



POPE COUNTY, MN: SMALL COUNTY GOES BIG WITH TRANSFORMATIVE GIS



Pope County, a small rural county in Minnesota, looked to Pro-West to deliver an end-to-end GIS function that brought value across the entire organization and enabled the County to achieve its GIS goals.

As a rural county with a population of 11,000 covering 717 square miles, Pope County sought the support of long time GIS team member Pro-West to fulfil its entire GIS function. Collaborating with Pro-West offered an efficient way for Pope to achieve its GIS goals despite the challenges of being a small, rurally located county. Pope's IT Director, Donna Martin, recognized that the County could benefit from the up-to-date knowledge of a third party GIS provider, as well as help with maximizing Pope's investment in technology, non-biased budget and strategic planning support, inter-departmental liaison, and communication and workflow expertise.

BANKING ON THE RIGHT PARTNERSHIP

Over time, responsibility for GIS at Pope County had shifted between staff, and transferred to Ms Martin upon the retirement of the Recorder, who had previously led the GIS function.

Focused on delivering a high standard of public service and transparent government, and supporting small cities within the County, Martin recognized the power of GIS in reaching the

organization's goals. However, despite ambitious goals and a growing list of requests from multiple departments for GIS, the work could not support a permanent, full-time role. The County needed a new, strategic approach to GIS projects that would be cost-effective, reduce overhead, incorporate expert feedback, and deliver appropriate training for staff in a timely manner.

Feeling a sense of urgency to keep pace with the rapid pace of change in GIS, Martin turned to Pro-West & Associates' [End-to-End GIS Service](#) to fill the knowledge gap and deliver the targeted support that County staff needed in order to meet business goals.

Having already provided parcel data development services to Pope County, Pro-West helped Pope to set its goals for the next 6 months by identifying the opportunities where GIS would add greatest value. The result was a focused list of priorities that Pro-West would work to achieve within a 9-month period. This was an ambitious timeframe in which to deliver many projects, including:

- Land records mapping/parcels
 - Editing and maintenance
 - Reading legal descriptions
- E911 addressing
- System integration
- Desktop GIS

- Database management
 - SQL
 - SQL Express
 - Excel
 - Microsoft Access
 - Metadata
- IT/networking, cloud environments
 - Security and sharing
- Web GIS
 - Publishing web services
 - Identifying and isolating workflows
 - Configuring and testing off-the-shelf tools and solutions
 - Developing custom tools and solutions
- Mobile GIS
 - Device management
 - Security
 - Editing and workflow management
 - Data integrity and accuracy
- Workflow management
 - Identifying key tasks
 - Isolating tasks and subtasks
- Branding
 - Metadata
 - Graphics

APPLICATIONS

Pro-West's expertise in empowering local government through easy-to-use interactive GIS apps helped Pope County identify and implement solutions that represented the best value for the organization. ArcGIS Online templates were configured for multiple departments and serving both internal staff and the public were configured, allowing the County to efficiently share accurate information, deliver improved public service, provide access to information on users' mobile devices, and make the information easy to find and understand for users who had never previously interacted with GIS.

Departments served:

- Assessor
- Auditor/Treasurer
- Emergency Management
- Highway/Engineering
- Information Technology
- Land and Resource Management
- Recorder
- E911 and Rural Addressing
- Law Enforcement
- Veteran Affairs

9 MONTH SNAPSHOT

Between August 2016 and April 2017, Pro-West worked with multiple departments to accomplish a collection of focused GIS tasks to ensure Pope County reached its GIS goals for the period:

- Implemented 21 GIS applications across 10 departments
- Updated the County's tax download process
- Organized and consolidated spatial data from multiple sources into a single location accessible by all users
- Created data layers and schema to support solution development
- Transferred Excel spreadsheet data on septic information to GIS format for user in mobile and desktop solutions
- Esri desktop and server software upgrades
- Training on desktop editing and using the new applications
- Supporting the County's rural broadband initiative

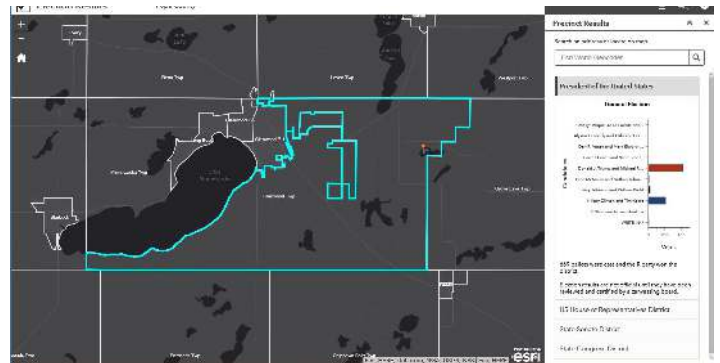
Applications deployed include:

[Election Results](#) - displayed in real time the results of the presidential and other elections taking place on November 8, 2016.

■ Received over 1,000 views on election night

Challenge: adapting and integrating available state election data on short notice.

Value: view and compare election results across the County. Users could search for their homes, workplaces, or areas of interest to learn about their newly elected representatives. Automated integration with MN Secretary of State data saved hours of time in manual processing.



Election Results app

[Emergency Management App](#) - enables the Emergency Management Department to run queries for vulnerable locations (day care centers, hospitals) near hazardous sites.

Challenge: identifying the information internal personnel need to see on a map during an emergency event, and how they need to use it.

Value: Emergency Management Department can easily maintain its own authoritative data that appears on a map, locating hazardous facilities and vulnerable locations. Staff can find the nearest vulnerable locations to an incident and quickly generate a list of individuals to

notify. The app is extremely user-friendly – staff were editing within an hour of set-up.

Situational Awareness - identify the impact of an incident on vulnerable populations and manage emergency and hazardous facility site data.

Challenge: identifying ground locations for hazardous facilities that previously contained no or inaccurate location information.

Value: consolidation of data into a single source and the ability to analyze impacts to a community in the case of an emergency event.

Highway Department Maps and Apps Gallery - allows internal users to quickly locate MnDOT data, maps and resources including maps created by Pro-West using live MnDOT data.

Challenge: identifying the various state data resources used by department staff on a regular basis and bringing them together into a single, easy-to-use resource.

Value: significant time savings compared to the previous process of searching for data that is now available in an interactive maps and apps gallery.



Highway Department Maps and Apps Gallery

Feedlot Collector and Feedlot Verification - plot feedlot boundaries in the field and verify old boundaries against the new ones.

Challenge: creating a workflow that allows staff to compare and update polygon data against point centroids simultaneously.

Value: staff members can now view boundary data and verify that it contains the same information as point centroids with older data, ensuring that accurate information is provided on feedlot sites.

Subsurface Sewage Treatment Systems (SSTS) Collector - obtain septic points and other required septic information.

Challenge: determining the best way to take large data sets offline where little connectivity is available.

Value: streamlined collection thanks to the ability to identify the most relevant data to use in the field and elimination of unnecessary steps.

Septic Look-Up - a tool for staff to locate septic system diagrams and print reports.

Challenge: determining effective ways of digitizing many years' worth of diagrams and schematics.

Value: easy access to digital information and elimination of handwritten reports.

ArcGIS Online Homepage - a single, centralized location for County staff and citizens to access mapping resources and more.

Challenge: determining a plan for growth and moving forward with new GIS and mapping resources

Value: an effective, accessible online presence for easy-to-use GIS resources that can be efficiently managed.



ArcGIS Online Homepage

LINK Mobile - view information on parcels and related documentation on mobile devices in any location.

Challenge: mobile-based parcel viewer to support phone or tablet formats.

Value: mobile capabilities; leveraging existing GIS integrations with tax and document imaging systems.

Open Data Site - efficiently sharing authoritative data with the public.

Challenge: locating and identifying the datasets shared via the County's previous method of distributing GIS data layers – an FTP site – and verifying whether or not they are accurate and up-to-date.

Value: putting authoritative, up-to-date data in the hands of its citizens while eliminating data request fulfillment costs.



Open Data Site

Address Requests - part of a comprehensive new address management solution that the public can use to apply for a new address.

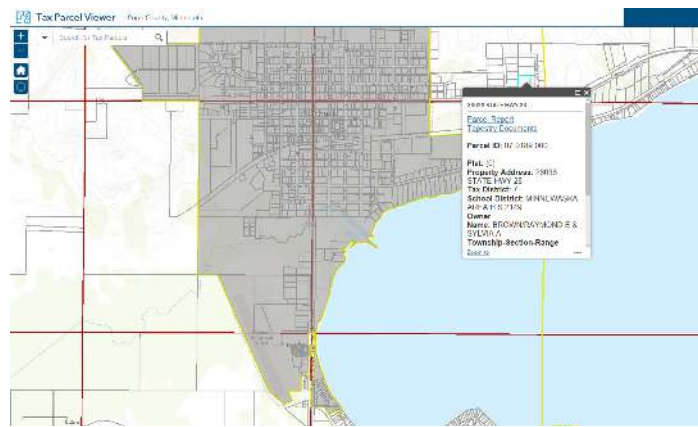
Challenge: identifying the right points in the workflow at which to notify additional departments of the status of new addresses.

Value: track and merge new address requests digitally, and streamline the process of generating a new address.

Burn Permits - a public app for applying for a controlled burn permit.
Challenge: incorporating waivers during County-wide burn bans
Value: self-service eliminates the need for County staff to be involved in permit application process, and lets law enforcement know where permits are valid during enforcement.

Veteran Affairs - mapping the area served by health facilities that participate in the Veterans Choice Program.
Challenge: identifying health facility locations. This challenge was resolved by using the Living Atlas.
Value: County staff can quantify and understand the areas that qualify for the Veterans Choice Program.

Tax Parcel Viewer - a tool to access property tax and assessment information.
Challenge: including appropriate attributes to incorporate that are also provided through the tax information hyperlinked within the Tax Parcel Viewer
Value: a user-friendly app that meets the needs of much of the population to answer a simple question: "Where's my house?"



Tax Parcel Viewer app

RESULTS

As the County has begun to measure the results of the GIS projects completed, the impact is clear. Benefits have taken hold rapidly, with the instant reduction in time for completing business processes, mobile data entry, reduced incoming enquiries from the public, up-to-date, consistent data, and more.

Opportunities to collaborate with neighboring Counties have surfaced since implementing a modern GIS, as demonstrated by Pope's work with Grant and Douglas Counties using GIS to plan logistics, security, and evacuation procedures for a recent visit by the Ambassador of the Republic of Uganda.

Pope County is breaking barriers for small, rural counties, competing with the largest urban centers with creative GIS solutions to support business processes, enhance public service, and drive efficiency.

Through its collaboration with Pro-West, the County has achieved its GIS goals and can attest to the following tangible benefits:

- Citizen self-service
- Citizen engagement
- Accurate information
- Enhanced collaboration with other local government organizations
- Streamlining and centralizing data
- Hours of time saved compared to previous manual processes
- Interactive public apps available on any device
- Access to up-to-date GIS skills and unbiased GIS support through third partner
- Increased collaboration
- Improved productivity
- Modern GIS environment

MOVING FORWARD

To maintain the momentum generated by the projects completed, Pope County has established focused next steps. A number of new applications are planned, along with further opportunities for collaboration with other local governments:

- Zoning Look-Up, in collaboration with the City of Glenwood, MN
- Shoreland Zoning and Creek Buffer Zoning
- City Property Sales
- Mobile sidewalk inventory and inspection

Numerous County departments have plans to expand their use of GIS. All have identified opportunities to use GIS to make core business processes more efficient, and use and share more accurate data.

"Quite simply, we would never have got anywhere without Pro-West. We have got much more done than we could have ever achieved alone, and are saving considerable time and money by working with their team.

Pro-West adds value by responding to our questions or requests right away, by going above and beyond what we ask of them, and by bringing a professional edge to our IT and GIS operations.

Without Pro-West, we would not have the up-to-date knowledge, tools and, most importantly, the results that they have brought to our County."

- Donna Martin, IT Director, Pope County