Government Matters

GIS for State and Local Government

The City of West Plains Shows Businesses the Bottom Line

West Plains is located in Howell County, Missouri, and boasts a population of around 20,000 people. Home to Missouri State University, this college town attracts those who are interested in a smaller community and slower pace. The city has been carefully managed using ArcGIS for many years in various departments ranging from public works to engineering and economic development.

When Robert Case began his job as economic development director for the city last year, he brought more than 10 years of economic development and urban planning experience in both the public and private sectors. Most recently, he had been working at a private consulting firm in South Bend, Indiana. In that position, he managed several multimillion-dollar economic development projects and

developed several master and strategic plans for communities throughout the Midwest. In his new role as director in West Plains, Case is responsible for attracting new businesses, as

In This Issue
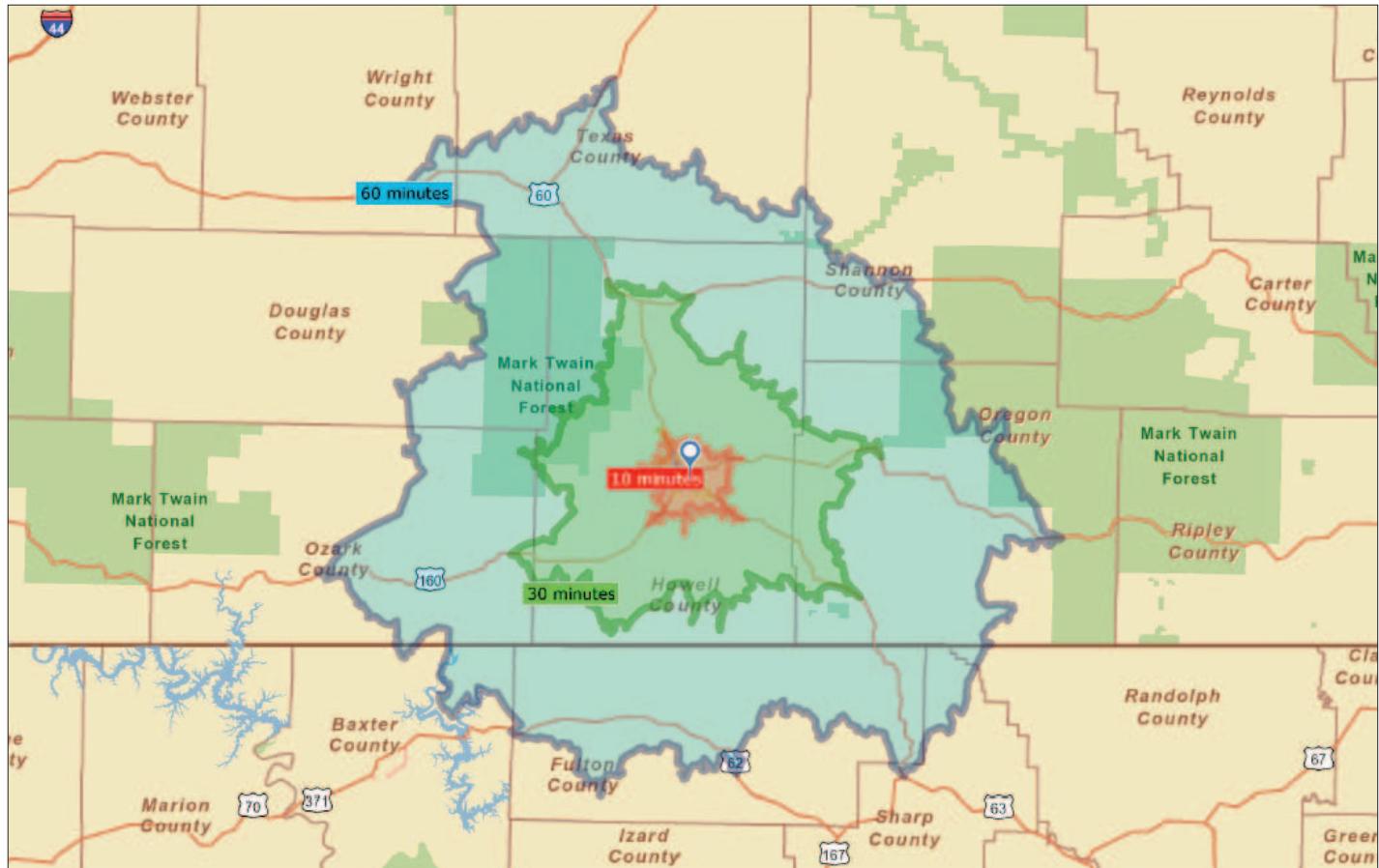
Drive-time maps provided by Community Analyst help the City of West Plains save valuable time when analyzing information to attract businesses to the area.

Local Government Resources

Visit arcgis.com to find templates, applications, and other resources to make your work easier. Here are a few examples:

Citizen Service Request Template for ArcGIS 10

Give citizens a user-friendly tool for submitting requests for service online.
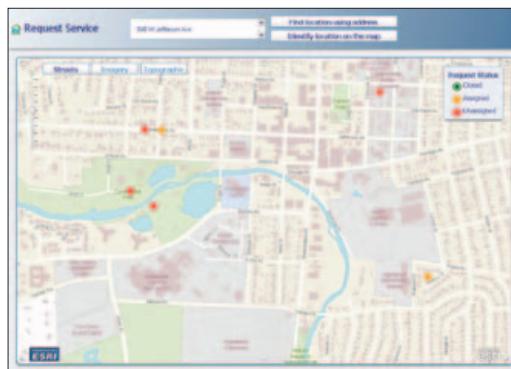
Local Government Maps and Apps Gallery

Use this template to configure a web application that provides quick and easy access to all the maps and apps you offer.
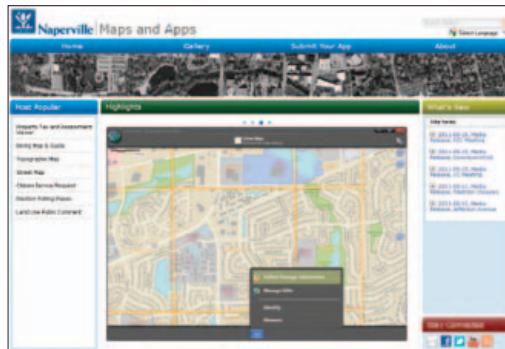
Public Information Center Template for ArcGIS 10

Present an interactive view of all activities published by local government along with opportunities to submit service requests and review social media feeds.
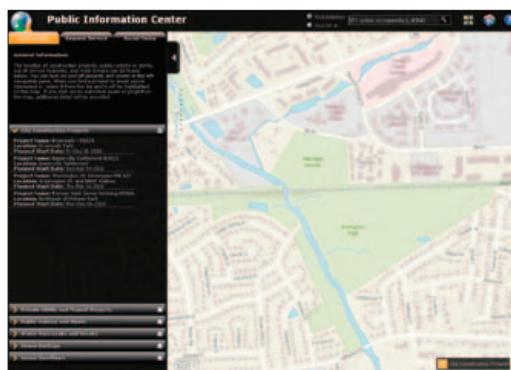
Esri Online

Esri Community Analyst Now Available

A Web-Based Solution for Planning and Policy Analysis

Find out how anyone can generate reports and maps that illustrate the geographic characteristics of an area based on thousands of demographic, health, economic, education, and business data variables. Sign up for a 14-day free trial and see Community Analyst in action at esri.com /communityanalyst, or view

Brenda Wolfe of Esri at the Esri UC

Brenda Wolfe's demo from the Esri International User Conference (Esri UC) Plenary Session at video.esri.com/search/community-analyst.

City of Boston: Engaging Citizens through Maps and Apps

Visit esrivideo.com and search for *Boston* to see an inspiring presentation on how the city uses maps to engage citizens. Chris Osgood and colleagues from the City of Boston, Massachusetts, shared their story at the 2011 Esri UC in San Diego, California.

Chris Osgood of the City of Boston at the Esri UC

2011 Special Achievement in GIS Awards

Congratulations to this year's Special Achievement in GIS (SAG) Award winners! Go to esri.com/uc to find a list of recipients, learn about their projects, and view photos from the awards ceremony at the Esri UC.

Jack Dangermond with SAG Award winners from the University of Alaska Southeast and USDA Forest Service—Alaska Regional Office

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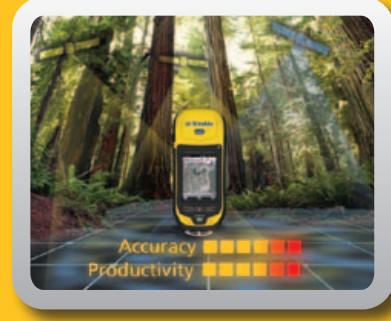
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GEOEXPLORER 6000 SERIES

City of Philadelphia Opens Data, Imagery to the Public
Free APIs Encourage Citizens and Web Developers to Leverage Local Information

Through the OpenDataPhilly website, the City of Philadelphia, Pennsylvania, now provides access to over 100 datasets, applications, and APIs containing authoritative regional information on a wide variety of topics. The site includes a series of map services built with ArcGIS technology from Esri that offer data and imagery related to census tracts, political wards, crime incidents, hydrology, evacuation routes, bicycle networks, and more.

"Our goal is to expose current and accurate Philadelphia spatial data that will enable developers to build applications to benefit Philadelphia citizens and businesses, enhance commerce, and help streamline city government," said James L. Querry, Jr., City of Philadelphia director of enterprise geographic information system (GIS) technology. "The city has openly shared its core GIS data and imagery for over a decade, and now, in conjunction with OpenDataPhilly, we have recently expanded data and imagery access via APIs."

Built by Philadelphia-based GIS software firm Azavea, OpenDataPhilly is based on the idea that providing free and easy access to information encourages effective, transparent government and a more engaged and informed citizenry. ArcGIS technology from Esri supports the Gov 2.0 movement by enabling governments around the world to build mapping applications that empower the public and enhance policy making. To learn more about the role of GIS in open government, visit esri.com/gov20. To access OpenDataPhilly, visit opendataphilly.org.

OpenDataPhilly.org is a searchable portal of over 100 datasets, applications, and APIs related to the Philadelphia region.

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Walter E. Washington Convention Center
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GIS, GPS, and Wireless
A Powerful Combination for Quicker, More Accurate Damage Assessment

With recent advances in wireless technology and network speed, nearly everything you can do on the desktop can be performed in the field. Not long ago, streaming live video or surfing the web from your phone seemed implausible. Imagine the implications for more critical mobile tasks, like assessing damage and allocating resources after a disaster.

As a geographic information system professional focused on emergency management and disaster recovery, Karyn Tareen understands the value of gathering and sharing timely, accurate information so that cities, counties, and states can prioritize their relief efforts, seek federal reimbursements, and rebuild after a major event. Her company, Geocove, Inc.—an Esri partner—provides cutting-edge tools and services that help local governments collect, map, and report damage assessment information and community needs.

Using ArcGIS technology and APIs from Esri, Geocove developed an application called ARM360 that gives field-workers a real-time,

dynamic picture of the situation from a mobile device, tablet, or laptop. Digitally enabling damage assessments allows information to be collected quickly and accurately, instantly enhancing maps and reports that become powerful decision-making tools. Because ARM360 references an organization's in-house GIS data, it also provides emergency personnel with a common operational picture.

"By using ArcGIS for Server Advanced, we can now support our customers through a hosted environment or allow them to keep their data stored in-house, which is important to many government organizations," says Tareen. "If they don't have the advanced server version in-house, they can still use our mobile application in the field."

ARM360's communication capabilities can be powered by AirCard mobile broadband devices from Sierra Wireless, whose products are available through AT&T. The devices provide Geocove a quick and reliable way to connect to the Internet anywhere there is AT&T net-

work coverage. Even if the application is not connected to a network, ARM360 offers full functionality and automatically synchronizes when connected. An integrated GPS in the AirCard device ensures geographic accuracy and simplifies the data collection process. To streamline large-scale government rollouts, the AirCard device can be inserted into virtually any laptop and programmed to automatically connect to virtual private networks to ensure the secure transfer of data.

When damage assessments are collected on paper without requiring that all factors be accounted for, local governments can miss out on significant federal funding. ARM360 eliminates the need to manage vast paper files and includes customizable forms to ensure that all required pieces of information are collected and measured on a consistent scale.

In ARM360, incident and initial damage reports may be viewed as a dashboard summary or in detailed assessments, depending on current needs. An incident assessment report lo-

In the wake of the Alabama tornadoes, an online viewer powered by ARM360 presented a common snapshot of structural damage, complete with full individual damage assessments.
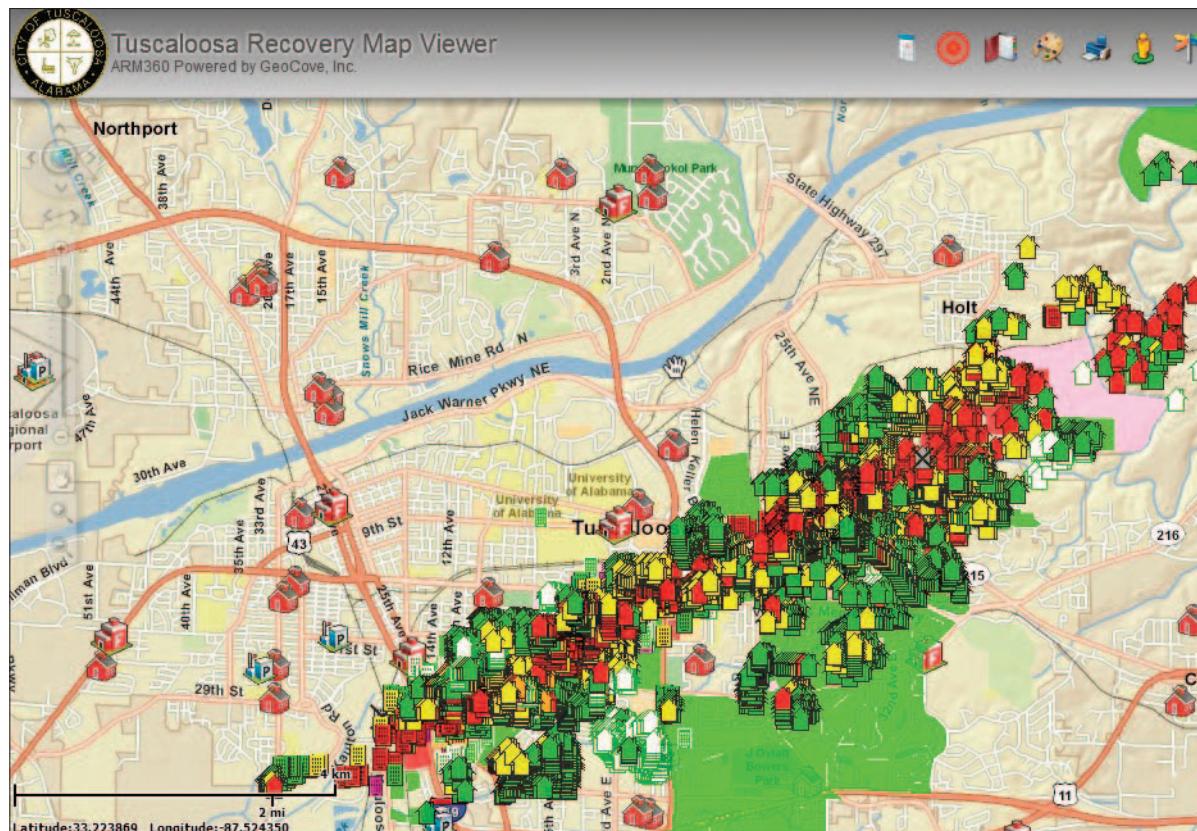
cates information such as downed wires, debris blocking roadways, and flooded areas. A human services assessment report collects data on public health or community needs, such as water, medical services, and transportation, to facilitate appropriate and timely response.

After a disaster, Tareen says the most immediate damage assessment need is a basic summary of areas with major structural damage. Current satellite imagery of the area can be brought into ARM360 to help quickly identify unsafe areas so officials can protect citizens from danger. Next, building inspectors and engineers are dispatched to collect detailed assessments and post warnings in severely damaged areas. During the assessment process, the application can reference other geospatial data, such as property tax information, to generate intelligent estimates of the cost of the damage. Finally, field-workers can use ARM360 to track the safety precautions they take and the proposed next steps in the rebuilding effort.

Geocove CEO Karyn Tareen, center, worked with Cpt. Brian Cleveland (left) and Lt. Tim Honeycutt (right) of Pelham, Alabama, Fire Department in support of the Tuscaloosa tornado recovery effort. Geocove's ARM360 application stays connected via the Sierra Wireless AirCard 890 from AT&T.
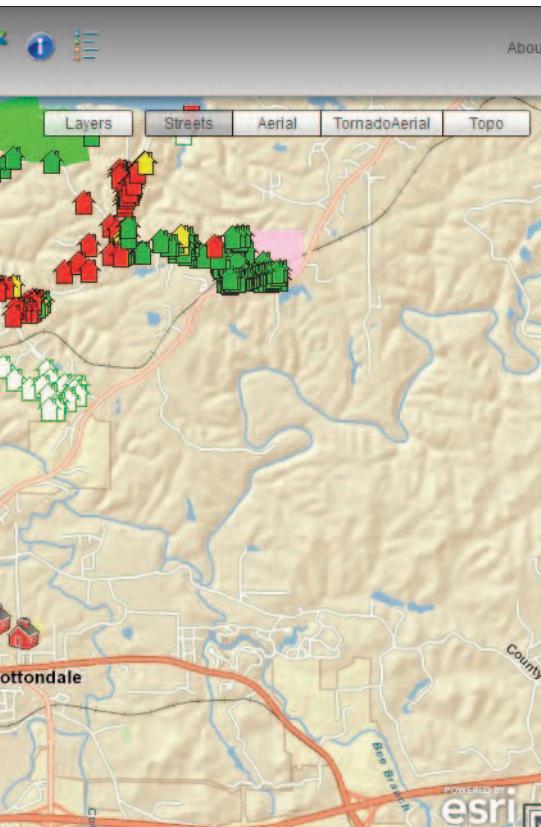
ARM360 in Action
Supporting Damage Assessment after the 2011 Tornadoes

When massive tornadoes ravaged southeastern states recently, emergency crews from Geocove played a major role in helping Tuscaloosa, Alabama, city officials assess the extent of tornado damage. Geocove specialists provided a tool that coupled satellite images with GIS databases to produce a thorough preliminary damage assessment within days. Tuscaloosa was able to rapidly and accurately determine not only the number of structures affected by the storm but also the estimated cost of the damage to assist in planning recovery efforts and requests for adequate funding.

"When the damage grid is that sensitive, it would take weeks to compile the assessments using standard protocols," Tareen says.

About Geocove

Geocove, Inc., provides scalable assessment solutions built using the power of GIS across a multitude of industries. The Geocove team has extensive experience in providing assessment, reporting, and mapping tools for emergency management, building officials, public health, and other government agencies as well as utilities and private industries. Geocove, a privately held corporation located in central Florida, is an authorized partner of Esri.

The City of West Plains Shows Businesses the Bottom Line

well as encouraging expansion and retention of businesses in the city.

This is not an easy task, especially for a smaller community competing with larger-populated areas within a region. Case knew he needed to attract business to the community by providing information about the city area that would translate into risk-free opportunities that organizations could take to the bank.

Competing in a Big Pond

As an active Esri user, Case took part in the offer to beta test Esri Community Analyst, a cloud-based Software as a Service solution. "Right away, I was working with the solution, pulling up data," says Case. "It was so much easier to have information readily available for the areas around West Plains, instead of having to research and pull up data from the census and manipulate it into something that would make sense for a marketing program."

Community Analyst is an online GIS application, delivered as a service via any browser. It is specifically designed for government agencies like the West Plains Department of Economic Development. While the city has a lot of GIS experience, the solution can also be used by organizations that have little or no technical GIS experience. Further, since the application is hosted in the cloud by Esri, Community Analyst customers need not be concerned with allocating and maintaining supporting hardware or installing additional software on the premises.

Through the online data and mapping tools, Case is able to quickly explore the geographic characteristics of any area and develop the right strategies for attracting more business in his community. Case and his staff have access to thousands of demographic, health, economic, and business data variables that help them discover patterns, relationships, and trends

and analyze unique community characteristics for their geographic region.

Esri's Tapestry Segmentation Profile data is also included and provides insight into particular types of people who live in each neighborhood, including demographic and socioeconomic characteristics and preferences. This type of detailed information, such as what TV shows people watch or what magazines they read, is invaluable in assisting businesses to understand who is living in the area and what their preferences are.

Case creates maps and reports that provide information that is useful to the commercial

> "Right away, I was working with the solution, pulling up data. It was so much easier to have information readily available for the areas around West Plains, instead of having to research and pull up data from the census and manipulate it into something that would make sense for a marketing program."
>
> Robert Case, Economic Development Director, City of West Plains, Missouri

developers he is working to attract. Pertinent data like that described above is used by retailers, offices, and light-manufacturing organizations to make the sound decision to relocate in West Plains.

Geodemographic Data—A Real Eye-Opener

Perhaps the biggest eye-opener for Case and the commercial developers he works with was the data counts provided for regions around the city. The 2000 Census population for the city of West Plains was 10,866. The data available through Community Analyst is Esri Updated Demographics data for 2010/2015, so it has more accurate counts. The demographic data is built on Census 2000 and updated an-

nually to give current-year estimates and five-year projections for categories including population, households, income, and housing.

"When we pulled up ZIP Code data for the city, we found that the population counts were in fact almost double what the 2000 Census counted," says Case. "When I showed this to the developers, we started getting a little more interest in the community, even during such a sour economy."

Being able to map this information was a big positive for this rural community. "Having access to this data was a definite benefit," continues Case. "Many times, it is difficult to get updated information for rural areas like ours outside a larger metropolitan statistical area."

Saving Time

Community Analyst also comes with customized drive times and rings that can be selected to find out even more about the types of people who live in a particular area. "While some might think that one, three-, and five-mile drive times are archaic, this kind of travel data is so important for the organizations we are trying to attract to the area," says Case. "If we were to do this ourselves, we would have had to build quite an interesting model to figure this out, and it would have taken some time. Having this readily available saved staff time and taxpayers' money."

For more information, contact Robert D. Case, economic development director, City of West Plains, Missouri (tel.: 417-256-7176, e-mail: development@westplains.net).

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Elements in a sample workflow

P · Ro · In · Rm · In · Cn · Wo · Ss · Sr · Ag · Ww · Cc · Db

Gc 1 GIS Centric																	**Bl** 2 Business Licensing
Wb 3 Web Browser	**Dt** 4 Desktop						**P** 5 Permitting	**Bp** 6 Building Permits	**Zp** 7 Zoning Permits	**Ce** 8 Code Enforce	**Pa** 9 Planning Activities						**Rs** 10 Renewals
M 11 Mobile	**Ag** 12 ArcGIS						**Ta** 13 Tasks	**Is** 14 Inspections	**Pr** 15 Plan Review	**We** 16 Workflow Engine	**F** 17 Fees						**Em** 18 Expired Lic Mgmt
R 19 Reporting	**Ss** 20 SQL Server	**Sl** 21 Silverlight	**Wp** 22 WPF	**W** 23 Windows	**Am** 24 Asset Mgmt	**Sr** 25 Service Request	**In** 26 Inspection	**Wo** 27 Work Order	**Cs** 28 CMMS	**Rm** 29 Reactive Maint	**Pm** 30 Preventive Maint	**N** 31 Notices	**Bc** 32 Building Codes	**Cu** 33 Conditional Use
Or 34 Oracle	**Fm** 35 Facility Mgmt	**Sw** 36 Stormwater	**El** 37 Electric Utilities	**E** 38 Equipment	**L** 39 Labor	**M** 40 Material	**S** 41 Storeroom	**T** 42 Tasks	**Cr** 43 Condition Rating	**C** 44 Costs	**Lu** 45 Land Use	**Co** 46 Cert. of Occupation	**Is** 47 Inspection Scheduling	**B** 48 Bonds
Ww 49 Water Wastewater	**St** 50 Streets Traffic	**Wf** 51 Work Flow Mgmt	**Db** 52 Dashboard	**Ar** 53 Asset Registry	**Qt** 54 Query Tools	**Cc** 55 Call Center	**Mh** 56 Maint History	**Co** 57 Contractors	**Os** 58 Online Submittal	**Cr** 59 Corrections	**RR** 60 Revenue Reporting	**Iv** 61 Invoices	**Ch** 62 Court Hearings	**Op** 63 Online Payments
Lg 64 Local Govt	**Pm** 65 Park Mgmt	**E** 66 Event Mapping	**S** 67 Scheduling	**Me** 68 Multiple Entities	**Ro** 69 Related Objects	**Ui** 70 Extensible UI	**Mt** 71 Map Tools	**B** 72 Budget Planning	**Cw** 73 Crew Mgmt	**St** 74 Status Tracking	**Rp** 75 ROW Permits	**O** 76 Online Application	**Ad** 77 Attached Docs	**Lm** 78 Location Mgmt

I 79 Inbox	**Gc** 80 Geocoding	**Eq** 81 Equipment Mgr	**Tv** 82 CCTV	**Cn** 83 Condition Analysis	**Pj** 84 Project Mgmt	**Ca** 85 Cyclical Activities	**Mm** 86 Meter Mgmt	**Pc** 87 Parcel Centric	**Dp** 88 Develop Plats	**Fe** 89 Fee Estimator
Od 90 Open Data Model	**Kp** 91 KPI	**Gr** 92 Graphs	**Sc** 93 SCADA Interface	**Lm** 94 Lifecycle Mgmt	**Ai** 95 Developer API	**Cm** 96 Contract Mgmt	**N** 97 Network Mgmt	**If** 98 Impact Fees	**Cp** 99 Child Permits	**Bh** 100 Business History

Envisioning Regional Growth
Erie and Niagara Counties Outline a Vision through 2020

Erie and Niagara Counties occupy a strategic position at the center of a dynamic region. The counties are in the western portion of New York State, bordering Lakes Erie and Ontario. The Niagara River and world-famous Niagara Falls define the international border separating the two counties from Canada. As emphasized in recent reports by the Niagara BiNational Region Economic Roundtable and the Urban Design Project/Waterfront Regeneration Trust, the counties benefit from their location in the middle of an inter-

The Erie-Niagara Planning & Development application helps users understand policy areas. Here, 85 percent of the selected parcel falls in a developed area, and 28 percent is in a wetland.

nationally significant regional community and marketplace that extends over 3,700 square miles from Toronto, Ontario, to Rochester, New York, and is home to 3.2 million people. According to the roundtable report, the border location presents a host of advantages:

- Access within a half-day's drive for half of the US and Canadian populations
- The presence of industry leaders in information technology and data processing, banking and financial services, telecommunications, automotive manufacturing, and food processing
- More than 60 colleges and universities with enrollment of more than 300,000 students
- A unique and often underappreciated collection of significant historic and natural resources and cultural events and activities

In 2006, Erie and Niagara Counties created the Framework for Regional Growth, a plan outlining the development vision for both counties through 2020. The overarching goals of the plan include creating a region with a vital economy, sustainable neighborhoods, strong rural communities, improved accessibility and mobility, and efficient public systems and services.

Recently, the counties selected Esri partner Buffalo Computer Graphics to create an online map for the framework using ArcGIS for Server and ArcGIS API for Microsoft Silverlight/Windows Presentation Foundation (WPF). Buffalo Computer Graphics has worked extensively with Erie County in the past, primarily on the DisasterLan application, and has demonstrated a strong competence with Esri applications. The public-facing framework application (gis1.erie.gov/ErieNiagaraFramework/PlanningMap.aspx) helps planners, local government staff, and other interested parties understand the local landscape, including developed, developing, rural, and reservation policy areas; rural centers and growth corridors; natural systems, such as lakes, wetlands, and rivers; and heritage areas, like the Erie Canal and Niagara wine trail.

When users launch the ArcGIS for Server application from the Framework for Regional Growth website, they can search for addresses or click a point on the map to generate reports that can include information such as how much of a parcel is in a defined policy area or growth corridor, distances from natural systems, and whether a parcel intersects a floodplain or steep slope. Visitors can also save their work and continue their review at a later

time, measure distances and areas, and identify features. In addition to being a valuable tool for visualizing the policies contained in Framework for Regional Growth, the ArcGIS for Server application helps planning staff in the two counties comply with project review requirements under New York State planning laws.

"This server application makes the framework much more usable for our planners," says Darren Kempner, deputy commissioner, Department of Environment and Planning, Erie County. "Whenever I talk about it, people get excited, because it's tangible; they can look and say, 'Okay, here's how this broad planning document applies to me, to this parcel, and to my municipality.' It's truly user friendly."

The application also fosters informed discussions on planning issues and allows stakeholders to determine impacts on the area. "This gives them the big picture and shows them what is going on in the world around them," says Kempner.

For more information, contact Darren Kempner, deputy commissioner, Department of Environment and Planning, Erie County (e-mail: Darren.Kempner@erie.gov).

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