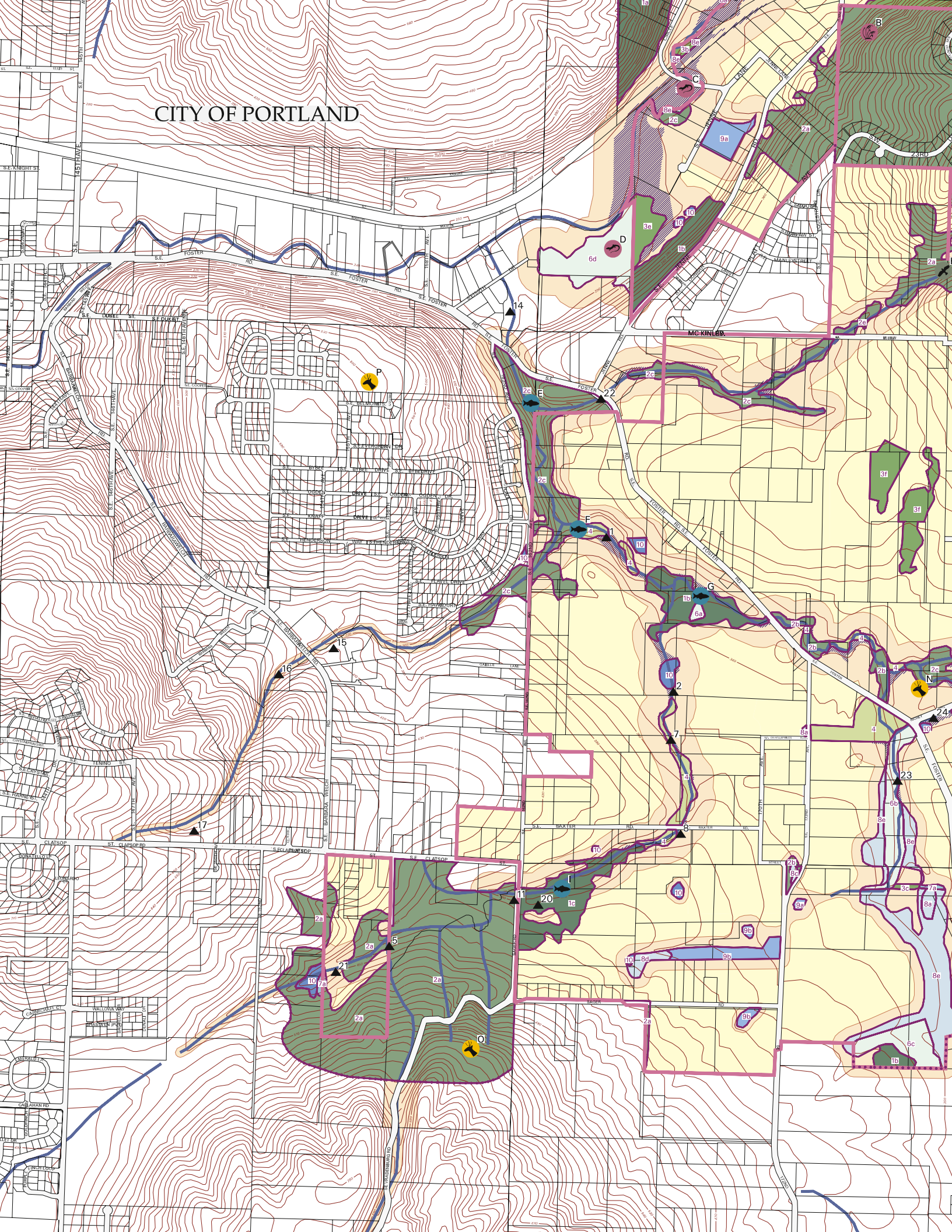


CITY OF PORTLAND



A Message From Our President

Dear Friends:

When ESRI was founded in 1969, we felt an almost limitless enthusiasm for the possibilities of geographic information system (GIS) technology. We understood even then that this new GIS technology could bring about a better future.

Our confidence in GIS is built on the belief that geography matters. It fundamentally influences and connects our many cultures, societies, and ways of life. In this brochure, you will find abundant evidence of the important contributions that GIS technology can make in improving our quality of life and supporting more analytical decision making.

Our technology helps route emergency vehicles, find promising sites for fast-growing companies, target markets for commerce, rebuild cities around the world, study behavioral habits of wildlife species, monitor optimal land use planning, locate outages for utilities, and perform countless other vital tasks every day.

GIS technology must constantly evolve to meet the changing needs of government, business, natural resources, conservation, science, and education. We are ready for these changes. Today, ESRI has more than 2,750 skilled employees worldwide who work with hundreds of business partners and tens of thousands of users. Each one makes a unique contribution to this remarkable technology. Each one makes a difference.

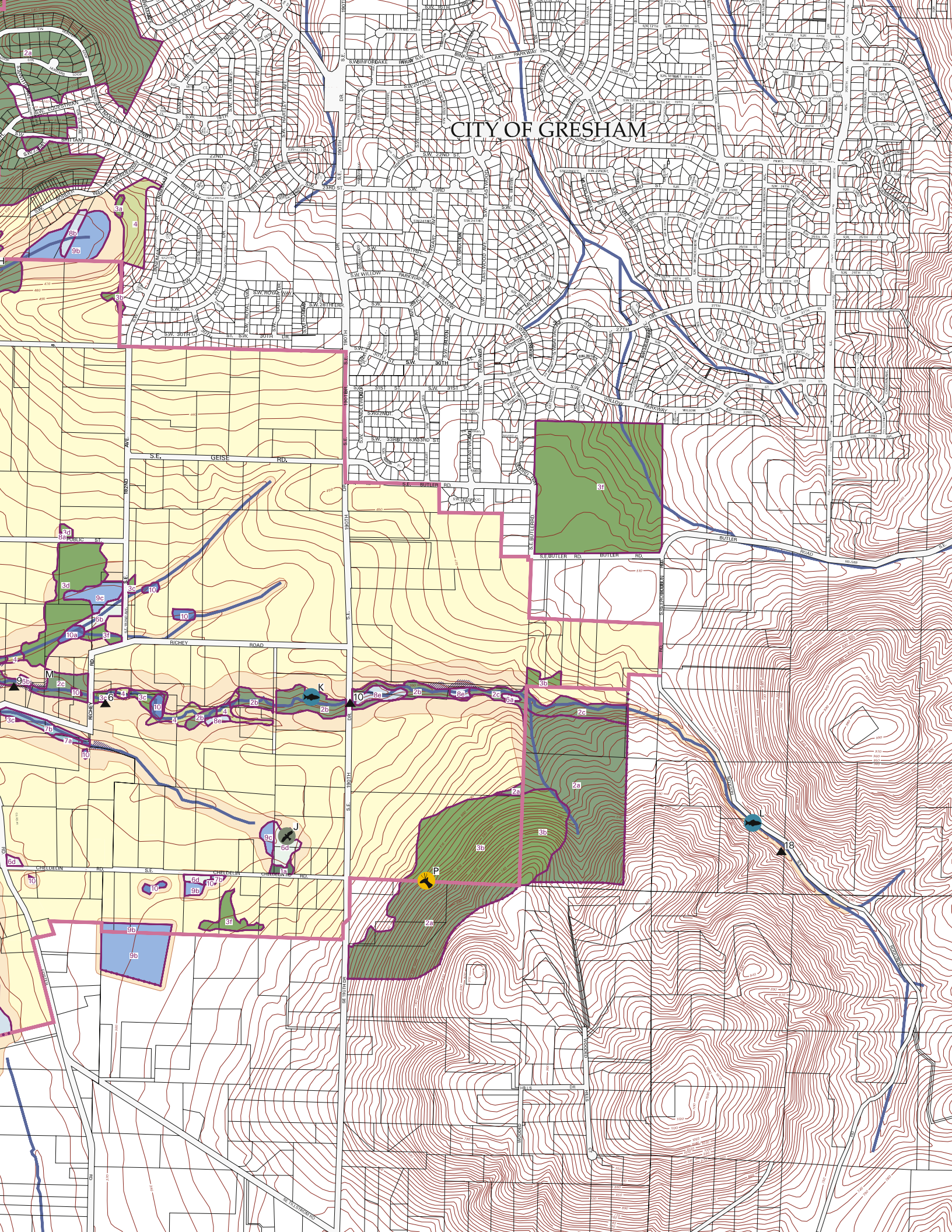
Thank you for taking the time to learn about our company. Hopefully, the stories you read in this brochure will inspire you to consider joining the community of GIS users who use their skills for creating a better world.

Warm regards,

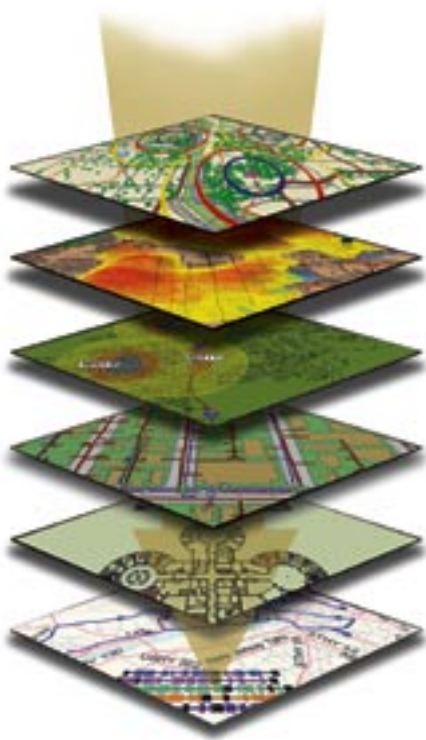
A handwritten signature in black ink, reading "Jack Dangermond". The signature is fluid and cursive, with the first name "Jack" and last name "Dangermond" clearly legible.

Jack Dangermond

CITY OF GRESHAM



What Is GIS?



GIS—geographic information systems for better decisions through modeling and mapping our world

Mapping geography is one of humanity's most ancient arts, but today it is on the cutting edge of information analysis. Technologically enabled maps created by GIS help people from many lands and occupations make better decisions for their communities. Whether business, government, education, or science, from the largest enterprise to the single worker, GIS offers boundless possibilities.

GIS is computer software that links geographic information (where things are) with descriptive information (what things are like). With a flat paper map "what you see is what you get," but a GIS-generated map has many layers of information for many ways of thinking about a geographic space. For example, if you look at a store represented on a paper map, you see the name of the store and a point noting where it is located. However, if you view a GIS map on your computer, you can click on the same store and see its location, name, annual revenue, customer flow, square footage, product mix, quarterly sales, and the store manager's name. You can even see a photo of the storefront and receive a virtual tour of the facility.

Many companies have a database management system in which day-to-day information is stored. If information has location attached to it, that information can be mapped. Using GIS, a business can unlock this spatial data and provide the perspective for the analysis needed to succeed. From the everyday business database GIS can represent

- Customer profiles by location, demography, and purchasing power
- Sales success by product, site, and sales representative
- Site locations of stores, factories, and warehouses
- Asset location (e.g., utility poles, pipes, and cables)
- Resource locations of staff, products, and equipment
- Delivery routes by land, sea, and air

GIS can integrate georeferenced imagery as data layers or themes and link them to other data sets to produce geospatial representations of data. These geographical pictures not only depict topographical boundaries, but they also offer special insight to planners across many disciplines such as health, agriculture, city management, natural resources, telecommunications, and transportation. Whatever people can imagine that needs mapping, GIS can help.

GIS also helps users anticipate future outcomes by depicting regression analysis for forecasting future events and processes. These studies may include drought repercussions on wildlife, dam influences on urban and agrarian economies, the spread of communicable disease, and the impacts of population growth on a township's economic development. The ability of GIS to manage, correlate, predict, model, and share geographic information makes GIS an essential analytical tool.

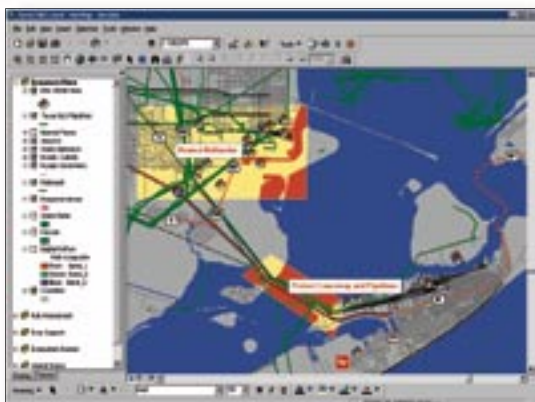
GIS for a Better World

Employed by decision makers in a multitude of industries in thousands of ways, GIS software allows its users to intelligently manage and manipulate their data. Analysts can see the patterns and processes of projects that work and do not work. Policy makers are in a position to create the foundation for ensuring the longevity of thriving communities, commerce, and government as well as the longevity of the earth's resources.

National, State, and Local Government



GIS links documents and image files to map features for an integrated view of information.



Proximity analysis is used to calculate the closest resources for emergency response.

National Government

Government agencies trust GIS technology to establish and regulate policy and to strengthen the welfare of their citizens. GIS is also an intelligent means for agencies to provide public information. The U.S. government relies heavily on GIS to evaluate the results of U.S. Census 2000.

Local Government

Revenue collection, economic development, and public information are just a few opportunities that GIS affords municipalities. The cities of Madrid, Geneva, and Paris all use GIS for providing many city services. Bregenz, a small township in Austria, uses GIS to meet the needs of its 12 government departments.

Homeland Security

GIS assets at local, regional, and national levels are used in emergency response in the areas of detection, risk assessment, mitigation and prevention, preparedness, response, and recovery. Utilized in both natural and human-induced disasters, GIS has merged into the common operating procedures for public safety and emergency response activities. City, county, state, and federal-level agencies use GIS as a common framework for organizing and sharing data in a digital world.

Military Defense

Military defense uses GIS for intelligence, terrain analysis, mission planning, and facilities management. Sweden integrates global positioning systems (GPS) into its mobile GIS for a mine-clearing management system in Bosnia.

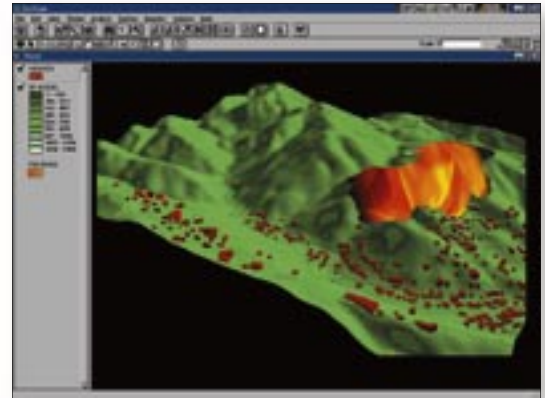


Geographic analysis is critical in military operations, tactical or logistical planning, and infrastructure management.



Fire/Emergency Medical Services/Disaster

GIS allows public safety personnel to effectively plan for emergency response, determine mitigation priorities, analyze historical events, and predict future events. Wilson Fire/Rescue Services in Wilson, North Carolina, uses GIS to get critical information to incident responders upon dispatch or while en route to an emergency to assist in tactical planning.



Spatial analysis helps manage risk and identify threatened areas.

Law Enforcement

GIS is an effective crime-fighting tool. Police analysts use GIS for planning and event modeling, tactical and strategic planning, and incident mapping. The Chicago Police Department's Informative Collection of Automated Mapping (ICAM) gives all police officers access to information about crime throughout the city.

Health

Effective health care services management uses GIS not only to show what resources and needs exist but also where to find them. Health experts also put GIS to work in epidemiological and public health monitoring. They can geographically track public health indicators, identify disease clusters, and explore sites of environmental risk. For example, public health departments use GIS for mosquito abatement programs.

Transportation

GIS serves three distinct transportation needs—infrastructure management, fleet and logistics management, and transit management. GIS offers insight for network planning and analysis, vehicle tracking and routing, inventory tracking, and route planning analysis. The city of Budapest, having 20,000 to 30,000 unexpected road repairs a year, relies heavily on its GIS to help plan, coordinate, manage, and complete repair work in a timely fashion.



GIS in law enforcement provides a valuable spatial element to crime analysis and community policing.



GIS helps manage road infrastructure for public works as well as create efficient routes for truck dispatch and bus stops.



The state of Pennsylvania offers an online Web site for its West Nile Virus Surveillance Program.



Spatially enabled information supports customer service and helps solve business problems.

Business

Banking

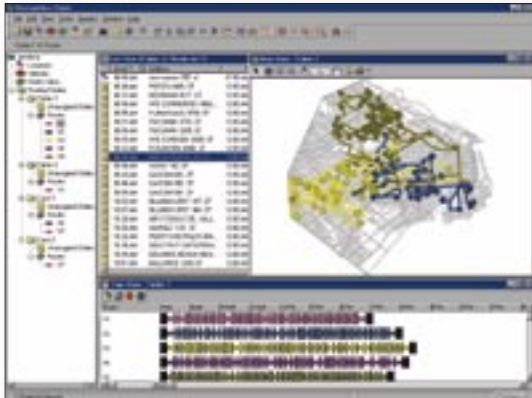
Financial analysts employ GIS for targeting their markets by visualizing service needs. Companies including Metropolitan Life and Chase Manhattan Bank rely on ESRI® software to help them improve operational excellence and profitability.

Insurance

Many insurance companies have made GIS a central component of their business, using it to visualize, analyze, and distribute risk. Companies, such as CHUBB Insurance, use ESRI's GIS software for portfolio risk management.



GIS is ideal for outage management and work order processing.



ArcLogistics™ Route solves complex routing and scheduling problems.

Logistics

Logistics management requires planning the distribution fleet's activities, route locations, and schedules. Argentina's telephone company, Grupo Telefónica, uses a GIS logistics routing solution to increase the number of daily deliveries without increasing resources.

Media

GIS is used by media bureaus for everything from analyzing circulation and attracting advertisers to creating the maps used in the material itself. The Associated Press, *USA TODAY*, and *National Geographic* use ESRI's GIS software to create accurate maps quickly for magazines, newspapers, and online news services.



GIS maps can help keep the public informed about street closures or openings and other emergency services.



Real Estate

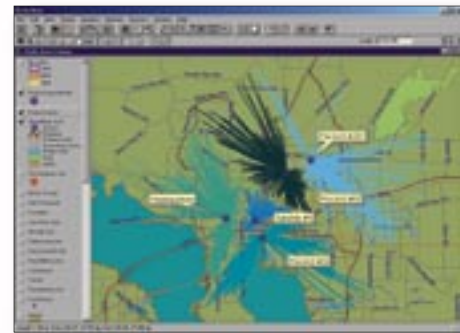
From map-based contact management to sophisticated investment analysis in large real estate investment trusts, real estate agencies rely heavily on electronic mapping. Many Realtors have found great success in using the Internet to market properties. Companies, such as SSR Realty Advisors, Inc., use GIS in commercial real estate while REALTOR.com uses GIS to bring maps online to people shopping for a new home.



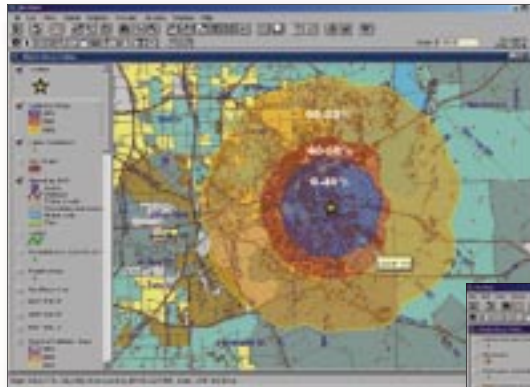
REALTOR.com uses Internet mapping tools to help people search 1.2 million property listings.

Retail Business

Businesses maintain information about sales, customers, inventory, demographic profiles, and mailing lists, all of which have geographic locations. Therefore, business managers, marketing strategists, financial analysts, and professional planners increasingly rely on GIS to organize, analyze, and present their business data. Companies, such as Sears, have saved millions of dollars by managing deliveries with GIS. Gold's Gym Enterprises uses GIS to study new franchise locations. Smaller companies, such as Ultra Marine Kayaking of Santa Cruz, California, find GIS useful and cost-effective for creating accurate and attractive maps for promotional materials.



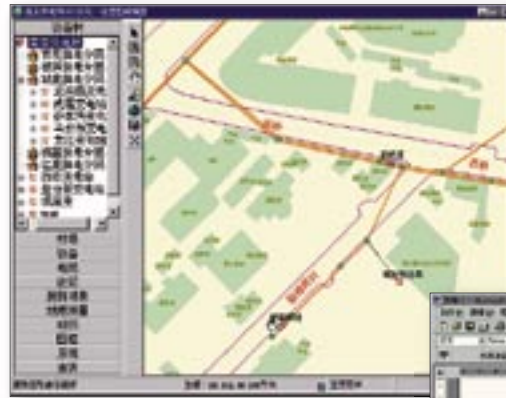
GIS is powerful for visualizing customer clusters and target markets.



Utilities

Power Management

The process of routing energy is highly dependent on geographic information. From network design to outage management, more than 80 percent of utility data management contains spatial components. Many utility companies combine their gas and electric service to customers. Jiangsu Provincial Power Company of China maps four kinds of data in its GIS: the base city map data, the geoschematic of the network, facilities data, and real-time data.



A sample map of the Nanjing City distribution power network shows poles, lines, and transformers.



Electricity

PPL, listed as a Fortune 500 company, has used GIS for almost 30 years to leverage facilities management (FM). PPL uses its electric facilities database (EFD) for responding to storm-caused outages. The dispatcher clicks on a pole, and the EFD shows all the attachments to that pole, whether they are from a cable company or utility company. The companies can be notified of the outage and quickly restore services.

Gas

Gas source and physical pipeline management depend on GIS for every detail from stations and pipe pressures to valves and pipe diameter. METROGAS, the largest natural gas distributor in Chile, uses FM GIS applications for outage management, emergency response, gas distribution, network operation, planning and research, sales, engineering, and construction.



Mobile GIS enables field personnel to locate facilities and capture real-time asset information.



Telecommunication companies worldwide use GIS for customer support, network management, and location-based services.



Telecommunications

GIS provides telecommunication businesses with many solutions such as analyzing relationships among signal coverage, test results, trouble tickets, customer inquiries, revenues, and Gap Analysis. Velocom de Argentina uses GIS for geocoding antennas, analyzing service areas, geocoding clients, and correlating equipment requirements to service area demand.

Water and Wastewater

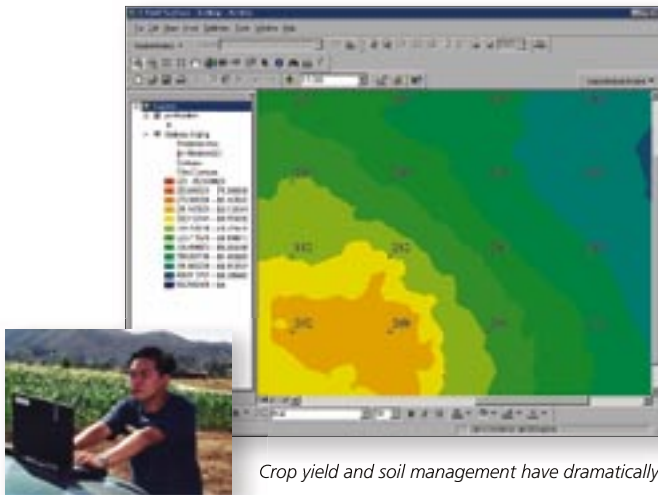
The Colorado Springs Utility Water Resources Department's high-resolution maps detail the location of its underground pipelines, watersheds, reservoirs, and hydroelectric facilities. Its database of information gained at its raw water treatment complex will help the department assess possible expansion capabilities.



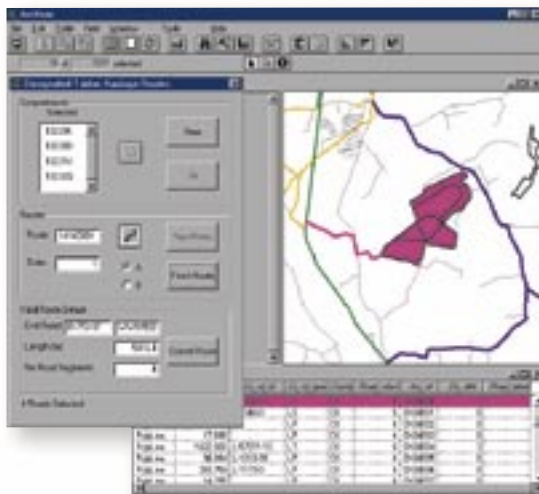
Ground orthophoto of Sand Creek Pumpstation (ERDAS IMAGINE)



Raw water distribution reservoirs just downstream of Nichols Reservoir. These reservoirs are used to store and capture water for distribution to water treatment plants. (Photo: CSUWRD)



Crop yield and soil management have dramatically evolved with enhanced methods to measure and manage variability within production fields.



Foresters use GIS for strategic planning, modeling ecosystem processes, and visualizing spatial relationships.

Natural Resources

Agriculture

GIS provides the analytical capabilities that form the hub of a successful precision agriculture system. GIS lets farmers perform site-specific spatial analyses of agronomic data. The United States Department of Agriculture uses GIS to map a nation's farms not only by property lines but also by crop and yield. A farmer uses GIS to forecast crop yields and determine fertilizer spread.

Forestry

Ireland's forestry service, Coillte Teoranta, uses GIS as a key component in managing its timber resources and maintaining sustainable forest management. Coillte Teoranta leverages GIS functionality for applications as diverse as land valuation, timber market analysis, harvest route planning, and landscape visualization.

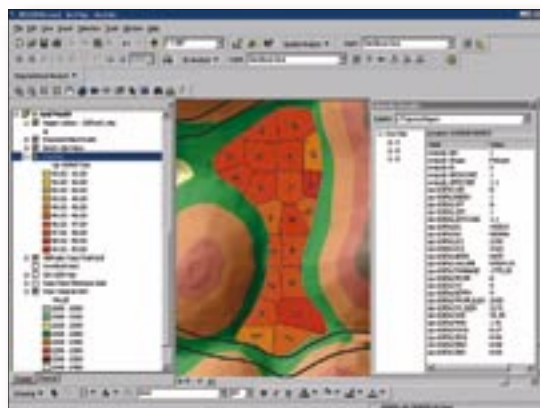
Mining

Terrain and ore body modeling, exploration, drilling, mine planning, reclamation, and rehabilitation are important digital mapping elements in mining. The Kaiser Jamaica Bauxite Company creates GIS-based mine planning and operations applications.

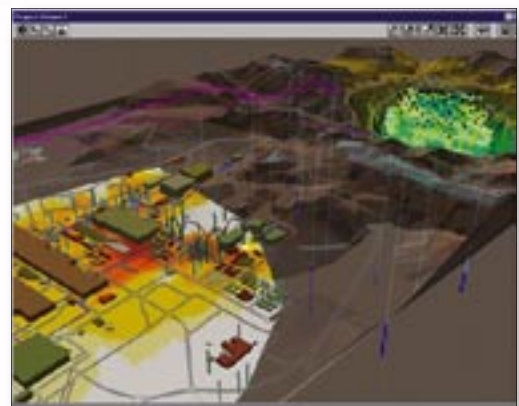
Natural Resources

Oil and gas exploration, hydrology harnessing, timber management, and mining operations require sound assessment to steer growth into areas that can support it while preventing contamination of rivers or destruction of resources. The delicate balance between industrial development and environmental conservation requires sophisticated modeling and spatial analytical tools. Companies and organizations, including The Nature Conservancy, the Environmental Protection Agency, Borax, Chevron, and the Department of Fish and Wildlife, rely on GIS for resource analysis.

Where to drill, route a pipeline, or build a refinery are all questions that rely heavily on an understanding of geography. That is why more than 70 percent of major oil companies use GIS software from ESRI.

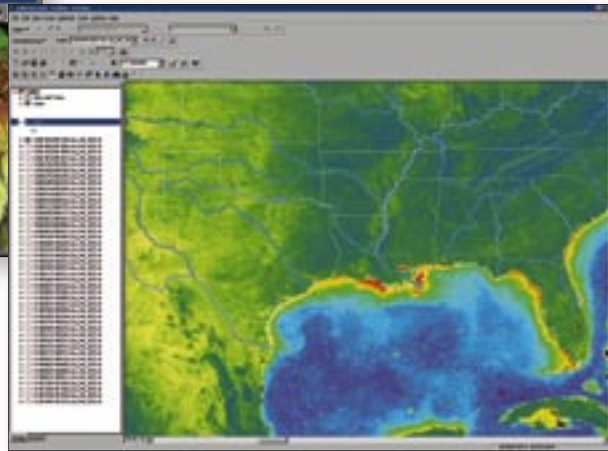


Geography provides the framework to manage and model surface and subsurface networks and data sets.





In addition to looking forward, GIS can look back, integrating historical data into interpretive maps.



Science and Education

Research

GIS is an ideal tool to help researchers model the real world, classify and observe phenomena, and predict changes over time. The goal for the ArcGIS® data models is to provide a practical template for implementing GIS projects to make it easier for researchers and professionals to store, analyze, and query data. ESRI has created many data models that make it easy to work with layers of data to observe relationships and explore new methods to represent the world around us. Dawn Wright of Oregon State University uses the ArcGIS Marine Data Model as a development tool in the lab.

Libraries and Museums

GIS creates interactive maps for museum exhibits that help visitors explore people, places, and events. GIS is also a valuable research tool used by museum scientists and researchers to increase people's understanding of natural systems and human cultures from anthropology to zoology. A researcher at the American Museum of Natural History in New York uses the museum's GIS to study the algae levels in the Gulf of Mexico.



Landsat False Color Composite of Glacier Bay

K-12 Education

GIS helps learners of all ages grasp the ways in which geography matters. GIS helps students and teachers engage in studies that require and promote critical thinking, integrated learning, and multiple intelligences at any grade level.

Universities

The advance of GIS has opened up millions of employment opportunities. More than 3,000 colleges and universities have developed excellent courses and certificate and degree programs in GIS.



GIS helps people make better decisions for managing resources, delivering services, and building sustainable communities.

Environmental Management and Conservation

Water

Environmental management and stewardship programs integrate a broad spectrum of data with the analysis tools of GIS to provide a better understanding of how elements of natural communities interact across a landscape. GIS is used worldwide in ecology labs, planning departments, parks, agencies, and nonprofit organizations to promote sustainable growth. The Los Angeles and San Gabriel Rivers Watershed Council uses GIS for habitat, wetland, and water quality mapping and planning. It uses GIS to map the Sepulveda Basin including headwater stream watersheds, channel characteristics, seasonal flow, adjacent land uses, and natural features in the existing habitat.

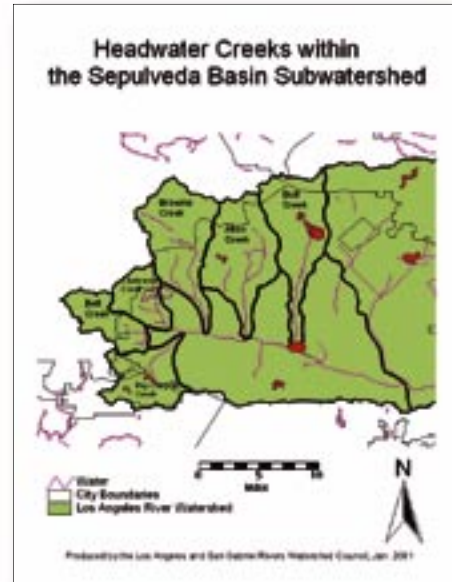


GIS maps and services can be delivered across an enterprise or shared on the Web to keep people informed and connected.



Oceans

Marine GIS uses data from oceans and seas to represent nearshore and deepwater phenomena such as current, salinity, temperature, biological and ecological mass, and density. The Surfrider Foundation has developed a GIS application called Beachscape that provides up-to-date coastal information at the community level. The South Florida Ecosystem Restoration Program uses GIS to establish baseline information about bottle-nosed dolphins in Florida Bay. The team locates a pod of dolphins and then records the sighting location using a GPS unit. They follow focal animals and input their findings into the geodatabase.

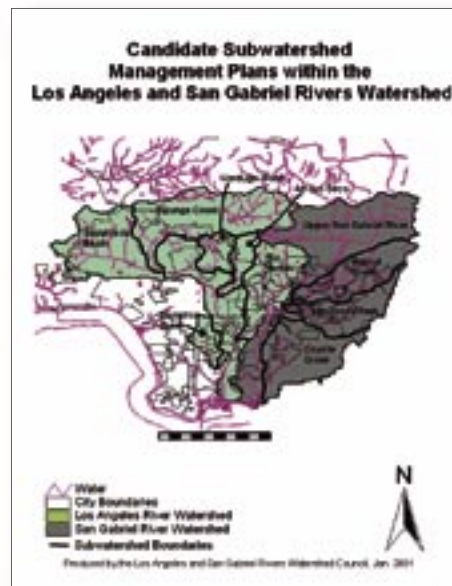


The GPS team looks for discharge points and outfalls that are potential sources for pollutants to be dumped into the creek.



Land

Accurate information about the local landscape is critical to making decisions about what to protect and how to protect it. Digital maps of sites can be linked to a relational database that stores topography, baseline data, site documentation, and aerial digital photography. Tug Hill Tomorrow Land Trust uses GIS to spatially illustrate natural features in the area, identify landowners with whom the trust interacts, and evaluate the protection projects according to priorities and criteria.



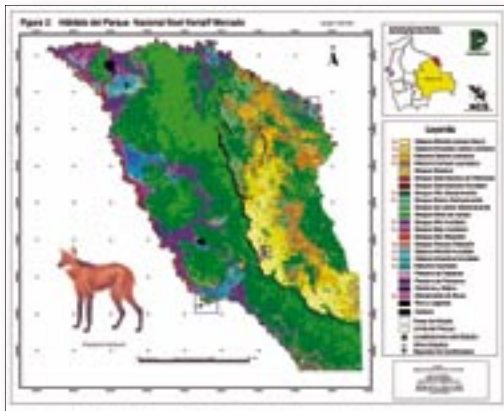
Mapping watershed boundaries provides a view for planning and managing the natural environment.

Wildlife

GIS is an important tool in habitat and species management and protection. GIS enables the study of animal populations at a variety of scales as well as analysis tools to study habitat corridors; migration patterns; and the influence of parks, reserves, and sanctuaries for wildlife conservation.

Researchers from the Bwindi Impenetrable National Park, Uganda, carried out a distribution census of mountain gorillas. GIS showed that gorillas tended to avoid areas of high human impact.

Wolves were studied at Bolivia's Muse de Historia Natural. Based on Landsat images using ERDAS and vegetation maps, researchers recorded 13 habitats used by wolves in the study site to estimate their total area. They were also able to show potential habitats for wolves.



A study area in Bolivia examines wolf habitats.

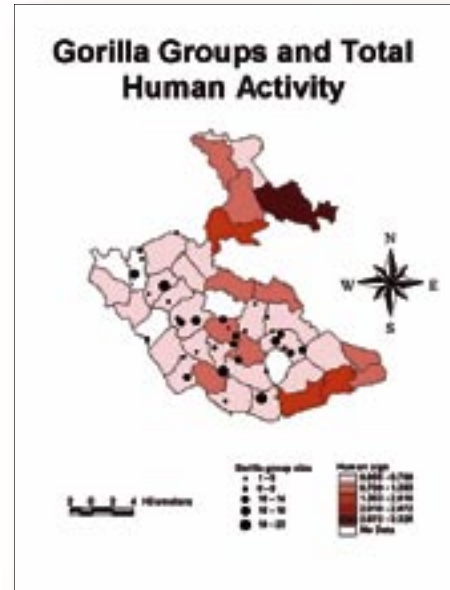
Dolphins in Florida Bay are being studied by the Dolphin Ecology Project. GIS is instrumental in testing the hypothesis that dolphins feed preferentially in habitats where water quality is good and prey densities are high.

Sea turtle journeys are tracked from space using GIS, transmitters, and the ARGOS satellite. The Oceanic Resource Foundation found GIS helpful in determining the migratory corridors and habitat usage patterns of green sea turtles that nest on the beaches of Lechuguillas, Veracruz, Mexico.

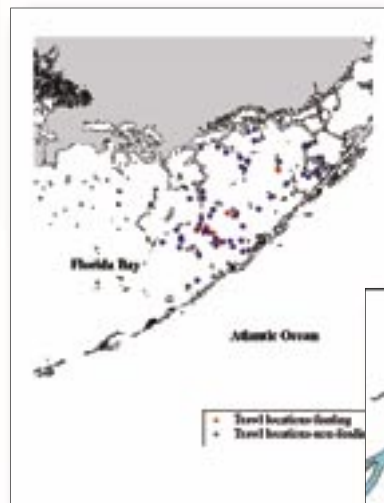
Vegetation

GIS is ideal for mapping and inventorying vegetation across landscapes and to better understand threatened and endangered species inventories for scientific and managerial applications.

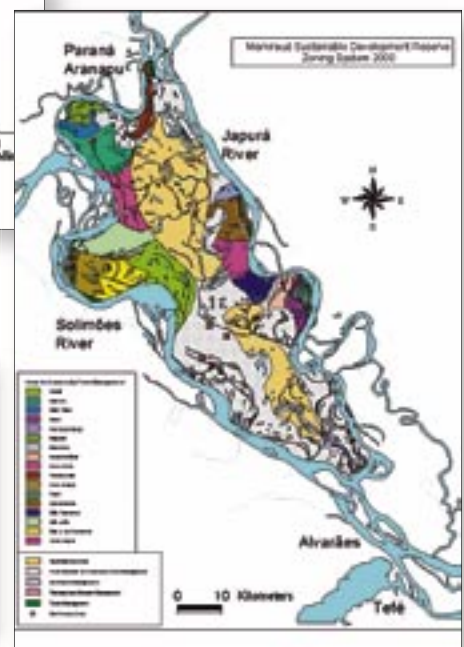
The Indonesian government and the Wildlife Conservation Society Indonesia Program in Sulawesi use GIS to understand the biohabitat of Indonesia's preserve. The Mampirauá Project uses GIS to meet the conservancy's requirement of continually updating Mampirauá Reserve information. Its vegetation map is used to estimate forestry species stocks and monitor land clearing and subsistence agriculture.



This study in a national park in Uganda shows that most gorilla sightings take place away from highly populated human areas.



This map of Florida Bay correlates dolphins and feeding areas.



Indonesia uses GIS to maintain its forest inventory and monitor land clearing and subsistence agriculture.

A Comprehensive Family of Products

ESRI is the only GIS software developer offering tightly integrated solutions that span the full spectrum of GIS requirements from small applications designed for casual users to sophisticated multiuser enterprisewide systems. As your GIS requirements grow, ESRI software solutions grow with you. Because ESRI software is designed as an integrated system, you can create your own GIS configuration by selecting appropriate software from our comprehensive product family.



ArcGIS

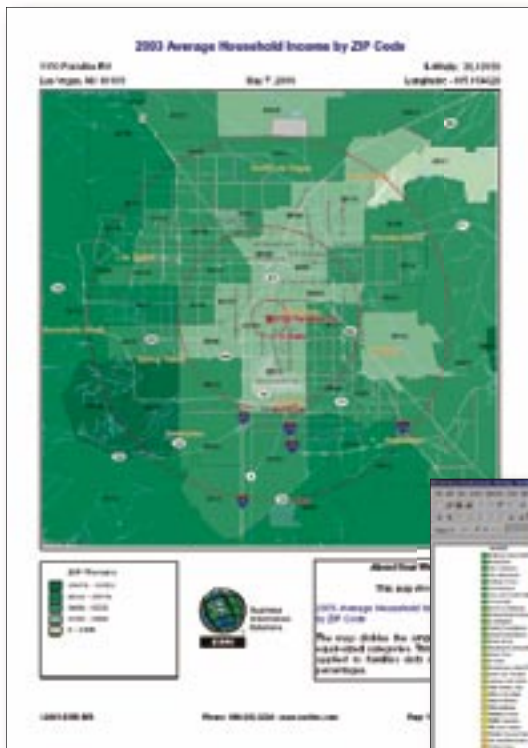
ESRI ArcGIS is a family of software products that forms a complete GIS built on industry standards that provide exceptional yet easy-to-use capabilities out of the box. ArcReader™, ArcView®, ArcEditor™, and ArcInfo™ are a scalable suite of desktop software products for geographic data creation, integration, and analysis. ArcIMS® provides data and application services via the Internet. ArcSDE® is an application server that facilitates storing and managing spatial data in a database management system (DBMS). ArcPad® is a mobile technology that extends GIS to the field.

ESRI—The Standard in GIS

For years ESRI designed its line of ArcGIS software with the word *interoperability* as its keystone. ESRI software is built on a scalable, high-performance platform for creating enterprisewide spatial visualization and analysis tools. ArcGIS software can be used across any organization, whatever the size or industry. It can easily be integrated with any existing database management system, network, and enterprise resource planning software. ESRI provides a published data format for use with its software family as well as data readers for a variety of types of data including computer-aided drafting (CAD), GPS, database files, and raster imagery.

ESRI BIS

ESRI Business Information Solutions (ESRI BIS™), a division of ESRI, combines demographics, consumer spending pattern intelligence, and lifestyle segmentation with powerful technology to help users make better business decisions. ESRI BIS provides innovative solutions to help industry, government, and nonprofit organizations understand customers, analyze site locations, visualize and map marketing and demographic data, and identify untapped market potential.



Services

A successful GIS is more than software; it also requires people who can develop and manage the system. Because we want you to succeed, ESRI offers many opportunities to help you take full advantage of your GIS.

- Professional Services Division: GIS professionals offer consulting, design, programming, and implementation services as well as database design and assistance in data publishing.
- Training: ESRI's instructor-led courses are offered at ESRI facilities and client sites around the world. ESRI's Virtual Campus (campus.esri.com) is a leader in GIS education on the Web, making GIS courses and a global GIS learning community accessible to anyone with an Internet connection.
- Publications: ESRI Press books and workbooks on GIScience, GIS technology, and GIS applications are used in formal university and corporate training programs everywhere. Publications help the first time learner as well as the professional user. Publications are available through major booksellers and from ESRI.
- Technical Support: ESRI offers a rich array of technical support, and user community resources are available to help you meet your GIS challenges. From 24/7 technical support to user groups online and free resources available to the community, ESRI has the tools to make you successful.

Learn More About ESRI and Its Users

To learn more about ESRI, GIS, and the ESRI family of products and how they are used, visit the ESRI Web site at www.esri.com.



Expanding Your GIS Community

ESRI strongly supports the GIS user community's efforts to create a better world. Therefore, we have initiated some important GIS community services to promote the welfare of GIS user groups worldwide.

GIS.com is an Internet portal intended to educate anyone interested in geographic information and spatial referencing (including first time users) on the value that GIS technology brings to their day-to-day activities. www.gis.com

The Geography Network™ is a global community of government and commercial data providers who are committed to making geographic content easily accessible online. www.geographynetwork.com

GIS Day™ is a global event for which users of GIS technology open their doors to schools, businesses, and the general public to showcase real-world applications of this exciting technology. www.gisday.com

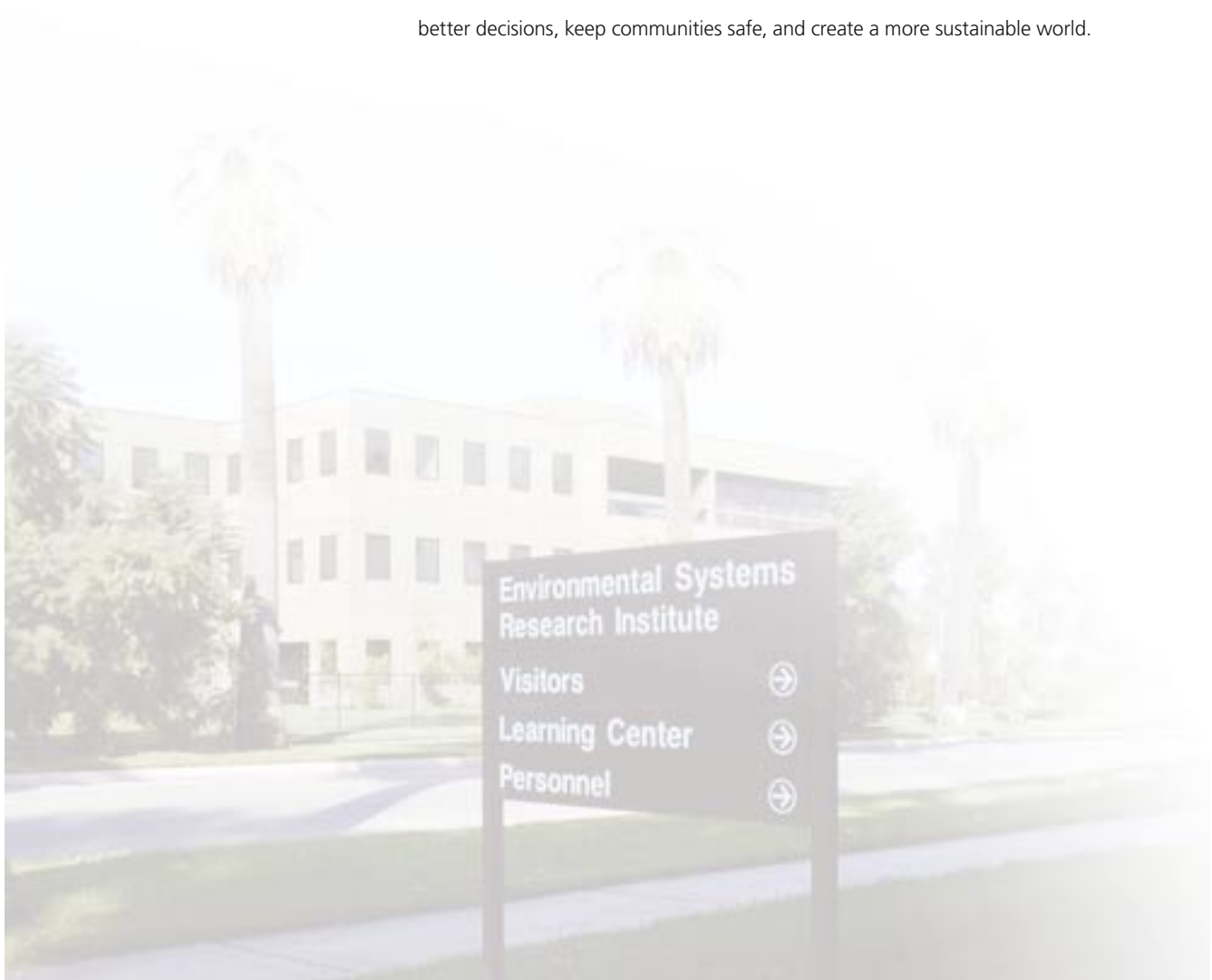
Special interest groups, either by region or industry, meet to share challenges and lessons learned in their GIS experiences. ESRI supports special interest groups through event planning, staff support, publications, and consultation.

The ESRI International User Conference is held annually to host the world's largest gathering of GIS users who discuss innovations, technology, and applications. www.esri.com/uc

Business Partners Offer Successful Solutions

Each year ESRI and its more than 1,600 business partners continue to grow the success of GIS and solve business problems with new software applications, data, and value-added services. ESRI draws on the talents and skills of its business partners to expand end user knowledge and capabilities of GIS. www.esri.com/partners

ESRI is widely recognized as the technical and market leader in GIS, pioneering innovative solutions for working with spatial data on the desktop, across the enterprise, in the field, and on the Web. ESRI has the largest GIS software install base in the world with more than one million users in more than one hundred thousand organizations. With annual sales of more than \$490 million, ESRI is the fourth largest privately held software company in the world. Its mission is to help people use GIS tools to manage and share geographic knowledge to make better decisions, keep communities safe, and create a more sustainable world.



ESRI

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

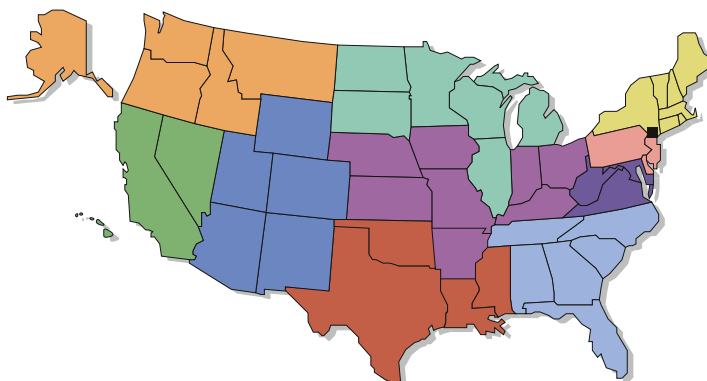
Telephone:
909-793-2853
Fax:
909-793-5953

For additional information
about ESRI, call us at
1-800-447-9778
(1-800-GIS-XPRT)
or contact an
ESRI reseller near you.

Send e-mail inquiries to
info@esri.com
Visit ESRI's Web page at
www.esri.com

REGIONAL OFFICES

ESRI-Boston 978-777-4543	ESRI-California 909-793-2853 ext. 1-1906	ESRI-Charlotte 704-541-9810	ESRI-Denver 303-449-7779
ESRI-Minneapolis 651-454-0600	ESRI-New York City 212-349-3700	ESRI-Olympia 360-754-4727	ESRI-Philadelphia 610-337-8380
ESRI-San Antonio 210-499-1044	ESRI-St. Louis 636-949-6620	ESRI-Washington, D.C. 703-506-9515	



INTERNATIONAL OFFICES

Australia www.esriau.com.au	Belgium/Luxembourg www.esribelux.com	Bulgaria www.esribulgaria.com	Canada www.esricanada.com
China (Beijing) www.esrichina-bj.cn	China (Hong Kong) www.esrichina-hk.com	Finland www.esri-finland.com	France www.esrifrance.fr
Germany/Switzerland www.esri-germany.de www.esri-suisse.ch	Hungary www.esrihu.hu	India www.esriindia.com	Indonesia/Malaysia 62-21-527-1023 603-7874-9930
Italy www.esriitalia.it	Japan www.esrij.com	Korea www.esrikr.co.kr	Netherlands www.esrinl.com
Poland www.gis.com.pl	Portugal www.esri-portugal.pt	Romania www.esriro.ro	Singapore www.esrisa.com
Spain www.esri-es.com	Sweden www.esri-sweden.com	Thailand www.esrith.com	United Kingdom www.esriuk.com
Venezuela www.esriven.com			





