

CASE STUDY

Lake County

How Lake County GIS improved addresses
in public tax and voter systems

Challenge

Issues with address data led to tax bills and ballots being returned by the post office.

Solution

Standardized data through Smarty's US Address Verification software flagged potential issues.

Results

Lake County's GIS team received the most accurate address data it has ever had, which improved county and municipality operations and public service.

PRODUCTS USED



US Address Verification



US Address Autocomplete



US Rooftop Geocoding

The client: Lake County, Illinois

Lake County, Illinois, is home to 170 lakes and rivers, acres of lush forest preserves, miles of hiking and biking trails, and attractions like Six Flags, the Naval Station Great Lakes, the Ravinia Festival, and more. It's also home to over 50 municipalities and a lot of address data.

Peter Schoenfield and Matt Coleman are GIS Analysts with the Lake County Geographic Information System (GIS) Division, a team of seven people. They support the technology and development of an enterprise GIS for the benefit of all Lake County departments, municipalities, and residents.

The Lake County GIS team has worked diligently to build its database and now maintains robust data. They've had countywide address points and center lines for over ten years.

In addition to supporting many departments and county agencies, the GIS team works with almost 150 federal, state, regional, and local government agencies and non-profit organizations to promote the growth of GIS. Some departments they work with have in-house GIS staff, and others don't. In its central role, the GIS team views its obligation as keeping address data current for all others within the county's boundaries who depend on it.

"There's such a wide user base for our address information that goes beyond just internal county departments," said Matt Coleman. "There's a big GIS component that serves natural disaster and emergency response teams, public works like stormwater, and more. Our goal is to produce the most accurate address data possible because everyone relies on it."



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Matt Coleman
GIS Analyst, Lake County, IL

The challenge: Standardizing data collected by different departments and individuals

Lake County contains over 50 municipalities, all at different stages of computer expertise and comfort. Despite this, every municipality and department has address data that needs to be standardized.

Among many use cases, two key areas of focus for the GIS team are:

Tax Parcel Database

- Voter Registration Systems
- Tax Parcel Database

Undeliverable tax bills being returned have been an ongoing challenge for years.

According to Peter Schoenfield. "Getting tax bills into the hands of property owners so that they can pay their bills in a timely manner is a top priority for the County and the property owners."

Voter Registration Systems

When a voter shows up to register, they must provide a photo ID with their address, which is then keyed into the registration database and verified. That address must be tied to a spot on the map because the ballot will be different depending on the municipality, township, taxing district, and so forth. Having accurate address data is crucial to ensure the ballot gets to each voter.



The solution: Integrated Smarty US Address Verification standardizes address data

Tax Parcel Database

Lake County uses Tyler Technologies' Enterprise Assessment and Tax Software, which has Smarty's API integrated into it. When a property has sold, the county employee enters the new taxpayer information for the tax bill. Then they enter the address and push a button that calls Smarty's API to instantly show whether the address is correct or not. If not, a dialog box opens and says, "You entered this address, but I found this other one; is this other one correct?" The user can then accept the verified address.

Voter Registration Systems

Because of how the different voting and tax districts are drawn, Lake County needed a way to tie addresses to the map. The solution was to store a tax parcel identification number with each voter record so they can always tie it back to a parcel or to a spot on the map.

"The more we're able to verify this data, the easier it is for the County Clerk's staff to find the correct parcel when a voter walks in and registers to vote. This prevents problems where the voter arrives on voting day and finds the wrong entity on their ballot," said Peter Schoenfield.



The results: Smarty US Address Verification saves time and prevents human error

“This software has helped us to ensure that the mailing addresses in our system are accurate,” said Peter Schoenfield.

In 2021, when the GIS team ran the tax bill data through Smarty for the first time, it updated more than 558,000 addresses in the system.

Now that addresses are mostly updated this year, Smarty’s address verification service only needed to adjust about 24,000 addresses, a 95%+ reduction. Of those 24,000, many were minor corrections, like changes the post office made to the plus four of the ZIP Code.

As addresses change, Lake County runs all addresses through Smarty on a monthly basis to keep data current and accurate.

In addition to improving the accuracy of the data, Smarty has increased the efficiency of the team’s efforts.

“I could run our standard tax mailing database—about 400,000+ addresses— in less than 30 minutes which streamlines our process,” said Peter Schoenfield.

Now that the team uses Smarty US Address Verification, they can run any of their address sets through the software, and if something comes back that has changed,



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Peter Schoenfield
GIS Analyst, Lake County, IL

they then figure out why that address isn't in their parcel record. It may be a new street or a new development. Using Smarty to solve that mystery is easier and faster than calling 50+ municipalities looking for answers.

"Having a tool like this at our disposal makes our jobs a lot easier," said Matt Coleman.

No one has undertaken a countywide effort like this before. The Lake County GIS team already sees this being a vast improvement over the long term.

"I would say that as a public entity—county-level government—there is an obligation to use resources that best serve the taxpayers and residents of Lake County. Supplying good GIS data that we can keep current and regularly update is a top priority for our team. This means giving the public the best experience, whether it's 911 emergency response, property tax payments, or getting the right ballot style," said Peter Schoenfield.



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GIS Analyst, Lake County, IL

Questions?

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