Welcome to EPIC

Minnesota Planning offers a series of tools that extend the benefits of GIS to state and local governments. These ready-to-use applications are targeted for specific audiences ranging from beginners to more advanced spatial analysts. Packaged with extensive data libraries on CDs, the tools support geographic analysis, comprehensive and environmental planning and education.

EPIC tools are based upon EPPL, Environmental Planning Programming Language, a powerful raster-based GIS developed in the early 1970s, before commercial products were widely available. All EPIC tools contain the easy-to-use functionality originally developed for EPPLviewer and contain specialized GIS functions tailored to specific audience needs.

EPIC stands for the EPPL Interface Consortium, an informal partnership of organizations that fosters the development of GIS software to address Minnesota issues and problems.

Tools to Analyze. EPIC GIS is a fast, high-powered raster-based analysis package for technically oriented professionals.

Tools to Plan. EPICplanner supports local comprehensive planning activities and includes models and data to examine land use allocation and use.

Tools to Teach. The EPIC Environmental Atlas includes more than 250 digital maps and teaching tools to support K-12 curriculum development and multi-disciplinary environmental studies.

Partners

EPIC GIS tools are available free to Minnesota governments and at a nominal cost to nongovernment units. Applications come with training materials, tutorials and lesson plans. The Land Management Information Center at Minnesota Planning coordinates the effort with support from the Department of Natural Resources and Macalester College and input from local governments throughout the state. Funding sponsors include the Minnesota Legislature as recommended by the Legislative Commission on Minnesota Resources and other advisory boards and committees.

About Us

Minnesota Planning and its Land Management Information Center offer a full range of GIS services: coordination, data and map production, applications design, and technology transfer. Recent projects include GIS support for the Generic Environmental Impact Statement on Animal Agriculture, mapping of attendance boundaries for all Minnesota schools, an online map production service, and mapping and analysis for the Governor’s Commission on Redistricting. Ongoing activities include:

- A central clearinghouse for geographic data, including delivery of GIS data via the Internet and CD collections
- Interactive reporting and mapping of census data
- Development of GIS tools and data for local government comprehensive and disaster mitigation planning
- Development, review and promotion of GIS standards in collaboration with the Governor’s Council on Geographic Information and other organizations
- Coordination of GIS activities within Minnesota and with national programs

Minnesota Planning develops long-range plans for the state, stimulates public participation in Minnesota’s future and coordinates public policy among state agencies, the Minnesota Legislature and other units of government.

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EPIC GIS

EPIC GIS is a powerful, desktop geographic information system for professionals interested in spatial analysis who may not be able to afford extensive investments in software and training.

Users can build database study areas, import GPS data, create labels and conduct spatial analysis. They can create, combine and evaluate buffers, use directional buffers, generate frequency counts, cross tabulate multiple data layers, reclassify data, interpolate point data and conduct surface density modeling. Statistical results are automatically displayed in spreadsheet format. New data layers generated by EPIC’s analytical functions can be shared with other GIS systems.

EPIC GIS is being used for studying community sprawl, assessing fire risk, monitoring groundwater contamination, visual impact studies, and forest health analysis. By taking advantage of powerful modeling functions contained within EPPL, EPIC GIS lends itself to other applications ranging from resource assessment to service area analysis. It can import and export data in a variety of common GIS formats.

EPIC GIS was developed by the Land Management Information Center in cooperation with the Department of Natural Resources and is offered free to Minnesota government staff provided they attend a one-day training session at a nominal cost.

EPIC GIS runs on Windows-based operating systems and requires one gigabyte of free disk space. For more information, visit the Minnesota Planning Web site: www.mnplan.state.mn.us or contact Ken Pekarek at ken.pekarek@state.mn.us or 651-296-1201.

EPICplanner

EPICplanner customizes EPIC GIS to meet the needs of local planners. This new GIS planning tool expands the core functionality of EPIC GIS to include a report and model builder, and also includes data sets tailored to local planning and a conversion tool. Use EPICplanner to:

- View data – Quickly view data and create maps using standardized 30 and 100 meter data sets either statewide or by county, watershed or other custom built area. Users can highlight areas of significance with vector and raster overlay options and create elevation profiles with the measurement tools. Simplified legends are tailored to planners’ needs and the user-friendly file structure makes incorporation of local data sets easy.
- Analyze data – Use interfaces with Excel to incorporate multiple fields from dbase files for in-depth study. Report Builder lets users generate statistics and create customized reports that include a number of features, minimum/maximum/average values, and area of features, plus create charts in Excel. The conversion tool lets users quickly compute metric equivalents, lot sizes and numbers, and estimates of land needed for development.
- Evaluate planning scenarios – Use Planning Applications, EPICplanner’s “on the spot” modeling tool, to develop planning scenarios and get results for a county-sized area in as little as five minutes. Users can address suitability, probability and likelihood scenarios by applying predefined models or creating their own. The drag and drop function allows users to rapidly reclassify data.

For more information or to order a copy contact: Jeff Bloomquist at 651-282-5451 or jeff.bloomquist@state.mn.us.

The Minnesota Environmental Atlas is an electronic textbook that delivers the best of Minnesota’s GIS data to education, government and citizens. Designed in cooperation with secondary and college instructors, the atlas contains more than 250 digital maps along with the software to retrieve and analyze the information. The atlas has been described as a tool “that will fundamentally change the way environmental education is taught in Minnesota classrooms.”

The EPIC Atlas is fast, easy-to-use and requires no formal GIS training. Instructors use the atlas to support lesson plans in environmental science, ecology, biology, geography and social studies. Digital maps address agriculture, climate, ecology, forestry, geology, hazards and events, land use cover, demographic change, soils and water resources themes.

The atlas also provides government units with an effective productivity tool to retrieve and analyze information. Analytical features allow maps to be compared side-by-side, merged together, statistically tabulated and re-colored. Users can measure distance, determine direction and graph elevation across aerial photos and topographic maps. The environmental atlas includes new composite data layers, hot links to Web sites and integration with online DNR data sets.

Minnesota Planning is working with the Minnesota Educational Effectiveness Program (MEEP) and others to distribute the atlas to educators and government organizations. For more information, contact Jim Ramstrom at jim.ramstrom@state.mn.us or 651-296-2559.

Concentration of dairy farms using EPIC’s surface density feature.

The Epic Atlas offers a new perspective on environmental education.