



Elkhart County, Indiana

GIS Improves Parcel Maintenance Productivity

CASE STUDY



CHALLENGE

Improve parcel maintenance productivity and service to county GIS users and citizens.

RESULTS

- A backlog of parcel maintenance was erased.
- The GIS Web site makes map data available to the public.
- The county can quickly produce custom plotted maps.

"ArcGIS and Parcel Builder have given us the advantage of accurate GIS data analysis and cartographic-quality GIS maps. Our parcel maintenance problems have been solved, our GIS parcel data is now up-to-date, and we're still discovering the added advantages of using ArcGIS and Parcel Builder."

*Dave Hess
Auditor
Elkhart County, Indiana*

Elkhart County, located in north-central Indiana, is composed of three thriving cities and four unique towns. The county has 16 townships, 84,000 parcels, a land area totaling 464 square miles, and a population of more than 198,000. The county is home to many successful recreational vehicle, manufacturing, and high-tech businesses and actively supports new business development. In 2000, Elkhart County seized the opportunity to develop a geographic information system (GIS) using an ESRI® software platform. The project included new aerial photographic surveys, orthophotography, countywide two-foot contour topographic mapping, and cadastral data conversion.

The Challenge

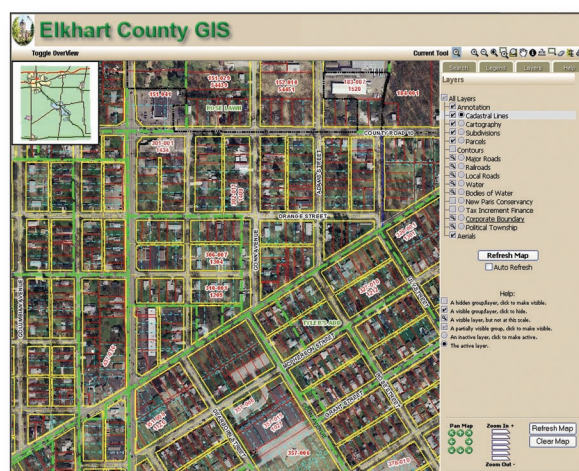
The integration of GIS into the county's cadastral workflow required frequent maintenance of parcel data in relation to new subdivisions, parcel splits, and parcel combinations. With ongoing development growth, county staff found performing parcel database maintenance for a rapidly developing area to be time consuming. Within two years, GIS parcel maintenance had fallen behind and the county had a mounting backlog.

"Elkhart County had a data model that was outdated and overburdened with unnecessary fields, making it difficult for us to maintain parcel data," explains Mary Cripe, Elkhart County GIS technician. "The maintenance workflow was cumbersome and just didn't work."

With a parcel maintenance backlog, the county was unable to provide current data to its internal GIS users and the public. The search began for options that would improve parcel maintenance productivity and service to county GIS users and the citizens within Elkhart County.

The Solution

After extensive research, Elkhart County determined that the best solution to improve its GIS parcel maintenance backlog was to advance to ArcGIS® Server technology. Sidwell, an Illinois-based GIS and mapping service provider, migrated the county's GIS data from coverage format to an enterprise geodatabase. Sidwell also implemented a tagged data model using its ArcGIS software-supported Parcel Builder software. Within a tagged data model, cadastral geometry is stored as line features where one line can be tagged with multiple identities such as road right-of-way, parcel line, lot line, and subdivision line. This data model mimics the real world because map features are often coincident.



Elkhart County's GIS-based parcel map maintenance process makes current map data available through a public access GIS Web site.

Learn more at www.esri.com/landrecords.

Elkhart County, Indiana

ESRI SOFTWARE USED

ArcReader™
ArcGIS Server
ArcIMS

OTHER SOFTWARE USED

Parcel Builder
Microsoft® SQL Server® Express

DATA USED

Image files

- Deed records
- Subdivision plats
- Surveys
- Orthophotography

CAD files used for subdivision plat submissions, parcel data, and reference data from external sources (e.g., soil type, wetland areas, flood hazard areas)

HARDWARE

Dell® Precision® Workstations,
Microsoft Windows® XP
Professional, Single-Core Intel®
Xeon® Processors (3.00 GHz),
HP® ProLiant® DL 380 G5 Server,
Microsoft Windows Server
2003 Dual-Core Intel Xeon
Processors 5160 (3.00 GHz)

FOR MORE INFORMATION



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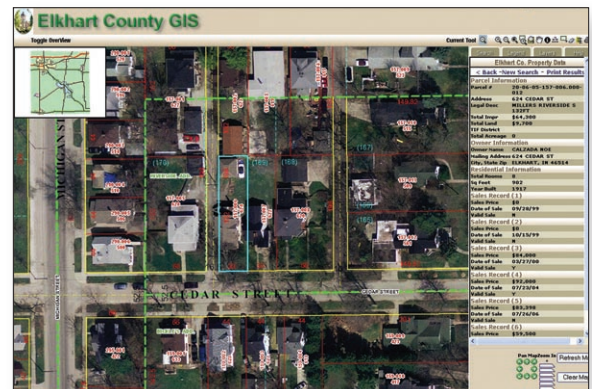
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To satisfy countywide demands for GIS data, Parcel Builder's MapPlotter™ module was implemented to produce standard format maps with high cartographic quality. The maps are viewable on an Elkhart County intranet Web site, which uses ArcIMS® as its online mapping application. To better serve the public, the county also upgraded its existing public access GIS Web site with new information, rapid response, and easy-to-use tools. The ArcIMS software-supported public Web site delivers current map data such as aerial photos, parcels, roads, water features, contours, tax increment financing (TIF) districts, and political townships. Searchable topics include parcel number, parcel address, or subdivision name. Advanced searches by sale price range and/or sale date range are also supported and can return tax records that fit these criteria. This public access GIS Web site is Elkhart County's first phase in a plan to develop more detailed sites for internal and public use.

The Results

Moving to an enterprise GIS has allowed Elkhart County to capitalize on its GIS data and boost its service to public and county employee users. Current map data is available to GIS users through the county's efficient parcel map maintenance process. GIS parcel maintenance workflows have been streamlined, and productivity has increased. Within three months of receiving ArcGIS and Parcel Builder training and instruction, county staff erased its parcel maintenance backlog. As a result, the GIS Web site is serving the public, property appraisers, and others in the real estate community, and the county is seeing less traffic in the auditor's office. County staff can now easily fulfill requests for custom plotted maps with the implementation of Parcel Builder-MapPlotter. With its progressive use of technology and software, Elkhart County has streamlined its parcel maintenance workflow and successfully deployed a GIS that benefits its employees and citizens.

"ArcGIS and Parcel Builder™ have given us the advantage of accurate GIS data analysis and cartographic-quality GIS maps," says Elkhart County auditor Dave Hess. "Our parcel maintenance problems have been solved, our GIS parcel data is now up-to-date, and we're still discovering the added advantages of using ArcGIS and Parcel Builder."



From the Elkhart County GIS Web site, county staff and the public can query and search data based on features such as parcel, road, political township, and subdivision name.

Learn more at www.esri.com/landrecords.