



WLIA 2016 Annual Conference

February 10-12, 2016, Osthoff Resort, Elkhart Lake, WI

“The Illusion of Simplicity”

It is my pleasure to invite you to the Wisconsin Land Information Association’s 29th Annual Conference!

Our theme the year is the *Illusion of Simplicity*. We come together each year to share lessons we’ve learned, describe hurdles we’ve jumped, identify new technologies we’ve implemented, and promote innovative ideas that advance all aspects of our field. We acknowledge that, often, what we do is not simple, but we can look to the WLIA community to help foster an environment that helps us design, develop, and create with the ultimate goal of achieving simplicity for our users.

We welcome our speakers including Rep. Adam Neylon discussing his efforts in supporting the development of the unmanned aerial systems technology in Wisconsin, Dr. Ian Muehlenhaus who will speak on the topic of “why do maps matter?” and Aurelia Moser who will grab your attention speaking on the subject of “Storytelling with Maps using Open Source.” Alan Rudnick, Village of Elkhart Lake President, will provide a welcome for us. We will also hear from Wisconsin Geographic Information Officer Jim Giglierano.

This conference will provide you with compelling speakers, educational sessions, and technical workshops to help develop a vision specific to your organization. The program also includes the annual map contest, the exhibit hall, GeoLounge, Esri “Hands on Learning Lab” and the WLIA Town Forum. And new this year is our “Opening Event” Wednesday evening featuring a reception and music by Dead Horses.

I appreciate your involvement in WLIA. Your attendance at this and other conferences is the reason WLIA has been such a successful organization all these years. I would like to personally thank the WLIA Board members, the Conference Committee, presenters, and exhibitors for their dedication, hard work and time given to this Association.

I encourage you to stay engaged with the Association throughout the coming year. This is your Association and the initiatives undertaken by the Board of Directors are intended to benefit all of you. Our Website (www.wlia.org), social networking sites including Facebook, Twitter and LinkedIn are great avenues to interact and exchange ideas. Of course, if you have ideas or concerns you wish to see addressed, please do not hesitate to contact me via e-mail (goettlm@uwec.edu) or at 715-836-4709.

Thank You,
Martin P. Goettl
2016 WLIA Conference Chair

WLIA 29th Annual Conference - Register for the Conference

February 10-12, 2016 at the Osthoff Resort in Elkhart Lake, WI

Tuesday, Feb 9, 2016

8:30 a.m. – 5:30 pm Esri ArcGIS Pro Workshop

Wednesday, Feb 10, 2016

9:00 a.m. – 5:00 p.m. Geolounge

9:30 a.m. - Morning Workshop Sessions

8:30 a.m. – 5:30 pm Esri ArcGIS Pro Workshop

8:45 a.m. - Registration

12:30 p.m. - Lunch

1:30 p.m. - Afternoon Workshop Session

5:00 p.m. - LION Meeting

6:00 p.m. - The “Opening” - Reception and Music

Thursday, Feb 11, 2016

9:00 a.m. – 5:00 p.m. Esri Hands-On Learning Lab

9:00 a.m. – 5:00 p.m. Geolounge

7:30 a.m. - Breakfast with Board

7:30 a.m. - Professionals in GIS SIG

8:30 a.m. - Opening Remarks/Welcome

9:00 a.m. – Scholarships & Awards

9:15 a.m. - Speaker

10:00 a.m. - Break with Exhibitors (Exhibit Hall Opens)

10:30 a.m. - Educational Sessions

12:00 p.m. - Lunch, 50/50 Raffle

12:45 p.m. - Speakers

1:45 p.m. - Break with Exhibitors

2:00 p.m. - Afternoon Educational Sessions

3:45 p.m. - Special Interest Group Meetings (SIG)

5:00 p.m. - Exhibitors Reception

Friday, Feb 12, 2016

9:00 a.m. – 5:00 p.m. Esri Hands-On Learning Lab

9:00 a.m. – 5:00 p.m. Geolounge

6:45 a.m. - President’s Breakfast

8:00 a.m. - Coffee and Breakfast Bar with Exhibitors

8:30 a.m. - Speaker

9:30 a.m. - Morning Educational Sessions

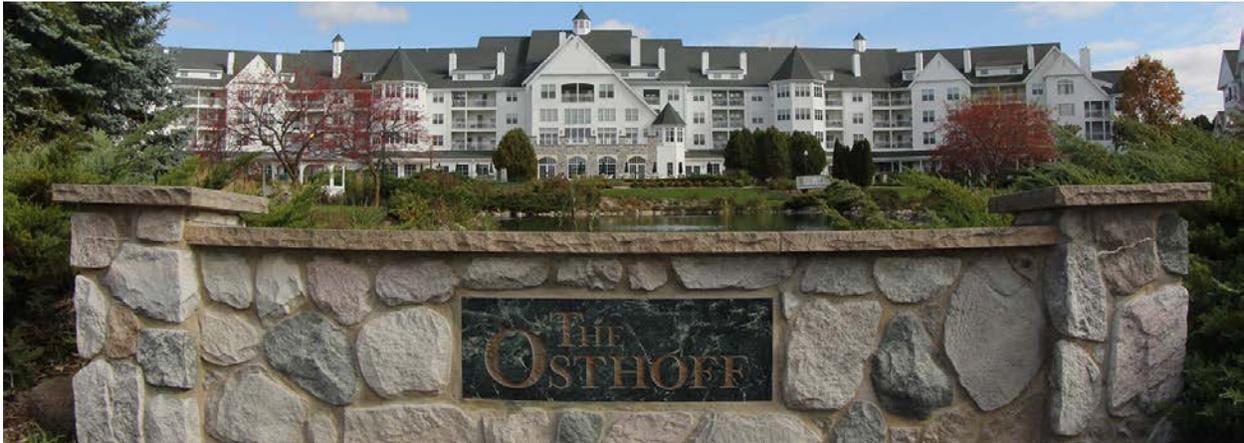
11:00 a.m. - Silent Auction Ends, Last Chance for 50/50 Raffle

12:00 p.m. - Lunch, Town Hall, Awards, Prizes

2:00 p.m. – Incoming WLIA Board Meeting

Hotel Information

February 10-12, 2016 at the Osthoff Resort in Elkhart Lake, WI



Consider the cost sharing benefit of 2 bedroom suites at the Osthoff Resort

- The hotel can provide you with individual invoices and receipts
- You share only the entrance and common area
- You would have your own bedroom and bathroom

Rates vary per suite as follows:

- Two Bedroom Courtyard/Lakeview Suites: \$144
- Two Bedroom Lakeside Premier/Superior Suites: \$164

See detailed floor plans and layouts of these beautiful suites at: www.osthoff.com/guest-suites

Also available are Regular Guest Rooms, One Bedroom suites and Two Bedroom Woodland Suites of \$82 for single or \$102 for double.

Any questions, call The Osthoff Resort at **800-876-3399**

Make your reservation by Jan. 20, 2016 for best availability.

Esri Workshop

Tuesday - Wednesday, Feb. 9-10, 2016

Annual Conference February 10-12, 2016 at the Osthoff Resort in Elkhart Lake, WI

Introduction to ArcGIS® Pro for GIS Professionals – [VIEW WORKSHOP FLYER](#)

Learn essential ArcGIS Pro terminology and get prepared to efficiently complete many different tasks related to mapping, editing, geoprocessing, and analysis. ArcGIS Pro, the newest application included with ArcGIS 10.3 for Desktop, is designed to help GIS professionals complete their projects and share their results more quickly and easily than ever before. With its modern ribbon interface and tight integration of 2D and 3D capabilities, ArcGIS Pro will streamline the way you do your GIS work.

Esri will provide the following software and computers to use during class:

ArcGIS 10.3 for Desktop (Advanced)

ArcGIS Pro 1.0 (Advanced)

ArcGIS 10.3 Spatial Analyst

ArcGIS Online

When and where is the Esri training taking place?

The workshop (2 days – 16 hours) will be held on February 9 & 10, 2016 at the Osthoff Resort in Elkhart Lake, WI from 8:30 a.m. to 5:30 p.m. (1 hour lunch break each day).

What will be covered in this class?

[View class outline.](#)

How much does the Esri training cost?

The two day Esri instructor-led workshop will cost:

Members

\$900

\$850 (\$50 savings) with Early Bird Registration (Members ONLY before December 4th)

Non-Members

\$1,000

Will lunch be provided?

Yes, lunch will be provided both days.

Where can I register?

Please [Register HERE](#) online for the Esri Workshop!

WLIA Workshops – [Register HERE](#)

Wednesday, Feb. 10, 2016

Annual Conference February 10-12, 2016 at the Osthoff Resort in Elkhart Lake, WI

Workshop 1 - Introduction to Python Scripting for ArcGIS 10

Time: 9:30 a.m. - 4:30 p.m.

Length: 6 Hours

Presenters: Alison Mynsberge, DATCP & Aaron Ruesch, DNR, Dave Evans, LTSB

Participant Need: Laptop and ArcGIS license available and checked out. Participants should be comfortable working in ArcGIS, but previous Python experience is not required.

Python is an open-source scripting language that has been integrated into ArcGIS for extending and automating GIS processes. This course will provide a hands-on introduction to Python and its applications in ArcGIS. Topics will include basic Python syntax and debugging strategies, batch processing and geoprocessing workflows, map automation, tabular data processing, and linking scripts to geoprocessing tools. A brief lecture on each subject will be followed with applied exercises to reinforce concepts.

Workshop 2 & 2A - Incorporating Historical Map Images into GIS and Web Maps

Time: 9:30 a.m. - 12:30 p.m. repeated 1:30 p.m. - 4:30 p.m.

Length: 3 Hours

Presenter: Eliza Bettinger, American Geographical Society Library, UW-Milwaukee

Participant Need: Laptop, mobile device with data plan or wireless capabilities

Historical maps can lend insight into contemporary issues related to real estate, environmental pollution, land use, genealogy, and plain old curiosity about one's surroundings. And as scanning technology and digital storage space become less expensive, an ever-increasing variety of high-resolution digital maps are available free or low-cost for use in GIS or Web maps. In this workshop, we'll explore some of the emerging tools that make it easier to incorporate historical map images into your GIS or Web map projects. Learn simple methods for georectification, how to prepare the image as a web service, adding user-controlled transparency, and other tips for seamless integration. We'll also look at how to find and access old maps of interest to Wisconsin users, including from the AGS Library at UW-Milwaukee and the Wisconsin Historical Society, as well as from other national and international repositories.

Workshop 3 & 3A - Mobile GIS Techniques

Time: 9:30 a.m. - 12:30 p.m. repeated 1:30 p.m. - 4:30 p.m.

Length: 3 Hours

Presenter: Christine Koeller, UW-Stevens Point GIS Center

Participant Need: Workshop attendees are highly encouraged to bring a mobile device (with data plan and or wireless capabilities) and a personal laptop.

This workshop will explore some of the many options for Mobile GIS and data collection with mobile devices for integration into your GIS. There will be an overview of both common proprietary and open-source options for mobile data collection. Proprietary methods include Esri's ArcPad application with Trimble Nomad GPS receivers (or other Windows mobile devices) and Esri's Collector application for Android and iOS devices. Open-source methods discussed will include QGIS for Android, ODK Collect,

PDF Maps, GPS Essentials, and OpenStreetMap. Integration into desktop GIS will also be shown for some of the methods.

Workshop 4 - Implementing ArcGIS Online for Asset Management for Municipal Functions

Time: 9:30 a.m. - 12:30 p.m.

Length: 3 Hours

Presenter: Jon Schwichtenberg, GRAEF

Participant Need: Laptop, mobile device with data plan or wireless capabilities

This workshop will go through how to implement ArcGIS Online for an asset management tool for municipal functions. This includes, assessing, utilities, zoning, inspection and more. Topics included:

Data Collection

ArcGIS Online Setup and configuration

Using ArcGIS Online Tools to manage data

Incorporating local, regional and national data layers into your maps.

ArcGIS Online – Sharing Data with the Public and others

Mobile Applications using ArcGIS Online

Workshop 4A - Implementing ArcGIS Online for Asset Management for Municipal Functions

Time: 1:30 p.m. - 4:30 p.m.

Length: 3 Hours

Presenter: Jon Schwichtenberg, GRAEF & Mark Paulat, Department of Revenue

Participant Need: Laptop, mobile device with data plan or wireless capabilities

Assessor Education Credits Available - [Application for Continuing Assessor Education Program](#)

This workshop will go through how to implement ArcGIS Online for a management tool for assessors. This includes, gathering and mapping eRETR and PAD information. Utilizing system applications to configure an onsite property inspections and more. Topics included:

Data Collection

ArcGIS Online Setup and configuration

Using ArcGIS Online Tools to manage data

Incorporating local, regional and national data layers, eRETRs into your maps.

ArcGIS Online – Sharing Data with the Public and others

Mobile Applications using ArcGIS Online

Workshop 5 & 5A - Real-time Tile Caching in the Cloud

Time: 9:30 a.m. - 12:30 p.m. repeated 1:30 p.m. - 4:30 p.m.

Length: 3 Hours

Presenter: Mark Korver, Amazon Web Services

Participant Need: Laptop with wifi

Simple architectures are core to scalable systems. Every day on our mobile devices we interact with mapping systems that rely on a simple concept popularized by Google Maps back in 2005, cached map tiles, or “slippy maps”. On Esri’s website there is an article titled “Tiles on a Cloud” dated 2009. Before that, in 2008, James Fee had a post called “ArcGIS Map Server Cache in Amazon S3” on his Spatially Adjusted site. The idea of using Simple Storage Service (S3), rather than a server, to store static map tiles is old news.

Workshop 6 & 6A - The ArcGIS App for Every Challenge

Time: 9:30 a.m. - 12:30 p.m. repeated 1:30 p.m. - 4:30 p.m.

Length: 3 Hours

Presenter: Kyle Wikstrom, Pro-West & Associates

Participant Need: Laptop, mobile device with data plan or wireless capabilities, ArcGIS Online Organizational Account with Publisher or Administrator privileges

During this session we will focus on solving real world problems in managing land records using ArcGIS apps and solutions that are available right out of the box. We will look at how to select the right app or solution, and its configuration and deployment. We will also demonstrate the very latest and most exciting apps for ArcGIS. Solutions demonstrated will be in the realm of property inspections and violations, planning and development, and damage assessment. You will see how to get up and running fast with apps that can be used any time, in any place, and on any device. Workshop attendees will leave with a working solution for their ArcGIS Online Organization.

Educational Sessions

Thursday, Feb. 11, 2016

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Track 1: Education & Awareness

Thursday, Feb. 11

a.m. **Wisconsin Geographic Names Council: How Wisconsin’s Geographic Features Get Their Names**

David Winston, WiDNR

The Wisconsin Geographic Names Council (WGNC) is a relatively unknown intra-agency council that plays an important role in establishing the authoritative official state name of features such as lakes, rivers, islands, and other geographic features in the state. Established originally as the Wisconsin Geographic Board and modeled after the U.S. Bureau on Geographic Names, the Council meets annually to review requests to name previously unnamed features or change the name or spelling of an established name of a geographic feature.

This presentation will provide an informative overview of the Wisconsin Geographic Names Council. It

will also discuss the procedure and naming guidelines of the Council and its role in the greater national naming process. After leaving this presentation you will know a little more about the history of geographic names, how to propose new geographic names to the Wisconsin Geographic Names Council, and use the national Geographic Names Information System (GNIS) to look up any geographic name in the country.

a.m. GeoMentoring: Breaking through the Chalkboard Ceiling!

Emily Champagne, Jay Feiker, MMSD & Pat Walker, City of West Allis

Esri is working to develop a nationwide network of GeoMentors to support the U.S. Department of Education's ConnectED Program, for which Esri has agreed to donate free GIS software to all K-12 schools in the U.S. The ConnectED GeoMentors Program is working to enhance GIS and geographic learning in U.S. K-12 schools through the introduction of ArcGIS Online into classrooms across the country. If each GeoMentor connects with one educator or School to share geographic concepts and GIS resources, we can make a profound impact on K-12 education. GeoMentors will help schools and teachers introduce GIS and associated geographic concepts into classrooms across the country. This session will share experiences presenters had GeoMentoring and discuss ideas to advocate and improve the program in more Wisconsin schools.

a.m. Educating the Next Geospatial Workforce: Opportunities, Challenges, and Strategies.

Christina Hupy, University of Wisconsin-Eau Claire

The Department of Geography and Anthropology has been awarded a University of Wisconsin System "Growth Agenda-Institutional Change Grant" for the Geospatial Education Initiative (GEI). The award is for \$418,829 for three years beginning in 2014. The purpose of this initiative is to cultivate and promote the skills needed for today's student entering the geospatial workforce. The GEI has three core goals: to enhance teaching and learning by developing informative relationships between UW-Eau Claire Faculty and businesses; to create a sustainable and relevant internship program with geospatially-related businesses; and to transform geospatial education through innovating existing curriculum, developing new course offerings, and the establishment of a comprehensive geospatial major. One mechanism for reaching these goals is an annual business summit. The annual business summit, hosted by UW-Eau Claire, is an event where business partners in the GEI provide direct input on curriculum. The annual business summit addresses several issues facing geospatial programs today. For example, remaining current in the field of geospatial technology is always a challenge; the summit facilitates direct relationships between faculty and partners spurring the sharing of knowledge. Faculty regularly face the decision of which suite of competencies to include in the curriculum from the Geospatial Competency Model (GTCM). Business Summits were held in the summer of 2014 and 2015. The first business summit held in July of 2014 focused on the GTCM while the second business summit in 2015 focused on innovating curriculum and industry trends. Results from the business summits will be presented.

Track 2: Land Records & Document Management

Thursday, Feb. 11

a.m. From Paper to PC

Laurel Hanson, Xcel Energy

The Siting and Land Rights Department at Xcel Energy is in the process of converting all land records into digital form with a corresponding GIS database. This complex project includes multiple operating companies with different file organization and project management methods. The ultimate goal of the project is to incorporate all land rights documents into one document management system – LandWorks. There are three stages in the process; digitization, abstraction and polygoning. We are currently in between the digitization and abstraction phases. Although we haven't reached our ultimate goal, our file organization, project management processes and GIS data management have been vastly improved. I would like to go into some detail on the process and share lessons learned.

a.m. Preserving History: Scanning and Archiving Historic Maps and Documents

Jennifer Borlick, Michelle Schultz and Jada Vandergeest, Rock County

Rock County Land Records has embarked on several projects to digitally archive historic maps and documents. Different offices have used different approaches such as contracting out for services and doing in house scanning. Jennifer Borlick (Planning, Economic and Community Development), Michelle Schultz (Real Property Lister) and Jada Vandergeest (Deputy Surveyor) will discuss the projects undertaken by the departments, the approaches they took, the benefits of having the documents digitized, lessons learned from their endeavors, and ideas for the future.

a.m. Online Access to Scanned Documents and Files

Andy Faust, NCWRPC

So, you have a hard drive full of scanned documents and files, and you want to give specific people or the public access to this information. This presentation will cover how we help many counties in our region do just that. By creating an online document storage area that is easy to maintain, can be searchable, and has a low cost to implement. I will cover a few examples on how and why each county utilized this system.

Track 3: Survey/PLSS

Thursday, Feb. 11

a.m. PLSS Corner Remonumentation - How Counties Can Get it Accomplished

Bryan Meyer, La Crosse County Surveyor

Public Land Survey System corner remonumentation is key to land ownership and parcel mapping. While many Wisconsin counties have a good share of their corners re-established, many do not. In this session you will learn about suggested processes and possible funding that can help to accomplish PLSS remonumentation.

a.m. Location Matters - Learn How WisDOT Efforts are improving the Quality of Your Data

Jacob Rockweiler, P.E., Wisconsin Height Modernization Program Manager WIDOT

This presentation will provide updates on the initial development and continuing maintenance efforts of the Wisconsin Height Modernization Program including the Wisconsin Geodetic Survey Control Network (Passive Network) and the WISCORS Network (Active Network). This presentation will also highlight various emerging technologies that are utilizing the Wisconsin Geodetic Survey Control Network and the WISCORS Network including LiDAR and Photogrammetric Mapping.

a.m. The role of PLSSFinder with the WLIP 2016 Strategic Initiative Grants

Brenda Hemstead, State Cartographer's Office

As part of the statewide parcel project, the State Cartographer's Office (SCO) will be receiving PLSS corner coordinates from counties who use strategic initiative funds for PLSS work. This data will be included within the SCO's online PLSSFinder application. So, what is PLSSFinder?

Track 4: Mobile & Web Apps

Thursday, Feb. 11

a.m. Leveraging ArcGIS Solutions for Land Records and Elections

Kyle Wikstrom, Pro-West & Associates

In this session we will discuss ArcGIS Online and ArcGIS Solutions for sharing information with the public and how to streamline these internal processes. We will look solutions that are available right out of the box, getting the data to drive them, and deployment. Special focus will be given to elections focused applications, and a demonstration will be included.

a.m. Story Maps: Harness the Power of MAPS to Tell Your STORY

Sam Giebner, North Point Geographic Solutions

You may have seen or heard talk about story maps lately, but aren't quite sure how to create or utilize their capabilities, or maybe you are familiar with them but just want learn a few tips and tricks. Whether you're new to story mapping, or just looking for ideas, come join us to see how you can harness the power of maps to tell your story! We will show you not only the basics, but provide instructions for how to take your maps to the next level and combine them with rich multimedia content - text, photos, graphics, video, and audio that will enhance the user experience. We will also briefly touch on creating custom thumbnails for your story maps and the best practices for displaying your maps through your ArcGIS Online account.

a.m. Wildfire Awareness and Education with GIS

Doug Miskowiak, University of Wisconsin-Stevens Point

May 5, 2015 marked the ten-year anniversary of the Wisconsin wildfire commonly known as the Cottonville Fire. The Cottonville Fire is the most thoroughly photo-documented and one of the most intensively studied fires in Wisconsin's history. GIS technology afforded the means to quickly collect and present documentation of the fire with maps, photographs, damage assessments, and other records. Cottonville was mapped in real-time by the Wisconsin Department of Natural Resources (WDNR) using

Esri's then popular ArcView 3.2 software. During the fire, maps produced by the Incident Management Team assisted in fire suppression, evacuation and structural protection. Desktop GIS mapping proved its utility during the run of the wildfire, but data collected could not be digitally shared in real-time, and post-fire data sharing proved cumbersome. With help from the University of Wisconsin-Stevens Point GIS Center and Esri's ArcGIS Flex API and later ArcGIS Online, today data about the fire are now easily shared and accessed to improve wildland fire awareness and education. Future wildland firefighting and recovery efforts stand to benefit from the incredible data collection and sharing efficiencies of ArcGIS Online and the ArcGIS Data Collector App.

Track 5: Routing, Roads & Addressing

Thursday, Feb. 11

a.m. Demographic Drive Time Analysis of Rural Hospitals in Wisconsin

Mitch Johnson, UW-Madison/State Cartographer's Office

The State Cartographer's Office partnered with the UW Office of Rural Health to generate drive time service areas for 64 rural hospitals across the state in order to better understand rural hospital demographic coverage. The project consisted of generating 20, 40, & 60 minute isochrones around each of these hospitals and then intersecting the polygons with population data. A combination NAVTEQ data for the road network and Esri's Network Analyst tool were selected to create isochrones for each hospital with the given time intervals. Our demographic results was created using an aerial interpolation approach that incorporated both land cover data and residential parcels from the V1 statewide parcel data set. The project resulted in 20, 40, & 60 minute isochrones with adjusted population counts for each of the service areas.

a.m. WISLR: The Road from Data Collection to Asset Management

Kathleen Spencer, WIDOT

The Wisconsin Information System for Local Roads (WISLR) is a repository for local road attributes, such as mileage and pavement type, that is used by state agencies, local law enforcement agencies, and local officials. WISLR program staff collaborate with other DOT offices and local officials to ensure that local road mileage data is accurate and that road attributes are current. The Wisconsin Department of Transportation (WisDOT) collects local road data annually and pavement rating biennially. Local officials record pavement ratings and reconstruction activities in order to conduct needs analysis on their road surfaces. WISLR also provides local officials an opportunity to record and track maintenance activities. WISLR tools and data provides Wisconsin communities with the opportunity to create a comprehensive asset management system using Wisconsin's local road data.

a.m. Addressing Application in Bayfield County

Carmen Novak, Bayfield County

In 2013, the Bayfield County Land Records Department partnered with North Point Geographic Solutions to begin developing an innovative addressing application that would streamline rural addressing in the county. After the completion of user testing and several updates, a successful and modern application for assigning county addresses is available for Bayfield County and the public. This presentation will focus on the significance of rural E-911 addressing, feature mapping tools and technology in the hands

of the user, working with other county departments to ensure a successful application, and future goals for the next stages of development.

Track 6: Municipal

Thursday, Feb. 11

a.m. Small Organization AGOL Implementation

Todd Halvorson, MSA Professional Services

The presentation will cover the implementation of an ArcGIS Online Implementation for a small community. It will cover the process, phases and successes and challenges of implanting AGOL and mobile applications for a small public works department in Wisconsin

a.m. ArcGIS for Municipal Governments

Esri

American cities today have more operational data available to them than at any other time in history. Getting this data into the hands of knowledgeable workers to perform their work is critical, just as important is ensuring these users have the appropriate level of access to the data. The ArcGIS platform provides role based access for all users. Our presentation will cover municipal workflows from back office staff to field crews to citizen engagement. We'll focus on our Water Utilities apps and how to access all ArcGIS Online solutions for municipal governments.

a.m. Electronic Records Tied to GIS

Jennifer Reek, City of Brookfield & Adam Dorn, City of Oshkosh

As with most municipalities, records of infrastructure, ordinances, fire preplans, highway reconstruction, water asset information, and recorded documents need to be kept and shared by several departments. Finding the most cost effective and efficient method of retaining and viewing these documents is a challenge. "Pie in the sky" is to have a document imaging software that is spatially connected to city maps for viewing and retrieval. These services are offered with sophisticated systems but normally is too expensive for most municipalities. This presentation offers alternatives that are fairly easy to implement with the goal of moving to a GIS integrated document management system. Departments involved are Engineering, Community Development, Fire, Water Utility, Highway, Assessor's Office and Clerk's Office.

Track 7: UAS/UAV p.m.

Thursday, Feb. 11

Performing Commercial UAS GIS Operations

Peter Menet, Menet Aero, Inc.

Peter Menet will discuss what is required to legally and effectively leverage SUAS in an organization. During this presentation Peter will discuss the following:

- Legislative history and current legal issues surrounding commercial SUAS operations.
- What is involved with establishing a legal, safe, and effective commercial SUAS program (personnel, equipment, training, insurance, etc.)

- Q&A - Peter is a wealth of knowledge when it comes to all things SUAS (regulations, technology, applications, etc.). He is happy to answer any questions anyone may have.

Comparing Drone Equipment Options

Travis LeMoine, Seiler Instrument

With over 200 (and climbing) manufacturers of UAS, and many manufacturers making multiple platforms, the options are endless. In this session, we'll review some of these options and look at the big picture to help a prospective mapping user identify what functionality is most important for the task at hand.

Ground Control Points (GCP) While Using Unmanned Aerial Systems (UAS)

Joe Hupy, University of Wisconsin-Eau Claire

Ground Control Points, or GCPs, theoretically are an excellent means to improve the spatial accuracy of Unmanned Aerial Systems (UAS) aerial imagery. If gathered properly and with the right device, they can improve data quality to sub-meter accuracy. Conversely, if GCPs are gathered in the wrong way, inaccurate GCPs can diminish the quality of data sets from the original flight controller GPS data. One of the biggest headaches for those savvy in geospatial data is to get data that is of poor quality, and have others expect survey quality results from it. The adage, "garbage in, garbage out" comes to mind when a data set is expected to become tied down to real world coordinates when the quality of the GPS data is inaccurate at best. This presentation comes from a teaching exercise where students used a wide variety of GPS devices, ranging from RTK survey grade to cell phone GPS signal, to determine how GCPs can enhance or diminish results in point cloud construction, using Pix4D software for point cloud construction.

Generating Quality Products from UAS Data

Paul Braun, Continental Mapping Consultants, Inc.

The market is flush with claims about the accuracies of data that can be derived from UAS. However, it is very difficult to know the true quality and accuracy of products derived from UAS data. Like with any geospatial data, having a solid understanding of accuracy is critical for the surveyor and GIS professional to effectively utilize this data within a GIS.

Numerous software products exist that use Structure from Motion algorithms to process imagery into mosaics, DSMs, & orthos. These products often provide reports that help you understand data accuracies but they often don't present the full picture. This presentation will build upon the previous presentations regarding the use of ground control and proper equipment to showcase the challenges that arise and approaches for ensuring and validating the quality of your derived products.

Track 8: Planning - Transportation, Parks & Recreation

Thursday, Feb. 11

p.m. From Park Analysis to Design

Trish Nau, East Central WI Regional Planning Commission

This presentation will take the attendee on a journey of how GIS is used as a tool in the park planning process. I will give an overview of steps involved, guiding principles, and the use of GIS in determining the best site for a park utilizing the Esri Spatial Analyst extension. Examples of park studies and park comp plans completed in our region will be highlighted.

The session will also touch on the National Standards used and the PRORAGIS online site to gather data and information from other agencies in the U.S. to create benchmarks for level of service analysis. Attendees should leave with a good understanding of park planning concepts.

p.m. Airport Property Management: Assuring a Proper "Landing" in the Community

Diann Danielsen, WisDOT Bureau of Aeronautics

How do I know what is airport property? Which areas of the airport are obligated to aeronautical use only? Which areas can be used for non-aeronautical purposes? Can the airport sell land? What type of survey is required for this airport project? Should the airport use zoning or purchase air rights? Airport owners have unique obligations to property. Airport development projects and ongoing airport property management must comply with these federal and state obligations. Many WLIA members are key partners in the management of their local airport – whether you realize it or not! This session provides background on airport property obligations, types of property interests held by airports, FAA requirements for "good title" and accurate mapping, local responsibilities to defend airport property interests, and best practices for managing airport property. Examples of local regulatory actions impacting airports will be discussed, including ownership representation, surveys, easement enforcement, airport leases, and road relocation. Help your local airport assure a proper "landing!"

p.m. GIS Applications for Bicycle and Pedestrian Planning and Public Engagement

Melissa Kraemer Badtke & Mike Zuege, East Central WI Regional Planning Commission

This presentation will address how GIS applications have been used for bicycle and pedestrian planning, safe routes to school (SRTS) planning and public engagement. Attendees will learn about how to conduct bicycle and walk audits and they are used by SRTS coalitions and local communities to develop recommendations. East Central staff is also working with local jurisdictions and the Wisconsin Department of Transportation on the College Avenue Corridor project. The purpose of the project is to decide what transportation modes (i.e. motor vehicle, transit, bicycle and pedestrian facilities) should be considered on this corridor in the future. For this project, East Central staff has developed an interactive website where community members can provide comments and feedback on the transportation challenges and opportunities that exist along the corridor.

Track 9: Parcels & Parcel Fabric

Thursday, Feb. 11

p.m. Parcel Fabric - Lessons Learned

Van O'Brien, Sidwell

The advances that Esri has made in parcel management have culminated in the development of the ArcGIS Parcel Editing Solution. This solution consists of a data model (Parcel Fabric), editing environment, tools (Parcel Editor) and workflows for editing parcels in the local government information model. There has been a lot of buzz over the past couple of years around this new environment, and naturally a lot of learning pains. Fortunately, we have taken on the tasks of understanding the ins and outs/dos and don'ts of this environment so you don't have to!! This presentation will focus on our experiences with migrating data into the Parcel Fabric, editing workflows within the ArcGIS Parcel Editing Solution environment, and tips and tricks we have picked up along the way to ensure that your experience within the ArcGIS Parcel Editing Solution will be smooth and efficient.

p.m. Transforming a County Land Information Program...Starting with the Parcel Fabric

Jason Poser, Buffalo County

This presentation will highlight Buffalo County's Land Information Program transformation starting with our Parcel Fabric project. We will illustrate the methods and timelines used in the process and share how the project benefited from successful engagement with the WLIA & DOA for guidance, along with our parcel project partner Frank Conkling.

p.m. Identifying and Fixing Problems with Your Parcel Data

Frank Conkling, Panda Consulting

Migrating your current parcel data into the ArcGIS Parcel Editing Solution (the Parcel Fabric) will often expose to you many of the problems inherent in your current data. Things such as generalized curves, extra vertices on lines, bad topology between layers and missing or incorrect line features are not obvious in the current data structures but are brought into the Parcel Fabric and are displayed. This presentation will review some of these problems and demonstrate how to best correct these problems using the tools and functions in the Parcel Editing toolbar. There will also be a short discussion on how to identify these hidden problems and fix them prior to migration to the Parcel Fabric.

Track 10: Programs

Thursday, Feb. 11

p.m. NOAA's Coastal Change Analysis Program in Wisconsin

Brandon Krumwiede, The Baldwin Group at NOAA Office for Coastal Management

Land use and land cover play a significant role as drivers of environmental change, and information on what is changing and where greatly improves our understanding of past management practices—and how to respond effectively to these environmental and human-induced changes. Through its Coastal Change Analysis Program (C-CAP), the National Oceanic and Atmospheric Administration's Office for Coastal Management produces nationally standardized land cover and change information for the coastal regions of the U.S. These products provide inventories of coastal areas, wetlands, and adjacent

uplands (using documented, repeatable procedures) with the goal of monitoring these habitats every five years.

This presentation will summarize some of the major changes and trends observed in Wisconsin and in the Great Lakes between 1975 and 2010, as well as recent and upcoming improvements to C-CAP data. We will discuss the various ways that users can access existing data, including a demonstration of the Land Cover Atlas (an online viewer that provides user-friendly access to the change information that can be derived from C-CAP data).

p.m. USGS Geospatial Data Highlights

Ron Wencil, USGS

The USGS National Geospatial Program continues to improve and deliver topographic information through a variety of products and services. The National Map (nationalmap.gov) supports data viewing and download, digital and print versions of topographic maps, and geospatial data services. Several new services and web pages are currently available.

The presentation will include information about recently revised US Topo maps and products in Wisconsin. Additionally, new viewers and services are available to access older historical topographic map versions in multiple data formats. The recent 3D Elevation Program (3DEP) Broad Agency Announcement will be discussed with updates for LiDAR projects in Wisconsin. The presentation will also highlight results from a recent Hydrography Requirements and Benefits Study conducted by USGS. References and resources will be provided on these topics along with additional information on other USGS program highlights.

p.m. What's in a Parcel Layer? - Use Cases of the Wisconsin Statewide Parcel Map

Codie See & David Vogel, State Cartographer's Office

On July 31 2015, Wisconsin Parcel Initiative's Version 1 Parcel Layer was released as the Wisconsin's first publicly available statewide parcel map. What have been the benefits of developing this statewide layer? How has the layer been used and what are its business drivers? What future potential does the layer have? This talk will attempt to answer some of these questions and will reference assessments and case studies within Wisconsin, in other states, and at the national level. Using these examples we will illustrate some of the known and potential uses of statewide parcel data, some unique parcel-based views of the state, and highlight some of the ways that statewide parcel data can be used to improve governance and enhance economic development.

Track 11: Emergency Government & Response

Thursday, Feb. 11

p.m. Importance of Connections with NG911

Bob Frank, Richland County Sheriff's Department

Bob has been employed by the Richland County Sheriff's Department for over 28 years and has worked as a Jailer/Dispatcher/Road Patrol Deputy. He is currently a Lieutenant with the Department. In 1995, he was assigned to setup the first 911 system for the county. This involved readdressing the entire county, including many villages. Thankfully Land Records/Zoning had already started discussing the process and the joint effort between Land Records/Zoning and the Sheriff's Department began.

He has worked thru the migration of 911 from its basic features to Enhanced E911 and then to wireless W911.

As a member of National Emergency Numbering Association (NENA) and the current president of the Wisconsin chapter, my focus is to improve training for telecommunicator/dispatchers and to work toward Next Generation 911 (NG 911).

NENA and APCO (Association of Public Safety Communications) have joined forces in Wisconsin creating WIPSCOM (Wisconsin Public Safety Communications). WIPSCOM builds relationships between the technical part of making 911 work and the telecommunicator part of answering 911 calls.

There are many areas in the 911 world that require attention in Wisconsin and the Nation. Some of them include accuracy location, telecommunicator training, upgrades and maintenance, and of course, funding.

p.m. Setting Out on a New Adventure - Building a Geospatial Program in Support of NG 911

Dan Ross, Minnesota Geospatial Information Office

Building a new program to support Next Generation (NG 911) is both exiting and daunting. This presentation will take you on a journey through the many facets and activities the Minnesota Geospatial Information Office is engaging in to build out a program to support NG 9-1-1. We will share our approach and highlight the challenges, opportunities and successes we have encountered along the way for this multi-year effort.

p.m. Avian Influenza GIS Response in WI

Larry Cutforth & Alison Mynsberge WI Dept. of Ag, Trade and Consumer Protection

An outbreak of avian influenza in the spring of 2015 resulted in the loss of nearly 2 million poultry birds in Wisconsin. This presentation will focus on the Wisconsin Department of Agriculture, Trade, and Consumer Protection's (DATCP) GIS response to the outbreak and lessons learned for future incidents. DATCP used data from the Wisconsin livestock premises registration system, licensed programs, and other secondary sources to identify poultry producers and businesses in avian influenza quarantine zones. In preparation for future avian influenza outbreaks, DATCP has set up ArcGIS Collector to gather real-time data from field surveillance teams and refined data workflows with the USDA's Emergency Management Response System (EMRS). The DATCP GIS team will also be included in the Incident Management Team to help coordinate GIS services with other response activities. The technical and organizational lessons learned from the avian influenza outbreak may help other agencies prepare for their GIS response to disaster situations.

Track 12: Municipal

Thursday, Feb. 11

p.m. Use GIS to Streamline Your CMOM Program

Scott Kiley, MSA Professional Services

Attendees will learn how to use GIS technology to help manage CMOM compliance. Wisconsin Administrative Code NR 210.23 requires all owners of collection systems to develop and implement a Capacity, Management, Operation and Maintenance (CMOM) Program by August 1, 2016. The CMOM program creates proactive operations and maintenance activities and is used to prioritize rehabilitation and replacement projects.

This presentation will describe how municipalities can use mobile apps and cloud-based GIS systems to centralize and manage CMOM related information. Through ArcGIS Online, communities can leverage mobile data to track maintenance and repairs back to a central GIS store. Other GIS applications are then designed specifically to summarize sanitary system details and activities to support reporting needs and assist with improvement planning.

p.m. PipeTech GIS Automation

Gene Olig, City of Fond du Lac

The City of Fond du Lac is using various tools to completely automate the process of ingesting PipeTech inspection data into our enterprise geodatabase. These processes include: copying inspections from the inspection truck to the server over WI-FI, transcoding videos from MPEG2 to MPEG4 format, loading inspections into the PipeTech library, exporting and then reformatting the library for ingestion into SDE, updating linear referencing information, updating video hyperlinking, attaching report pdf files to the geodatabase, and (finally) copying the updated GIS data back to the inspection truck. These processes occur on a nightly basis and are completed using various tools including batch scripting, python, Microsoft Access (VBA), Handbrake, AutoHotKey, and Windows Task Scheduler. This presentation will discuss these processes in more detail and will open a discussion for implementing the routines.

p.m. Asset Management Software Panel Discussion

Jennifer Reek, City of Brookfield; Emily Champagne, MMSD; Tim Pearson, General Mitchell Airport; & Greg Schauer, City of Waukesha

One major challenge many organizations face is the maintenance and optimization of their infrastructure assets. This diverse panel will highlight how asset management software has help their organization manage their infrastructure assets. Plan on attending this discussion to learn how these organizations selected software, integrated it with other systems, and utilized it to manage their assets.

Track 13: Open Source & Open Data

Friday, Feb. 12

9:30 a.m. Arches: A New Open Source GeoInventory Platform

Adam Cox, Independent Contractor

This presentation will describe a new web-based inventory and mapping platform called Arches, and will highlight a recent installation of the software performed for the Cane River National Heritage Area in Natchitoches, LA. The development of Arches was jointly sponsored by the Getty Conservation Institute and World Monuments Fund to support cultural heritage inventories around the world. From the public-facing Django web framework to a robust PostGIS backend, Arches is a combination of many prominent open-source technologies. In many ways, it exceeds the abilities of a traditional GIS--being server-side software, all database interactions happen through a web browser and being open-source software, it is free and highly customizable. To view a live Arches installation, visit crhim.canerivernha.org.

10:00 a.m. Visualizing Fire Department Responses with CartoDB

Paul Wickman, RESPEC

Local government fire departments need to demonstrate their performance and efficiency. In this session we will show how CartoDB and Torque are being used to visualize fire department responses to emergency events throughout the city allowing city officials to better understand how they are performing. We will also briefly discuss why routing based on Open Street Maps is not yet sufficient enough to be used for this analysis.

Effective Response Force (ERF) is one method that fire departments use to measure their level of success. An ERF is a set of specific resources required to perform a particular task within a set amount of time. For example, the Effective Response Force for a residential building fire, which is less than 200 square meters in size, needs to be four fire engines, one ambulance and a fire chief. These resources may be coming from different fire stations; they may be coming directly from other emergency events. They may even come from neighboring cities.

Using CartoDB and Torque we can visualize several things; the expected travel routes each of these resources may have taken, compare these routes to expected “drive-times” based on GIS road network analysis, and also show the order in which each of these resources arrived at the destination.

10:30 a.m. AVL – Know Where Your Fleet Is

Bob Basques, SharedGeo

Using an open software stack, including MapServer, PostgreSQL/PostGIS database, and Bootstrap packages, join in this session as we describe a live web viewer for Automated Vehicle Locating (AVL), as well as custom geographic reporting tools. This talk will cover why we chose to build our own web viewer instead of using a commercial package, and reasons to use the existing Open Source web tools. We'll also show how the feed from the AVL data tracking vendor was translated into the Postgres database in order to build out a smooth end user experience. We'll also discuss the design standards used during development in order to make the system plug and play for fleet managers interested in a live AVL web viewer of their own. The system includes tools for importing geographic map layers as well as sub-fleet viewing and tracking controls.

Track 14: LiDAR & the Cloud

Friday, Feb. 12

9:30 a.m. LiDAR Standards and Specifications in Wisconsin

Zach Nienow, Ayres Associates

When preparing for upcoming LiDAR projects for municipal or county-wide projects, it is important to understand the implications of the various standards and specifications in use today. Recently there have been significant changes to the standards commonly referenced in Wisconsin LiDAR projects; we will use this opportunity to highlight the basic standards for the USGS 3DEP program, ASPRS, and FEMA and the primary differences between them.

10:00 a.m. It's Always Sunny (and Cloudy) in Waukesha...

William Cozzens, Waukesha County

A journey into Amazon Web Services stack as it relates to GIS, ArcGIS Online and IT data centers. Discussions of how to get started in AWS, examples of IT as code, understanding the AWS console, migration paths, lessons learned and soaring at 10,000+ feet.

10:30 a.m. LiDAR and Imagery Derivative Products for Municipal Applications

Adam Derringer, Ayres Associates

This discussion will focus on specialized mapping applications to support a wide range of municipal services, including engineering, planning, public works, and public safety. Whether preparing for a new aerial photography mission or looking to build on a recently completed project, it is important to take into account the additional base mapping data beyond topography and orthoimagery that can be extracted.

Track 15: Mapping

Friday, Feb. 12

9:30 a.m. The Lost State Line and How We Hope to Find It Again

Bryan Meyer - La Crosse County Surveyor

The boundaries of our State were described and established in 1848 when Wisconsin became a State. Since that legal description was written, the location of the boundary has become clouded creating difficulty and turmoil for entities that need to know exactly where that line is. In this session you will find out how the original boundary of Wisconsin came to be, how it got "lost" and how it can be re-established again.

10:00 a.m. Statewide Boundary Annexation Survey

Tony Van Der Wielen, LTSB

This presentation will focus on statute changes that will go/went into effect on January 1, 2016. These statute changes direct each county clerk or board of election commissioners, no later than January 15 and July 15 of each year, to transmit to the Legislative Technology Services Bureau (LTSB), in an electronic format approved by LTSB, a report confirming the boundaries of each municipality and each ward and supervisory district within the county as of the preceding January 1 or July 1. LTSB is then required to reconcile and compile the information received into a statewide data base consisting of municipal boundary information for the entire state. The bill also directs LTSB to participate, on behalf of this state, in geographic boundary information programs when offered by the U.S. Bureau of the Census.

10:30 a.m. Improving Access to Statewide Historic Geospatial Data: Results of the Wisconsin Historic Landscape Project Community Forums

Howard Veregin, State Cartographer's Office & David Mladenoff; Jodi Forrester; Matt Noone, UW-Madison Forest Landscape Ecology Lab

Between 1832 and 1866, the US Government Land Office surveyed the area that would become Wisconsin. Surveyors divided the landscape into a grid of townships and sections while documenting

information about vegetation, soils, wetlands, and cultural features. In the 1990s, the UW-Madison Forest Landscape Ecology Lab entered the historical survey data into a Wisconsin Historic Landscape database and linked the database to the public land survey system. In 2015, the Forest Landscape Ecology Lab and State Cartographer's Office received an Ira and Ineva Reilly Baldwin Wisconsin Idea Endowment grant to investigate ways to make the database more accessible to interested citizens, community organizations, individual landowners, government agencies, land information professionals, educators, and others. In the summer and fall of 2015, we held a series of Community Forums throughout the state to gather information and perform a user needs assessment. Attend this session to learn what we discovered and to participate in the ongoing effort to make the Historic Landscape database more accessible and more useful.

Track 16: Mobile & Web Maps

Friday, Feb. 12

9:30 a.m. Designing Web Mapping Applications that Appeal to the General Public

Kris Johnson, North Point Geographic Solutions

The availability of geographic data and aerial imagery has increased in recent years, and has been logically paralleled by an increase with the general public's exposure to, and use of web-based maps. This sort of technological milieu is favorable for introducing map-based tasks into applications that can be made readily available to the general public, while simultaneously improving an organization's efficiency and workflows.

By upgrading existing paper-based application workflows to digital, web-based ones, a number of benefits may be realized, however this digital transition can bring with it a new set of challenges for the non-technical end-user. This presentation will utilize a case study for transitioning a paper zoning permit application to a web application. We will focus on some of the favorable outcomes, as well as highlight a few of the remaining challenges that can occur when trying to meet both business and end-user needs.

10:00 a.m. "Simple" Means to Engage Stakeholders to Help Improve Broadband Access in Wisconsin

Colter Sikora & Jaron McCallum, Public Service Commission of Wisconsin

Reliable statewide broadband access is essential for economic development and a necessity in the education, medical, and public safety sectors. The State Broadband Office (SBO) at the Public Service Commission (PSC) of Wisconsin, is responsible for mapping where broadband services exist and where it is lacking. The SBO works with stakeholders throughout the state to facilitate regional broadband deployment in areas that are either unserved or underserved. The PSC's talk will describe their mapping applications for collecting broadband access surveys and for displaying statewide broadband coverage data.

10:30 a.m. Utilizing Your ArcGIS Online Subscription to the Fullest

Jesse Adams, North Point Geographic Solutions

This presentation will cover not only the basics, but also a few of the new and exciting features that AGO has to offer. We will show you how to make your subscription work for you, along with tips for how AGO can benefit your workflows and become an integral part of your organization. Attendees will gain basic knowledge of AGO as well as information about customizing an AGO homepage, open data distribution

options, enterprise integration, geotriggers, AppStudio and out-of-the-box apps. Come join us to learn how to get the most out of your AGO Organizational account!

Track 17: Wetlands, Land Use & Land Cover

Friday, Feb. 12

9:30 a.m. Mapping Potentially Restorable Wetlands in Partially Hydric Soils & GIS Automation of NWI+ Classification for Existing and Potentially Restorable Wetlands

Christopher Smith & Matthew Axler, Wisconsin DNR

Finding potentially restorable wetlands (PRWs) has favored those areas that reside in soil map units labeled "hydric soils" in the NRCS Soils layer. Yet there are thousands of acres that could also be utilized for wetland restoration in partially hydric soils, short of taking the whole map unit from the NRCS soils data, these wetter areas inside of the larger unit have been largely undefined. This GIS process has now been applied across all of the counties of the state and is in final field verification of the data. This talk focuses on the process, caveats and output of the data.

Two methods currently exist for deriving Ralph Tiner's landscape level "National Wetlands Inventory Plus" (NWI+) attributes for Wisconsin wetlands. The first involves directly classifying wetland attributes using remotely-sensed imagery. This requires considerable staff-time and individual expertise. The second involves performing a crosswalk between the Wisconsin Wetlands Inventory (WWI) and the National Wetlands Inventory (NWI), which can then be supplemented with NWI+ attributes. While it is possible to automate this process, it is prone to inaccuracy since it relies on multiple conversions between different classification systems.

The automated approach being developed by the WI Department of Natural Resources (DNR) in conjunction with the Nature Conservancy (TNC) aims to bypass conversions and manual classification via a set of landscape models that uses existing datasets, including the Wisconsin 24K hydro database, the compound topographic index, the NRCS SSURGO soils layer, and best available elevation data to apply NWI plus attributes to both the WWI and the statewide Potentially Restorable Wetlands layer (PRW).

10:00 a.m. Wisland 2: Progress Towards an Updated Land Cover Map

Josephine Horton & Carly Mertes, UW-Madison/State Cartographer's Office

Over the last 20 years, the landscape of Wisconsin has changed; natural succession, along with changes in land use and land management practices have pushed urban footprints outward, reclaimed grasslands, and spurred transitions in forest species composition. These changes can have implications for land use planning, wildlife management, forestry practices, and among many other activities. The Wisland 2 team members from the Wisconsin Department of Natural Resources and the State Cartographer's Office have been working for almost two years to create an updated land cover map of the state. With the project scheduled for completion in June 2016, we will discuss the progress made to date and provide an overview of what to expect in the final product.

10:30 a.m. A Vision for Finding Land Use in Wisconsin

Nancy Wiegand, UW-Madison

This talk presents a vision to find types of land use across the state. Because land use codes are often found in parcel databases and the state is constructing a comprehensive parcel database, in the future,

statewide queries could be made over land use codes. The problem, however, is that land use codes are created locally. As a result, they vary between jurisdictions and may not match. For example, a shopping center in one jurisdictional code set could be called multi-retail, mall, or strip mall in other code sets. Some codes will map directly to each other, either exactly or as synonyms, but other codes could be sub or super classes of each other. We took seven different land use coding systems in Wisconsin and merged them into one large hierarchy. A search of this hierarchy enables someone to request a certain land use and get related land use terms. Computer code could eventually be written to then return the actual parcels that have related land uses, perhaps in a map display.

Track 18: Municipal

Friday, Feb. 12

9:30 a.m. The Road to Accreditation

Chad Churchill & Steve Beer, City of Fond du Lac

When Fond du Lac Fire / Rescue set out on their journey to become an internationally accredited agency they knew they had a large task ahead of them. To fulfill the requirements of the application process and obtain the opportunity to go before the Commission on Fire Accreditation International the agency needed to compile a self-study accreditation manual, community risk analysis, standards of cover manual, and strategic plan. The goal of these documents was to identify how well the agency performed against industry benchmarks, and self-assess to expose areas of weakness, as well as areas of excellence. As part of this process, a minimum three years of incident data needed to be analyzed and mapped. To assist with these tasks, Fire / Rescue called on the City's GIS staff. This presentation will summarize the accreditation process, and outline the role GIS can play in it.

10:00 a.m. More Than Pins on a Map, Using GIS for Public Safety

Felipe Avila, City of Fitchburg

As GIS tools become more common with cities and villages, departments beyond Planning and Public Works are using the technology for their needs. The City of Fitchburg, WI Police Department has started using GIS in various ways beyond just printing off an aerial photo. This talk will look at four areas where GIS technology has been used to support police operations; real time emergency support, crime analysis, pre-planning for events or anticipated problems, and trial materials for prosecution. Real examples of the four areas will also be presented to give attendees a chance to see GIS technology in action.

10:30 a.m. Improve Citizen Engagement and Streamline Processes: Ideas and Trends to Help Local Government Agencies Streamline Process and Better Engage with Citizens to Match Their Growing Expectations

Mitch Freitas, Accela

Open Data: Leveraging open data to provide valuable services to the community.

Moving from in line to online: Allow citizens to interact and streamline transactions online; i.e. apply for business license online, pay fees online, report a complaint via mobile device, etc.

Leveraging geospatial data to streamline processes and provide insight to constituents.

Mobile access: Allow citizens to connect and interact with the government via mobile devices.

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