ILLINOIS GIS ASSOCIATION

PROGRAM BOOK

October 20-22, 2024

Embassy Suites East Peoria Riverfront

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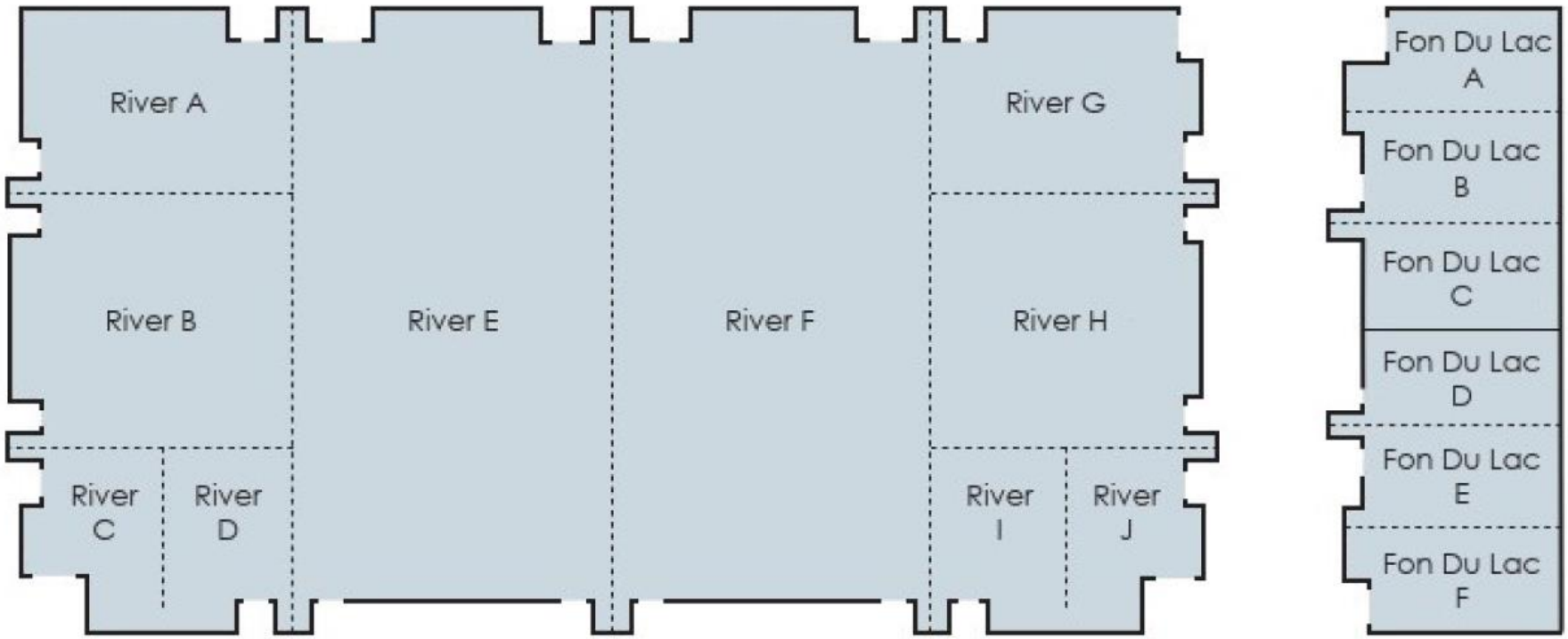
HOTEL LAYOUT

Floor Plan



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ILGISA 2024 Annual Conference Agenda

SUNDAY, OCTOBER 20	
3:00pm - 5:00pm	Exhibitor Move-In (Foyer)
5:00pm - 7:00pm	Networking Event in Lobby Bar

MONDAY, OCTOBER 21					
6:30am - 8:30am	Breakfast Hours (Lobby of Embassy Suites - Made-to-Order Breakfast - Included in Registration)				
8:00am - 5:00pm	Registration Desk Open (Foyer)				
8:30am - 5:00pm	Exhibit Hall Open (Foyer)				
8:30am - 9:00am	Welcome & Networking (River EF)				
8:30am - 4:00pm	Esri Hands on Learning Lab (Fon Du Lac C)				
8:30am - 11:40am	Python Lab (Fon Du Lac D)				
SESSION ROOMS	**ROOM: RIVER IJ**	**ROOM: RIVER H**	**ROOM: RIVER G**	**ROOM: FON DU LAC AB**	**ROOM: FON DU LAC EF**
TRACKS	**PUBLIC WORKS**	**AI**	**WEBGIS / AI**	**MAPS**	**WATER**
9:00am - 9:30am	**Creating a Custom Work Order System using Power Automate, Survey123, and Field Maps** *Seth Stark*	**GeoAI Unleashed: How Geospatial is Set Free with Deep Learning** *Jake Tully*	**Developing a New CookViewer through Feedback, User Research, and Iterative Development** *Josh Kalov*	**Exploring Iceland's Trails: A Journey through Data and Maps** *Emma LeMaster*	**What lies beneath? A look at the Kankakee River using ArcGIS Bathymetry** *Scott Perkins* *Avantika Ramekar, PhD.*
9:40am - 10:10am	**Optimizing Public Works Operations with GIS** *Cassidy Killian, GISP* *Hunter Ray, GISP*		**Insights into Deep Learning for Building Footprint Creation** *Daniel Bartlett* *Todd Sobieck*	**Introduction to the Agricultural Conservation Planning Framework** *Samikshya Pantha*	**Deriving Hydrography from Lidar** *Tyler Kaebisch*
10:10am - 10:30am	Grand Opening in Exhibit Hall (Foyer)				
TRACKS	**PUBLIC WORKS**	**WEB**	**STRATEGY**	**LIDAR**	**FLOODING**
10:30am - 11:00am	**Restructuring a Stormwater Service Fee Using GIS** *Keith Darby*	**Using Experience Builder to Promote Community** *Mike Falkofske*	**Making GIS Your Organization's Platform for Innovation - Empowering Your Program with a Shared Strategy for GIS** *Bryce Gartrell*	**Mapping the Future with Eagleview: Real Use cases with 1" imagery** *Trent Pell, GISP*	**Creating and Communicating Structure-Specific Flood Risk Assessments (FRAs)** *Brad McVay*
11:10am - 11:40am	**RFID + GIS = Accurate, Auditable and Streamlined Asset Management** *Sumukh Ramesh*	**Optimizing your ArcGIS Server with Shared Instances** *Josh Carlson*		**Illinois LiDAR Data: Leveraging the Future** *Janet Camarca*	**Web Maps of the FEMA RiskMAP Project Phases** *Zoe Zaloudek*
11:40am - 1:00pm	Luncheon & Keynote Address – Gabriel Yarleque (River EF)				
1:00pm - 4:00pm	Arcade Lab (Fon Du Lac D)				
TRACKS	**PUBLIC WORKS**	**ESRI**	**IMAGERY & WEBGIS**	**WORKFLOWS**	**CAREERS**
1:10pm - 1:40pm	**Levering GIS for Asset Management** *Louise Hahn*	**Streamline Processes with Workflow Manager** *Nate Rock* *Anna Ross*	**Revolutionizing Asset Management with Street-Level 360˚ Imagery and LiDAR** *Tyler Behle*		**GIS Careers Panel for Students** *Dr. Rich Schultz, GISP* *Keith Darby* *Dan Bartlett* *Marni Law*
1:50pm - 2:20pm	**Lifting the Lid on an ArcGIS and GraniteNet Integration** *Matt Junker*		**The Best GIS Viewer You're Probably Not Using** *Micah Williamson*	**Let's Read a Legal Description!** *Joshua Carlson*	
2:20pm - 2:30pm	Break in Exhibit Hall (Foyer)				
TRACKS	**WORKSHOPS**				
2:30pm - 4:00pm	**High Accuracy data taking in Field Maps** *Joe Madej*	**How to Succeed in Obtaining Your FAA Part 107 Remote Drone Pilot Examination** *Dr. Rich Schultz, GISP*	**Utilizing Dynamic Dashboards for Effective Communication** *Andy Bohnhoff*	**Getting Started with OpenStreetMap** *Joshua Carlson*	
4:00pm - 5:00pm	Vendor Reception (Foyer)				
5:15pm - 7:30pm	Bowling Social Event (Uncle Buck's Fish Bowl) *Registration Required* *Meet in Lobby of Embassy Suites at 5:15PM to Depart for Event*				

Note: ILGISA reserves the right to change or modify the agenda.

TUESDAY, OCTOBER 22					
6:30am - 8:30am	Breakfast Hours (Lobby of Embassy Suites - Made-to-Order Breakfast - Included in Registration)				
8:00am - 4:00pm	Registration Desk Open (Foyer)				
8:30am - 9:00am	Welcome & Networking (River EF)				
8:30am – 2:30pm	Exhibit Hall Open (Foyer)				
8:30am - 4:00pm	Esri Hands on Learning Lab (Fon Du Lac C)				
8:30am - 11:40am	Python Lab (Fon Du Lac D)				
SESSION ROOMS	**ROOM: RIVER IJ**	**ROOM: RIVER H**	**ROOM: RIVER G**	**ROOM: FON DU LAC AB**	**ROOM: FON DU LAC EF**
TRACKS		**APPS**	**ANALYSIS / UTILITY**	**WORKFLOWS**	**LIGHTNING TALKS / IMAGERY**
9:00am - 9:30am		**Introduction to Arcade** *Chad Bergeson*	**GIS Analysis of Oversized/Overweight Permit travel to and from the Port of Baltimore** *Brian Young*	**Open Source Workflows in a Desktop Linux Environment** *Amer Islam*	**Lightning Talks** *Brad Brewer* *Matthew Jefferson*
9:40am - 10:10am		**Getting to Know ArcGIS Data Pipelines** *Baylor Wagehoft* *Micah Williamson, GISP*	**Path to the Utility Network** *Jon Sedey*	**Make Metadata Management Manageable** *Hunter Ray*	**Using Street Level Imagery for 3D Asset Collection** *Bill Wetzel*
10:10am - 10:30am	Break in Exhibit Hall (Foyer)				
TRACKS	**DATA COLLECTION**	**LIDAR**	**ESRI**	**OPEN SOURCE**	**CAREERS**
10:30am - 11:00am	**Precision Unveiled: A Guide to High-Accuracy GNSS Data Collection, Validation, and Expert Tips** *Joe Madej, GISP*	**ADA Compliance using Mobile LiDAR** *Dan Newcomb*	**Arcade Across the ArcGIS System** *Nate Rock* *Anna Ross*	**Building the City of Alton's Enterprise-Level City GIS with Open Source software** *Kelly McGee*	**A Day in the Life of a GIS Professional (Panel)** *Lucy Stanfield* *Chad Bergeson* *Dan Bartlett* *Joshua Carlson* Veronica Sarver
11:10am - 11:40am					
11:45am - 12:15pm	Awards Luncheon (River EF)				
12:15pm - 1:00pm	ILGISA Annual Business Meeting (River EF)				
1:00pm - 4:00pm	Arcade Lab (Fon Du Lac D)				
TRACKS	**PUBLIC SAFETY**	**SURVEY123**	**URBAN**	**APPS / PARCELS**	**ANALYSIS**
1:10pm - 1:40pm	**Geospatial Automation for Public Safety** *Nick Gray*	**Using ESRI's Survey123 with VertiGIS Workflow 5: A LSLI Story** *Kip Kritis* *Kyra Dietz*	**Urban Climate Dynamics: Analyzing the Impact of Green Cover and Air Pollution on Land Surface Temperature** *Sepideh Azizi*	**On Demand, Custom, Topographic Maps with topoBuilder** *David Nail*	**FuzionView - A new way to share underground utility data for 811 tickets** *Bob Basques*
1:50pm - 2:20pm	**Police Transparency- Expanding Credibility and Confidence Through Spatial Data** *Thomas Ricker*	**Utilizing Survey123 to Streamline Public Works Refuse Operations** *Andrew Shuman*	**Site Suitability Analysis: Siting for a New Chain of High End Daycares** *Brock Terry*	**State Parcels Panel** *Mark Yacucci* *Dan Mlacnik* *John Mellor* *Cassidy Weller*	
2:20pm - 2:30pm	Break in Exhibit Hall (Foyer)				
TRACKS	**WORKSHOPS**				
2:30pm - 4:00pm	**QGIS: An Introduction** *Josh Carlson*	**Experience Builder Handbook** *Wendy Leonard*	**Migrating from ArcMap to ArcGIS Pro** *Nate Rock* *Anna Ross*	**NG911 and 3D Indoor School Mapping - Latest Developments** *Cindy Barbera-Brelle* *Peter Schoenfield* *Mark Yacucci* *Chad Sperry* *Eric Creighton*	**Demonstrations, Applications, and Flight Operations with Uncrewed Aerial Systems (UASs or Drones)** *Dr. Rich Schultz, GISP* Zach Lawrence

Note: ILGISA reserves the right to change or modify the agenda.

KEYNOTE SPEAKER – GABRIEL YARLEQUÉ IPANAQUÉ

Gabriel Yarlequé Ipanaqué is a Geospatial Analyst & Cartographer at the Field Museum of Natural History's Keller Science Action Center in Chicago. He specializes in GIS and remote sensing for environmental conservation. He is the recipient of the 2024 TUMI USA Award, which honors Peruvian professionals living in the U.S. who embody a spirit of solidarity, dedication to work, professionalism, and service to the community. Gabriel is being recognized for his work developing an online GIS platform for the Regional Conservation System in Loreto, which supports monitoring and management of protected areas in the Peruvian Amazon.

With a Master of Science from Clark University, Gabriel leads mapping initiatives in the Andes-Amazon region, particularly in the Putumayo-Içá Corridor and Guyana. His work supports strategic decision-making and protected area management, advancing the Center's mission of promoting conservation and community engagement across global ecosystems. Working alongside social and biological scientists, he has produced the most comprehensive and accurate map of indigenous communities along the Putumayo-Içá River at the tri-border area of Peru, Colombia, and Brazil. This mapping initiative identifies key areas for intervention and aims to facilitate sustainable land and biodiversity corridor management with local communities and organizations. Through participatory mapping, Gabriel has collaborated with Wapichan communities in Guyana to create biocultural maps that authentically represent Amerindian Territories. This initiative is part of the broader Rapid Biological and Social Inventory in the Acarai-Courentyne Corridor in Guyana, set for November 2024, contributing to the goal of protecting 30% of Guyana's territory by 2030, in alignment with the national conservation strategy.

In previous roles at Chemonics International, the Wildlife Conservation Society, and the Amazon Conservation Association, he supported teams monitoring deforestation in the Amazon, and analyzed food security and conflict data in Africa and Central America. Gabriel remains dedicated to applying his skills to conservation efforts that benefit both local and global communities.

Abstract - From Paper Maps to Mobile Apps

This year, the Andes Amazon team at the Field Museum celebrates a significant milestone—25 years since the inception of the Rapid Inventory Program, an initiative designed to conduct biological and social inventories in some of the most remote regions of the Amazon Basin. In its early days, the teams relied solely on pen and paper to record critical data that informed regional conservation strategies and management of protected areas across the region. For the upcoming Rapid Inventory in the Acarai-Courentyne Corridor in Guyana (November 2024), Gabriel is pushing the boundaries of how their scientists conduct fieldwork by introducing mobile devices for data collection. While this transition from traditional methods to digital technology may seem simple, it represents a profound shift in how they collect and manage data. It offers both challenges and new opportunities, allowing us to map and learn from the past while taking a leap of faith into the future of conservation science within a natural history museum. This is the story of Gabriel's journey to change how scientists conduct their research.

MONDAY, OCTOBER 21ST, 2024
9:00 AM – 10:10 AM SESSIONS

Creating a Custom Work Order System using Power Automate, Survey123, and Field Maps

Time: 9:00AM - 9:30AM
Location: RIVER IJ
Intended Audience: GIS User, GIS Builder, GIS Developer, Management
Skill Level: Beginner, Intermediate, Advanced

In support of its neighborhood revitalization effort, the City of Decatur has purchased several hundred vacant lots in its urban core over the last several years. These lots need to be maintained (mowed) regularly and without adequate staff to perform this work, the City has contracted it out. This has cost Decatur around $700,000 per year for the last several years. This year, in an effort to better monitor this work and reduce the cost of maintaining City-owned land, the City turned to GIS for a solution to create, manage, and report on property maintenance. Using a combination of Survey123, Field Maps, and Microsoft PowerAutomate, Decatur has been able to monitor the maintenance of City-owned land, empowered our contractors to efficiently report on the work they have done, and pay them accurately and in a timely manner. Using this new work order system is projected to cut the cost of maintenance in half. This presentation will go over how to integrate ArcGIS and PowerAutomate, discuss the success of the program, and give a few ideas of how it could be improved moving forward.

Seth Stark, City of Decatur

GeoAI Unleashed: How Geospatial is Set Free with Deep Learning

Time: 9:00AM - 10:10AM
Location: RIVER H
Intended Audience: GIS User, GIS Builder, GIS Developer, Management
Skill Level: Beginner, Intermediate, Advanced

Join us and discover how merging Deep Machine Learning and geospatial processing is expanding the power of Location Intelligence within ArcGIS. Experience aerial imagery as it is transformed into actionable insights and reveals hidden patterns across the built environment. We will decode the magic behind how you can create holistic GeoAI solutions from AI-driven feature extraction. Explore how to unleash the power of GeoAI from change detection and surface permeability to pavement management and paint condition on pedestrian crosswalks.

Jake Tully, Nearmap

Developing a New CookViewer through Feedback, User Research, and iterative development

Time: 9:00AM - 9:30AM
Location: RIVER G
Intended Audience: GIS Builder, GIS Developer, Management
Skill Level: Beginner, Intermediate, Advanced

The Cook County GIS Division's most popular public facing web application, CookViewer, built on an old version of the ArcGIS JS 3.x API, needed to be rebuilt. Instead of jumping straight into building an ArcGIS JS 4.x version, the team started with research. This presentation will share our process from embedded feedback surveys and user interviews, through iterative public beta versions leading to the production release of the new CookViewer application.

Josh Kalov, Cook County GIS

Exploring Iceland's Trails: A Journey through Data and Maps

Time: 9:00AM - 9:30AM
Location: FON DU LAC AB
Intended Audience: GIS User, GIS Instructor, Student
Skill Level: Beginner, Intermediate

This presentation explores the outcomes of a 7-day internship in Iceland focused on data collection for a magazine publication centered on hiking trails. The primary objective was to utilize an application known as Gaia GPS to gather essential metrics such as trail length, elevation changes, and time required, alongside identifying notable tourist spots along each route. This dataset formed the basis for creating detailed maps using ArcGIS Pro, facilitating a comprehensive understanding of Iceland's diverse landscapes and recreational opportunities. Throughout the internship, challenges included navigating rugged terrains and adapting to Iceland's unpredictable weather. By integrating field data with advanced mapping software, spatial relationships, trail features, and insights crucial for tourists are highlighted.

Emma LeMaster, Western Illinois University

What lies beneath? a look at the Kankakee River using ArcGIS Bathymetry

Time: 9:00AM - 9:30AM
Location: FON DU LAC EF
Intended Audience: GIS User, GIS Builder, Student, Management, Other
Skill Level: Beginner, Intermediate

In this session you'll hear about the Kankakee County's project to collect dual frequency single beam sonar data of the Kankakee River to aid in the study of sedimentation along the river bottom and how Prairie Engineers is using ArcGIS Bathymetry for data processing and visualization of the data. Sonar data was collected in the spring of 2024 during high water levels and data processing was performed over the summer.Keywords:Bathymetry, Sedimentation, Sonar, Water Levels, GPS, contours, TIN

Scott Perkins, Prairie Engineers, P.C.
Avantika Ramekar, PhD., Prairie Engineers, P.C.
Contributor: Geoffrey Olson, Kankakee County

Optimizing Public Works Operations with GIS

Time: 9:40AM - 10:10AM
Location: RIVER IJ
Intended Audience: GIS User, GIS Builder, GIS Developer, Management
Skill Level: Beginner, Intermediate, Advanced

Geographic Information Systems (GIS) has emerged as a critical tool in enhancing the efficiency and effectiveness of public works operations. This presentation explores how GIS-based applications can optimize various public services, focusing on pavement marking maintenance, lift station inspections, and waste collection services.This presentation will demonstrate how GIS technology can eliminate paper workflows, utilize real-time data to monitor waste collection services, gather current weather information, estimate costs, and monitor detailed insights on the condition and performance of critical sanitary sewer infrastructure.Attendees will gain insights into the practical implementation of GIS in public works and its potential to drive innovation and sustainability in operations and infrastructure management.

Cassidy Killian, GISP, Town of Normal
Hunter Ray, GISP, Cloudpoint Geospatial

Insights into Deep Learning for Building Footprint Creation

Time: 9:40AM - 10:10AM
Location: RIVER G
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor, Student, Management
Skill Level: Intermediate, Advanced

The Cook County Bureau of Technology's GIS Division has begun investigating Deep Learning workflows in ArcGIS Pro in pursuit of creating a county-wide building footprint dataset. Our presentation will detail successes, challenges, and areas of further investigation. We hope to include how to use training/reference data (including LiDAR vs Imagery) and deep learning libraries, modeling and post-processing techniques, and resource allocation required for performing related tasks.

Daniel Bartlett, Cook County Bureau of Technology
Alice Ferruzzi, Cook County Bureau of Technology
Todd Sobieck, Cook County Bureau of Technology

Introduction to the Agricultural Conservation Planning Framework

Time: 9:40AM - 10:10AM
Location: FON DU LAC AB
Intended Audience: GIS User, Student, Management
Skill Level: Beginner, Intermediate, Advanced

The Illinois State Water Survey (ISWS) and Illinois State Geological Survey (ISGS) have partnered with the Natural Resources Conservation Service (NRCS) to hydro condition the terrain models for nutrient reduction priority watersheds in Illinois using the Agricultural Conservation Planning Framework (ACPF) toolbox. This USDA's Arc GIS-based planning toolbox integrates tools to process high-resolution LiDAR derived digital elevation models. This initiative aims to support local agricultural communities in addressing soil and water conservation challenges by identifying areas vulnerable to runoff and facilitating suitable conservative practices. The ISWS project particularly focuses on Toolbox 1 and Toolbox 2 for generating stream networks, catchments and reconditioned DEMs that are crucial for the next steps in the ACPF toolbox. Since the project launch last year, ISWS has successfully applied this tool in over five HUC 8 watersheds in Illinois.The presentation will introduce the

ACPF toolbox, highlight recent updates of our project using the tools, and share lessons learned from this initiative. The team plans to expand the toolbox's use to other priority areas, leveraging innovation and automation to meet agricultural conservation and management needs in Illinois. Our goal is to complete processing all HUC12's in the state of Illinois by 2030.
Samikshya Pantha, Illinois State Water Survey

Deriving Hydrography from Lidar
Time: 9:40AM - 10:10AM
Location: FON DU LAC EF
Intended Audience: GIS User, GIS Builder, GIS Instructor, Student, Management
Skill Level: Intermediate, Advanced

There are many benefits updated hydrography can provide that are essential to a wide range of critical applications including natural resources, infrastructure management, agriculture, planning and water resource management. Elevation derived hydrography from lidar increases the accuracy of water features flowing across the landscape. Integrating culvert inventories and lidar DEMs, stream networks can be updated to represent true concentrated flow of water. Elevation derived hydrography can be used to update inventories of the state 24k Hydrography or the USGS National Hydrography Dataset (NHD). This presentation will review lidar derived watershed hydrography examples and potential for future opportunities will be explored.
Tyler Kaebisch, Ayres Associates

MONDAY, OCTOBER 21ST, 2024
10:30 AM – 11:40 AM SESSIONS

Restructuring a Stormwater Service Fee Using GIS
Time: 10:30AM - 11:00AM
Location: RIVER IJ
Intended Audience: GIS User, GIS Builder, GIS Developer, Management
Skill Level: Intermediate, Advanced

The City of Wheaton has a stormwater service fee that used to be billed based on water consumption. After extensive review, the City decided to change its billing method to calculate the total amount of impervious surface areas that are on each property. This presentation will show the workflow on how the impervious surface areas are extracted and calculated from various planimetric layers using ArcGIS Pro and Modelbuilder embedded with Arcade expressions. Further, I will briefly demonstrate a public facing lookup fee webapp using Experience Builder on how property owners can review the total estimated impervious areas and monthly stormwater fee that will be billed to them.
Keith Darby, City of Wheaton

Using Experience Builder to Promote Community
Time: 10:30AM - 11:00AM
Location: RIVER H
Intended Audience: GIS User, GIS Builder, Student, Management
Skill Level: Beginner, Intermediate, Advanced

In this presentation, we will explore how the Village of Libertyville's "Welcome to the Neighborhood" and the Village of Mundelein's "Explore Your Community" initiatives showcase the potential of Experience Builder and other ArcGIS Online (AGOL) applications to enhance community engagement. This session offers a timely opportunity to demonstrate how local governments can leverage ArcGIS Online technology to promote community amenities and services. In addition to showcasing GIS data products, we will highlight how these tools create interactive, user-friendly environments that engage residents and visitors alike. Join us to discover practical applications and innovative approaches for utilizing GIS to foster a more connected and informed community.
Mike Falkofske, MGP, Inc.

Making GIS Your Organization's Platform for Innovation - Empowering Your Program with a Shared Strategy for GIS

Time: 10:30AM - 11:40AM
Location: RIVER G
Intended Audience: GIS User, GIS Developer, Management
Skill Level: Beginner, Intermediate, Advanced

During this interactive session, Bryce will share examples, anecdotes, and explanations of contemporary tools and approaches for developing a guiding geospatial strategy and action plan for your organization. We will discuss ways to cultivate executive sponsorship, stronger connections and feedback loops with your customers, and ways to optimize your GIS as an enabling resource for greater innovation, productivity, and goal achievement.

Bryce Gartrell, The Gartrell Group, Inc.

Mapping the Future with Eagleview: Real Use cases with 1" imagery

Time: 10:30AM - 11:00AM
Location: FON DU LAC AB
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor, Student, Management, Other
Skill Level: Beginner, Intermediate, Advanced

Many jurisdictions are challenged with increasing needs to provide timely answers to issues within their communities all while we are faced with increased safety concerns and often times staffing limiitations. In this presentation we will look at real use cases on how many counties and cities are establishing enterprise high resolution 1" ortho and oblique images to help make these decisions quicker and more effectively across multiple agencies including public works, assessment, 911, Emergency Management and more. Addtionally, we will dive into different deployment methods to simplify the outreach of your Enterprise GIS to these various stakeholders.

Trent Pell, GISP, Eagleview

Creating and Communicating Structure-Specific Flood Risk Assessments (FRAs)

Time: 10:30AM - 11:00AM
Location: FON DU LAC EF
Intended Audience: GIS User, Other
Skill Level: Beginner, Intermediate

Identifying structures at risk of flooding is essential for proper mitigation planning. This presentation will cover the process of conducting a structure-specific Flood Risk Assessment (FRA) including: an overview of FEMA's Hazus GIS software, creating a building inventory, and developing flood depth grids. It will also cover the Structures at Flood Risk (SAFR) web mapping application developed by the Illinois State Water Survey with support from the Illinois Department of Natural Resources/Office of Water Resources (IDNR/OWR) and U.S. Army Corps of Engineers (USACE). SAFR hosts data produced by FRAs and allows community stakeholders in FRA project areas to select a building and display the estimated flood losses, surveyed elevations, and flood depth data. New FRA projects are continuously being added to SAFR and now cover the Mississippi and Illinois Rivers, the City of Rockford, and areas in Northeastern Illinois.

Brad McVay, Illinois State Water Survey

RFID + GIS = Accurate, Auditable and Streamlined Asset Management.

Time: 11:10AM - 11:40AM
Location: RIVER IJ
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor, Student, Management
Skill Level: Beginner, Intermediate, Advanced

RFID technology is the fastest growing asset identification technology in the world, revolutionizing the asset management industry. Unlike other asset identifiers such as bar codes, QR codes, or even etched or painted serial numbers, RFID uses radio waves to transmit a unique digital identifier and related information. RFID is exploding in popularity in part because it is rugged, passive, scalable for many uses, and does not require line of sight - superior features for marking assets in an outdoor environment.Until recently, the power of RFID was inaccessible to GIS. GIS alone cannot deliver failsafe infrastructure asset management. As more and more organizations use Geographic Information Systems (GIS) to manage field operations, the disconnect between digital asset maps and the physical world becomes apparent. The cause is simple - digitally represented assets on maps, even when initially created with survey grade precision for the asset location, are difficult to identify in the physical world. This uncertainty of asset identification makes it difficult to create traceable, verifiable, auditable records.This presentation highlights how RFID can be integrated with GIS to deliver faster, more reliable, and auditable asset management benefits. The presenter will cover how fast and easy it is to add RFID power to your GIS .

Brian Baker, Berntsen International

Optimizing your ArcGIS Server with Shared Instances

Time: 11:10AM - 11:40AM
Location: RIVER H
Intended Audience: GIS Builder, GIS Developer, Management
Skill Level: Intermediate

Shared instances have been around for a while already, but many organizations still fail to utilize them to their full extent. A server that looks like it needs more cores might just need some optimization. Properly configured, shared instances can help you get the most out of your server deployment. This presentation will go over shared instances, how they work, and how to use them. Work smarter, not harder!

Josh Carlson, Kendall County GIS

Illinois LiDAR Data: Leveraging the Future

Time: 11:10AM - 11:40AM
Location: FON DU LAC AB
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor, Student, Management
Skill Level: Beginner, Intermediate

Advancements in airborne Light Detection and Ranging (LiDAR) data technology include higher point densities, which produces a finer feature resolution, and better accuracy, for detecting small details and allowing for more precise measurements. In addition, most Illinois LiDAR data collections include buy-up classification of above ground points for low, medium and high vegetation and building strike points. When the federal 10-county project data are delivered later this year, all Illinois LiDAR data collections will date from 2020 to 2024. These recent data collections have been instrumental in developing accurate flood mapping, planning models for cities, forestry and land management, renewable energy, precision agriculture and change analysis. My presentation will review recent data acquisition projects and demonstrate how to view and download Illinois LiDAR data files and derivatives. I will also touch on the federal Data Collaboration Announcement (DCA) grant opportunity and how our agency can assist in the grant application process.

Janet Camarca, Illinois State Geological Survey

Web maps of the FEMA RiskMAP Project Phases

Time: 11:10AM - 11:40AM
Location: FON DU LAC EF
Intended Audience: GIS User, GIS Developer, Management, Other
Skill Level: Beginner, Intermediate, Advanced

There are multiple points during the FEMA RiskMAP project process where community review of floodplain mapping is essential. Web maps are created at these milestones to encourage feedback. Some web maps are informative, providing a simple way to view GIS data for those less technologically inclined. Others accept comments directly within the map in addition to displaying the data. This talk will provide an overview of the FEMA RiskMAP project process, the web maps created along the way, and their features. All the web maps are manually coded using HTML/CSS and the ArcGIS API for JavaScript, with GIS data hosted on a GIS server using ArcGIS Server.

Zoe Zaloudek, Illinois State Water Survey

MONDAY, OCTOBER 21ST, 2024
1:10 PM – 2:20 PM SESSIONS

Levering GIS for Asset Management

Time: 1:10PM - 1:40PM
Location: RIVER IJ
Intended Audience: GIS User, GIS Builder, Student, Management
Skill Level: Beginner, Intermediate, Advanced

How can GIS streamline tasks in the Public Works environment? This presentation explores the role of Geographic Information Systems (GIS) across the life cycle of utility assets. By integrating GIS with asset management practices, municipalities can build their digital inventory, track maintenance activities, and find new opportunities for data-driven decisions. Attendees will gain insight from demonstrations of how over 40 Chicagoland communities currently utilize GIS to manage their assets in their daily operations.

Louise Hahn, MGP, Inc.

Streamline Processes with Workflow Manager

Time: 1:10PM - 2:20PM
Location: RIVER H
Intended Audience: GIS Builder, GIS Developer, GIS Instructor, Management
Skill Level: Intermediate, Advanced

Business processes can be resource intensive as they typically span across desktop, web, and mobile and involve a number of teams and departments. ArcGIS Workflow Manager automates and simplifies many aspects of performing and managing GIS and non-GIS work, making you efficient and more productive. In this session we'll provide a general overview of the capabilities of ArcGIS Workflow Manager and demonstrate how it can be used to streamline business processes.

Nate Rock, Esri
Anna Ross, Esri

Revolutionizing Asset Management with Street-Level 360˚ Imagery and LiDAR

Time: 1:10PM - 1:40PM
Location: RIVER G
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor, Student, Management
Skill Level: Beginner, Intermediate, Advanced

Discover how street-level 360˚ imagery and LiDAR are reshaping the landscape of asset management and decision-making by providing powerful, real-world digital solutions. This session will explore key use cases where street-level data saves money, generates revenue, and mitigates risk, while emphasizing its role in augmenting—not replacing—traditional data sources like aerial and satellite imagery. Learn how integrating this technology into your workflows can unlock new insights, drive efficiency, and optimize asset management strategies.

Tyler Behle, NCTech Inc.

GIS Careers Panel for Students

Time: 1:10PM - 2:20PM
Location: FON DU LAC EF
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor, Student, Management, Other
Skill Level: Beginner

It is critical that today's geospatial workforce plan for the future of the community. A pipeline from those entering the geospatial workforce, including career changers and students, is the focus of this panel discussion which offers not only potential careers in the geospatial industry and skill sets to provide for the work, but ILGISA's plans for job shadowing and mentoring activities to make connections for the future workforce. Both professionals and students are welcome.

Dr. Rich Schultz, GISP, ILGISA
Keith Darby, GISP, City of Wheaton
Dan Bartlett, Cook County
Marni Law, Illinois State Water Survey

Lifting the Lid on an ArcGIS and GraniteNet Integration

Time: 1:50PM - 2:20PM
Location: RIVER IJ
Intended Audience: GIS User
Skill Level: Beginner, Intermediate

CUES GraniteNet is a comprehensive software platform for asset management and inspections in the Water Utility space. In this webinar, learn how our client, the City of Pekin Illinois, has enhanced their wastewater and stormwater inspection workflows by integrating GraniteNet with ArcGIS Enterprise technology.

Matt Junker, Cloudpoint Geospatial

The Best GIS Viewer You're Probably Not Using.

Time: 1:50PM - 2:20PM
Location: RIVER G
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor, Student, Management
Skill Level: Beginner

Ever thought ArcGIS Earth was just a flashy globe with no real use? Same here - until I gave it a shot. Join me for a lively session where I'll reveal how this seemingly simple tool packs a punch for GIS pros. We'll dive into its cool features like 3D visualization,

easy data integration, and real-world applications from urban planning to disaster response. I'll share my journey from skeptic to fan, showing you how ArcGIS Earth can seriously up your GIS game while keeping it fun and intuitive. Get ready to see this tool in a whole new light! (P.S. this Abstract was entirely written by ChatGPT)

Micah Williamson, Maruer-Stutz, Inc.

Let's Read a Legal Description!

Time: 1:50PM - 2:20PM
Location: FON DU LAC AB
Intended Audience: GIS User, Student
Skill Level: Beginner, Intermediate

Maybe you've been there: you're minding your own business, having a good, productive workday, and thenâ€¦ a wild legal description appears! They are a diverse bunch, from the delightfully simple to the utterly abstruse. This presentation will cover some of the common species of the genus, and how to effectively deal with them when encountered.

Joshua Carlson, Kendall County GIS

MONDAY, OCTOBER 21ST, 2024
2:30 PM – 4:00 PM WORKSHOPS

High Accuracy data taking in Field Maps

Time: 2:30PM - 4:00PM
Location: RIVER IJ
Intended Audience: GIS User, GIS Builder, GIS Instructor, Student, Management
Skill Level: Beginner

Seiler will present the basic setup of field Maps with Trimble's DA2/Catalyst system. Audience will then join Seiler representatives taking sample data on premise.

Joe Madej, GISP, Seiler Geospatial

How to Succeed in Obtaining Your FAA Part 107 Remote Drone Pilot Certification

Time: 2:30PM - 4:00PM
Location: RIVER H
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor, Student, Management, Other
Skill Level: Beginner, Intermediate, Advanced

This workshop will present the 13 topics on the FAA Part 107 certification exam for Remote Pilots and discuss each section in detail. Attendees will be provided with resources for studying for the exam.

Dr. Rich Schultz, GISP, ILGISA

Utilizing Dynamic Dashboards for Effective Communication

Time: 2:30PM - 4:00PM
Location: RIVER G
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor, Student, Management
Skill Level: Beginner, Intermediate

Creating an effective dashboard requires careful consideration of various elements to ensure it effectively communicates progress and KPI's.

Andy Bohnhoff, Platte River Analytics

Getting Started with OpenStreetMap

Time: 2:30PM - 4:00PM
Location: FON DU LAC AB
Intended Audience: GIS User, GIS Instructor, Student
Skill Level: Beginner

OpenStreetMap is the biggest, best, most open GIS project in the world. Barriers for entry are virtually nonexistent. For all kinds of fields and industries, there's likely someone, somewhere, using OSM in their work, often in novel and surprising ways.If you've never used OSM before, though, the very size and open-ended nature of the project can be daunting. Where do you even get started?At this workshop, we'll go over the basics of what OSM is, discuss best practices for mapping, and walk through some simple edits. If you want to follow along and participate, all you need is a device with a web browser!

Joshua Carlson, Kendall County GIS

TUESDAY, OCTOBER 22ND, 2024
9:00 AM - 10:10 AM SESSIONS

Introduction to Arcade

Time: 9:00AM - 9:30AM
Location: RIVER H
Intended Audience: GIS User
Skill Level: Beginner

ArcGIS Arcade is a portable, lightweight and secure language designed to enhance the functionality of Esri's ArcGIS platform. In this presentation we will take an introductory look at its core features and practical applications demonstrating how it can streamline geospatial tasks and improve mapping projects.Attendees will learn about the language's syntax, its integration with the ArcGIS platform and how to leverage Arcade to perform mathematical calculations, manipulate text, and evaluate logical statements for custom expressions, dynamic labeling, and symbology.We will explore real-world use cases, draw parallels to other scripting languages like Python & JavaScript, and highlight Arcade's ability to access feature and geometry data types.By the end of the session, participants will have an understanding of the ArcGIS Arcade language and how to implement it to transform their geographic data into insightful and actionable visualizations.

Chad Bergeson, City of DeKalb Illinois

GIS Analysis of Oversized/Overweight Permit travel to and from the Port of Baltimore

Time: 9:00AM - 9:30AM
Location: RIVER G
Intended Audience: GIS User, GIS Instructor, Management, Other
Skill Level: Beginner, Intermediate

Maryland One is Maryland State Highway Administration's online Oversized/Overweight permitting system. Trucking companies are required to purchase and obtain an issued OS/OW permit before moving their loads within the state when they exceed the Maryland over-dimensional permit limitations. This presentation discusses the GIS Analysis of Oversized/Overweight permits traveling to and from the Port of Baltimore, Maryland. We specifically reviewed issued permit travel and dimensions at the Dundalk Marine Terminal along Broening Highway. Due to the Francis Scott Key Bridge disaster, some OS/OW permits will need to use alternate routes. Our analysis will compare the routes utilized by OS/OW permits during Q1 and Q2 of 2024, before and after the Key Bridge collapse. We have also compared the number of issued permits from 2022 and 2023 to 2024. We utilized Esri ArcGIS, Microsoft SSMS, Bentley SUPERLOAD, Access, and Excel to analyze, visualize and compile the data. The Port of Baltimore, Dundalk Marine Terminal, accounts for a significant amount of OS/OW permits. During Q1 of 2024, 3,580 issued OS/OW permits used Dunhill Road at the intersection of Broening Hwy and the Dundalk Marine Terminal entrance. This was 12.4% of all OS/OW permits issued in the State of Maryland during Q1 of 2024. This presentation will present our findings and GIS analysis of Oversized/Overweight Permit travel to and from the Port of Baltimore. Including, alternate routes used by issued OS/OW permits after the Francis Scott Key Bridge disaster.

Brian Young, Bentley Systems

Open Source Workflows in a Desktop Linux Environment

Time: 9:00AM - 9:30AM
Location: FON DU LAC AB
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor
Skill Level: Beginner, Intermediate, Advanced

An introduction into open-source Geographic Information System (GIS) development on the Bluefin operating system (OS). Bluefin, is a derivation of Fedora Silverblue; an atomic desktop which greatly reduces configuration drift. This ensures a stable and predictable environment crucial for the deployment of complex GIS applications.At the heart of our GIS toolkit lies QGIS, a powerful, open-source GIS application renowned for its extensive ecosystem of Python plugins. These tools offer flexibility, and the extend functionality beyond standard capabilities, catering to specific project requirements and enhanced productivity.A critical aspect of our workflow involves leveraging GitLab, a comprehensive platform that offers a wide array of features beneficial to software development and collaboration. Among these features are a ticketing system, Gitlab issues for project management, and continuous integration (CI) tools for automating testing and deployment processes. Additionally, GitLab Pages simplifies the publication of interactive web maps, leveraging MapLibre GL - a powerful, open-source alternative to Mapbox GL - for rendering high-quality maps directly in the browser.By showcasing real-world scenarios and best practices, we intend to inspire attendees to adopt or enhance their own GIS projects with these technologies. Whether you're a seasoned

developer looking to expand your toolkit or a newcomer eager to dive into the world of open-source GIS, we hope to provide new insights on GIS development.

Amer Islam, Champaign County Regional Planning Commission

What Does LIDAR Data Allow Us To See

Time: 9:00AM-9:30AM
Location: FON DU LAC EF
Intended Audience: GIS User
Skill Level: Beginner, Intermediate

Most people in the GIS industry have experience using LiDAR data and know the value that it brings to a project. This brief presentation is designed to be enjoyable and informative by showing some of the unique things that can be seen with LiDAR data in Illinois.

Matthew Jefferson, Illinois State Water Survey

Easements: Using CAD to Create A City Wide Easement Layer

Time: 9:00AM-9:30AM
Location: FON DU LAC EF
Intended Audience: GIS User, GIS Builder
Skill Level: Beginner, Intermediate

This presentation is a quick preview of how to use Carlson Survey to create a city wide easement layer. It will also include some lessons learned through the process.

Brad Brewer, City of East Peoria

Getting to Know ArcGIS Data Pipelines

Time: 9:40AM - 10:10AM
Location: RIVER H
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor
Skill Level: Beginner, Intermediate

This presentation will provide an in-depth overview of ArcGIS Data Pipelines, exploring their structure, functionality, and integration capabilities. Attendees will gain insights into best practices for data ingestion, transformation, and distribution, ensuring data accuracy and accessibility. Through practical examples and case studies, participants will learn how to streamline workflows, enhance data quality, and drive informed decision-making in their GIS projects. Join us to unlock the full potential of ArcGIS Data Pipelines and elevate your geospatial data management strategies.

Baylor Wagehoft, Maurer-Stutz Geospatial Services
Micah Williamson, GISP, Maurer-Stutz Geospatial Services

Path to the Utility Network

Time: 9:40AM - 10:10AM
Location: RIVER G
Intended Audience: GIS User, Management
Skill Level: Beginner, Intermediate

Migrating to the Utility Network is the next step in modernizing your company's utility system. However, deploying the solution can feel like navigating in the dark - a journey filled with hurdles and unforeseen challenges. Despite these challenges, embarking on this journey is crucial, and knowing where to start is essential. There is no one-size-fits-all solution for migration, as each client has unique requirements and business processes. We'll share our journey to the Utility Network, including the insights we've gained, key challenges encountered, and practical tips and tricks to simplify your migration process. Join us to discover how our journey with multiple configured networks can help streamline your own migration process.

Jon Sedey, Gewalt Hamilton Associates

Make Metadata Management Manageable

Time: 9:40AM - 10:10AM
Location: FON DU LAC AB
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor, Management
Skill Level: Intermediate

In this session we will explore a new modern way to collect and update metadata for GIS database using Excel, Python and ArcGIS Pro. A spreadsheet-based approach for a metadata repository allows GIS administrators the power to delegate the

creation of metadata to their users. When a metadata spreadsheet is coupled with Python and ArcGIS Pro, the metadata updates can be automated - ultimately reducing the burden on GIS administrators to collect and update metadata for their ever-growing database items.

Hunter Ray, Cloudpoint Geospatial, Inc.

Using Street Level Imagery for 3D Asset Collection

Time: 9:40AM - 10:10AM
Location: FON DU LAC EF
Intended Audience: GIS User, Management
Skill Level: Beginner

High resolution street level imagery, mobile LiDAR, software tools can enable jurisdictions to move towards more efficient 3D asset data collection and data-driven operations. In this session, we will provide an overview of street level imagery resources, showcase web-based applications, integration with GIS and other platforms. This session will showcase several case studies demonstrating how agencies are leveraging street level imagery and LiDAR resources to support their public works, property assessment and enterprise operations.

Bill Wetzel, Cyclomedia Technology Inc

TUESDAY, OCTOBER 22ND, 2024
10:30 AM - 11:40 AM SESSIONS

Precision Unveiled: A Guide to High-Accuracy GNSS Data Collection, Validation, and Tips

Time: 10:30AM - 11:40AM
Location: RIVER IJ
Intended Audience: GIS User, Student, Management, Other
Skill Level: Beginner, Intermediate, Advanced

This abstract focuses on the meticulous process of collecting high-accuracy GNSS data. It outlines essential steps, including receiver selection and optimal field procedures, emphasizing the significance of adherence to best practices. The abstract highlights the critical testing phase against control points, discussing statistical analyses and error assessment techniques for data validation. Additionally, it touches upon advanced GNSS collection methods like differential correction and real-time kinematic solutions. Practical tips and tricks, addressing challenges like multipath interference, round out the abstract, providing a comprehensive guide for professionals seeking precise and reliable GNSS data.

Joe Madej, GISP, Seiler Instrument

ADA Compliance using Mobile LiDAR

Time: 10:30AM - 11:40AM
Location: RIVER H
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor, Student, Management, Other
Skill Level: Beginner, Intermediate, Advanced

Leveraging mobile LiDAR, TWM analyzed over fifty thousand linear feet of sidewalk and over sixteen hundred ADA ramps for the City of Pekin. The data is accessible by the public via an Experience Builder website, and was used by our Transportation engineers to create a ten year construction plan based on multiple input factors. We'll discuss how the data was collected, extracted, processed, and presented.

Dan Newcomb, TWM, Inc.

Arcade Across the ArcGIS System

Time: 10:30AM - 11:40AM
Location: RIVER G
Intended Audience: GIS User, GIS Builder, GIS Developer, Management
Skill Level: Intermediate, Advanced

ArcGIS Arcade is an expression language that is used across the ArcGIS system. Whether the application is symbology, labeling, pop-ups, Attribute Rules, field calculations in ArcGIS Pro, web maps, web apps, or field data collection, Arcade provides a simple scripting syntax to deliver these capabilities. Find out how to use Arcade with practical examples and how to get started putting it to use in your projects.

Anna Ross, Esri
Nate Rock, Esri

Building the City of Alton's Enterprise-Level City GIS with Open Source software

Time: 10:30AM - 11:40AM
Location: FON DU LAC AB
Intended Audience: GIS User, GIS Builder, GIS Developer, Student, Management
Skill Level: Beginner, Intermediate

In this presentation we will discuss how a city or any organization can build an enterprise level GIS utilizing Open Source GIS software. The City of Alton IL recently initiated a project to move from only having access to GIS on a couple computers with limited use to a city-wide GIS that now supports more desktop GIS users with an enterprise level Geospatial RDBMS and provides both internal and external users access via GIS-based web applications and web maps. We will discuss the what open source software was used and show where they started from, where they are currently and where they plan on going.

Kelly McGee, Spatial Connections Inc.

A Day in the Life of a GIS Professional

Time: 10:30AM - 11:40AM
Location: FON DU LAC EF
Intended Audience: GIS User, Student
Skill Level: Beginner, Intermediate

This panel session includes ILGISA members sharing their day-to-day projects, educational backgrounds, and current challenges in a hybrid work environment. Learn about their insights into the challenges and rewards of working in the geospatial field. Students, recent graduates, and all conference attendees are welcome to attend and, of course, ask your questions!

Lucy Stanfield, US EPA
Joshua Carlson, Kendall County & ILGISA Board Member
Chad Bergeson, City of DeKalb
Dan Bartlett, Cook County
Veronica Sarver, Illinois Dept. of Transportation

TUESDAY, OCTOBER 22ND, 2024
1:10 PM – 2:20 PM SESSIONS

Geospatial Automation for Public Safety

Time: 1:10PM - 1:40PM
Location: RIVER IJ
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor, Student, Management, Other
Skill Level: Beginner, Intermediate, Advanced

There exists a plethora of data in law enforcement and public safety. Getting direct access to the data and trying to figure out how to work with the data is often an issue however. Tools such as GeoEvent Server, ArcGIS Pro task scheduling, and Microsoft Power Automate help to automatically process data and prevent analysts from spending too much time having to get the data in the format they need. This session will take a look at some of the tools available for automating data ingestion, data calculations, and geospatial analysis and show some examples of how the Illinois State Police are using them.

Nick Gray, Illinois State Police – STIC

Urban Climate Dynamics: Analyzing the Impact of Green Cover and Air Pollution on Land Surface Temperature-A Comparative Study Across Chicago, San Francisco, and Phoenix, USA

Time: 1:10PM - 1:40PM
Location: RIVER G
Intended Audience: GIS User, Student
Skill Level: Beginner, Intermediate

Rapid urbanization worldwide has significantly altered urban climates, creating a need to balance urban growth with thermal environmental quality for sustainable development. This study examines the relationship between land surface temperature (LST) and urban characteristics, particularly focusing on how green cover can mitigate urban heat and how air pollution can increase temperatures. Recognizing the predictive value of LST for urban heat island (UHI) intensity, we analyzed three distinct U.S. cities - Chicago, San Francisco, and Phoenix - each characterized by unique climate and urban planning features.This study investigates the relationship between atmospheric pollutants (SO2, NO2, CO,O3) and the Normalized Difference Vegetation Index (NDVI) with Land Surface Temperature (LST) using regression and correlation analyses. The analysis aims to elucidate

how changes in atmospheric pollutants and vegetation index affect variations in land surface temperature. Regression analysis is employed to estimate the coefficients of independent variables and quantify their impact on LST. Correlation analysis assesses the linear relationships between variables, providing insights into their pairwise associations. The study also examines multicollinearity between independent variables to identify potential confounding factors. Results reveal significant associations between atmospheric pollutants, vegetation index, and land surface temperature, contributing to our understanding of environmental factors influencing LST dynamics and informing climate change mitigation strategies.

Sepideh Azizi, University of Illinois Urbana Champaign

Using ESRI's Survey123 with VertiGIS Workflow 5: A LSLI Story

Time: 1:10PM - 1:40PM

Location: RIVER H

Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor, Student, Management

Skill Level: Beginner, Intermediate, Advanced

In this presentation we will be going over how we managed to get ESRI's Survey123 to start a series of workflows in VertisGIS Workflow 5 that will allow for home owners to self report their Lead Service Lines and us to validate the information before adding it to the final data table.

Kip Kritis, Horner & Shifrin, Inc.

Kyra Dietz, Horner & Shifrin, Inc.

On Demand, Custom, Topographic Maps with topoBuilder

Time: 1:10PM - 1:40PM

Location: FON DU LAC AB

Intended Audience: GIS User, Student

Skill Level: Beginner, Intermediate

The U.S. Geological Survey's National Geospatial Program has released the topoBuilder application, which enables users to create topographic maps on demand using the best available National Map data. In topoBuilder, users can generate topographic maps, called OnDemand Topo, centered anywhere in the United States or Territories, with customized contour smoothing, and export formats GeoTIFF or GeospatialPDF. Maps are made at 1:24,000-scale for the conterminous United States and Hawaii, 1:20,000-scale for U.S. territories, and 1:25,000 for Alaska. Future releases are planned for additional customizations such as user-selected layers, user-added content, GIS data exports, and other map scales. TopoBuilder, its capabilities, and OnDemand Topo maps will be demonstrated

David Nail, U.S. Geological Survey

FuzionView - A new way to share underground utility data for 811 tickets.

Time: 1:10PM - 2:20PM

Location: FON DU LAC EF

Intended Audience: GIS User, GIS Developer, Management

Skill Level: Beginner, Intermediate, Advanced

In 2017, representatives of Gopher State One Call (GSOC) reached out to the leadership of Emergency Preparedness Committee of the Minnesota Geospatial Advisory Council (EPC) in hopes of learning what could be done to improve the use of geospatial technology in the underground utility community. Over the next three years, the Underground Utilities Mapping Project Team (UUMPT) came into existence under the EPC in early 2020. Now comprised of over 25 individuals from the underground Facility Operator (FO) community, since mid-2021 the UUMPT has been championing development of software called "FuzionView". In October 2022, a FuzionView prototype successfully demonstrated the ability to pull together an on-the-fly, web-mapped view, of utility infrastructure within a designated dig area. In 2023, GSOC hired Minnesota geospatial research and development nonprofit SharedGeo to develop a production version of FuzionView which will be used across Minnesota and released as Open Source software. Together, these project partners, as well as others who are joining the effort, are working to leverage 50-years of advancements in geospatial technologies that have been previously under-utilized in the underground utility community.Project Team members represent a variety of industry stakeholders who are dedicated to increasing locate efforts. The project revolves around the notion that the technical aspects of sharing data for underground assets amongst the 811 call before you dig community shouldn't be a barrier to sharing. This Gopher One Call Sponsored project is enabling sharing of geographic data at the feature level between underground facility operators with 811 call ticket requests.

Bob Basques, SharedGeo

Police Transparency-Expanding Credibility and Confidence Through Spatial Data

Time: 1:50PM - 2:20PM
Location: RIVER IJ
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor, Student, Management
Skill Level: Beginner, Intermediate, Advanced

In 2022 the County's Judicial and Public Safety Committee along with the County Sherriff were looking for a solution to share calls for service along with crime and arrest data with the public. DuPage County GIS stepped up to provide this service by using ESRI's Police Transparancy Solution. The drive behind this was to help improve the credibility and confidence that the public have in the county police-recorded crime levels, address perceptions of crime, promote community engagement and empowerment, and support greater public service transparency and accountability. Working with the County ETSB/DuComm E911, DuPage County GIS was able to pull live data from the County Report Management System (RMS) for E911 and provide real time calls and crime data through multiple dashboards out of a Police Transparency Hub Initiative for both public and more detailed data to Sheriff Department staff. During this prestation we will cover how we organized the RMS data into the GIS for publishing and configuring this data for use in the various dashboards and working with the Sheriff staff to determine what needs to be shown and how to show the data in a meaningful way. With this solution from Esri we were able to solve our problem on how to provide and share this data to the public in real time data from one location.

Thomas Ricker, DuPage County

Utilizing Survey123 to Streamline Public Works Refuse Operations

Time: 1:50PM - 2:20PM
Location: RIVER H
Intended Audience: GIS User, GIS Builder, Student, Management
Skill Level: Beginner, Intermediate, Advanced

Staff at the Village of Winnetka, IL previously tracked issues with refuse pickups through various sorts of methods, including text messages, Excel, and paper documents. It led to delays communicating between field workers and call takers, who were confronted by upset residents about perceived missed trash pickups. An ArcGIS Survey123 application was created, allowing refuse trucks to communicate refuse issues they encounter and send them back to the Public Works staff. This has enabled quick responses and trend identification of all incidents. This has greatly increased service issue response times.

Andrew Shuman, MGP, Inc.

Site Suitability Analysis: Siting for a New Chain of High End Daycares

Time: 1:50PM - 2:20PM
Location: RIVER G
Intended Audience: GIS User, GIS Builder, GIS Instructor, Student, Management
Skill Level: Intermediate

Selecting a location for childcare before school years is a critical decision for today's working families. Through my company, Blue Orb Technology, I was commissioned by a client to assist in expanding his business to new locations within the United States. This project extensively utilized traditional statistics, spatial statistics, and site suitability analysis to identify optimal areas. This presentation serves as a model for business site selection using the ESRI software suite of tools.

Brock Terry, Blue Orb Technology

State Parcels Panel

Time: 1:50PM - 2:20PM
Location: FON DU LAC AB
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor, Student, Management
Skill Level: Beginner, Intermediate, Advanced

The panel discussion will be geared toward building a statewide parcel layer program. Our goal is to bring together a working group of stakeholders to establish a framework for sharing parcel data statewide.

Mark Yacucci, Illinois State Geological Survey
Dan Mlacnik, Illinois Department of Transportation
John Mellor, Illinois Department of Transportation
Cassidy Weller, Illinois Department of Transportation

TUESDAY, OCTOBER 22ND, 2024
2:30 PM – 4:00 PM WORKSHOPS

QGIS: An Introduction

Time: 2:30PM - 4:00PM
Location: RIVER IJ
Intended Audience: GIS User, GIS Instructor, Student
Skill Level: Beginner

*You've heard of QGIS. You've heard that it's powerful, versatile, and *free*. You're curious to learn more, but who has the time? You've already got all your other programs, and it's enough just to keep up with how to use all of those, right? This workshop is for you! Using Q doesn't have to be hard! Come to watch and listen, or bring your laptop and follow along. We'll cover all the basics you need to start making maps in QGIS. I promise, there won't be anything technical!*

Joshua Carlson, Kendall County GIS

Experience Builder Handbook

Time: 2:30PM - 4:00PM
Location: RIVER H
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor, Student, Management
Skill Level: Beginner, Intermediate

Join us for a comprehensive workshop centered around Esri's Experience Builder, a powerful tool enabling users to create engaging and dynamic web applications without the need for extensive coding knowledge. Experience Builder empowers GIS professionals to design and develop versatile web apps with ease, thanks to its user-friendly interface and integration with ArcGIS Online and ArcGIS Enterprise.In this hands-on workshop, participants will learn to leverage the Experience Builder's diverse range of features and functionalities. Through practical exercises and real-world examples, attendees will explore the creation of web applications, as well as the implementation of responsive designs and custom layouts to enhance user experiences.By the end of this workshop, participants will possess the skills and knowledge necessary to build compelling and interactive web applications using Esri's Experience Builder, ultimately elevating their GIS projects and empowering their organizations to leverage location intelligence in new and innovative ways.

Wendy Leonard, Gewalt Hamilton Associates

Migrating from ArcMap to ArcGIS Pro

Time: 2:30PM - 4:00PM
Location: RIVER G
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor, Management
Skill Level: Beginner, Intermediate, Advanced

ArcMap will be retired in March of 2026, but will enter Mature Support (no more updates or patches) in March 2024. If you have not already moved to ArcGIS Pro, now is the time. ArcGIS Pro provides GIS professionals with a modernized experience for mapping; advanced analysis; management of 2D, 3D, and 4D data; and seamless content sharing to ArcGIS Online and ArcGIS Enterprise. In this workshop we will introduce key ArcGIS Pro terminology and components, demonstrate how to migrate maps and other items to ArcGIS Pro, and share additional resources that will help ArcMap users smoothly transition GIS workflows to ArcGIS Pro. This workshop will be a combination of lecture presentation and hands-on activities. Attendees will need to bring their own laptop and with ArcGIS Pro installed, as well as an account for either ArcGIS Online or ArcGIS Enterprise.

Nate Rock, Esri
Anna Ross, Esri

NG911 and 3D Indoor School Mapping - Latest Developments

Time: 2:30PM - 4:00PM
Location: FON DU LAC AB
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor, Student, Management
Skill Level: Beginner, Intermediate, Advanced

This panel will discuss GIS data developments in the Illinois Next Gen 911 system. It will cover NG911 workflow changes, updates to the NENA data model that are being implemented and a discussion of the future 3D indoor school mapping initiative.

Cindy Barbera-Brelle, Illinois State Police
Peter Schoenfield, Western Illinois University GIS Center
Mark Yacucci, Illinois State Geological Survey
Chad Sperry, Western Illinois University GIS Center
Eric Creighton, City of St. Charles, IL

Demonstrations, Applications, and Flight Operations with Uncrewed Aerial Systems (UASs or Drones)

Time: 2:30PM - 4:00PM
Location: FON DU LAC EF
Intended Audience: GIS User, GIS Builder, GIS Developer, GIS Instructor, Student, Management
Skill Level: Beginner, Intermediate, Advanced

In this second part of two drone workshops, demonstrations with DJI drones including the DJI M300 drone platform with the DJI L1 LiDAR sensor using the DJI P1 35mm camera will be presented. Data collection and drone safety will be discussed along with additional applications for drone use. Led by FAA Part 107 licensed remote pilots, this workshop will provide the opportunity to learn about the use of drones for spatial data collection and processing of data.

Dr. Rich Schultz, GISP, ILGISA
Zach Lawrence, Horner & Shifrin, Inc.