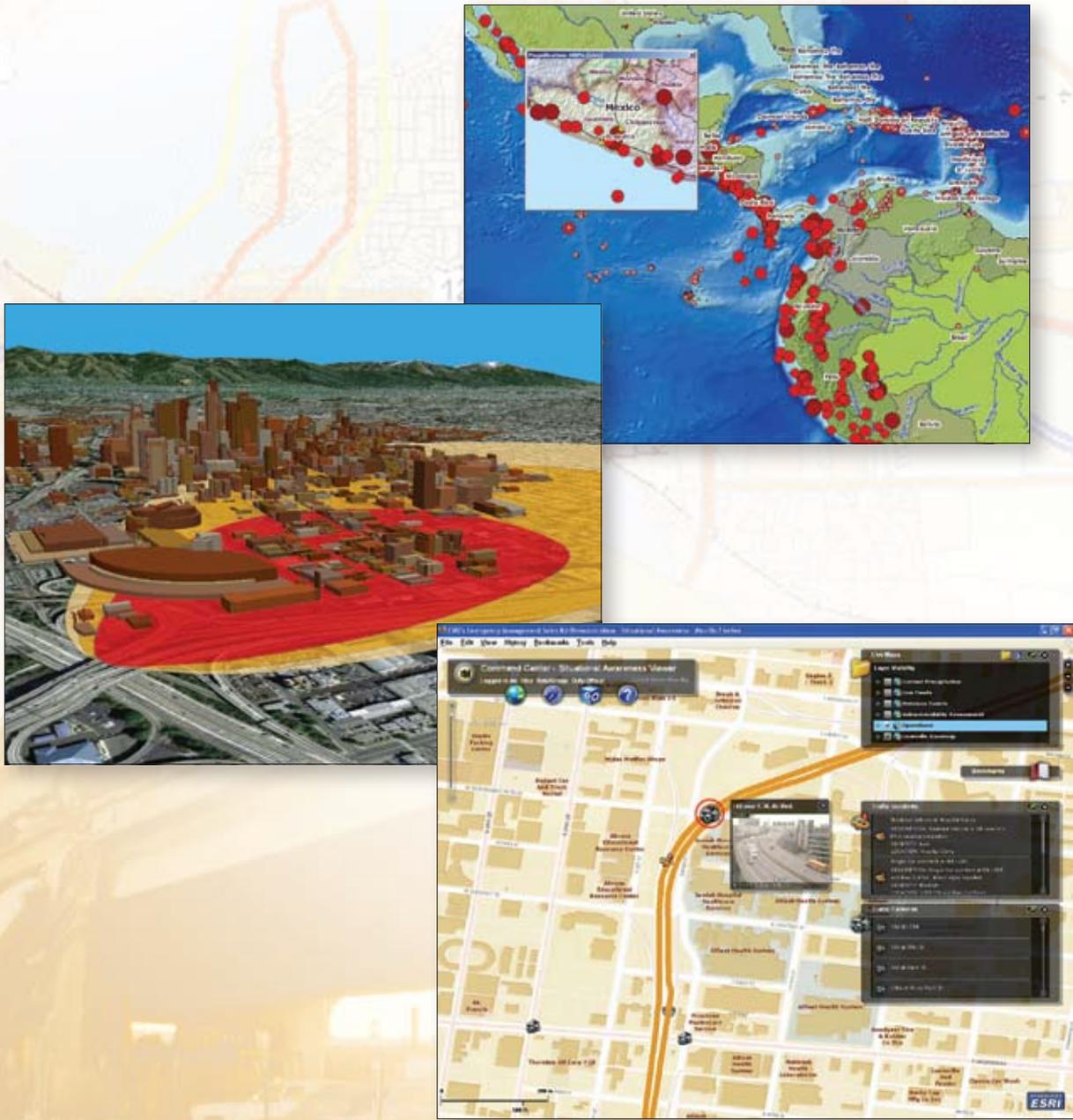


Emergency Management

GIS for Comprehensive Emergency Management



GIS for Emergency Mitigation

You need to know where your vulnerabilities are before an emergency strikes. A geographic information system (GIS) gives you tools to proactively identify risks and take action. Powerful mapping and analysis capabilities help you plan ahead and be prepared.

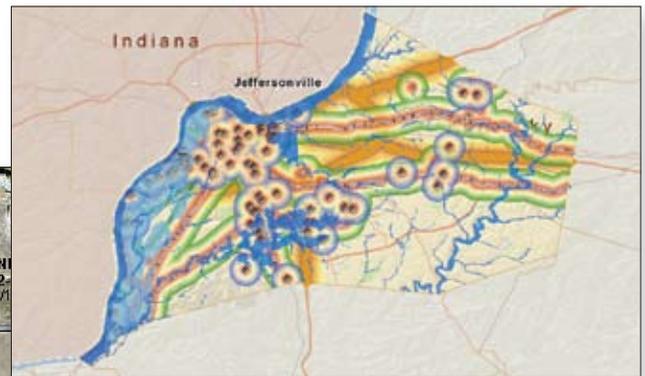
Planning and Analysis

GIS technology provides the capability to map and analyze hazards of all types and visualize their potential impacts. When natural or man-made hazards are fused with critical infrastructure, population densities, and other community values, vulnerabilities can be better understood.

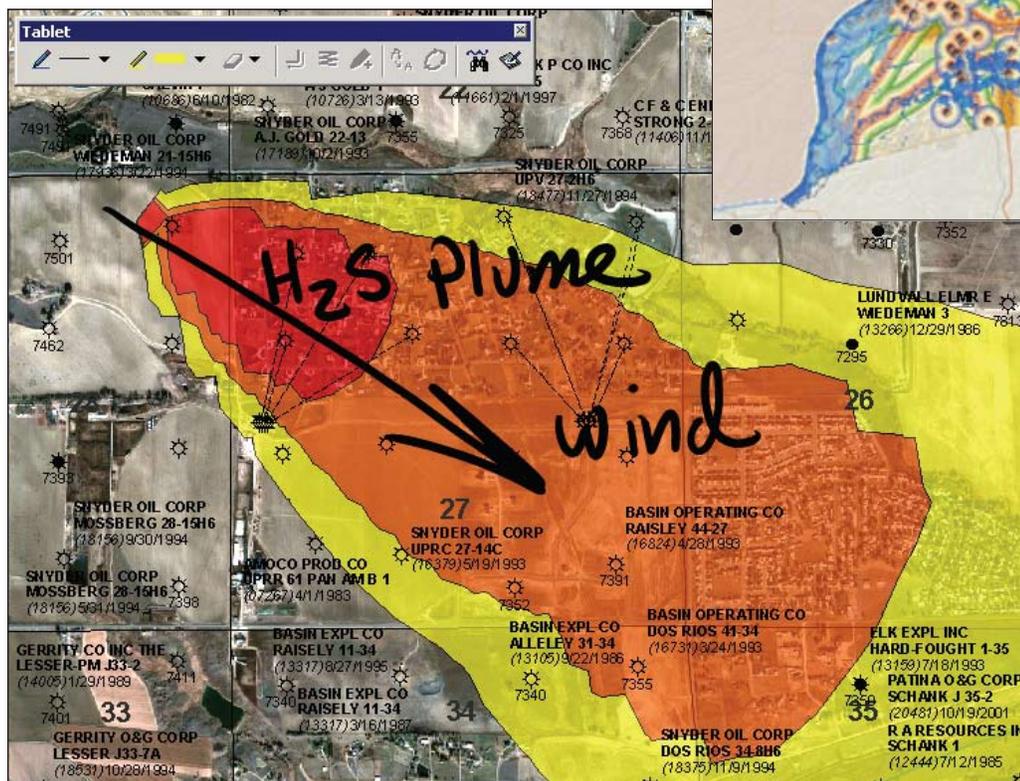


The NOAA weather warnings and watches let the EOC know if there are any forecasts of severe weather that could impact the jurisdiction.

When hazards have been identified and mapped, their severity and proximity to community values drive mitigation strategies. You can begin to prioritize plans using GIS-based intelligence.



GIS can help identify community values at risk to drive mitigation priorities.



Hydrogen sulfide plume modeling and area of dispersion using ArcGIS.

GIS for Emergency Management

Terrorist attacks; devastating natural disasters; budgetary constraints; and a greater mandate for collaboration among local, state, and federal agencies are just a few of the challenges you face today.

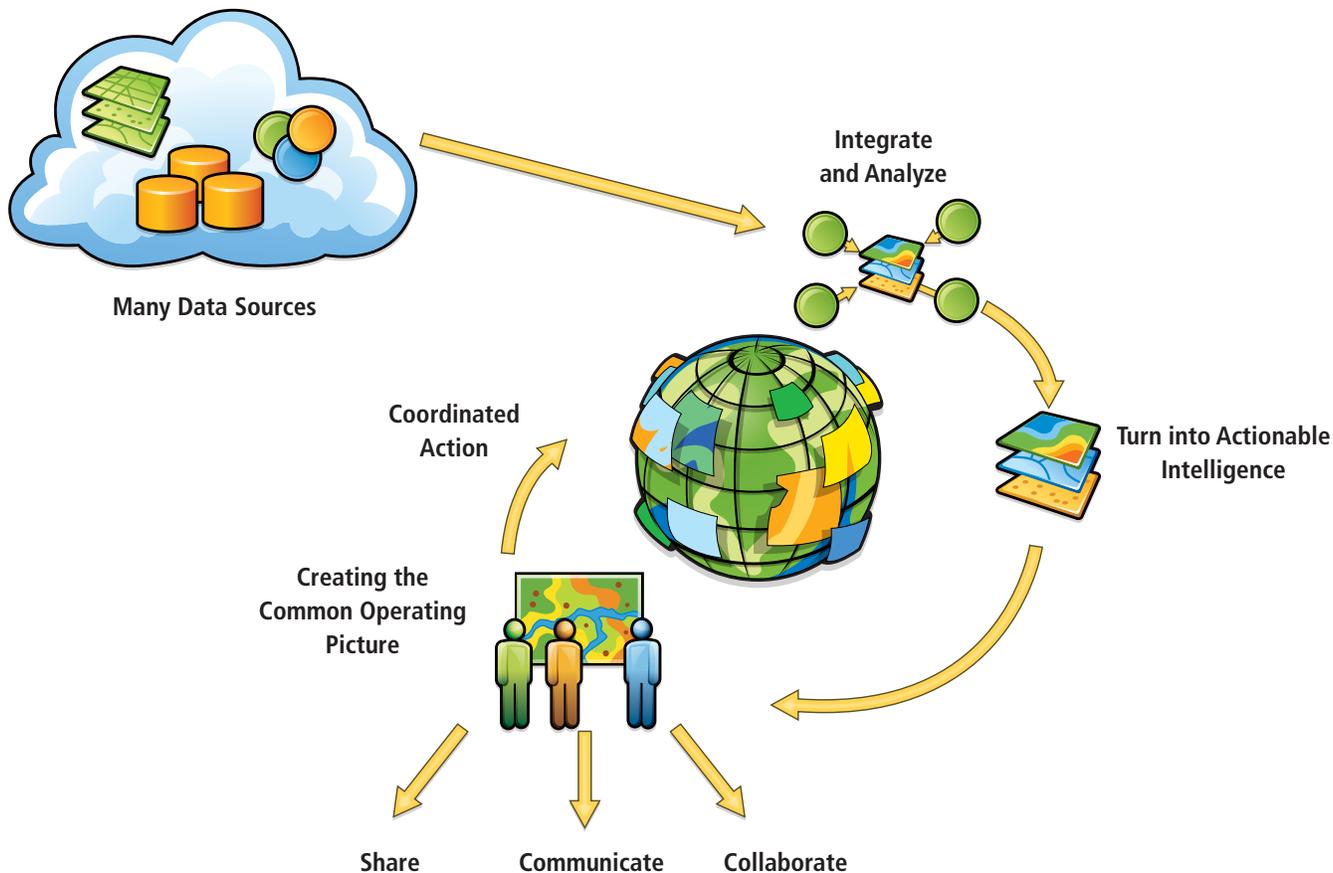
Emergency management organizations are responsible for reducing vulnerabilities and establishing an effective response. Identifying hazards, analyzing community values at risk, developing mitigation and response plans, maintaining situational awareness, managing resources, and supporting response and recovery are complex responsibilities.

GIS technology gives you the capability you need to overcome challenges and meet mission requirements. It provides powerful yet easy-to-use tools for the four phases of emergency management:

- Mitigation
- Preparedness
- Response
- Recovery

GIS enables emergency management professionals to collect vast amounts of data that can be quickly transformed into actionable information. You can reduce response times, gain comprehensive situational awareness, and improve communication.

GIS Applies the Geographic Approach



GIS provides the capability to meet every aspect of the emergency management decision support cycle—from acquiring, analyzing, and managing disparate data to supplying coordinated action. This results in better decisions, greater efficiency, and more effective communications.

GIS for Emergency Preparedness

Emergency managers face the difficult task of developing comprehensive plans to prepare for all types of disasters. They are responsible for protecting emergency staff and the public as well as property and natural resources. GIS technology builds and enhances emergency preparedness by providing in-depth data management, optimizing situational awareness, and supporting emergency personnel.

Data Management

To achieve comprehensive preparedness, a great deal of information must be gathered and maintained in advance of an event.

ArcGIS® is a flexible information platform that enables

- Full integration with other information systems
- A standards-based architecture for true interoperability
- Storage and analysis capability for all types of data
- Accurate cataloging of GIS data and services

Situational Awareness

Gaining an accurate understanding of events on the ground as an emergency unfolds is paramount to an effective response. GIS aids in quickly establishing full situational awareness by linking people, processes, and information together using geography.

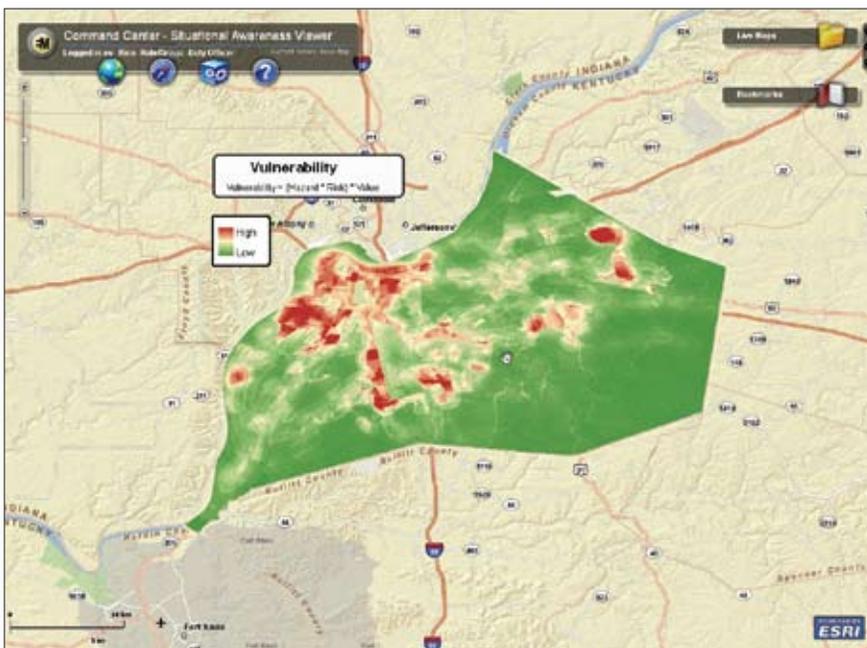
GIS supplies

- Decision support through a GIS-based common operating picture
- The establishment of communications and collaboration among participating departments and agencies
- Resource management for rapid deployment of emergency personnel, supplies, and equipment
- Access to live data feeds and geoprocessing services

Supporting Emergency Operations and Staff

Emergency management mobilizes services and resources to support first responders. The Emergency Operations Center (EOC) supports incident management operations as well as continuity of government operations. The staff uses GIS to support the response mission at all levels by

- Acquiring and tracking resources from multiple locations
- Providing public warnings, notifications, and general information
- Evacuating affected populations and providing shelter support
- Maintaining incident status and damage assessment
- Preparing maps and status reports for community leaders and decision makers



This vulnerability assessment was generated for a hazard mitigation plan. It is published both in paper form and as an overlay in the common operating picture.

Learn more about GIS for emergency management at www.esri.com/publicsafety.

GIS for Emergency Response and Recovery



Situational awareness can be obtained with this common operating picture illustrating a chemical plume that identifies road closures and critical infrastructure.

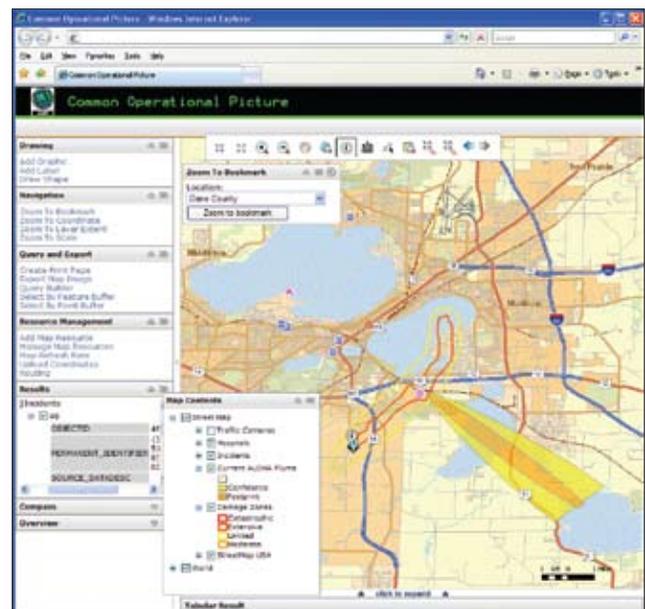
Field Operations

Getting accurate information from field operations back to the command center can be a difficult challenge. Mobile GIS gives you the advantage you need. Field crews can easily capture data and have it instantly sent back for incorporation in the common operating picture. Commanders get a more accurate, dynamic understanding of conditions on the ground. New data can be sent to field teams so they have the best information possible for staying safe and protecting lives. Whether it's response or recovery, mobile GIS gives you the capability you need for getting the right information, wherever it may be.

Recovery Operations

GIS is essential for both short-term and long-term recovery. It supplies a central information repository for damage assessment. It allows you to

- Collect assessment data from field personnel.
- Assess impacts via a common operating picture.
- Determine recovery resources from both public and private sectors.
- Select the best possible locations for public assistance sites.
- Build continuity plans for reestablishing government operations.
- Determine alternate transportation routes.
- Monitor reconstruction efforts.
- Publish recovery progress maps for the public and government organizations.



ArcGIS is used to display areas damaged by a tornado as well as a chemical plume from a facility.



About ESRI

For four decades, ESRI has been helping people make better decisions through management and analysis of geographic information. Our culturally diverse staff work with our business partners and hundreds of thousands of people who use GIS to make a difference in our world.

A full-service GIS company, ESRI offers support for implementing GIS technology from the desktop to enterprise-wide servers, online services, and mobile devices. GIS solutions are flexible and customizable to meet the needs of all our users.

Our Focus

At ESRI, we focus on promoting the value of GIS and its applications throughout the world and pay close attention to our users' needs. Our software development and services respond to our customers with products that are easy to use, flexible, and integrated. Our technology is multidisciplinary, productive, and valuable to our users.

We have a strong commitment to educating our customers through ESRI's various training programs. ESRI is a socially conscious business and invests heavily in issues regarding education, conservation, sustainable development, and humanitarian affairs.

Contact ESRI

1-800-GIS-XPRT (1-800-447-9778)

Phone: 909-793-2853

Fax: 909-793-5953

info@esri.com

www.esri.com

Offices worldwide

www.esri.com/locations



ESRI
380 New York Street
Redlands, California
92373-8100 USA