

# 21st Annual Midwest Esri Utility User Group Conference



March 23-25, 2022

Double Tree by Hilton Rochester - Mayo Clinic Area  
150 South Broadway, Rochester, Minnesota 55904



- Hosted By -



## Agenda

Wednesday, March 23, 2022

Track 1	GIS Beginners Classes
Track 2	GIS Intermediate & Advanced Classes
	Sponsor Presentations

### Hotel Information

A block of rooms has been reserved at: Double Tree by Hilton Rochester - Mayo Clinic Area

Address: 150 South Broadway, Rochester, Minnesota 55904

Phone: (507) 281-8000

Rooms must be reserved by Wednesday March 2nd to receive the group rate of \$139. After 3/2/2022 any rooms reserved will be subject to availability, their Best Available Rate, and the Group Rate will not be honored.

Mention Midwest ESRI Utility Users Group (MWEUUG) when making your reservation or use the following link: [2022 Annual MWEUUG Conference](https://www.esri.com/conferences/2022-annual-mweuug-conference)

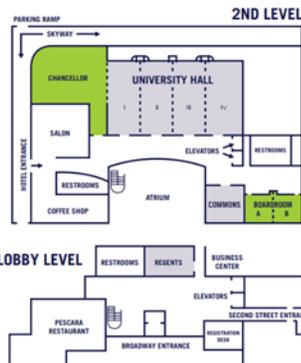
11:30 am - 4:30 pm	Exhibits Open	<b>Registration</b>
12:00 pm - 5:00 pm		Sponsor Presentations
12:00 pm - 12:35 pm		<b>Power System Engineering</b> – Tom Asp
12:35 pm - 1:10 pm		<b>Frontier Precision</b> – Steve Richter
1:10 pm - 1:45 pm		<b>Pro-West &amp; Associates</b> - Alex Lange
1:45 pm - 2:20 pm		<b>Honey Badger Analytics</b> – Bradford Folta
2:20 pm - 2:35 pm		<b>Afternoon Break</b>
2:35 pm - 3:10pm		<b>WSB</b> – Alex Johnson
3:10 pm - 3:45pm		<b>Eos Positioning Systems</b> - Stephen Nicholson
3:45 pm - 4:20 pm		<b>POWER Engineers</b> – Len Jewel
4:20 pm - 4:55 pm		<b>Fenux Labs</b> – Gregg Noland
5:00 pm - 8:00 pm		<b>Vendor Hall Evening Social</b>

### General Conference Information

We will be utilizing **CHANCELLOR and UNIVERSITY HALL** rooms I-IV for the MWEUUG Conference.

Please direct any questions to Todd Copeland at [tcopeland@mpsutility.com](mailto:tcopeland@mpsutility.com) or Jay Forstner at [jforstner@rupu.org](mailto:jforstner@rupu.org)

For additional information please visit the conference website at [www.mweuug.com](http://www.mweuug.com) or by joining the MWEUUG LinkedIn group at <https://www.linkedin.com/groups/4233259/>



### LOCATION



### DoubleTree by Hilton

150 South Broadway, Rochester, MN  
507.280.8888  
[rochesterdowntown.doubletree.com](http://rochesterdowntown.doubletree.com)



# Agenda

Thursday, March 24, 2022

8:00 am - 8:05 am	Exhibits Open at Breaks	Welcome - General Assembly	
8:05 am - 9:00 am		Plenary Session - Tell us what you are doing	
9:00 am - 10:00 am		Keynote Speaker - Jeff Grussing	
10:00 am - 10:15 am		Morning Break	
10:15 am - 12:00 pm		Esri - Utilities overview - Keith Krall	
12:00 pm - 1:00 pm		Lunch Break	
1:00 pm - 2:00 pm		How does a small utility use GIS? Ryan Wendt - MMU	Oriented Image Catalog Full Motion Video Esri - Roadmap Mike Siedschlag - GRE
2:00 pm - 3:00 pm		Getting Started with ArcGIS Pro Robert Borchert - GRE	Building Custom Python Add-Ins for ArcMap Andy Berg - Connexus Energy
3:00 pm - 3:15 pm		Afternoon Break	
3:15 pm - 5:30 pm		How to start a drone program Steven Wolf - RPU	Solutions Templates, Web APIs & Arcade Expressions Todd Copeland - MPS
	Survey123 - Water Service Line Verification Ryan Elvrum - MPS	Site Scan Esri - Roadmap Jeff Grussing - GRE	
	ArcGIS Field Maps Jay Forstner - RPU	Monitor your GIS System with ArcGIS Monitor Ryan Moore - RPU Todd Copeland - MPS	
6:00 pm - 10:00 pm	Group Dinner and Social		

Friday, March 25, 2022

8:00 am - 9:00 am	MWEUUG Business Meeting / Q & A Session
9:00 am - 9:15 am	Morning Break
9:15 am - 11:45 am	Digital Showcase Lightning Talks: Field Maps, Survey123, Operations Dashboards, Workforce  Cyber Security and Disaster Recovery Chad Schauf - Oakdale Electric  The Long Journey from AutoCAD to ArcPro is ..... done? Steve Hanson - Detroit Lakes Public Utilities
11:45 am	Adjourn



# Agenda Details

## Vendor Presentations – Wednesday March 23

Power System Engineering - Tom Asp

Frontier Precision -

Pro-West & Associates - Alex Lange

Discover What's Possible: Getting More from Your Esri Utility GIS

*Discover how to use your Esri technology to support utilities workflows, improve public service and work more efficiently than ever. We'll explore lightweight solutions that can be easily deployed to start delivering value quickly, tools to improve data editing processes, and how to take your utility GIS further by adding value with ArcGIS Hub deployments. Real-life examples will be shared throughout and will include lead service line solutions, one-stop data editing capabilities and more.*

Honey Badger Analytics - Bradford Folta Jr. MPSc.

Everything but the squeal: data collection, data fusion, visualization, all with user utilization.

*This day in age is perplexing when you think about it. We spend a lot of time and energy chasing a few things, and then repeat it again in a year or two. Now, this isn't a sales pitch as much as a wake up call. We have the technology and the tools available to us but we aren't using them. Scanners can bring us more data than ever before, Drones to get a view from above, ROV/ Side Scan to capture what lies beneath the murky waters, softwares (ESRI, AutoCAD, Microstation, Etc) that not only allow for precision measurements and refinement but integrations that allow all users to work on the same information making sharing/updating a one and done. We live in a time where we have more technology than we know what to do with. Yet we still fill out paper forms and give it to our assistants to put in the system. Honey Badger Analytics focuses on how to help it's clients understand what they need, what the potential time and cost savings will be, the cost to achieve it, and teaches them how to repeat it.*

WSB - Alex Johnson

Esri Utility Network - Introduction to the Utility Network and Latest Advancements

*Organizations have been using GIS to manage utility assets for years. Historically, GIS has been utilized as a system-of-record for mapping and asset management within organizations tasked with managing utilities. The release of ESRI's Utility Network provides a new fundamental approach to utility management: a smarter, faster, and more accurate way model your system. The Utility Network also offers new features and functionality. Users can now view and interact with data in ways that resembles reality including new data concepts such as assemblies, containers, and associations. New tools built for the Utility Network allow for more specific analysis: users can experience greater understanding of how their system works and improve decision making. These tools were built for the ArcGIS Pro environment, where users can expect quicker responsiveness and greater data processing capabilities. Be prepared for ArcGIS Utility Network, the future of utility management within GIS.*

*Biography: Alex Johnson is a GIS professional specializing in the ESRI's ArcGIS Platform, database management, and work and asset management solutions. He also has experience creating web mapping applications, administrating web and feature services, developing database schemas for local government and utilities, and converting numerous data formats into GIS. As Solution Architect, Alex's goal is to find the ways GIS can enhance the organization or end user's experience.*

Eos Positioning Systems - Stephen Nicholson

Survey-Grade GNSS Accuracy on any Mobile Device using ArcGIS Field Maps

*In the past seven years, GNSS receivers and data collection software have fundamentally transformed the way organizations collect 3D survey-grade GNSS data. Whereas previously organizations had to purchase expensive, proprietary data collectors and software to operate their high-accuracy GNSS receivers, today field technicians can collect survey-grade data, including elevations, on their iPhone when connected to an Eos Arrow GNSS receiver.*

*Furthermore, if an organization has only a single ArcGIS fieldworker license, it will likely have free access to powerful survey-grade field data collection software, including ArcGIS Field Maps, Survey123, and QuickCapture. If that weren't enough, many state DOTs -- including those in Minnesota, Wisconsin and Iowa -- operate an RTK network where access is free of charge. The user needs only an Internet connection on their mobile device to stream the free centimeter RTK corrections to their GNSS receiver. Never before in the history of GPS/GNSS has it been so inexpensive and simple to collect three-dimensional, survey-grade spatial data.*

POWER Engineers - Len Jewel

Esri Utility Network and SBS AUD Deployment for a Municipal Utility

*Kaukauna Utilities recently switched from the Esri geometric network to the new Utility Network. This presentation will look at how we did the migration. This includes deploying SDS AUD software for electric design and integrations with Milsoft and DataVoiceInt OMS.*

Fenix Labs - Gregg Noland



## General Session Presentations – Thursday March 24

### Plenary

Todd Copeland, Jay Forstner

*In this group discussion we will focus on you and how you are or plan to use GIS, discuss challenges you face and what you're Utilities future GIS plans are. How are you using GIS currently? What challenges are you encountering? What projects are you working on? What do you want to implement but need assistance with? What is your GIS plan or initiatives for next year, five years and ten years?*

### Keynote Speaker

History of GIS - 30 years in the making??

Jeff Grussing – Great River Energy

## Beginner Breakout Sessions

### How does a small utility use GIS?

Ryan Wendt - Marshall Municipal Utilities

### Getting Started with ArcGIS Pro

Robert Borchert - GRE

*ArcMap Desktop program for many is the bread and butter of their Geographical Information System interface. More and more GIS are migrating towards supplying GIS to the end user on line. Enter ArcGIS Pro, a software application designed for the GIS creator who wants to put content online. ArcGIS Pro is built for GIS online, but it is different enough from ArcMap that it may be difficult to get started without some sort of training. This session will start off with the expectation that you have never used ArcGIS Pro but would like to learn how to get started. We will see how well ArcGIS Pro interfaces with ArcGIS Online and Portal and how it may assist in developing your online presence.*

*Biography: I have a degree in Geography from Saint Cloud State University and I have been a GIS Professional since 1997. I have worked in E911 and Electric for Transmission & Distribution since 2001. A large part of my Electric work has been the conversion from other formats into ESRI GIS, maintaining those databases and providing deliverables. The last 4-5 years my focus has shifted entirely to providing GIS Online Solutions for Great River Energy.*

### Survey123 Water Service Material Verification

Ryan Elvrum - Moorhead Public Service

*At Moorhead Public Service we are utilizing ArcGIS Survey123 to create a simple and easy survey that allows our customers to submit information about their water service line material. We are doing this to help verify and update missing information in our water service records. Our goal is to identify lead service lines in our water distribution system, a goal driven by the EPA's recent Lead and Copper Rule Revisions. I will cover the basics of creating a survey and managing the data, as well as provide an overview of our entire workflow which incorporates multiple personnel and GIS-based tools like ESRI Field Map, ArcGIS Dashboards, ArcGIS Online, and ArcGIS Experience Builder.*

*Biography: Ryan has been with Moorhead Public Service for 3 ½ years as the GIS Analyst*

### How to start a drone program

Steven Wolf - Rochester Public Utilities

*Have you ever considered using drones to conduct infrastructure inspections of your utility assets? What are the requirements for using drones and how do I build a business case for it? Should I hire out drone inspection work or start my own drone program? How can I use lidar to identify vegetation encroachments? These and other questions will be answered in this presentation on how RPU has leveraged drone technology to improve the infrastructure inspection process.*

*Biography: Steve has 8 years of GIS experience with state and local government agencies. Steve has worked for Rochester Public Utilities as a GIS Specialist for the last 4 years.*

### ArcGIS Field Maps

Jay Forstner - Rochester Public Utilities

*With the deprecation of ArcGIS Explorer and ArcGIS Collector at the end of 2021, Esri has transitioned to ArcGIS Field Maps. Launched in 2020, Field Maps combines the functionality of the two applications into one app for end users. This presentation will go over an introduction to Field Maps, briefly show the core functionality of the app and then dive into the offline capabilities and options that Field Maps provides.*



## Intermediate and Advanced Breakout Sessions

### Oriented Image Catalog & Full Motion Video

Esri - Roadmap  
Mike Siedschlag - Great River Energy

### Building Custom Python Add-ins for ArcMap

Andy Berg - Connexus Energy

*Learn how the GIS Group at Connexus Energy creates and builds custom python add-ins for different groups within their organization. This presentation will cover how add-ins are built, distributed and touch on how add-in creation in ArcGIS Pro is different. Most add-ins begin with a simple request to the GIS group that begins with something like this: "Can you create a button for me that...?" And the answer is: Yes, we can, with Python Add-ins! This presentation will detail how the GIS Group at Connexus Energy creates and builds custom python add-ins for different groups within the organization. With an add-in, a non-GIS user can enter a few simple parameters into a toolbar, press a button and all the work will happen through python scripts in the background. This presentation will cover: 1) The process of how add-ins are created using the Esri Add-in Wizard and distributed to an organization. 2) A few examples of the add-ins we've developed, how they work in the background and what problems they've solved and lastly, 3) As we move to ArcGIS Pro, how building an add-in is different in that environment.*

*Biography: Andy Berg has been with Connexus Energy for 5 years and currently serves as a GIS Analyst. He has over 10 years in the electric utility industry and held previous roles in Field Locating and Field Mapping.*

### Solutions Templates, Web APIs & Arcade Expressions

Todd Copeland - Moorhead Public Service

*What are Solutions Templates, Web APIs, and Arcade Expressions? I am not a Developer, why should I use Web APIs? Does Arcade Expressions have something to do with video gaming? What benefit do they bring to the utility? During this session we will learn how these tools can help to enhance your utilities GIS and bring value to your organization. We will briefly explore Esri's Solutions Templates, Web APIs, and Arcade Expressions; then dive into how to deploy a Solution Template, create a Web Application using Web APIs, and dig into Arcade Expressions...it may not be a video game, but it can be fun!*

*Biography: Todd Copeland has worked the past 5 years for Moorhead Public Service as the GIS Coordinator. Todd began his utility career in 2006 and enhancing utility operations utilizing GIS since 2010.*

### Site Scan

Esri - Roadmap  
Jeff Grussing - Great River Energy

### Monitor your GIS System Health with ArcGIS Monitor

Ryan Moore - Rochester Public Utilities  
Todd Copeland - Moorhead Public Service

*Identifying performance issues within your GIS platform can be difficult to troubleshoot. Is it due to server hardware constraints such as CPU, RAM, Disk Space? Is your enterprise geodatabase state tree or version count high? What data can you use to prove or disprove "slow performance" reported by your users? Are your Portal and Server certificates about to expire? ArcGIS Monitor can be another tool in your toolbox to help answer these and other questions.*

*Biography: Ryan has 24 years of GIS experience with state and local government agencies. Ryan has worked the past 15 years in the utility industry with Rochester Public Utilities. He currently serves as the GIS Manager at RPU.*

*Biography: Todd Copeland has worked the past 5 years for Moorhead Public Service as the GIS Coordinator. Todd began his utility career in 2006 and enhancing utility operations utilizing GIS since 2010.*



# Agenda Details

## General Session Presentations – Friday March 25

### Business Meeting

MWEUUG Committee

*We look to the users to provide direction for next year's conference. What should we change or better improve upon? What are your likes and dislikes about the conference. What topics do you want to hear presented on? We will also show you the ArcGIS Ideas page and how we can be an influence on the direction of Esri's development team. Announce next year's venue and host utility.*

### Utility Presentations

#### Digital Showcase Follow-up Discussion:

Collector for ArcGIS, Explorer, Survey 123, Operations Dashboard...Lightning Talks

*Quick ten-minute presentations showcasing your digital masterpiece. Bring your favorite device and showcase how you are using Collector, Explorer, Survey 123, or Operations Dashboard. No device. No problem. We will have laptops for you to display your application. If you are interested please contact MWEUUG Committee Members.*

#### Cyber Security and Disaster Recovery

Chad Schauf - Oakdale Electric Cooperative

*Cybercriminals can penetrate 93 percent of company networks. This is among the findings of a new study of pentesting projects from [Positive Technologies](#), conducted among financial organizations, fuel and energy organizations, government bodies, industrial businesses, IT companies and other sectors.*

*If you don't have a comprehensive Cyber Security and Disaster Recovery plan now is not the time to delay getting it done. An attack of your company's system and data is much more likely than it ever was making it more important than ever to have a plan in place. Fault tolerant systems and a good backup strategy, while still very important are just not enough in today's world. Cyber security and the ability to prevent, detect and respond to those events is now just as important. This session will give you some basic insight on the types of things that will enable your company to survive any type of disaster, including a successful cyber-attack or data breach and get you back up and operational sooner rather than later.*

#### The Long Journey from AutoCAD to ArcPro is ..... done?

Steve Hanson - Detroit Lakes Public Utilities

*Over the past several years, the City of Detroit Lakes has been planning to convert to ESRI for our GIS System. Steve will be going over the steps it took to convert his drawing, as well as the work he has been doing to make sure his AutoCAD drawing was ready for the conversion.*

## Conference Surveys

Use this link <https://arcg.is/1WfCfn> or the QR Code Below to access the conference surveys.

