

GEOGRAPHIC INFORMATION SYSTEMS

ELEMENTS OF GIS: DATA SOURCES

Links to New Jersey GIS Agencies:

New Jersey State Agencies:

- NJ Geological Survey (NJGS)

The main page of the NJGS. A wealth of GIS data is available at the Digital Geodata Archive page.

<http://www.state.nj.us/dep/njgs/index.html>

- New Jersey Association of County Tax Boards (NJACTB)

The main page of the NACTB. Legal Archive page.

<http://www.njactb.org/news.asp>

- NJ Geographic Information Network (NJGIN)

NJGIN is the successor to the NJ Spatial Data Clearinghouse. NJGIN provides the ability to search for spatial data and interactive mapping services across a distributed network of local nodes throughout New Jersey's state and local government.

<http://njgin.nj.gov>

- NJ Office of GIS (OGIS)

The NJ Office of GIS plays a leadership role in coordinating the use of computer mapping and analysis technology throughout New Jersey. This site provides information on how GIS works, links to important NJ State GIS initiatives and links to the NJ Geographic Information Network and NJ interactive mapping applications.

<http://www.state.nj.us/it/oit/gis/>

- NJ Commerce Business Portal Interactive Mapping

The Business Portal offers a Location Assessment Tool which can be used to elect and evaluate potential business locations. You can display environmental, economic growth/planning and workforce/demographic data on a map and then generate and print custom reports.

http://njgin.state.nj.us/OIT_BusinessMap/index.jsp

- Delaware & Raritan Canal Commission

Power Point Presentation describing the D&R Canal that uses GIS mapping and data.

d&rcanal.htm

- NJ Dept. of Transportation (NJDOT) GIS-T page

State and county maps available in pdf and zipped formats.

<http://www.state.nj.us/transportation/gis/>

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- NJ Dept. of Health and Senior Service GIS Data

GIS data created by the NJDHSS, available for download in ESRI shapefile format.

<http://www.state.nj.us/health/chs/gis.htm>

- NJ Dept. of Community Affairs-Office of Smart Growth Maps and GIS Data

The Maps and Data page of the NJ Office of Smart Growth. State Plan maps in Adobe PDF format are available as well as GIS data for the 2001 State Plan Policy Map & Other Maps.

<http://www.nj.gov/state/planning/maps.html>

New Jersey Counties:

- Atlantic County GIS Program

The Atlantic County New Jersey Geographic Information Network (NJGIN) node, developed through the NJ Office of GIS. This link provides access to the County's interactive mapping applications.

<http://www.aclink.org/GIS/index.asp>

- Bergen County GIS

View general information regarding Bergen County, including property and land records, roads, environmental, and Census data.

<http://gis.co.bergen.nj.us/>

- Cape May County IMS Site

The Cape May County New Jersey Geographic Information Network (NJGIN) node, developed through the NJ Office of GIS. This link provides access to the County's interactive mapping applications.

<http://www.capemaycountyims.net>

- Hunterdon County Division of GIS

The Hunterdon County Division of GIS's role is to coordinate and support the development and maintenance of GIS data, serve as a data clearinghouse, promote conformity and establish data development standards for all GIS users throughout Hunterdon County.

<http://gis.co.hunterdon.nj.us/>

- Mercer County GIS Program

The GIS page of Mercer County provides information about use of GIS for county projects, and information on available data. The site is a node of the New Jersey Geographic Information Network (NJGIN), developed through the NJ Office of GIS, and links to Mercer County's Internet Map Server.

<http://www.nj.gov/counties/mercer/departments/planning/geograph.html>

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- Monmouth County Office of GIS

The home page of the Monmouth County Office of GIS.

<http://co.monmouth.nj.us/page.aspx?ID=2971>

<http://oprs.co.monmouth.nj.us/oprs/index.aspx>

MODIV Assessment Records Search

<http://oprs.co.monmouth.nj.us/Oprs/External.aspx?iId=12>

Monmouth County Tax Maps (Some tax maps going back to the 1920s)

<http://oprs.co.monmouth.nj.us/Oprs/TaxBoard/TaxMap.aspx>

- Morris County GIS

Provides public access to maps, data, and information for Morris County.

<https://morrisgis.co.morris.nj.us/index.jsp>

- Somerset County GIS Program

The Somerset County GIS site offers background information GIS a link to the County IMS service, and metadata and downloads for data layers featured in the map services. The site is a node of the New Jersey Geographic Information Network (NJGIN), developed through the NJ Office of GIS, and links to Somerset County's Internet Map Server.

<http://www.njgin.co.somerset.nj.us/>

- Sussex County Office of GIS Management

The Sussex County Office of GIS Management provides GIS services to the different County divisions and agencies as well as providing GIS assistance to its municipalities. As a NJMAPP partner, Sussex County, actively promotes the use and sharing of GIS data throughout the County.

<http://njgin.sussex.nj.us/default.htm>

- Union County Maps

Provides public access to maps, data, and information for Union County.

<http://ucnj.org/community/community-renewal/gis/>

Non-Profits and NGOs:

- The GIS Center

The GIS Center is dedicated to assisting government agencies and nonprofit organizations in their utilization of geographic information systems (GIS) and related technologies. We provide expertise to organizations that are initiating their own in-house GIS operations and conduct GIS-related projects for those that have no GIS capability of their own. The GIS Center

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operates as a joint project of the Stony Brook-Millstone Watershed Association and the Upper Raritan Watershed Association.

<http://www.giscenter.org/>

- NJ Office of GIS NGO Program

The State of New Jersey administers the Initiative for Community Access to Technology (ICAT) program through which New Jersey's non-profit organizations and environmental commissions can receive free software to develop their own GIS capacity.

http://www.nj.gov/it/oit/gis/gis_workfor.html#3

Links to States Bordering NJ:

Delaware:

- The Delaware DataMIL

The home page of the Delaware DataMIL. Plenty of information about GIS in the state of Delaware.

<http://datamil.delaware.gov/geonetwork/srv/en/main.home>

- The Delaware Geospatial Information Clearinghouse

A joint project of the University of Delaware, the State of Delaware, and the FGDC. Search Delaware's clearinghouse using their metadata explorer.

<http://gis.smith.udel.edu/fgdc2/clearinghouse/>

New York:

- New York State Geographic Information Systems Clearinghouse

The NY State GIS clearinghouse is a provided by the Office of Cyber Security and Critical Infrastructure Coordination.

<http://www.nysgis.state.ny.us/>

- Cornell University Geospatial Information Repository (CUGIR)

CUGIR is an active online repository in the National Spatial Data Clearinghouse program. CUGIR provides geospatial data and metadata for New York State, with special emphasis on those natural features relevant to agriculture, ecology, natural resources, and human-environment interactions.

<http://cugir.mannlib.cornell.edu>

- New York State - Interactive Mapping Gateway

New York State's interactive mapping service.

<http://www.nysgis.state.ny.us/gateway/mg/index.html>

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Pennsylvania:

- Pennsylvania Geological Survey - PENN PILOT

(Historic Aerial Photographics from the Pennsylvania Geological Survey.)

<http://www.pennpilot.psu.edu/>

- Pennsylvania Spatial Data Access

(Penn State University Pennsylvania's official geospatial information clearinghouse and FGDC node. A collaborative project of Penn State University, Pennsylvania Geospatial Information Council, and the Pennsylvania State Department on Environmental Protection.)

<http://www.pasda.psu.edu/>

- Penn State University Environmental Resources Research Institute

The Penn State University Libraries Maps and Data Center download site.

<http://www.maproom.psu.edu/erri/>

- Pennsylvania DEP's eMap and What's In My Watershed?

Both eMap PA and What's In My Watershed can be accessed from this URL.

eMap PA is a mapping application that displays DEP permit information on a dynamic web based Map Server. The application integrates permitting information with various statewide data layers on one single map controlled by the user.

What's In My Watershed? is a mapping application that provides the user with an easy to use tool for locating their neighborhood and obtaining information about their environment.

<http://www.depweb.state.pa.us/dep/cwp/view.asp?a=3&q=461149&depNav=>

Federal GIS Links:

- Bureau of Land Management Geospatial Data Clearinghouse

This site serves as a clearinghouse for BLM GIS data files.

<http://www.blm.gov/nstc/gis/GISsites.html>

- The Environmental Protection Agency's EnviroMapper

EnviroMapper is a powerful tool used to map various types of environmental information, including air releases, drinking water, toxic releases, hazardous wastes, water discharge permits, and Superfund sites.

<http://www.epa.gov/emefdata/em4ef.home>

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- The Environmental Protection Agency's MyEnvironment

A powerful web-based tool that provides a wide range of federal, state, and local information about environmental conditions and features in an area of your choice.

<http://www.epa.gov/myenvironment/>

- EPA/OST BASINS watershed management tools

Better Assessment Science Integrating point and Nonpoint Sources (BASINS), is a multipurpose environmental analysis system for use by regional, state, and local agencies in performing watershed and water quality based studies. The application is available for download.

<http://www.epa.gov/OST/BASINS/>

- Federal Geographic Data Committee

The Federal Geographic Data Committee is a 19 member interagency committee composed of representatives from the Executive Office of the President, Cabinet-level and independent agencies. The FGDC is developing the National Spatial Data Infrastructure (NSDI) in cooperation with organizations from State, local and tribal governments, the academic community, and the private sector. The NSDI encompasses policies, standards, and procedures for organizations to cooperatively produce and share geographic data. Important information available includes educational material on metadata and the Spatial Data Clearinghouse.

<http://www.fgdc.gov/>

- Geospatial One-Stop - National Spatial Data Infrastructure, State Links

A listing of state spatial data clearinghouse websites. This is helpful for browsing data for a particular state as opposed to conducting a search via the FGDC Clearinghouse. This is also helpful for finding data for states that may not be included in the FGDC search.

<http://www.geodata.gov/>

- The National Geodetic Survey (NGS)

NOAA's National Geodetic Survey (NGS) defines and manages a national coordinate system. This network, the National Spatial Reference System (NSRS), provides the foundation for transportation and communication; mapping and charting; and a multitude of scientific and engineering applications. The site offers a great deal of information relevant to geodesy, geoids, datums, GPS base station information and information on contacting State Geodetic Advisors.

<http://www.ngs.noaa.gov/index.shtml>

- National Geospatial-Intelligence Agency (NGA)

The Geospatial Sciences Division provides accurate and timely expert analysis of worldwide gravity, satellite and positional information including imagery and mapping control for navigation, safety, intelligence, positioning and targeting in support of national security objectives.

<http://www1.nga.mil/pages/default.aspx>

- National Park Service- Geography and Mapping Technologies-GIS

The GIS page of the National Park Service, with links for data downloads, park information, GIS outreach and education, and applications.

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<http://www.nps.gov/gis/>

- U.S. Census Bureau Geography

This page has information related to Census Bureau geography including links to the Maps and Cartographic Products page (map products, boundary files), the Topologically Integrated Geographic Encoding and Referencing system (TIGER), and online mapping.

<http://www.census.gov/geo/www/index.html>

- U.S. Geological Survey (USGS)

National Mapping Information site Geography, one of the four science disciplines in the U.S. Geological Survey (USGS), is responsible for building, maintaining, and applying The National Map. USGS Geography (formerly Mapping) provides scientific information to describe and interpret America's landscape by mapping the terrain, monitoring changes over time, and analyzing how and why these changes have occurred. Information on the National Map as well as other mapping and digital data initiatives.

<http://geography.usgs.gov/>

- The USGS National Center for Earth Resources Observation & Science (EROS)

The main site for obtaining geospatial data developed by the federal government including USGS data and aerial and satellite photography that can be ordered online.

<http://edcwww.cr.usgs.gov/>

- USGS Earth Science Information Center - Ask USGS site

A site that answers common questions about USGS. Topics include general questions about the agency, sources of information, maps and other products, educational resources, and online information.

<http://ask.usgs.gov>

GPS Related Links:

Federal Government:

- U.S. Coast Guard Navigation Center

Provides useful information on current GPS and DGPS status. Of particular interest are the NANUs (Notice Advisory to NAVSTAR Users) which forecast GPS satellite outages.

<http://www.navcen.uscg.gov/>

- U.S. National Geodetic Survey

This site provides links to NGS products and services, specifically data (including National Spatial Reference System – NSRS data), and GPS base data from Continuously Operating Reference Stations – CORS), software programs, and NGS publications.

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<http://www.ngs.noaa.gov>

Non-Governmental:

- GPS World Magazine

The home page of GPS World Magazine covers all things related to GPS technology, including industry news, product reviews, etc.

<http://www.gpsworld.com>

- Peter H. Dana's Global Positioning System Overview

Created at the University of Texas, this site provides an informative overview on GPS along with useful overviews on map projections, datums, and coordinate systems.

http://www.colorado.edu/geography/gcraft/notes/gps/gps_f.html

- Professional Surveyor Magazine

The home page of Professional Surveyor Magazine that includes GIS, GPS, and surveying information, news items, product reviews as a searchable archive of articles from previous issues.

<http://www.profsurv.com/>

- Sam Wormley's Global Positioning System Resources

Created at Iowa State University, this site provides many links to useful GPS related sites. Includes links to equipment reviews and information files.

<http://www.edu-observatory.org/gps/>

GIS Educational Materials:

- Burlington County College - Geospatial Technology Associate Degree Program

http://staff.bcc.edu/faculty_websites/mzamkoto/index.asp?spage=gis_index

- Burlington County Institute of Technology -GIS Certificate Program

A program leading to certification in GIS.

<http://www.bcit.cc/132610712121951810/site/default.asp>

- ESRI Home Page

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The home page of Environmental Systems Research Institute, Inc. Provides information on ESRI products and user support for customers. The site also includes links to GIS Resources (including the Geography Network, the Virtual Campus) GIS Online, GIS Events and Free Resources.

<http://www.esri.com>

- ESRI – Training

Online learning dealing with general GIS concepts as well as use of ESRI software. Costs of classes range in price, and in most cases the first module can be taken at no cost.

<http://training.esri.com/gateway/index.cfm>

- The Geographer's Craft (Univ. of Colorado at Boulder)

The Geographers Craft is a teaching initiative being pursued to improve the teaching of geographical techniques at the introductory level. Includes general GIS and GPS information, course outlines, PowerPoint presentations and exercises.

<http://www.Colorado.EDU/geography/gcraft/contents.html>

- GIS.com

The Internet guide to GIS contains basic information about GIS for beginners including data sources and the GIS "site of the week." The site is sponsored by ESRI, Inc.

<http://www.gis.com/>

- Monmouth University Geography/GIS Program

Information on GIS courses, including information about the Undergraduate Minor in Geography/GIS and the Graduate Certificate in GIS. Monmouth University is located in West Long Branch, NJ

http://www.monmouth.edu/academics/history_and_anthropology/GIS.asp

- Montclair State University's Department of Earth and Environmental Studies

Offers a suite of courses, from introductory through doctorate, in the GISciences (including GIS, spatial analysis, and remote sensing)

<http://www.csam.montclair.edu/earth/eesweb/>

- National Center for Geographic Information and Analysis

The NCGIA is an independent research consortium whose primary mandate is to conduct basic research in geographic information science and its related technology.

<http://www.ncgia.buffalo.edu/>

- The National Geographic Maps and Geography Site

Link to online mapping and map products of the National Geographic. Also includes links to introductory GIS information.

<http://www.nationalgeographic.com/siteindex/maps.html>

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- New Jersey Institute of Technology (NJIT) Surveying Page

Information about the surveying program at NJIT, that also includes information on GPS, GIS and some downloads.

<http://www-ec.njit.edu/surveying/surveying.html>

- Princeton University Library - Digital Map and Geospatial Information Center

Information on GIS data, and digital map services at Princeton University.

<http://www.princeton.edu/~geolib/gis/>

- Penn State University Certificate in Geographic Information Systems

The Penn State World Campus Certificate Program in GIS is a noncredit program designed to meet the needs and busy schedules of full-time professionals. Students earn the Certificate of Achievement in GIS by successfully completing four courses. Most courses are offered four times a year, starting in January, April, July, and October. Most courses are ten weeks in length, involving approximately 100 hours of student activity (depending on your prior computing and GIS experience).

<http://www.worldcampus.psu.edu/pub/gis/index.shtml>

- Rutgers Geomatics Program

The Cook College Office of Continuing Professional Education offers a Professional Certificate Program in Geomatics. This program recognizes that many working professionals require high-quality, practical training without the commitment of a full-time graduate program. This program is designed to fulfill that need with a series of evening and full-day short courses that provide expert instruction in a flexible schedule format.

<http://www.cpe.rutgers.edu/programs/geomatics.html>

- Rutgers University Center for Remote Sensing and Spatial Analysis (CRSSA)

A research center at Rutgers University focusing on advancing the application of various geo-spatial technologies including remote sensing, geographic information systems (GIS) and global positioning systems (GPS). CRSSA also develops spatial-statistical analysis/modeling techniques to the environmental, agricultural and natural resource sciences and management. Links to the projects page has interesting details about CRSSA' current and past research projects.

<http://www.crssa.rutgers.edu/>

- Rutgers University Department of Geography

This site provide information on the geography program at Rutgers as well as geography related links.

<http://geography.rutgers.edu/>

- Stockton College - Environmental Studies Program

Information on the GIS program in the Stockton College Environmental Studies program, including courses, introductory material and interactive mapping.

<http://www.stockton.edu/~wwwenvl/>

- University Consortium for GIS

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The University Consortium for Geographic Information Science (UCGIS) is a non-profit organization of universities and other research institutions dedicated to advancing our understanding of geographic processes and spatial relationships through improved theory, methods, technology, and data.

<http://www.ucgis.org>

- URISA Links to Colleges and Universities with Existing GIS Certificate Programs

Links to schools that are known to have GIS certificate programs, organized alphabetically.

<http://www.urisa.org/career/colleges>

- West Chester University Center for Geographic Information Systems and Spatial Analysis

Information on GIS at West Chester University, including courses taught, faculty and student profiles, GIS lab resources, etc.

<http://quantifactus.wcupa.edu/>

Interactive Mapping and Internet GIS:

Federal Government:

- National Atlas of the United States

An interactive mapping application covering major data layers with nationwide coverage. Work on a new National Atlas of the United States® began in 1997. The National Atlas delivers easy to use, map-like views of America's natural and sociocultural landscapes.

<http://www.nationalatlas.gov/>

- National Oceanic and Atmospheric Administration (NOAA) Map Services

A listing of numerous interactive map serviced develop by NOAA. Includes maps services of a global nature, including ecoregions, vegetation, hurricane occurrence, natural hazards, ocean data, precipitation, paleoclimatology, and other topics.

<http://www.ngdc.noaa.gov/maps/>

- The National Park Service Interactive Map Center (ICM)

Contains information about national parks and delivers base maps and park brochure maps for geographic reference and navigation to and within parks.

<http://maps.nps.gov>

- The US Dept. of Housing and Urban Development (HUD) E-Map

An Internet service that combines information on HUD's community development and housing programs with EPA's environmental data.

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<http://www.hud.gov/offices/cio/emaps/index.cfm>

State Government and Regional Organizations - New Jersey:

- NJDEP NJ-GeoWeb interactive mapping application

Environmental mapping tool that can provide you with information about your neighborhood, county, or state (NJ). Homeowners can find out what's in their backyard; and environmental organizations, planners, and builders can identify open space, various regulatory boundaries, sensitive lands, watersheds, and much, much more.

<http://www.state.nj.us/dep/gis/newmapping.htm>

- New Jersey Information Warehouse

This application lets you find and download orthoimagery for the entire state.

https://njgin.state.nj.us/NJ_NJGINExplorer/IW.jsp

- City of Newark, Geographic Information Network

NEWGIN's enterprise approach to GIS ensures that the City of Newark has the tools to view and analyze the wealth of spatial data flowing between agencies.

<http://njgin.ci.newark.nj.us/>

- Montgomery Township

Montgomery Township and the Geospatial Information Technology Department's Geoweb Map Interactive Internet GIS Map Applications.

http://gisweb.montgomery.nj.us/website/interactive_maps.htm

State Government and Regional Organizations - Other:

- The Delaware Data Mill

Information about the Data Mill, including links to interactive mapping, data access, discussion forums and other resources.

<http://datamil.delaware.gov/>

- New York State - Interactive Mapping Gateway

New York State's interactive mapping service.

<http://www.nysgis.state.ny.us/gateway/mg/>

- Pennsylvania DEP's eMap and What's In My Watershed?

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Both eMap PA and What's In My Watershed can be accessed from this URL.

eMap PA is a mapping application that displays DEP permit information on a dynamic web based Map Server. The application integrates permitting information with various statewide data layers on one single map controlled by the user.

What's In My Watershed? is a mapping application that provides the user with an easy to use tool for locating their neighborhood and obtaining information about their environment.

<http://www.depweb.state.pa.us/dep/cwp/view.asp?a=3&q=461149&depNav=>

Private and Commercial Agencies:

- The ESRI Introduction to ArcExplorer Web

ArcExplorer Web is a custom mapping application that lets you view one or multiple map services in your Web browser. Use ArcExplorer Web to access hundreds of ArcIMS map services available through the Geography Network, or other mapping sites, to view individually or together. By using ArcExplorer Web there is no need for the user to download and install the ArcExplorer application.

<http://www.geographynetwork.com/maps/arcexplorerweb.html>

- ESRI ArcGIS Server User Showcase

This showcase is an ESRI service that catalogs Web sites that offer live mapping applications powered by ESRI Internet solutions. Use the registry to find exciting live Web mapping applications, or register your own site.

<http://resources.esri.com/showcase/>

- The Geography Network

A site hosted by ESRI, focused on "sharing GIS data and services through a global network of publishers." A good place to search for data and interactive map services.

<http://www.geographynetwork.com/>

- The Nature Conservancy's Internet Map Server

Interactive mapping service developed by the Nature Conservancy.

<http://maps.tnc.org/data/IMS/TNCOverview/>

- The National Geographic Map Machine

The interactive mapping site of the National Geographic. Geographic coverage is global and there are opportunities for purchasing maps, atlases and other geography-related merchandise.

<http://plasma.nationalgeographic.com/mapmachine/>

GIS Site Directories and Publications:

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Directories of GIS Sites:

- The Free GIS Project

This site provides a collection of free GIS resources, including software, data, projects and documents. The FreeGIS Project was launched in late 1999 as an initiative of Intevation GmbH, a consulting company based in Germany.

<http://www.freegis.org/index.en.html>

- Guide to Mostly On-Line and Mostly Free U.S. Geospatial and Attribute Data

This is the 2nd edition of this site (2003) that has links to mostly free data for all 50 states including links to federal and state sites..

<http://libinfo.uark.edu/GIS/us.asp>

Online GIS Publications:

- GIS Café

A wealth of GIS information including news, jobs, company information, university GIS, book reviews, and lots of downloads by category.

<http://www.giscafe.com/>

- GeoCommunity

A great deal of GIS information including news, jobs, industry information, software and data downloads. Information is available on GIS, CAD, mapping, and the location-based industry. Billed as THE leading GIS online portal and daily publication (SpatialNews NewsWire).

<http://www.geocomm.com/>

- Geospatial Electronic Records

Contains a Guide to Managing Geospatial Electronic Records; a Data Model for Managing and Preserving Geospatial Electronic Records; categorized references to related resources; project presentations; and materials from, Extending the Boundaries: A workshop on Managing and Preserving Geospatial Electronic Records.

<http://www.ciesin.columbia.edu/ger/>

- GIS Lounge

A GIS information site with industry news, discussion boards and general GIS resources. Billed as a One-stop source for GIS.

<http://www.gislounge.com/>

- GIS Monitor

The site calls itself the ultimate map/GIS directory, and contains news articles, data links, jobs listings, education, events, etc.

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<http://www.gismonitor.com/>

- GeoPlace.com

A directory of GIS information that calls itself the "authoritative resource for spatial information." From the publishers of GeoWorld magazine, the site has top GIS news stories and weekly features as well as a wealth of GIS resources, product reviews and events calendar, etc.

<http://www.geoplace.com>

- Directions Magazine

Billed as "your GIS news source" this site has GIS-related news items and feature stories in addition to many GIS resources, GIS information categorized by industry, data, events, etc.

<http://www.directionsmag.com>

Professional Development:

Professional Associations:

- The American Society for Photogrammetry & Remote Sensing

The mission of the ASPRS is to advance knowledge and improve understanding of mapping sciences and to promote the responsible applications of photogrammetry, remote sensing, geographic information systems (GIS), and supporting technologies.

<http://www.asprs.org/>

- The Association of American Geographers

The Association of American Geographers (AAG) is a scientific and educational society founded in 1904 and is devoted to the advancement of geography and geographic education. Though mainly devoted to geography the site also contains GIS-related information.

<http://www.aag.org/>

- The Association of American Geographers GIS Specialty Group

The site of the GIS specialty group, whose purpose is to promote the exchange of ideas and information relating to GIS, to promote GIS research, and to improve the understanding of the proper application of GIS procedures.

<http://geography.sdsu.edu/aaggis/>

- The Association of American Geographers Middle States Division

A regional division of the national association that promotes the advancement of professional studies in geography and encourages the application of geographic research in business, education, and government.

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<http://departments.bloomu.edu/geo/msd/index.html>

- Cartography and Geographic Information Society

The mission of the Cartography and Geographic Information Society is to support research, education, and practice to improve the understanding, creation, analysis, and use of maps and geographic information to support effective decision-making and improve the quality of life.

<http://www.cartogis.org/>

- ESRI Mid-Atlantic Users Group

The Mid-Atlantic ESRI software users group covering the states of New Jersey, Pennsylvania, Delaware, Maryland, District of Columbia, Virginia, and West Virginia.

<http://www.esrimug.org>

- The Mid-Atlantic Chapter of URISA (MAC-URISA)

The Mid-Atlantic Chapter of the Urban and Regional Information Systems Association (URISA), serves the needs of GIS professionals in New Jersey and Pennsylvania. MAC-URISA organizes GIS related events, information sessions, and sponsors a semi-annual GIS conference in conjunction with the NJ State Mapping Advisory Committee held at Rutgers University.

<http://www.macurisa.org/>

- The Northeast Arc User Group (NEARC)

The Northeast Arc User Group is an independent group of users of ESRI software that serves GIS professionals in the northeast region. The group organizes an annual conference.

<http://northeastarc.org/>

- Pennsylvania ARC/INFO User Group

This group is currently inactive.

<http://quantifactus.wcupa.edu/paaugis/>

- The Urban and Regional Information Systems Association (URISA)

URISA is an international organization devoted to advancement in GIS and spatial technologies.

<http://www.urisa.org>

Paper presented at 2005 ESRI GIS User Conference: *NJDEP's i-MapNJ GeoSpatial Data Miner: Serving Customized Profiles and Web Reports*

<http://gis.esri.com/library/userconf/proc05/papers/pap1277.pdf>

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Paper presented at 2004 ESRI GIS User Conference: *Using GIS to Implement Smart Growth Regulations in New Jersey*

<http://gis.esri.com/library/userconf/proc04/docs/pap1126.pdf>

Paper presented at 2003 ESRI GIS User Conference: *ArcIMS Internet Mapping Application for Recreation, i-Map DelBasin (Delaware River Basin)*

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