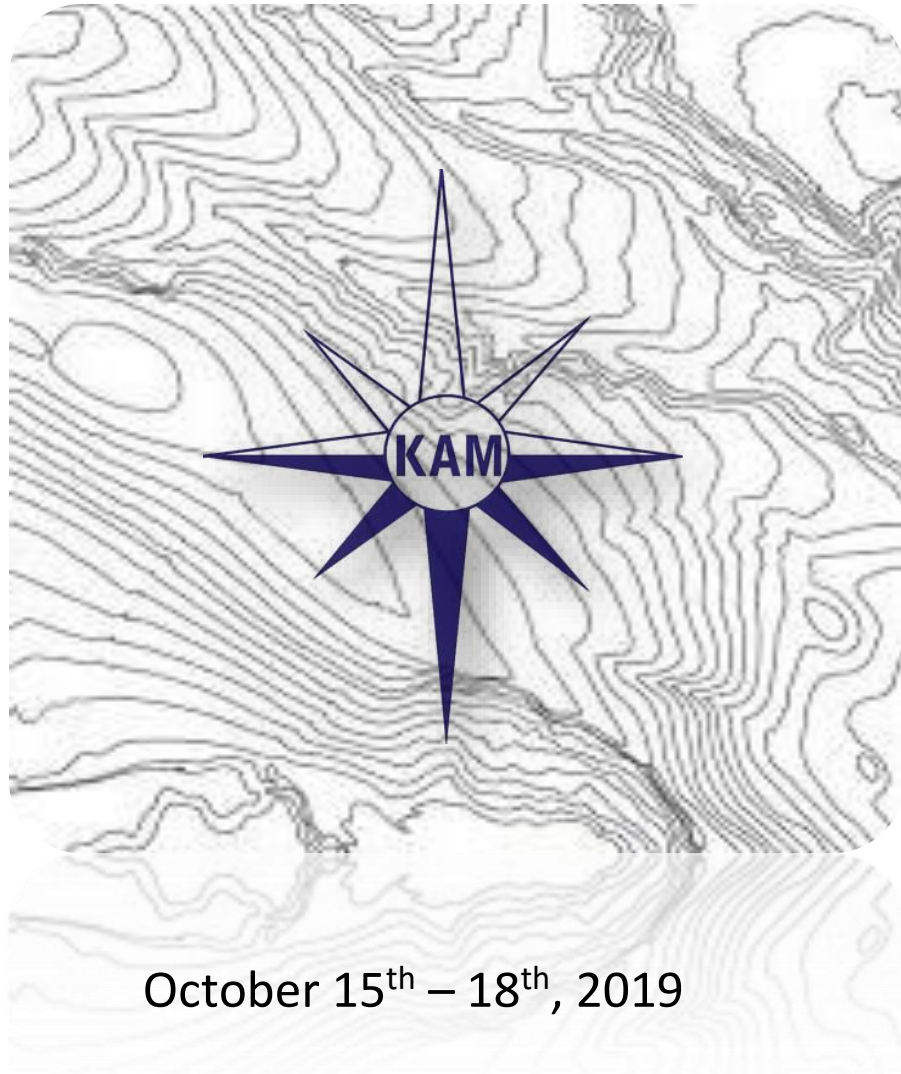


Kansas Association of Mappers 34th Annual Conference



On behalf of the KAM Board, I would like to personally welcome each of you to the 34th Annual KAM Conference. It has been a fast year to say the least. These are exciting times, as we continue to grow and adapt to an ever changing and moving industry. Individually, we bring adaptation, growth, motivation and new ideas. This forum not only allows such professional achievement but continues to meet and bring together inspiration and experiences, to ensure you and our organization remain progressive.

In the next couple of days, I hope you can squeeze as much information from the sessions provided. To enhance your relationship with others throughout the industry and State of Kansas. To take away key aspects that will not only enhance your skills, but also provide you with solutions to enhance your professional organization.

Let me give you a brief update on where we are today. KAM is successful. We have innovative professionals sharing their time and ideas to increase the knowledge of our members.

Membership: Our Membership is around 303 individuals with 36 new individuals this year in 2019. 15 Commercial. 13 students. However, out of those only 121 are active (paid up-to-date).

Classes Offered: We have provided one professional class throughout 2019 and 4 additional classes in our pre-conference setting.

Financially: KAM membership remains consistent. The good thing is that membership and conference fees have not increased in several years. It is our goal to continue to not increase membership costs but instead increase our total membership to compete with inflation. Therefore, encourage your colleagues to become members!

Let's make KAM prosper!! We're continuing to transform and change how we look at serving your membership. Enhancing our ability to inform, educate and involve you as part of KAM family. In addition, I welcome each one of you to become an active member. Become involved with a group in your area of interest. By providing your expertise and knowledge, you have the power to enhance KAM.

Thank you for attending **YOUR** conference. You have the experience, the leadership, and the information to ensure this organization remains valuable in the future. Throughout the next couple of days, I ask that you stay engaged, keep us proactive, and help us to continue to flourish through the foreseeable future.

Nick Callaghan
2018-2019 KAM President



DASC



R&S Digital Services Inc.
A Full Service GIS Mapping Company

 **eagleview™**

The logo for Eagleview features a stylized icon on the left consisting of three horizontal bars in blue and green, followed by a diagonal slash. To the right, the word "eagleview" is written in a blue, sans-serif font with a trademark symbol (TM) at the end.

Schedule of Events

Tuesday October 15th

- 9:00 am to 5:00 pm Registration (*Hancock Library*)
8:00 am to 12:00 pm Pre-Conference Workshop – Introduction to ArcGIS Pro
(*Gathering Room 1*)
9:00 am to 3:00 pm KAM Designation Testing (*Media Room*)
9:00 am to 12:00 pm Pre-Conference Workshop – Kansas NG911 GIS Data Maintainer Class
(*Gathering Room 2*)
1:00 pm to 5:00 pm Pre-Conference Workshop – Introduction to ArcGIS Pro
(repeat from morning class) (*Gathering Room 1*)
Pre-Conference Workshop – Precision Parcel Mapping in ArcGIS Pro
(*Gathering Room 3*)

Wednesday October 16th

- 8:00 am to 8:30 pm Registration (*Hancock Library*)
9:00 am to 9:30 am Continental Breakfast (*Hancock Library*)
9:30 am to 11:30 am Opening Remarks, Keynote Speaker, GIO Update and KAM Business
Meeting (*Hancock Room*)
11:30 am to 11:45 am Exhibitor lighting talk
11:45 pm to 12:45 pm Plated Lunch (*Hancock Room*)
12:45pm to 1:30pm Breakout Sessions
1:45 pm to 2:30 pm Breakout Sessions
2:30 pm to 3:00 pm Refreshment Break with Exhibitors (*Griffith Room*)
3:00 pm to 3:45 pm Breakout Sessions
4:00 pm to 4:45 pm Breakout Sessions
5:00 pm to 6:00 pm Past President and New Member Reception (*Guest Room 221*)
6:00 pm to 8:30 pm Exhibitor Reception and Family Feud Game (*Griffith Room*)
8:30 pm to 11:00 pm Hospitality Room Open (*Guest Room 221*)

Thursday October 17th

- 8:00 am to 9:00 am Continental Breakfast with the Exhibitors (*Griffith Room*)
9:00 am to 9:45 am Breakout Sessions
10:00 am to 10:45 am Breakout Sessions
10:45 am to 11:15 am Break with Exhibitors (*Griffith Room*)
11:15 am to 12:00 pm Breakout Sessions
12:00 pm to 1:15 pm Lunch with the Exhibitors, Map Gallery Opens, Voting for Board (*Griffith Room*)
1:00 pm to 2:00 pm Mapping Archive Tour (*Meet at Registration Desk at 12:45 pm*)
1:15 pm to 2:00 pm Breakout Sessions
2:15 pm to 3:00 pm Breakout Sessions
3:00 pm to 3:30 pm Break with Exhibitors (*Griffith Room*)
3:30 pm to 4:15 pm Breakout Sessions
5:00 pm to 7:00 pm Social at Watkins Museum of History – Charity Raffle Drawing At 6pm
(*Transportation provided from 5:00 pm – 11:00 pm*)

Friday October 18th

- 8:00am to 9:00am Coffee in the Registration Area (Breakfast on Your Own)
8:30am to 9:15am Breakout Sessions
9:30am to 10:15am Breakout Sessions
10:30am to 11:30am Brunch (*Griffith Room*)
11:30am to 12:30pm Closing KAM Business Meeting, Announcement of New Board, Map Gallery Winners
and Door Prize Winner (*Griffith Room*)

Pre-Conference Workshops

Tuesday, October 15th

8:00 am – 12:00 pm

- **Introduction to ArcGIS Pro – Ken Wilkerson, GISEdge**

(Gathering Room 1)

This workshop helps you get ready for your conversion to ArcGIS Pro. We'll see how to import map documents into ArcGIS Pro and how to perform many of the tasks you are familiar with in your daily use of ArcMap, such as working with symbology and layer properties, building queries, running tools, and making a layout.

9:00 am – 12:00 pm

- **Kansas NG911 GIS Data Maintainer Class – Sherry Massey, Dickinson County GIS Coordinator and Kristen Jordan Koenig, Data Access and Support Center (DASC)**

(Gathering Room 2)

In the Kansas NG911 GIS Program, the Data Maintainer is the person who will be performing the actual maintenance of GIS data for the NG911 Program. Every PSAP (Public Safety Answering Point) must have a certified Data Maintainer or have a maintenance contract with a vendor that has a certified Data Maintainer on staff. Those completing this class will be certified as Kansas NG911 Data Maintainers.

Topics to be covered: The role of GIS in NG911; an update on the status of the NG911 program in Kansas; the role of the Data Maintainer and the responsibilities that come with the position; the Kansas NG911 GIS Data Model and its requirements; the tools available to assist in data maintenance; and a discussion of geoMSAG maintenance and the GIS role in telephone record accuracy. During the Behind-the-Scenes of the NG911 Toolbox, we will go in-depth covering the details of certain tools and how they work and how users can leverage the tools to make their data life easier.

1:00 pm – 5:00 pm

- **Introduction to ArcGIS Pro – Ken Wilkerson, GISEdge**

(Gathering Room 1)

This workshop helps you get ready for your conversion to ArcGIS Pro. We'll see how to import map documents into ArcGIS Pro and how to perform many of the tasks you are familiar with in your daily use of ArcMap, such as working with symbology and layer properties, building queries, running tools, and making a layout.

1:00 pm – 5:00 pm

- **Precision Parcel Mapping in ArcGIS Pro – Douglas County, KS GIS Staff**

(Gathering Room 3)

ArcGIS Pro looks different from ArcMap, yet the basic concepts still apply. In this workshop, you will get hands-on experience with the plat and parcel digitization workflow in Pro. With a focus on precision editing techniques, we'll show you where to find the tools that you need, how they are similar and how they differ, and what has yet to be migrated into this new interface. Let's migrate our skills into Pro together by applying a basic workflow to the new environment.

Meet our Keynote Speaker:

Vern Dosch, President & CEO

National Information Solutions Cooperative (NISC)

Vern Dosch is NISC's President and Chief Executive Officer. NISC provides billing, accounting and engineering software solutions to more than 860 rural utilities and telephone companies and 14,000,000 end customers in 50 states, American Samoa, Palau, and Canada. With offices in Mandan, North Dakota; Lake Saint Louis, Missouri; Cedar Rapids, Iowa; and Shawano, Wisconsin. NISC employs more than 1,200 highly skilled employees.

Dosch, a life-long resident of Bismarck-Mandan, holds a Bachelor of Science degree and a Master of Management degree from the University of Mary and resides in Bismarck with his wife, Lynne. Vern and Lynne have three grown children: Zachary (Skylar), Brittany (Jesse) and Jordan and five grandchildren.

Vern is the author of the book *Wired Differently*.

Wednesday Breakout Sessions

TIME	SESSION TITLE	ROOM NAME	SPEAKERS NAME
12:45– 1:30pm	KDOT Resources	Gathering Room 1	Kyle Gonterwitz
	How a GIS was used in Coffey County's Emergency Response to the 2019 Flooding	Gathering Room 2	Cara Mays
	ArcGIS Enterprise: An Introduction	Gathering Room 3	Tim Hensley
1:45 – 2:30 pm	State Plane Coordinate System of 2022	Gathering Room 1	Ken Nelson Steve Thompson
	Survey123 for Dummies	Gathering Room 2	Pan Dunham & Amy Roust
	KDHE Resources	Gathering Room 3	Nolita LeVoie
3:00 – 3:45 pm	Kansas NG911 GIS User Group	Gathering Room 1	Eileen Battles
	Improving Situational Awareness with Real-Time Flood Mapping in Kansas: Live Action from Spring 2019	Gathering Room 2	Jude Kastens
	ArcGIS Apps for the Field	Gathering Room 3	Tim Hensley
4:00 – 4:45 pm	Address Points: A Better Way to Deliver Geographic Information	Gathering Room 1	Robert Meier
	Flooding 2019	Gathering Room 2	Mike D'Attilio
	Open Data and the Esri Hub	Gathering Room 3	Darren Haag

Thursday Breakout Sessions

TIME	SESSION TITLE	ROOM NAME	SPEAKERS NAME
9:00 – 9:45am	Basic Title Insurance	Gathering Room 1	Darlene Flynn
	Arcade: What's the Point?	Gathering Room 2	Amy Roust
	Mapping Using Drone Imagery: Agricultural and Natural Resource Applications	Gathering Room 3	Kevin Price
10:00 - 10:45am	ORKA Update	Gathering Room 1	Kristen Jordan Koenig
	Clutter and Anarchy: A Story of the Unified Government's ArcGIS Online Organization	Gathering Room 2	April Friedl

TIME	SESSION TITLE	ROOM NAME	SPEAKERS NAME
10:00 - 10:45am	Adventures in Geospatial Automation: How ArcGIS Streamlined a Stormwater Billing Process	Gathering Room 3	Daniel Gwartney
11:15am – 12:00 pm	Election Solutions	Gathering Room 1	Tim Hensley
	Tornado Emergency	Gathering Room 2	Bryce Hirschman
	Innovative Technologies to Improve Site Characterization: Deriving Actionable Intelligence from your Drone Data	Gathering Room 3	Michael Rawitch
1:00 – 2:00pm	Mapping Archive Walking Tour (leave by 12:45)	Spencer Library	
1:15 – 2:00pm	Fancy Maps	Gathering Room 1	Jared Tremblay
2:15 – 3:00pm	Role of LiDAR Derived Stream Network Datasets	Gathering Room 1	Atefeh Hosseini John Dunham Elizabeth Smith
	Collector App for At-Grade Public Rail Crossings	Gathering Room 2	Kyle Gonterwitz
	Arcade: Expressions with Power	Gathering Room 3	Robert Meier
3:30 – 4:15pm	BFE Portal and Web Resources	Gathering Room 1	Bill Pace
	ArcGIS Pro: Task Lists and Templates	Gathering Room 2	Linda Sibert
	Soils Update for Appraisal Parcel and Ag Use Mapping	Gathering Room 3	Pan Dunham

Friday Breakout Sessions

TIME	SESSION TITLE	ROOM NAME	SPEAKERS NAME
8:30 – 9:15am	Cartographic Tips and Tricks: Re-Creating 1903 Loch Ness Survey Map	Gathering Room 1	Will Trimble
	ArcGIS Hub: What is it and How Do I Get Started?	Gathering Room 2	Pam Dunham
9:30 – 10:15am	Investigating Controls on Lateral Erosion in a Small Bedrock River over Long and Short Time Scales	Gathering Room 1	Abbey Marcotte
	The GLO Meets GIS: Mapping 19 th Century Kansas	Gathering Room 2	David T. Hughes

Wednesday October 16th

12:45 pm to 1:30 pm – Breakout Sessions

Gathering Room 1

KDOT Resources

Kyle Gonterwitz, Kansas Department of Transportation (KDOT)

An overview of GIS and Mapping resources brought to you by the Kansas Department of Transportation, including web services, maps, projections, and applications.

Gathering Room 2

How a GIS was used in Coffey County's Emergency Response to the 2019 Flooding

Cara Mays, Coffey County

Like most of Eastern Kansas, Coffey County experienced extensive flooding during the May and June months due to excessive rainfall. In Coffey County, homes were damaged or destroyed and several homeowners had to be evacuated. This session will aim to give a little insight on how GIS resources can be used in an actual emergency response effort as well as gain insight on how to better be prepared for your next emergency. Coffey County is home to John Redmond Reservoir, a flood control reservoir managed by the US Army Corp of Engineers Tulsa District. Before this flooding event, the max release by the Corp at John Redmond was 21,000 cubic feet per second. During the peak of this flooding event the Corp was releasing close to 35,000 cubic feet per second. Because this potential release extent from John Redmond was unfamiliar and the area had not seen rainfall totals of this magnitude since the construction of John Redmond, the county and city officials relied heavily on GIS data to predict the potentially affected areas and provide data and visual aids for all other response efforts.

Gathering Room 3

ArcGIS Enterprise: An Introduction

Tim Hensley, Esri

ArcGIS Enterprise is the next evolution of the server product line. It includes all the components that you're familiar with ArcGIS Portal, Server, and more. Join us in this workshop to get an introduction to ArcGIS Enterprise and the many capabilities that have been introduced, such as Portal collaboration, Insights for ArcGIS, ArcGIS Image Server, ArcGIS GeoEvent Server and ArcGIS GeoAnalytics Server.

1:45 pm to 2:30 pm – Breakout Sessions

Gathering Room 1

State Plane Coordinate System of 2022

Ken Nelson, KDOT, and Steve Thompson

In 2022, the National Spatial Reference System (NSRS) will be modernized. Existing reference frames (horizontal datums & vertical datums), including the North American Datum of 1983 (NAD83) & North American Vertical Datum of 1988 (NAVD88), will be replaced with new

reference frames. The State Plane Coordinate System of 2022 (SPSC2022) is being developed as part of this transition. In April 2019, the National Geodetic Survey released the policy, procedures, and timeline that will govern this transition. Attend this session to learn more about the Kansas SPSC2022 plan.

Gathering Room 2

KDHE Resources

Nolita LeVoie, Kansas Department of Health and Environment

KDHE provides many public web map applications and other online tools to improve state government transparency. This presentation will highlight and explore the online tools available to quickly find environmental data that KDHE maintains.

Gathering Room 3

Survey123 for Dummies

Amy Roust, Douglas County, and Pam Dunham, Butler County

WHAT is Survey123, HOW can it be used, WHY would I want to, and WHERE do I go to get started? I for one have heard about Survey123 for quite a while now and just really had no idea how to get started. It all can be just so overwhelming sometimes. Once I dived right in, I found that you could easily create a quick survey to use with or without maps. We will cover the basics, provide some documentation on how to get started and some resources. In this session we will also provide some examples of how it is being used in our counties.

3:00 pm to 3:45 pm – Breakout Sessions

Gathering Room 1

Kansas NG911 GIS User Group

Eileen Battles, Manager, Kansas Data Access and Support Center (DASC)

The Kansas NG911 GIS User Group meets quarterly to discuss the NG911 project and NG911 GIS related updates. This session will provide a project update but will focus mainly on audience questions and discussion.

Gathering Room 2

Improving Situational Awareness with Real-Time Flood Mapping in Kansas: Live Action from Spring 2019

Jude Kastens, Kansas Biological Survey

In May of this this year, record-level widespread flooding came to Kansas, impacting most major rivers and reservoirs in the eastern half of the state. Past funding from GIS Policy Board database development grants supported the creation of inundation map libraries for the greater eastern half of Kansas, the vast majority of which utilize the state's LiDAR elevation data collection. During the peak of the 2019 spring flooding, the Kansas Biological Survey (KBS) worked closely with the Kansas Water Office (KWO) and the Kansas Division of Emergency Management (KDEM) to implement the flood libraries and provide timely and regularly updated time-specific and projected maximum inundation extents. Though real-time flood

mapping technology continues to improve, KBS's one-of-a-kind, flexible, rapid, wide-area inundation library approach remains at the forefront. KBS intends to continue to coordinate with KDEM, KWO and other agencies to develop a strategic plan for real-time flood mapping in Kansas.

Gathering Room 3

ArcGIS Apps for the Field

Tim Hensley, Esri

ArcGIS includes a suite of mobile field apps to help you collect data, navigate to locations, coordinate assignments, and monitor field operations. Learn how Workforce for ArcGIS works together with Navigator for ArcGIS, Collector for ArcGIS, Survey123 for ArcGIS, Explorer for ArcGIS, and Operations Dashboard for ArcGIS to optimize fieldwork.

4:00 pm to 4:45 pm – Breakout Sessions

Gathering Room 1

Address Points: A Better Way to Deliver Geographic Information

Robert Meier, TREKK Design Group

ESRI has made it easy to publish data and create mapping applications in ArcGIS Online. These "traditional" mapping applications require a search, then multiple clicks for a user to find information. Address Point data, attributed with many geographic descriptors, such as; zoning, wards, school districts, police districts and land ownership, can be the basis of a simple and easy to use mapping application requiring less clicks and a friendlier user experience. Using attributed Address Points an ArcGIS Online application can be created where a single query of an address, can display multiple attributes such as those listed previously and can even include links to other sites. Finding the time to maintain Address Points can be a challenge for many GIS professionals, since addresses and geographic boundaries change on a regular basis. TREKK Design Group has automated the maintenance of Address Points through Python scripting. The process reads data paths from a file and copies fields and attributes (point in polygon) from listed polygon-based data (zoning, school districts, etc.) to the target Address Points. The Address Points must be loaded onto ArcGIS Online while the polygon-based data, can be stored on a local drive, ArcGIS Server or ArcGIS Online. This presentation will show the difference between "traditional" mapping applications and ones based on Address Points. To aid in understanding the update process, some Python code will be shown and discussed.

Gathering Room 2

Flooding 2019

Mike D'Attilio, Kansas Department of Emergency Management (KDEM)

Through the spring and early summer of 2019, Kansas was impacted by several rounds of extensive flooding and severe weather. The Kansas Division of Emergency Management (KDEM) GIS group supported KDEM operations and response with several GIS applications and products. This session will examine some of these and (hopefully) provide some ideas for you to use in your jurisdictions for disaster response or for other projects.

Gathering Room 3

Open Data and the Esri Hub

Darren Haag, City of Topeka

Open data has become a hot-button item in recent years as governments and organizations are pushing towards more transparency. The City of Topeka recently launched a new open data site completely powered by the ESRI HUB. In this presentation, we will discuss the site, what needed to happen to move forward with it, why your organization should investigate open data, and the steps that could be involved in the initiative.

Thursday October 17th

9:00 am to 9:45 am – Breakout Sessions

Gathering Room 1

Basic Title Insurance

Darlene Flynn, Kansas Secured Title

Basic Explanation of Title Insurance / What its Title Insurance? / Owner's Policy-Lender's policy / Covers the history of the property going back in time / Unlike car insurance or life insurance, which covers future events / Other Title Research projects / County Tax Sale / Ownership and Encumbrance Reports / 50 Year Title Search-Environmental / Databases used for research / Appraisers site – Ownership, legal, physical address, taxes and special taxes / ROD/courts indexes and Federal courts in counties that have federal courts / We DO NOT research county engineer survey files, city regulations, planning rules and ordinances, and we DO NOT insure compliance with county and city regulations, zoning or rules. / GIS systems / Arial views, how RE sits on property, water and access to public road, legal description vs deed description. Mapping programs / Transverse PC & Map Draw and others (compiling a list) / Pencil, Paper, Pronto and Scale / Alta Surveys and their purpose / Commercial Property-high \$\$ means higher risk. Lenders have more stringent requirements. / Question and Answer session

Gathering Room 2

Arcade: What's the Point?

Amy Roust, Douglas County

I didn't choose a career in GIS because I love to code. So, when Esri unveiled a brand-new language called Arcade, I wasn't exactly jumping for joy. Why should I learn yet another language when I'm already striving to keep current with Python, SQL, JavaScript, HTML5, CSS, and VBScript? Join me for a frank assessment of this relatively new feature to the ArcGIS platform. I'll share what I've learned about Arcade so far and what I feel are the pros and cons of the language in its current state. Please note that I am not a programmer or developer. I will share some code samples, but I'm not going to delve deeply into the language's structure, logic, or syntax.

Gathering Room 3

Mapping Using Drone Imagery: Agricultural and Natural Resource Applications

Kevin Price, Air Data Solutions, LLC

You can read about drones in the news on nearly a daily basis. Drones are but a platform for acquiring remotely sensed data from an aerial perspective. Dr. Price became involved in the use of drones in 2010 and since has acquired hundreds of thousands of images from drones for mapping and vegetation studies. Much is said about drones, but their applications can be more complex than one may realize and mapping with the imagery can be challenging. Mappers who use imagery are most likely aware of image distortions such as radial displacement, off nadir viewing, reflectance variation caused by varying target geometric and biochemical properties and incoming solar radiation variation, vignetting, scale variation, edge matching, signal-to-noise issues, and more. During this presentation, Dr. Price will discuss what can and cannot be done well with drones, the challenges of using the imagery, and will show the amazing applications that are possible with the drone platform and discuss issues with sensors one should know before investing in them. The future of this technology is exciting but can be very disappointing if one does not understand how to avoid costly pitfalls.

10:00 am to 10:45 am – Breakout Sessions

Gathering Room 1

ORKA Update

Kristen Jordan Koenig, Kansas Data Access and Support Center (DASC)

ORKA is expanding from a basic property viewer website into a variety of products including a new management portal. Come hear about new products available and how to start using the ORKA Portal (PORKA).

Gathering Room 2

Clutter and Anarchy: A Story of the Unified Government's ArcGIS Online Organization

April Friedl, Unified Government of Wyandotte County/Kansas City, KS

Employees at the Unified Government of Wyandotte County and Kansas City, KS have been using ArcGIS Online (AGOL) since 2014. There was never a formal strategy on how to implement, manage, and use AGOL; the only plan was just to get more people using it. Fast forward five years and the Unified Government has 112 ArcGIS Online users (111 publishers), 2,653 pieces of content, 1,661 layers, 583 maps, and 296 apps. There are old user accounts, maps and apps with broken links and functionality, users who should not be publishers, AGOL groups that were never implemented, and several near-identical copies of ancient data. This presentation will focus on the steps the Unified Government took to clean up its AGOL Organization account including developing a steering committee, policies, workflows, accountability, basic training for users, and manual and automated data updates.

Gathering Room 3

Adventures in Geospatial Automation: How ArcGIS Streamlined a Stormwater Billing Process

Daniel Gwartney, Wood Environment & Infrastructure

Originally, the annual process for regenerating stormwater utility fees for the Southeast Metro Stormwater Authority was cumbersome and expensive. Efforts were largely manual and required data transfer between various programs. The step-by-step “guidance manual” for fee-calculation processes was over 400 pages, and comparison between before current records was difficult. Wood has worked to substantially automate the effort via sophisticated ESRI geoprocessing models and streamlined manual processes. As a result, the manual is now 1/10 the size, is more efficient, and only technically requires one software package - ArcGIS. File Geodatabases are now used to store all account information, while models generate master account files with consistent naming conventions. Metrics, linkages, and updates are more easily performed with the new file structure. Additionally, this same geoprocessing workflow is easily transferable to countless other stormwater billing systems. The presentation will discuss both billing systems, details of the GIS-based approach, and lessons learned.

11:15 am to 12:00 pm – Breakout Sessions

Gathering Room 1

Election Solutions

Tim Hensley, Esri

Esri's Election Solutions changed significantly at the beginning of 2019. The overall Election Solution has been compartmentalized into the concepts of Outreach, Management and Results. This presentation will discuss these compartments and focus on how they can be leveraged by Election Office and GIS Personnel. Discussions will revolve around identifying Election Polling Places, providing Polling Place Wait Times, identifying Elected Officials and the dissemination of Election Results, either in real time on election night, or after the election has been certified.

Gathering Room 2

Tornado Emergency

Bryce Hirschman, Douglas County

Rick Miller once told me “GIS data holdings are only as good as the last emergency.” I believed it then and I believe it now. Douglas County has been hit by a five (5) tornadoes, a couple micro-bursts, and a couple isolated weather events that caused damage since 2003 and the responses, from a GIS perspective, have become better with each successive event. Join me as we take a GIS tour of the most recent tornado to hit Douglas and Leavenworth Counties. We will look at apps, maps, and photos, as well as go through the sequence of events that comprised the GIS effort to support Emergency Management, first responders, and the Kansas Damage Assessment Team (KDAT) inspectors.

Gathering Room 3

Innovative Technologies to Improve Site Characterization: Deriving Actionable Intelligence from your Drone Data

Michael Rawitch, Ramboll

Recent improvements in the fields of remote sensing, computing power, and web-based GIS, allow for the implementation of new workflows facilitating an unprecedented level of

understanding in site characterization. Large volumes of data can quickly be collected and compiled into three-dimensional models, digital surface models, volumes, high-resolution orthomosaic images, oblique photography, and aerial videography. This large volume of data can be processed into a cohesive story using web-based GIS to share with stakeholders including consultants, regulators, clients, and local communities. During this presentation, we will discuss the collection of imagery data using remotely piloted aircraft systems (RPAS or drones) on several sites and review innovative methodologies that can be used to characterize these sites through several case studies. These case studies will show how we create value from drone data by automating advanced imagery analyses, including methodologies for change detection over time, automated feature extraction, volumetric analysis, hydrologic analysis, integration into mobile field devices, and vegetation monitoring at environmental projects.

1:00 pm to 2:00 pm – Walking Tour of Mapping Archives

Victoria Williams, T.R. Smith Map Collections, and Karen Cook, Special Collections Librarian

The mapping archive tour will focus on maps illustrating the history of Kansas and the region and will include map perusal of collections of both the T.R. Smith Map Collection and the Spencer Library's Kansas Collection. The tour will start with the T.R. Smith Map Collection in the Anschutz Library, where we will have time to peruse a selection of in Kansas, American, and international maps from the late 19th century to the present. The tour will continue at the Kenneth Spencer Research Library with a selection of historical maps of America from the age of the early explorers onward and of the Kansas region from the territorial period onward. Please note that this tour does require walking across campus so please wear appropriate footwear.

1:15 pm to 2:00 pm – Breakout Sessions

Gathering Room 1

Fancy Maps

Jared Tremblay, Flint Hills MPO

Bring your laptop and learn to play around with the free InDesign-like program Inkscape. Break free of ESRI restrictions and see how Inkscape can open a world of quick & beautiful maps.

2:15 pm to 3:00 pm – Breakout Sessions

Gathering Room 1

Role of LiDAR-Derived Stream Network Datasets

Atefeh Hosseini, Department of Civil and Environmental Engineering and Kansas Geological Survey, University of Kansas

John Dunham, Kansas Geological Survey

Elizabeth Smith, Kansas Department of Health and Environment, Bureau of Water

High-resolution National Hydrography Dataset (NHD) data are the basis for a number of state and federal regulations, including the Clean Water Act, and are critical for protecting important wetlands and inland marsh ecosystems (e.g., Quivira National Wildlife Refuge). These data are a central component of understanding how land use affects water quality. Climate change and land-surface conditions that affect surface channel drainage over time mean NHD-mapped hydrography flowlines must be updated. Since elevation is the key factor driving surface channels, flow networks derived from LiDAR DEMs provide a much higher level of detail than the existing NHD flowlines. Recent LiDAR acquisitions over large portions of Kansas, available at 1-m resolution, represent an opportunity to significantly improve the accuracy of NHD stream features. Here we explore the potential to use Esri ArcGIS hydrological tools with a suite of Python programming to generate stream features from LiDAR-based flow direction and accumulation estimates. The Middle Arkansas-Slate River sub-basin, with total drainage area of 216,711 acres (87,700 ha), was selected to assess the performance of the proposed method.

Gathering Room 2

Collector App for At-Grade Public Rail Crossings

Kyle Gonterwitz, GIS Manager, Kansas Department of Transportation (KDOT)

KDOT will present on how the collector app is being used to collect information about approximately 5,500 at-grade public highway-railroad crossings in the State of Kansas using Sparx Enterprise Architect for geodatabase design, ArcGIS and ArcPro for publishing hosted feature services to ArcGIS online and for data review and validation, the Esri Collector App for field data collection and Mapillary for photo. In addition to the technology architecture and approaches, the presentation will include details about version control and change management, including developing and delivering training and documentation to support the program, which is designed to meet FRA Highway-Railroad Crossing requirements and transportation planning initiatives.

Gathering Room 3

Arcade: Expressions with Power

Robert Meier, TREKK Design Group

This will be a programmer look at Arcade. I'll use the Labeling and Popup profiles to show features of Arcade. Examples of If and IIF statements, For Loops, and User Defined functions. I'll show how to create and use Dictionaries to aggregate and display data. Geometric operations like Intersect, Contains and Centroid will also be shown.

3:30 pm to 4:15 pm – Breakout Sessions

Gathering Room 1

BFE Portal and Web Resources

Bill Pace, Division of Water Resources, Kansas Department of Agriculture

For assisting Kansas communities in understanding flood hazard information, the Kansas Department of Agriculture -- Division of Water Resources, utilizes multiple web resources. The Base Flood Elevation (BFE) portal is a tool unique to Kansas that was created in partnership with

DASC. The portal is a web interface that allows end users to request BFEs for flood prone areas to build and insure properly. The portal is used for local community officials, surveyors, engineers, and at times, individual property owners. This presentation will discuss its features and the benefits they provide and planned future enhancements. This presentation will also discuss other web resources KDA-DWR provides, including the effective floodplain viewer and project web maps and web pages.

Gathering Room 2

ArcGIS Pro: Task Lists and Templates

Linda Sibert, Kansas Department of Agriculture

Streamline and automate your work using Task list. Project and layout templates; project, layer and map packages; and finally map, and layer files. What are the differences and best use cases for each type of sharing option.

Gathering Room 3

Soils Updates for Appraisal Parcel/Ag Use Mapping and Roundtable Discussion about Ag Use Mapping

Pam Dunham, Butler County

The goal of this session is to provide you a better understanding of where the SURGO Soils layer utilized in determining the agricultural value comes from and we will review how to determine if your SURGO Soils have updated each year. If they show an update, how do you know what updated? We will identify how to read the metadata to determine if it was tabular or spatial updates and where and what the changes were. We will discuss what to do next. How do you download and implement the updates? The session will wrap up with a roundtable discussion about agricultural use mapping in general, so bring your questions and we will discuss them to see how others handle the same situation.

Friday October 18th

8:30 am to 9:15 am – Breakout Sessions

Gathering Room 1

Hub: What Is It and How Do I Get Started?

Pam Dunham, Butler County

Did you know that with your ArcGIS Online account you have Hub Basic? So, what is Hub Basic and is it something that I should be using or could be using? We hear and see the words “collaborate and share content with other using sites or initiatives” in ESRI’s definition, but what do they really mean? Hub is a great way to showcase your work you are sharing currently, whether it is a website, data layers you are providing for download, PDFs or TIFFs just to name a few. In this session we are going to cover an overview and dive into how to get started creating your own. There will be some documentation you can take back home and some additional resources. You may also upgrade your license to Hub Premium, but other than some of the basic differences, we will not cover Hub Premium in this session.

Gathering Room 2

Cartographic Tips and Tricks in ArcGIS Pro: Re-Creating 1903 Loch Ness Survey Map

William Trimble, Shawnee County

Presentation focusing on cartographic methods in ArcGIS Pro. The main presentation source will be using Pro to re-create a survey map of Loch Ness by Marshall and Pearcy from 1903. Topics include finding sources of inspiration for maps, finding data for map projects, creating and editing styles, using photo editing software to create symbology, creating and using textures, how to make new maps look old, and other Pro tips and tricks relating to cartographic styling. Other examples of styles from the author will be discussed briefly if time allows. Wood cut maps, blue print maps, etc.

9:30 am to 10:15 am – Breakout Sessions

Gathering Room 1

Investigating controls on lateral erosion in a small bedrock river over long and short timescales

Abbey Marcotte, Graduate Student, Kansas State University (2019 JCM Scholarship Winner)

Bedrock rivers play a crucial role in landscape evolution; erosion and subsequent channel adjustment in these systems occurs through a complex combination of stream discharge, sediment transport, and climate. While much is known about how bedrock rivers erode vertically into their channel bed, controls on lateral erosion remain poorly understood. This study's objective is to investigate erosional processes of Kings Creek, a small bedrock stream located within Konza Prairie, using erosion pins, structure from motion photogrammetry (SfM), and optically stimulated luminescence (OSL) dating. Erosion pins are installed in exposed bedrock in the channel banks to measure modern erosion rates in resistant limestone and erodible shale bedrock. We use SfM, a range imaging technique, to create high resolution digital elevation models (DEMs) of channel banks. Through repeated surveys, DEMs of difference can be generated to evaluate patterns and volumes of bedrock erosion. We will use OSL dating of fluvial deposits overlying stream terraces at the study site, which will yield an age of when the stream occupied the terrace, as well as characterize deposition rates and the duration of lateral channel migration. Upon successful dating of fluvial deposits, OSL data coupled with SfM data and erosion pin measurements will ultimately reveal patterns of past and current lateral erosion, thus improving our understanding of how bedrock rivers erode laterally over time to form wide bedrock valleys.

Gathering Room 2

The GLO Meets GIS: Mapping 19th Century Kansas

David T. Hughes, Emeritus Professor of Anthropology, Wichita State University

The 1860-70 GLO plats have a great deal of historic information that can guide us through modern preservation efforts. As part of long-term objective of preparing a 19th century atlas of Kansas based on the original GLO maps, several interesting observations and some unusual workarounds have appeared. The focus of this presentation is on south-central Kansas.

Board Nominations:

President Elect:

Pamela Dunham has a bachelor's degree in Business from Wichita State University and began her career in mapping with Butler County in 1986. Her first job was in layout and design and from there she worked her way up through the department. She moved to Lyon County in 1991 as the GIS Coordinator where she was instrumental in implementing GIS. In 2000, she returned to Butler County as the GIS Director and her first task was to get Butler County GIS implemented with parcels and aguse. From there they have brought several departments on board and have created and maintain their own website internally with ArcGIS.

Pamela's background in cartography and the importance on current, maintainable GIS data was all started with a good foundation with KAM. Pamela has been Treasurer for the last few years and is excited to be nominated for President Elect.

Secretary:

Amy Roust is the senior GIS analyst for Douglas County, Kansas. She has both public and private sector experience supporting GIS clients in local government. Amy has an M.A. in Geography from the University of Missouri and earned her GIS Professional (GISP) certification in 2016. She is finishing her second year as KAM secretary and hopes to continue to serve the organization in that capacity for another year.

Treasurer:

Drew Bean currently works for Saline County, Kansas as a GIS Analyst. He has been working for the county for 6.5 years and has been a KAM member since being hired. He has a bachelor's degree in GIS and Geography from South Dakota State University. He was a Director for the last two years, and he would like to continue to serve KAM as Treasurer.

Director:

Tyler Fleming is a member of the Douglas County, Kansas GIS team. As a member of Kansas Association of Mappers for the past five years, he always appreciates the opportunity to network and hear how organizations around the state use GIS. Over the past year, Tyler served on KAM's program committee and acknowledges the importance of serving our organization. When away from the office, Tyler enjoys working on home improvements and playing with his two-year-old son. Tyler and his wife are expecting another boy in November. Although he might be tired over the next year, if elected he will enthusiastically continue to serve KAM.

Kyle Gonterwitz is a professional civil engineer and GIS Professional in the Bureau of Transportation planning at the Kansas Department of Transportation. Kyle has the privilege of providing a statewide transportation geographic information system to meet the needs of Kansas.

Darren Haag is a Solutions Architect for the City of Topeka in the Technical Support Group (TSG). Before this role he worked at an engineering firm and the Kansas Geological Survey. He spends most of his time working on GIS solutions for the city, asset management, and open data initiatives. Outside of work, he enjoys spending time with his family, traveling, cooking, and watching sporting events.

Clint Miller is a GIS Analyst who has managed the utilities infrastructure for the City of Lawrence Municipal Services and Operation division since 2006. Clint has been involved with topography and mapping of utilities mapping and surveying since 2000 as a Sr. Engineering Technician with the University of Kansas. Clint joined the Kansas Association of Mappers in 2012 and has been an active member participating the Designations and Conference committees. Clint is dedicated to spreading the insight and power of understanding that mapping/GIS brings, and the understanding that maps are modern day stories of our world both past and present. He is dedicated to the growth of the KAM organization and has worked to introduce new members to the organization each year and works to foster the sense of community in the GIS and mapping circles.

**Next Year's Conference – Oct 27-30, 2020 at
The Capitol Plaza Hotel in Topeka!**



LOBBY LEVEL

1. Bird Dog Bar
2. Five 21 Event Space
3. On The Hill Farmhouse Italian
4. All Seasons Den
5. Hancock Ballroom
6. Hancock Library
7. 1865 Uniquely KU
8. Coffee Corner

LOWER LEVEL

9. Slice of History
10. Hot Box Cookies
11. Media Room
12. Lemon Bliss Tanning (open seasonally)
13. Griffith Ballroom
- 14/15/16. Gathering Rooms 1, 2, 3
17. Fitness Center

