailing address via e-mail for the sole purposes of mailing the prize(s) to you. Contest winner(s) who provide their postal mailing address will be done voluntarily.

The USGS permits the public to openly post content to our Pages. If you opt to post content to one of our Pages, your personal name and link to your profile are listed alongside your content posted. This functionality is solely operated by Facebook. While we encourage comments on our Pages, there are some comments which we may consider inappropriate or offensive based upon our Comment Policy (which is stated on each Page). In the event that a comment does violate the USGS Comment Policy, we have the right to delete that content. Before doing so, we do capture the content of that comment for records purposes, but we do not collect the name associated with that content. We are concerned only with the comment itself as to why it was deleted and how it conflicts with our posted Comment Policy. If a comment does contain personally identifiable information within the actual comment text, we will remove the portion classified as personally identifiable information. The USGS is solely interested in our interaction with the general public and not collecting personal identifiable information.

In addition, the USGS may also provide embedded Facebook content within our own pages on the domains in which we own and maintain. In these cases, Facebook may set a persistent cookie as a result of the embedded content. The USGS use of any possible information provided to us through this embedded content will be consistent with the previously stated usage. If there is any more specific use that falls outside of the stated one on this page, that information will be listed directly alongside with the embedded content.

Google+ - The USGS maintains official Google+ Pages. Our intention with these Pages is to encourage conversation between the USGS and the public as well as sharing real time information. Your use of Google+, and the privacy of your information on Google+ is outlined in the Google+ Privacy page. Google+ provides a number of privacy settings and controls to allow you to manage how your personal information is shared with others. The USGS does have access to a subset of this information in the form of basic statistics for the Pages that we maintain. We may use this information in order to improve the effectiveness of our Google+ content to better support the needs of our visitors to those Pages. We do not use or maintain any personally identifiable information related to those statistics. We may, from time to time, run contests or free giveaways using our account(s) where the winner(s) may receive some prize which is delivered by postal carrier. In these cases, the USGS personnel responsible for running that USGS account(s) will request your mailing address via e-mail for the sole purposes of mailing the prize(s) to you. Contest winner(s) who provide their postal mailing address will be done voluntarily.

The USGS permits the public to openly post content to our Pages. If you opt to post content to one of our Pages, your personal name and link to your profile are listed alongside your content posted. This functionality is solely operated by Google+ While we encourage comments on our Pages, there are some comments which we may consider inappropriate or offensive based upon our Comment Policy (which is stated on each Page). In the event that a comment does violate the USGS Comment Policy, we have the right to delete that content. Before doing so, we do capture the content of that comment for records purposes, but we do not collect the name associated with that content. We are concerned only with the comment itself as to why it was deleted and how it conflicts with our posted Comment Policy. If a comment does contain personally identifiable information within the actual comment text, we will remove the portion classified as personally identifiable information. The USGS is solely interested in our interaction with the general public and not collecting personal identifiable information.

In addition, the USGS may also provide embedded Google+ content within our own pages on the domains in which we own and maintain. In these cases, Google+ may set a persistent cookie as a result of the embedded content. The USGS use of any possible information provided to us through this embedded content will be consistent with the previously stated usage. If there is any more specific use that falls outside of the stated one on this page, that information will be listed directly alongside with

the embedded content.

Flickr® - The USGS maintains official Flickr account(s) (owned by Yahoo®). Our intention is to share USGS imagery with the public which is also available on the USGS Multimedia Gallery (http://gallery.usgs.gov). Your use of Flickr, and the privacy of your personally identifiable information, as provided by Flickr, can be found on their Yahoo! Privacy page (http://info.yahoo.com/privacy/us/yahoo/flickr/details.html). As part of the Flickr service, anonymous usage statistics (not containing any personally identifiable information) are made available to users to understand the amount of traffic and use of their uploaded content. The USGS may periodically review this usage data to help improve our content. The USGS will not receive any personally identifiable information. We may, from time to time, run contests or free giveaways using our account(s) where the winner(s) may receive some prize which is delivered by postal carrier. In these cases, the USGS personnel responsible for running that USGS account(s) will request your mailing address via e-mail, for the sole purposes of mailing the prize(s) to you. Contest winner(s) who provide their postal mailing address will do so voluntarily.

In addition, USGS may also provide embedded Flickr content within our own pages on the domains which we own and maintain. In these cases, Flickr may set a persistent cookie as a result of the embedded content. The USGS use of any possible information provided to us through this embedded content will be consistent with the previously stated usage. If there is any more specific use that falls outside of the stated one on this page, that information will be listed directly alongside the embedded content.

Twitter - The USGS maintains official Twitter account(s). Our intention is to engage and interact with the public for sharing current USGS information such as live tweeting USGS events or as a customer service tool in responding to requests. Your use of Twitter, and the privacy of your personal information, can be viewed on Twitter's privacy page (http://twitter.com/privacy). In our use of the Twitter service, the USGS does not archive any of your personally identifiable information other than what any public person(s) may see within the content of a tweet (e.g., the Twitter profile name if a USGS account replies to that person(s)). We may, from time to time, run contests or free giveaways using our account(s) where the winner(s) may receive some prize which are delivered by postal carrier. In these cases, the USGS personnel responsible for running that USGS account(s) will request your mailing address via e-mail for the sole purposes of mailing the prize(s) to you and will be completely voluntary.

The USGS may also run scientific experiments using public Twitter data to improve the reporting and scientific capabilities of earthquake monitoring/notification. In these cases, the information would available through various Twitter tools (e.g. - Twitter APIs). In the event that this information is repurposed for public use, the full disclosure of the information being used and displayed will be posted alongside any views or tools available for use by the public.

In addition, USGS may also provide embedded Twitter content within our own page on the domains in which we own and maintain. In these cases, Twitter may set a persistent cookie as a result of the embedded content. The USGS use of any possible information provided to us through this embedded content will be consistent with the previously stated usage. If there is any more specific use that falls outside of the stated one on this page, that information will be listed directly alongside with the embedded content.

YouTube - The USGS maintains official YouTube Channels (owned by Google Inc.™). Our intentions with these channels are to share USGS related videos which are also available in the USGS Multimedia Gallery (http://gallery.usgs.gov). Visitors to YouTube will typically have a persistent cookie sent from YouTube which may include some personal information related to your Google account (if you have one). Information pertaining to what YouTube stores and/or collects for their use can be viewed at their privacy webpage (http://www.youtube.com/t/privacy_at_youtube). YouTube does make a subset of this information available to Channel content owners in order to provide basic video usage information such as state, country, region location, visits, video drop-in/drop-out viewing parts, etc. The USGS may use this statistical information to improve the content of our channel(s) which will improve your viewing experience at the USGS YouTube Channel(s). The USGS does not have access to any personally identifiable information. We may, from time to time, run contests or free giveaways using our account(s) where the winner(s) may receive some prize which is delivered by postal carrier. In these cases, the USGS personnel responsible for running that USGS account(s) will request your

mailing address via e-mail for the sole purposes of mailing the prize(s) to you. Contest winner(s) who provide their postal mailing address will do so voluntarily.

In addition, the USGS may also provide embedded YouTube content within our own web pages domains which we own and maintain. YouTube may set a persistent cookie as a result of the embedded content. The USGS use of any possible information provided to us through this embedded content will be consistent with the previously stated usage. If there is any more specific use that falls outside of the stated one on this page, that information will be listed directly alongside with the embedded content.

AddThis: The "Share" function on some USGS sites is provided by a third party, AddThis. The service provider uses cookies and collects information on visitors who use this feature to share USGS content on their Facebook pages, Twitter feeds or other social media or social networking sites. As noted in their privacy policy, AddThis uses this information for its own business purposes, including marketing the information to other parties. AddThis does not collect information from users who do not use the feature.

Google Analytics: "Like many services, Google Analytics uses … cookies to track visitor interactions. These cookies are used to store information, such as what time the current visit occurred, whether the visitor has been to the site before, and what site referred the visitor to the web page. Browsers do not share … cookies across domains" (from the Google Analytics privacy overview). The U.S. Geological Survey does not collect personally identifiable information from these third-party tools, nor provide them with additional PII. We use IP masking in order to share only a portion of the IP address for geolocation. In addition, Google provides an Opt-out Browser Add-on "to indicate that information about the website visit should not be sent to Google Analytics." USGS does not endorse and makes no representation about the effectiveness of the Google Analytics Opt-out Browser Add-on.

Pinterest - The USGS may maintain official Pinterest profiles. Our intention with these profiles is to encourage conversation between the USGS and educating the public. Some accounts, like the USGS Store specifically, may be used to share specials, discounts, or share products which are for sale in the USGS's online store. Your use of Pinterest, and the privacy of your information on Pinterest, is outlined in the Pinterest Privacy and Terms page. Pinterest does provide privacy settings and controls to allow you to manage how your personal information is shared with others.

If a Pinterest user or member of the public interacts with USGS through its official Pinterest account, posts comments on an image in a USGS Pinterest collection, requests information or submits feedback through Pinterest, their name, gender, profile photo, free-form biography, location/hometown, website URL and email address, and other personal information provided by the user may be used by USGS to communicate or provide the requested information. The USGS does not collect or share PII through its use of Pinterest, except in unusual circumstances where user interactions indicate evidence of criminal activity, a threat to the government, a threat to the public, or an employee violation of USGS policy. This information may include name, gender, profile photo, free-form biography, location/hometown, website URL, email address, comments and other personal information provided by the user, and may be used to notify the appropriate agency officials or law enforcement organizations.

We may use some of this information in order to improve the effectiveness of our Pinterest content to better support the needs of our visitors to those accounts. We may, from time to time, run contests or free giveaways using our account(s) where the winner(s) may receive some prize which is delivered by postal carrier. In these cases, the USGS personnel responsible for running that USGS account(s) will request your mailing address via e-mail for the sole purposes of mailing the prize(s) to you. Contest winner(s) who provide their postal mailing address will be done voluntarily.

While we encourage comments on our Pinterest accounts, there are some comments which we may consider inappropriate or offensive based upon our Comment Policy (which is stated on each Page). In the event that a comment does violate the USGS Comment Policy, we have the right to delete that content. Before doing so, we do capture the content of that comment for records purposes, but we do not collect the name associated with that content. We are concerned only with the comment itself as to why it was deleted and how it conflicts with our posted Comment Policy. If a comment does contain personally identifiable information within the actual comment text, we will remove the portion classified as personally identifiable information. The USGS is solely interested in our interaction with

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Site Security

To provide site security and to ensure that this service remains available to all users, our Government computer system employs software programs to monitor network traffic to identify unauthorized attempts to upload or change information or otherwise cause damage. Unauthorized attempts to upload information or change information on this Web site are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and the National Information Infrastructure Protection Act. Information may also be used for authorized law enforcement investigations. For more information, see the section entitled, "Identification for Law Enforcement or Unauthorized Use."

Policy

- For relevant USGS policy on privacy, refer to the Survey Manual chapter entitled, Privacy Act - General.
- For relevant USGS policy on information technology security, refer to the Survey Manual chapters entitled, Information Technology Systems Security.
- For relevant DOI policy on safeguarding Privacy Act records, refer to the Department's Privacy Program.
- For relevant Federal law on conduct of DOI employees, refer to 43 CFR 2.52 - Conduct of employees.
- For relevant Federal law on standards for maintenance of Privacy Act records, refer to 43 CFR 2.48 - Standards for maintenance of records subject to the Act.

Contact

If you have questions on USGS privacy or information technology security, contact:

USGS Privacy Officer
Mail Stop 807
National Center
USGS
Reston, VA 20192

USGS Information Technology Security Manager
Mail Stop 802
National Center
USGS
Reston, VA 20192

Policies and Important Notices

These pages provide information that describes the principal policies and other important notices that govern information posted on USGS Web sites. In these pages, you will find information (or links) related to:

- Information Policies and Instructions
- USGS Information Quality Guidelines
- USGS Peer Review Agenda
- Privacy Policies
- How to request information under the Freedom of Information Act (FOIA) Policy
- Accessibility Policy
- Policy for linking to non-Federal sites
- Equal opportunity data required by the No Fear Act Policy
  No Fear Act (- 51 Kb)
- Children's Online Privacy Protection Act of 1998 (COPPA) Policy
- E-Government Act of 2002 Policy (- 218 Kb)
- Employment with USGS | USAJobs
- Environmental Management Policy Statement
- Comment Policy

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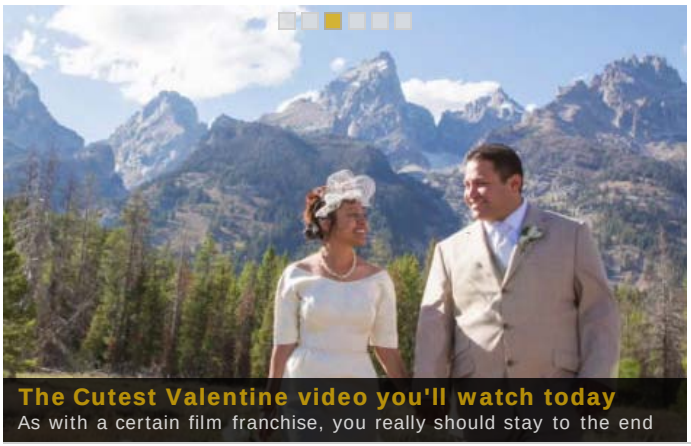
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The Cutest Valentine video you'll watch today
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Our Mission: Protecting America's Great Outdoors and Powering Our Future

The U.S. Department of the Interior protects America's natural resources and heritage, honors our cultures and tribal communities, and supplies the energy to power our future.

Latest Happenings

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Media Advisory: Secretary Jewell to Tour California Water Facilities for On-the-Ground Examination of Historic Drought Issues

MON, MARCH 10, 2014, 01:24 PM EST

On Tuesday, March 11, 2014, Secretary of the Interior Sally Jewell will tour the federal C.W. "Bill" Jones Pumping Plant in Byron, Calif., to examine firsthand critical water storage and conveyance facilities. Read More >



This Week at Interior March 7, 2014

FRI, MARCH 7, 2014, 03:26 PM EST

A new report shows the powerful impact that national parks have on local and national economies; NPS projects a peak bloom date for Washington DC's world-famous cherry blossoms; Interior has a new Deputy Secretary; more. Watch Video >



Media Advisory: Secretary Jewell, Mayor Garcetti to Announce Partnership to Connect Los Angeles Urban Youth to Outdoors

FRI, MARCH 7, 2014, 11:44 AM EST

On Monday, March 10, 2014, Secretary of the Interior Sally Jewell will join Los Angeles Mayor Eric Garcetti to announce a partnership that will help connect urban youth in the Los Angeles area to the outdoors. Read More >



Secretary Jewell Lauds President's Intent to Nominate Estevan López to Serve as Commissioner of Bureau of Reclamation

THU, MARCH 6, 2014, 08:15 PM EST

Estevan López, a professional engineer with more than two decades of experience in water resource management, would lead the largest wholesale water supplier and second largest producer of hydroelectric power in the United States. Read More >



Historic Agreement Reached on Upper Klamath Basin Water

WED, MARCH 5, 2014, 02:06 PM EST

The Klamath Tribes, Interior, Oregon Governor John Kitzhaber, Oregon Senator Ron Wyden, Oregon Senator Jeff Merkley and Upper Klamath Basin irrigators announced today that they have completed negotiations on the Upper Klamath Basin Comprehensive Agreement Read More >

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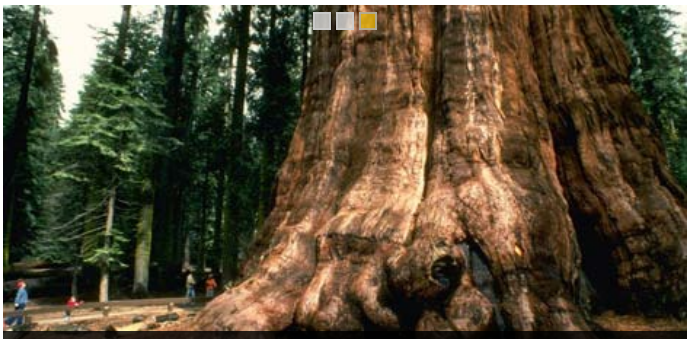
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An organization of 300 employees driven by a keen sense of mission and committed to conducting the business of government in the best interest of the American public.

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Bureau of Indian Affairs Real Property Leases
FRI, JANUARY 31, 2014, 03:58 PM EST

OIG performed an inspection of BIA real property leases and found the Bureau had leased property without approval in excess of square footage limits. OIG identified more than $32 million spent without GSA leasing approval. Read More >

Records Management at Selected Bureau of Indian Affairs' Agency Offices
FRI, JANUARY 31, 2014, 03:21 PM EST

An inspection of record keeping at three BIA agency offices found that two offices had significant shortcomings and that record keeping at some agencies needs improvement. We subsequently made three recommendations to BIA to improve its record keeping.
Read More >

Investigative Report of OSM Environmental Review
FRI, DECEMBER 20, 2013, 03:07 PM EST

We investigated whether OSM pressured contractors to lower their estimate of the number of potential job losses associated with a proposed rule to protect streams located near coal mines, and then ended the contract when they refused. Read More >

United Mine Workers of America Health and Retirement Funds (Revised)
MON, DECEMBER 16, 2013, 11:53 AM EST

The Office of Inspector General reviewed the United Mine Workers of America Health and Retirement Funds in response to concerns expressed by the Office of Surface Mining Reclamation and Enforcement about increasing administrative costs. Read More >

Semiannual Report to Congress - October 2013
FRI, NOVEMBER 29, 2013, 11:43 AM EST

This report, covering the period April 1, 2013, through September 30, 2013, highlights audit and investigative activities completed by the Office of Inspector General and focuses on high-priority programs within the U.S. Department of the Interior. Read More >

U.S. Department of the Interior, Office of Inspector General, 1849 C Street NW, Washington, DC 20240. Webmaster_Account@doioig.gov

Last Updated: 10/17/2013



CONTACT USGS

To find specific USGS information, data, maps, products or services please choose from the following options:

- USGS FAQs Homepage
- Call 1-888-ASK-USGS (1-888-275-8747)
- Social Media

Or, you can use the form below to ask a question or send a message to the USGS:

Email Address *

Subject

Message *

Name

Phone Number

Address - only include if we are shipping something to you.

*** Required field. See our** Privacy Statement**.**

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Additional Contacts

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The USGS has public affairs staff located across the country to respond to reporters questions. We are readily available to help reporters find an expert on a variety of earth and biological science topics.

Public Affairs Officer: Anne-Berry Wade, 703-648-4460

- Jessica Robertson, 703-648-6624
  Covers: Natural Hazards Mission Area
- Jon Campbell, 703-648-4180
  Covers: Climate and Land Use Change Mission Area (Land Use portion)
- Mark Newell, 573-308-3850
  Covers: Core Science Systems Mission Area
- Catherine Puckett, 352-377-2469
  Covers: Ecosystems Mission Area, Climate and Land Use Change Mission Area (just the Climate Change portion)
- Alex Demas, 703-648-4421
  Covers: Energy and Minerals and Environmental Health Mission Area

For general inquiries contact: usgsnews@usgs.gov, 703-648-4460

For information related to earthquake events contact: 303-273-8500
(USGS National Earthquake Information Center)

State Contacts for Press Inquiries

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(AL, AR CT, DE, DC, FL, GA, LA, MA, MD, ME, MS, NC, NH, NJ, NY, PA, PR, RI, SC, TN, VA, VI, VT, WV)

Vic Hines, 813-855-3125
Hannah Hamilton, 703-648-4356
Christian Quintero, 813-498-5019

Central States
(AZ, CO, IA, IL, IN, KS, KY, MI, MN, MO, ND, NE, NM, OH, OK, SD, TX, UT, WI)

David Ozman, 303-202-4744
Heidi Koontz, 303-202-4763
Jennifer LaVista, 303-202-4764

Western States

(AK, CA, HI, ID, MT, NV, OR, WA, WY)

Justin Pressfield, 916-278-9500
Leslie Gordon, 650-329-4006
Paul Laustsen, 650-329-4046

Congressional Affairs Contacts

USGS Congressional Affairs staff are available at 703-648-4455. Additional information may be found on the Congressional Statements and USGS Congressional Briefing Series websites.

Headquarters Contacts: Phone: 703-648-4455 Fax: 703-648-5427 cong_liaison@usgs.gov

Congressional Affairs Officer: Tim West, 703-648-4455

Kathleen Gohn, 703-648-4242
Covers: Energy and Minerals | and Environmental Health | Natural Hazards
Clarice Ransom, 703-648-4299
Covers: Water
Chris Trent, 703-648-4451
Covers: Climate and Land-Use Change | Core Science Systems
Holly Fowler, 703-648-4442
Covers: Ecosystems | Congressional Briefing Series

Audio Visual

Don Becker, 303-202-4770 (Email preferred: becker@usgs.gov)
Steve Wessells, 702-564-4626

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External Communications Officer: Karen Wood, 703-648-4447

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- U.S. Geological Survey Organizational Chart

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Chief, Office of Diversity and Equal Opportunity, Alesia Pierre-Louis	703-648-7775
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Associate Director, Ecosystems, Anne Kinsinger	703-648-4051
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Associate Director, Natural Hazards, David Applegate	703-648-6600
Associate Director (Acting), Water, Jerad Bales	703-648-5044
Associate Director, Core Science Systems, Kevin Gallagher	703-648-5747

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Regional Director, Alaska, Leslie Holland-Bartels (Anchorage, AK) (Alaska and Volcano Science Center)	907-786-7055
Regional Director, Northwest, Max Ethridge (Seattle,WA) (WA, OR, ID, WY, MT)	206-220-4600
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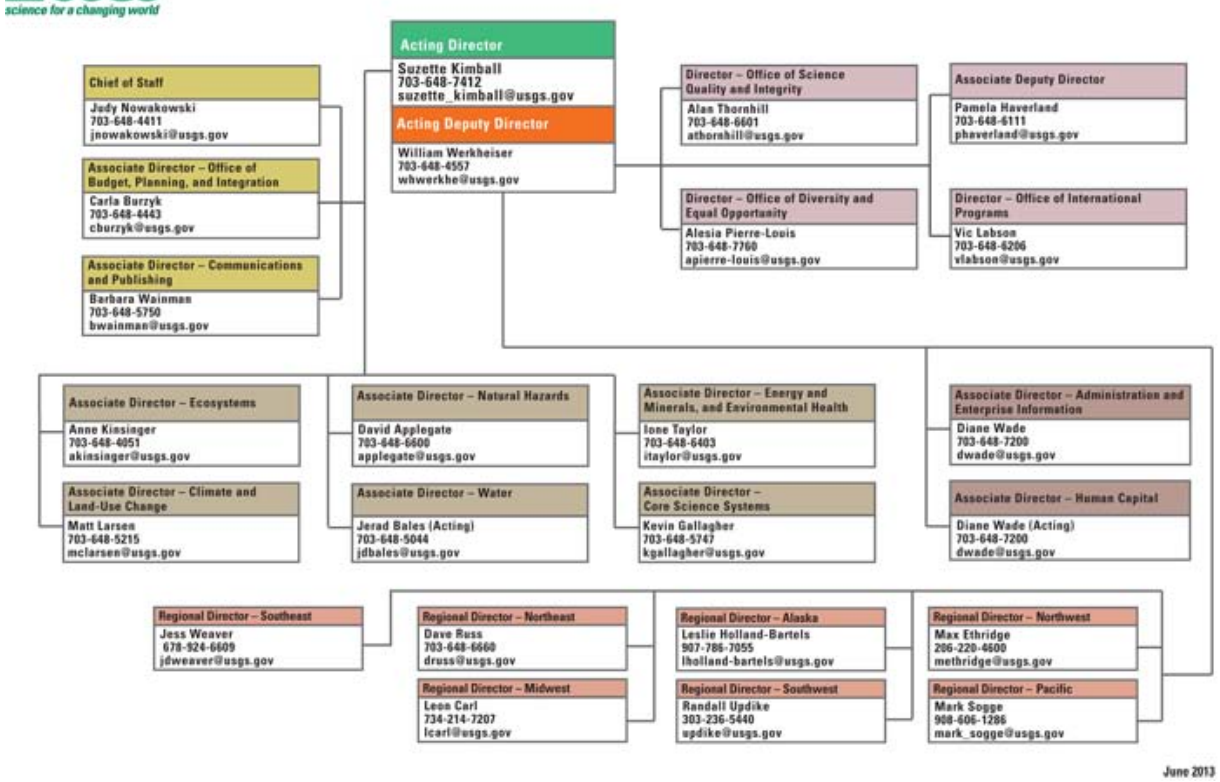
Regional Director, Pacific, Mark Sogge (Sacramento, CA) (CA, NV, HI)	606-1286

Map of Geographic Areas where USGS science is being conducted.



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Organization Chart



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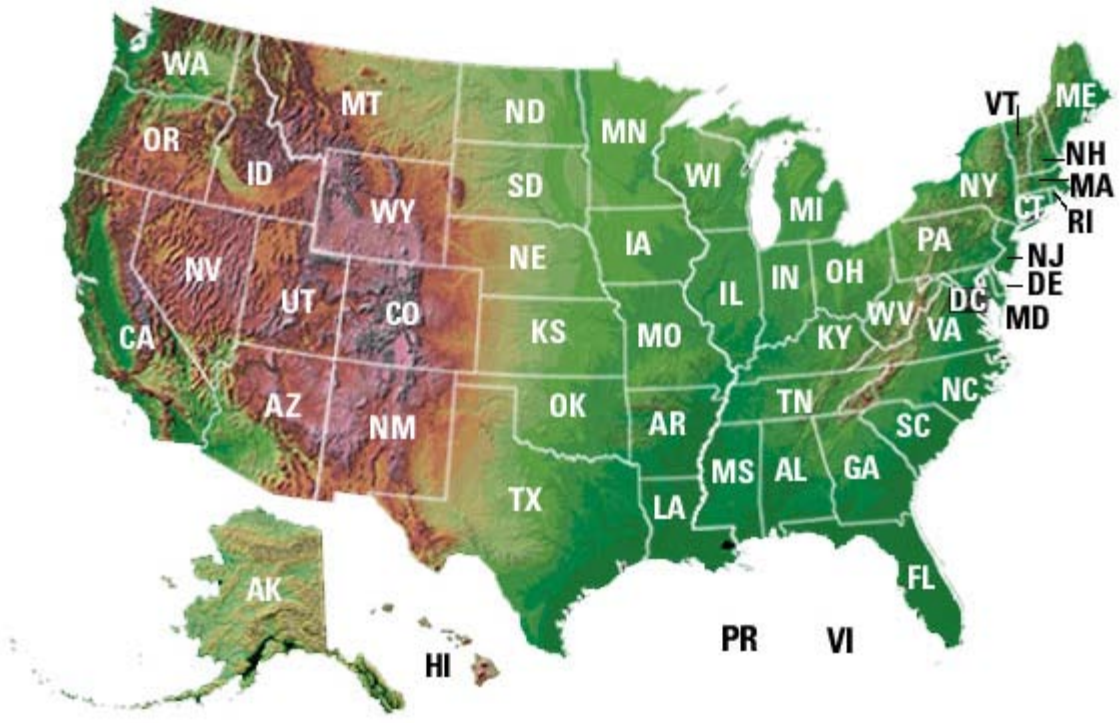
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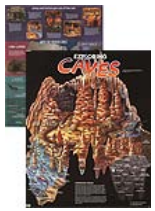
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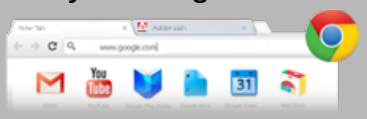


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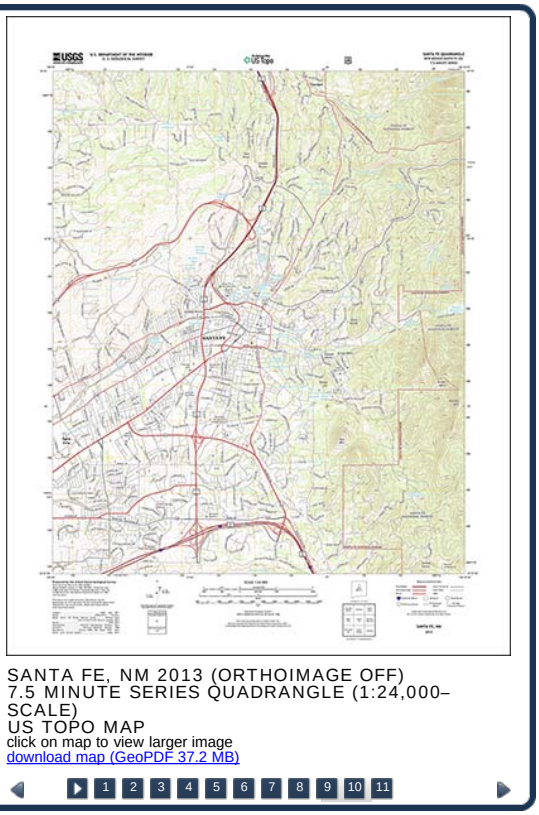
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Historical Topographic Maps - Preserving the Past

In 2009, USGS began the release of a new generation of topographic maps (**US Topo**) in electronic form, and is now complementing them with the release of high-resolution scans of more than 178,000 historical topographic maps of the United States. The topographic map remains an indispensable tool for everyday use in government, science, industry, land management planning, and leisure.



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As physical and cultural features change over time, maps are updated, revised and new editions printed. While out of date, historical maps are often useful to scientists, historians, environmentalists, genealogists and others researching a particular geographic location or area. A series of maps of the same area published over a period of time can show how an area looked before development and provide a detailed view of changes over time.

The goal of the Historical Topographic Map Collection is to scan all scales and all editions of the more than 193,000 topographic maps published by the USGS since the inception of the topographic mapping program in 1884. The National Geospatial Program (NGP) is accurately cataloging and creating metadata to accompany high-resolution, georeferenced digital files representing the legacy lithographic maps. These maps are either no longer available for distribution in print or are being replaced by the new generation of **US Topo** maps; however, they hold the potential to become chronological layers of *The National Map*. The potential for research that documents change over time is becoming increasingly recognized by the geospatial community, and this project will provide previously published lithographic USGS maps in digital form.

Objectives of the USGS Historical Topographic Map Collection are:

- Develop and publish specifications for scanning maps;
- Inventory, summarize, and create metadata for all topographic maps published by the USGS;
- Prioritize and scan historical paper maps;
- Develop methods for accurate and efficient georeferencing of scanned images;
- Archive files with National Archives and Records Administration and the Library of Congress; and
- Provide publicly accessible metadata and downloadable and viewable files of all scanned maps.

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