



Grant County, MN was challenged with managing and sharing authoritative information. With the right GIS location technology and robust GIS processes in place, the County has reached its goal of providing the public with self-service access to accurate data, improving cost-effectiveness across the organization, and easily visualizing and communicating vital information.

GIS was well-established as a mission-critical system at Grant County, playing a key role in organizational efficiency and operations. Recognizing the power of location technology to put valuable information at users' fingertips, in 2017 the County enlisted long-term GIS partner Pro-West's help to establish and pursue a set of GIS goals to be achieved over a 12-month timeframe, focusing on outcomes including constituent engagement, internal efficiency and decision support.

READY TO LAUNCH

Defining the path to reaching those goals was the next step. As a small organization with limited resources, Grant County needed to focus on the areas where GIS integration would add the greatest value. The County worked with Pro-West to identify key steps to project success:

- Esri ArcGIS Online implementation
- Open data deployment
- Implementing solutions - public and internal
- Collaboration across departments
- Esri Local Government Information Model (LGIM) implementation

The primary driver of the County's new approach to GIS implementation was the need to find a long-term solution to the challenge of getting accurate data to the public in a timely manner. Pro-West aggregated the County's data into a single source of authoritative

information, deploying Esri's Local Government Information Model (LGIM), before setting about identifying and configuring simple public-facing ArcGIS Online applications that would allow users to quickly and easily find the data they need.

MOVING FORWARD WITH GIS SOLUTIONS

Enabling spatial information through dashboards and easy-to-use solutions would support all of the County's goals for its GIS project, offering ways to engage more effectively with the public, provide better information to support the decision-making process, and increasing the speed and accuracy of internal processes. To support the easy availability of authoritative information, data consumed and served by each solution is updated automatically every night using a publishing script, ensuring information is always consistent and up-to-date.

Data For All

Building on the foundation of the LGIM, an [open data portal](#) was created based on Esri's ArcGIS Online Open Data solution. The portal allows users to view data in a number of categories, which is set to grow over time:

- Administrative data
- Environmental
- Land records
- Public Land Survey System
- Public Safety



Since implementation, the Open Data Portal has evolved to become much more than a data resource. It is now an important source of *information*, providing useful products that help users make decisions.

An ArcGIS Online-based [GIS hub](#) was created to further ease access to information, establishing a single entry point for all public GIS services.



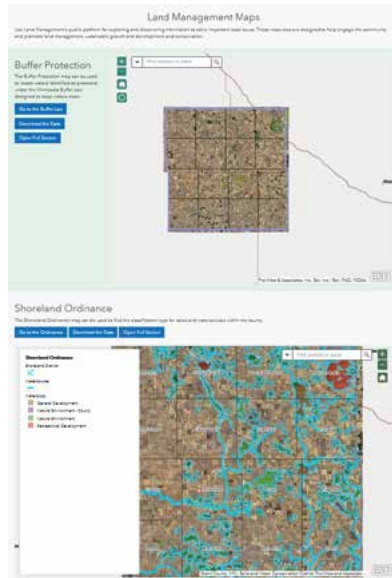
Grant County ArcGIS Online hub

In addition to the ArcGIS Online hub, users can access the same applications via the County's Open Data Portal, thus eliminating the need to visit separate online locations to retrieve information products.

Location, Location, Location - Adding Value to Land Records and Tax Data

Project stakeholders at Grant County knew that much of the success of the County's location strategy hinged on the ability to use GIS technology to do more with its land records information. Pro-West supported the County with the development of tools and solutions to empower County and public GIS users to better use their land records data.

- [Open Data Page for Land Management Maps](#), providing an easy way to access maps that support County land management, growth and development and conservation:



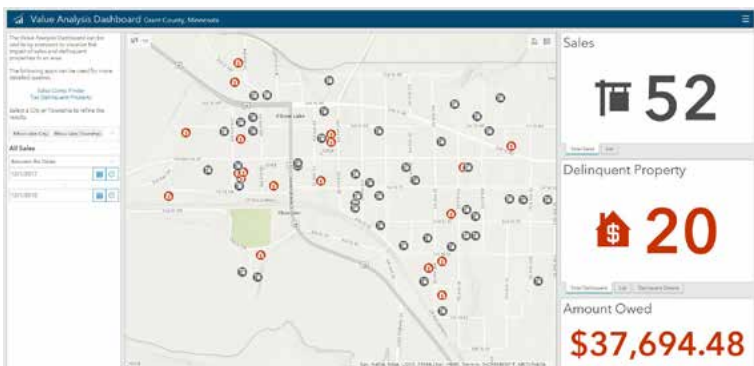
- Shoreline Ordinance Map - used to look up classification type for lakes and water courses
- Buffer protection - used to locate waters identified as requiring a 50ft buffer under shoreline ordinance

- Sales Comp Finder - internal application for looking up and exploring property sales information

- [Interactive Map](#) - look up parcel reports and other property tax information

[Open Data Page for Land Management Maps](#)

- [Mobile Map](#) - look up parcel reports and other tax information on a mobile-friendly platform
- Value Analysis Dashboard - used by Assessors to visualize the impact of sales and tax delinquent property in a community



Value Analysis Dashboard

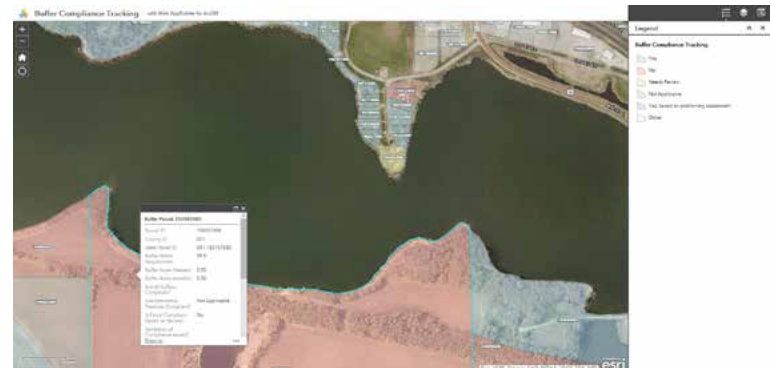
- [Tax Parcel Viewer](#) - easily look up existing address information and request a new address
- Tax Delinquent Property - used by County staff to look up unpaid tax and penalties and prepare for land sales
- Parcel Drafter - map metes and bounds to identify parcel closure errors
- [Elevation Profile](#) - public application enabling users to look up elevation profiles for water flow characteristics
- Web-based tools for calculating soil area and designating land use, allowing multi-user editing to delineate land use classifications, including tillable, with automatically generated CPI-weighted values and meaningful reports

Simplifying Compliance

Pro-West worked with Grant County's Land Management Department deploy the Public Waters Buffer Compliance Inventory application in collaboration with the Soil and Water Conservation District (SWCD) to easily track and communicate between government entities regarding buffer law compliance. Used for site visits and compliance reviews, it allows County staff to edit data in the field and automatically sends email notifications to SWCD when updates are made.

The solution consists of two applications - one for field staff, based on Collector for ArcGIS, and the other for office staff, based on Web AppBuilder. Together, the applications provide the ability to look up and record compliance with state regulations and track owner engagements.

As a result, staff can make more robust decisions and support enforcement efforts with comprehensive data.



Web AppBuilder-based application for tracking shoreline buffer compliance

Engaging Constituents

- [Courthouse Story Map - Uncovering the History of the Grant County Courthouse](#) - a Story Map detailing the discovery and preservation of 100 years of design and craftsmanship in Grant County through the story of the County's historic courthouse



Story Map Uncovering 100 years of craftsmanship Grant County Courthouse

- [Elected Officials](#) – look up local elected officials and find up-to-date information on Commissioner meetings. Users can discover the elected representatives for their city and township, State House and Senate, and US Congress and State.
- [Who's My Commissioner?](#) - an even more focused mapping app to look up Commissioner districts and constituent districts
- Public Notification - an internal solution that allows staff to identify properties within a given distance of a location and generate mailing labels
- [School Locator](#) - used by residents to determine which elementary, middle and secondary schools their students should attend. This solution can also be used to engage the public in elections processes, such as referendums.
- [Licensed Care Finder](#) - created for Social Services to solve the problem of an identified shortage of daycare providers, this solution allows the public to search for and explore licensed child and adult care providers, foster homes and community-based services.

Preparing for Emergencies

Grant County recognized the value of location intelligence in enabling emergency preparedness. GIS project managers at the County collaborated with Emergency Management teams to identify the ways in which GIS technology could make the greatest difference in emergency situations.

Together, a Situational Awareness solution was developed, which would allow public safety officials to quickly assess the impact of an incident on public infrastructure and populations with the goal of protecting life and property during an incident response. The solution allows users to rapidly visualize and understand information about an emergency event, so that the right decisions can be made and pertinent information shared efficiently with those affected.

GIS technology was also implemented to speed the production of hard copy emergency management briefing and response maps that the County is required to submit to the State. A solution was deployed based on a set of workflows combined with ArcGIS Pro to produce high quality printed map products.

BEHIND THE SCENES - ENABLING SOLUTIONS

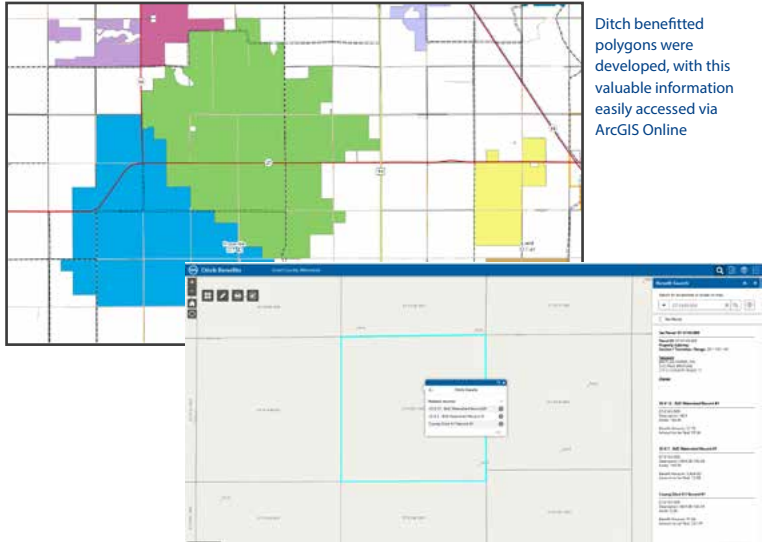
While the County reached many of its goals through the provision of easy-to-use, interactive GIS solutions, many factors are at play "behind the scenes" to allow the efficient deployment, accessibility and ease of use of an off-the-shelf application template. A "solution" also needs fundamental components such as accurate data, robust infrastructure and the right workflows if it is to succeed.

For Grant County, this ranged from securing the right training for staff to offering the right basemaps for the most valuable visualizations. Pro-West ensured the County had the right tools and capabilities in place:

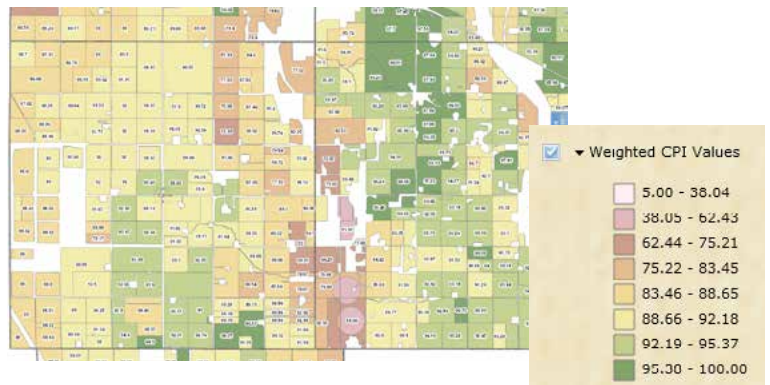
- [Developing metadata](#) for solutions, ensuring they can be easily located and that important information is clear
- Configuring solutions to use [nine vector basemaps](#) for greater performance and user experience
- [Imagery caching in Esri scales](#) for use in solutions
- [Integrating online imagery services](#)
- Reviewing and [incorporating available Social Services state data](#) - such as the licensed daycare data layer - as a base for developing solutions

for Social Services before developing and adding County data

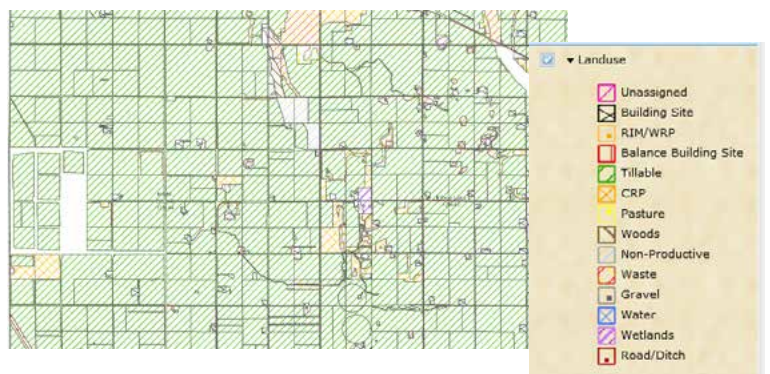
- Downloading and utilizing [fields from the tax database](#) in almost every solution implemented
- [Ditch benefitted polygon creation](#) based on tax database attributes, automated daily to ensure availability of accurate information by internal staff responding to public inquiries. The ability to search by parcel number or property owner, perform in-house quality control, and visualize information that was previously tabular add meaningful ROI



- [Automated process designed to generate weighted crop productivity index \(CPI\) tillable layer](#) for display to enable the Assessor's Department to efficiently and accurately respond to land owners' inquiries



Above and below: Automatically generated weighted CPI tillable layer, providing visualization of vital agricultural data



- Implementation of an [ETL \(extract-transform-load\) publishing tool](#) for the County's addressing data to help meet Next Generation 911 standards. With this tool, the County's data can remain in the current scheme for use in the computer aided dispatch (CAD) system and be easily extracted to meet state standards.

RESULTS

With the primary goal of using GIS to manage and share accurate information in a timely manner, the project has delivered. Apps are [intuitive and focused](#), and [data is updated automatically](#), allowing internal and public users to [easily reach the information they need](#), when they need it, using any smart device, as well as delivering [time and cost savings](#).

With limited resources, Grant County is always seeking creative ways to do more with less. Greater GIS integration into business processes is saving the county both money and time, thanks largely to the deployment of apps for specific purposes in departments across the organization. Automating as many of these processes as possible is also allowing the County to do more while [eliminating opportunities for human error](#).

[Valuable time is also saved for the public](#). Up-to-date information can be accessed on any device, wherever there is an internet connection. There are particular benefits for the area's many seasonal land owners, who can now handle permits and other property or tax-focused enquiries remotely via online applications, instead of having to spend considerable time traveling to meet with County staff.

GIS is also helping the county to [make and defend decisions](#) with accurate data and communicate information to the public much more easily. This is a particular asset in the setting of a public meeting, where attendees and the county benefit from the ability to easily visualize and understand data.

COMING NEXT

Grant County is planning future implementations that will further empower its users with location technology.

To support constituent engagement, the County's ArcGIS Online gallery continues to grow, and the volume of information accessible by the public expands regularly.

Within the County's internal workforce, ArcGIS is being used increasingly to connect individuals and departments with each other's authoritative information.

A number of solutions based on Esri application templates are in development, with the goal of providing the public with efficient access to better information.

- [County Facilities Finder](#) - for the public to find locations where government and other public services are available
- [ATV Park map](#) - providing a way for the public to learn about park trails and facilities, this solution will digitize the existing paper map
- [Historical Sites](#) - allowing the public to locate and learn about historical sites
- [Government Housing](#) - a public app for users to discover affordable housing opportunities
- [Address Request](#) - a public-facing solution for the public to request a new address from the County. It will replace the existing paper submission process.

In addition to growing its collection of public-facing solutions, the County is evaluating the possibility of deploying custom base maps to enhance the ability of its map products to communicate high value information.

An exciting future is in store for the growth of location intelligence at Grant County.

BENEFITS

- Efficiency
- Cost savings
- Data organization and map production for easier communication at public meetings
- Robust decision defense
- Better information available to the public
- Self-service capabilities for constituents
- Improved internal productivity
- Maximum process automation = minimal opportunity for human error

"We knew where we wanted to take our GIS but didn't have the knowledge we needed to get there."

"Working with Pro-West was the right fit, as we had an ongoing relationship and knew some of our neighboring counties had achieved excellent results from implementing a custom GIS package with Pro-West."

"We have certainly been successful in reaching our goals for the project. We have one set of authoritative data that everyone uses, we know it's always up-to-date, and it's easy to find."

Karl Lindquist, Assessor, Grant County