



Waushara County, WI overcame the challenge of an outdated GIS to implement modern location technology supported by cloud-based architecture in an Amazon hosted environment. As a result, the County gained a GIS that supported its needs for mobile GIS capabilities, integration of GIS with its tax system, public-facing solutions, and the self-sufficiency to administer its own location technology.

When Waushara County added a GIS professional to its staff, two main goals were identified: regain control of its GIS data and deploy a modern, intuitive GIS website. Having run on an outsourcing model for data management for some time, the County wanted to bring that process back in-house and improve efficiency by eliminating the need to send data to a consultant for updates and publishing.

The County also needed to implement a modern Esri-based GIS to replace its outdated Flex-based viewer, which was neither user-friendly – even for a GIS professional – nor easy to update.

Having engaged with Pro-West, together the two organizations defined what was needed and set Waushara on a path to reaching its goals.

CHOOSING CLOUD-BASED HOSTING

The first major decision in the process involved the hosting environment. The County's GIS and IT Departments weighed options for on-premise and cloud-based architecture. While the County had an internal server that may have been able to support the bandwidth imposed by the planned GIS application, choosing this route would

have required significant administration of the internal server.

In contrast, an Amazon Web Services (AWS) environment would take the administration burden off the County, allowing GIS and IT staff to focus on delivering value to users.

GIS and IT jointly decided on an AWS hosting model as the way to best support an Esri enterprise GIS.

DECISIONS ABOUT DATA

Next, the County's data had to be discovered and organized. | Working with Pro-West, the County found that data existed in silos in formats ranging from coverages to file geodatabases. For user-friendly online access via an enterprise GIS that would serve the public and internal users, a proper structure was needed. A new database structure was designed that would support the business need for expanding GIS at Waushara County.

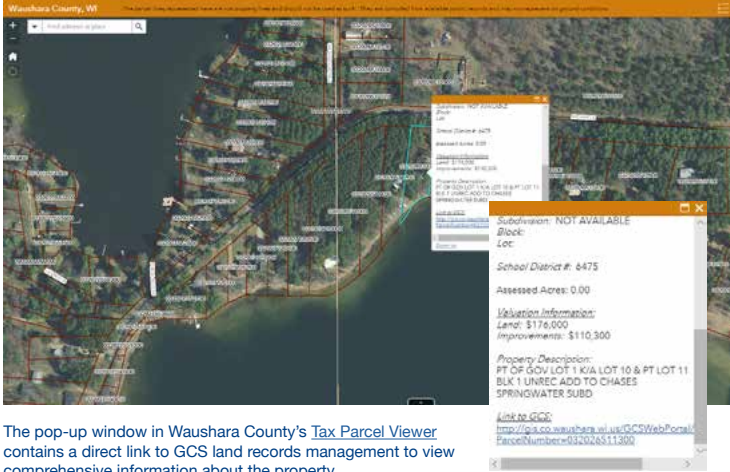
“Organizing our data was the key to success. It was the key to making our enterprise GIS work and providing the standard of service we want to deliver. Having an appealing and user-friendly front-end is one thing but getting the data and infrastructure right on the back-end is what really makes the magic happen. Once we had our data and hosting in order we were able to create valuable online solutions such as our tax map and parks viewer.”

- Zach Newton, GIS and Land Records Information Specialist

To support daily publishing of up-to-date data, Pro-West implemented an automated process to export data from servers to the web maps and apps used by Waushara County's staff and constituents.

ENABLING INTEGRATION

Waushara County embraced the opportunity to integrate its new GIS with other systems that held related data. Connecting GIS to the County's GCS land records management system allows users of the online [tax parcel viewer](#) to see a wealth of information about a property in a single pop-up window.



The pop-up window in Waushara County's [Tax Parcel Viewer](#) contains a direct link to GCS land records management to view comprehensive information about the property.

- Improved workflows and reduced workload, since data is updated in real time
- Easy-to-use tools for staff and constituents
- Expansion of GIS to other departments, adding value to their work
- Process transformation using GIS tools such as Collector for ArcGIS

"I am excited to see other departments, such as our Zoning Department, benefitting from our new enterprise GIS. We're planning to roll it out to even more departments soon, including our Sheriff's Department, and adding more data editors. We are able to deploy GIS solutions such as Collector that empower users across the organization to work more efficiently and focus on activities that are most valuable to our constituents."

- Zach Newton, GIS & Land Records Information Specialist

SUPPORT THROUGH TRAINING

Training organizations to use the tools in which they have invested is a vital part of any enterprise GIS implementation. With on-site training from Pro-West configuring its new GIS tools, applications and maps in an Esri ArcGIS Online and Web AppBuilder environment, Waushara County staff developed the skills to efficiently update its own GIS without relying on external assistance.

"It was important to get to know our own GIS processes and tools in depth so that we can manage them efficiently without always needing help from a third party. The training gave me the confidence to do just that. I am able to effectively support the organization's expanding needs as we do more with location technology."

- Zach Newton, GIS & Land Records Information Specialist

DELIVERING VALUE

Waushara County's cloud-based GIS model has brought value in several ways:

- Time savings – at least 50% reduction in enquiries from the public about property information, with data easily accessible online via the tax parcel viewer
- Easy administration

TIPS FOR GIS SUCCESS IN THE CLOUD

For organizations considering a cloud-based GIS model, Zach Newton offers the following advice:

- **You're still in control of your data** - even when it's not housed on-premise. You will have user-friendly access via a simple remote connection, with the added advantage of protection in the event of a local catastrophic event.
- **Be open to cloud-based deployment.** It's worth exploring; it is not as expensive as some may think, and means you don't have to manage an open data portal on your organization's infrastructure.
- **Don't be intimidated.** It's not difficult to administer - the hardest part is keeping tabs on the passwords needed to log in! There is no need to worry about administering internal servers or coordinating with IT to gain access. Removing the burden of infrastructure administration allows the focus to remain on the enterprise GIS itself.