USGS Emergency Response Resources

Every day, emergency responders are confronted with worldwide natural and manmade disasters, including earthquakes, floods, hurricanes, landslides, tsunami, volcanoes, wildfires, terrorist attacks, and accidental oil spills. The U.S. Geological Survey (USGS) is ready to coordinate the provisioning and deployment of USGS staff, equipment, geospatial data, products, and services in support of national emergency response requirements.

http://www.usgs.gov/

USGS Real-Time Information

General To monitor and analyze current natural hazards and events, the USGS integrates dynamic near-real-time data with geospatial base data on a single map.

Natural Hazards Support System (NHSS)
http://nhss.cr.usgs.gov/

Earthquakes Situational awareness tools include e-mail and text alerts to over 200,000 subscribers, and the Prompt Assessment of Global Earthquakes for Response (PAGER) system's rapid estimates of casualties and economic losses.

PAGER: Rapid estimate of fatalities/economic impact
http://earthquake.usgs.gov/earthquakes/pager

Did you feel it?
http://earthquake.usgs.gov/earthquakes/dyfi

Earthquake Notification Service (sign up for e-mail/text)
https://sslearthquake.usgs.gov/ens/

Volcanoes The USGS uses a common nationwide alert/notification system for characterizing the level of unrest and eruptive activity at the sites of the 169 active U.S. volcanoes, including threats to aviation and nearby communities.

U.S. volcano alerts
http://volcanoes.usgs.gov/activity/status.php

Volcano status map
http://volcanoes.usgs.gov/activity/index.php

Landslides The USGS conducts landslide hazard assessments, pursues landslide investigations and forecasts, provides technical assistance to respond to landslide emergencies, and engages in outreach activities. The USGS is partnering with the National Oceanic and Atmospheric Administration (NOAA) on a prototype debris-flow warning system for wildfire-impacted areas of southern California.

Advisories
http://landslides.usgs.gov/advisories/

Monitoring
http://landslides.usgs.gov/monitoring

Flooding The USGS collects and distributes real-time streamflow data for 7,700 streamgages, provides onsite hydrologic expertise to the National Weather Service river forecast centers during major floods, deploys field crews to measure flood flows at streamgages and other locations of interest, performs highwater surveys for analysis of flood flows, and deploys water-level monitors to record hurricane storm surge.

Current flood conditions and flood-data portal
http://waterwatch.usgs.gov/new/index.php?id=ww

WaterAlert: Customized flood notification e-mails and messages
http://water.usgs.gov/wateralert/

StreaMail: Instant text message of current conditions
http://ga.water.usgs.gov/streamail/streamail-help.html

Summary of recent flooding (map and tabular data)
http://waterwatch.usgs.gov/new/index.php?id=wwdp2_2

National Flood Hazard Coordinator
Robert R. Holmes, Jr.
E-mail: *bholmes@usgs.gov*
Telephone: (573) 308–5581

USGS Flood and Hurricane Databases

The USGS maintains extensive datasets and statistical summaries of riverine flooding that can be accessed for historical context and preparation and assessment of FEMA flood-insurance rate maps. Storm-surge water-level and barometric-pressure data are useful for assessing past flooding and calibration of storm-surge models.

Storm-surge data, maps, and reports
http://water.usgs.gov/osw/programs/storm_surge.html

USGS peak flow file
http://nwis.waterdata.usgs.gov/usa/nwis/peak

Flood hydrographs
http://ida.water.usgs.gov/ida/index_usgs.cfm

Regional flood-frequency equations
http://water.usgs.gov/software/NSS/

Flood-frequency estimates for ungaged locations
http://water.usgs.gov/osw/streamstats/

Wildland Fire

GeoMAC This is a Web-based mapping application that provides current geospatial information on the status, location, and proximity of wildfires to natural resources, property, and infrastructure. This

application, originally designed for fire managers to strategically place firefighting resources, has become increasingly popular with the public.
http://www.geomac.gov

USGS Geospatial Data and Services Supporting Emergency Response

Rapid Data Delivery System (RDDS) provides emergency and incident response teams with timely access to geospatial data.
http://rmgsc.cr.usgs.gov/rdds

The National Map is easily accessible for display on the Web, as products and services, and as downloadable data. The geographic information available from The National Map includes orthoimagery (aerial photographs), elevation, geographic names, hydrography, boundaries, transportation, structures, and land cover.
http://nationalmap.gov/

US Topo provides 1-meter imagery no older than 3 years, hydrography, transportation, structures, boundaries, geographic names, and the U.S. National Grid.
http://nationalmap.usgs.gov/ustopo

Hazard Data Distribution System (HDDS) is the preeminent source for disaster imagery. HDDS provides services for pre-event baseline imagery and data, and the most recent event/disaster response imagery and data.
http://hdds.usgs.gov/hdds2/

USGS Offices Supporting Emergency Response

Key Senior Executives at USGS National Center and Regional Offices: Northeast, Midwest, Southeast, South Central, Southwest, Rocky Mountain, Northwest, and Alaska
http://www.usgs.gov/aboutusgs/organized/key_officials.asp

National Earthquake Information Center provides 24/7 monitoring and reporting of earthquakes in the United States and worldwide.
http://earthquake.usgs.gov/regional/neic/

Volcano Science Centers are five USGS volcano observatories (Alaska, Cascades, Hawaii, Long Valley, and Yellowstone) that monitor and issue alerts and warnings for the 169 active volcanoes in the United States.
http://volcanoes.usgs.gov/index.php

National Landslide Information Center provides technical assistance to respond to landslide emergencies.
http://landslides.usgs.gov/nlic/

USGS Water Science Centers located in each State, provide technical assistance for emergency measurement, monitoring, and analysis of floods, and sampling of chemical spills.
http://water.usgs.gov/district_chief.html

National Geospatial Program, Office of Emergency Operations provides senior-level liaison support to the Department of Homeland Security, United States Northern Command, and the National Geospatial Intelligence Agency. In addition, the Office of Emergency Operations coordinates the acquisition and provision of satellite imagery and authoritative geospatial information for use in disaster preparations, rescue and relief operations, damage assessments, and reconstruction efforts.

USGS Geospatial Liaisons, as part of the National Geospatial Program's Partnership Network, coordinate geospatial data acquisition and use with State and Federal emergency management officials and first responders.
http://liaisons.usgs.gov/geospatial/

Eastern Region Geographic Science Center provides imagery and geospatial analyses, GIS, and mapping expertise in support of the Department

of the Interior's Interior Operations Center and Web-based decision support tool development in partnership with other Federal agencies.
http://egsc.usgs.gov/

Rocky Mountain Geographic Science Center provides imagery and geospatial analysis, science response vehicle (SRV) staffing, and geospatial support for wildland fire suppression activities.
http://rmgsc.cr.usgs.gov/rmgsc/

Earth Resources Observation and Science (EROS) provides satellite imagery, elevation data, and climate data to support emergency operations
http://eros.usgs.gov/.

National Wetlands Research Center provides Science Response Vehicle (SRV) deployment, SRV staffing, GIS, and mapping support
http://www.nwrc.usgs.gov/

National Water-Quality Laboratory provides rapid analysis of water-quality contamination following a chemical spill, as needed.
http://nwql.usgs.gov/

Crustal Geophysics and Geochemistry Science Center provides analytical capability to examine environmental contamination resulting from disasters.
http://crustal.usgs.gov/index.html

Coastal and Marine Geology Science Centers monitor and predict magnitudes of erosion of U.S. coasts during extreme storms, and support modeled assessments of storm surge.
http://marine.usgs.gov/index.php

For more information, please contact:

Robert D. Bewley
U.S. Geological Survey
590 National Center, 12201 Sunrise Valley Drive
Reston, VA 20192
Telephone: 703–648–5660
E-mail: rbewley@usgs.gov