28th **Annual IMAGIN Conference**

June 9-11, 2019 | Grand Rapids

IMPROVING MICHIGAN'S ACCESS TO GEOGRAPHIC INFORMATION NETWORKS

IMAGIN

WELCOME!

To IMAGIN's 28th Annual Conference in beautiful downtown Grand Rapids. This year's conference features amazing keynote sessions, 40 breakouts, the Esri Hands-on Learning Lab, and fun networking opportunities.

To ensure you do not miss a thing, use the IMAGIN Conference app by accessing it through your device's web browser at www.imagincon.net.

The IMAGIN 2019 App is a Progressive Web App (PWA) and is best viewed in a web browser. The app is compatible with all major web browsers, including Chrome, Firefox, Edge, Internet Explorer, and Opera.

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IMAGIN 2019

IMAGIN 2019 ANNUAL EDUCATIONAL CONFERENCE

JUNE 9-11, 2019
GVSU EBERHARD CONFERENCE CENTER
GRAND RAPIDS, MI

Home   Schedule   Sponsors   Keynotes   Menu

Keynote Speakers

Monday Keynote Speaker: Adam Carnow

Topic: The Underutilization of GIS and How to Cure It

When most non-GIS professionals hear "G-I-S" they think "M-A-P". Now that GIS is a location intelligence platform, the underutilization of it is critical and career-limiting. As a GIS professional, your purpose is to do more than make maps. It is vitally important that you proactively evangelize and market all of the GIS capabilities. This presentation will provide strategies on how to spread the understanding and full value of GIS across your organization.

Adam Carnow is a Community Evangelist at Esri, the global market leader in Geographic Information Systems (GIS). He is a keynote speaker, thought leader and technology evangelist, helping organizations get the most out of their GIS investment, and make a difference in their communities. He inspires customers to maximize their return on investment in the ArcGIS platform. He works closely with the Esri teams and Partners to assure customer success. He helps these organizations use the ArcGIS platform to transform from mapmakers into solution providers, through the application of location intelligence, to deliver spatial insight. He strives to assist customers in creating and reaching their vision, and gaining professional recognition for their efforts, like awards, presentations, articles and videos.

Mr. Carnow has over 25 years of experience as a GIS practitioner in the public and private sectors, as well as academia. He holds a BA in Geography, and a MA in Urban and Regional Planning from the University of Florida, and has achieved certification as an Urban Planner (AICP) and GIS Professional (GISP).

Monday Lunch Guest Speaker: Ismael Chivite

Topic: Field Operations with ArcGIS

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Ismael Chivite works as a Senior Product Manager Lead at Esri. With over 20 years of GIS experience, Chivite is passionate about building ArcGIS products that help organizations use geography to improve the way they work.

Ismael will spend a portion of the Monday lunch session informing the group about Field Operations with ArcGIS. Attendees with learn how organizations leverage the power of geography to optimize field operations and the latest trends and applications in mobile GIS technology.

Tuesday Keynote Speakers: Wendy Ogilvie & Matt Chapman

Topic: Bringing the Rapids Back to Grand Rapids

On Tuesday morning, we welcome Wendy Ogilvie and Matt Chapman. Ogilvie is the Director of Environmental Programs for the Grand Valley Metropolitan Council (GVMC). Chapman is the Director and Project Coordinator for Grand Rapids Whitewater.

Wendy Ogilvie joined the Grand Valley Metro Council in 2013 as the Director of Environmental Programs. GVMC is an alliance of governmental units in West Michigan committed to Collaboration and coordination of governmental services. Wendy came to GVMC to create its Environmental Programs Department, bringing her expertise of over 25 years in watershed and storm water management and also her passion for convening and developing partnerships to build capacity in addressing environmental issues. Originally from Maryland, Wendy came to Michigan to earn a B.S. in Forestry from the University of Michigan and a M.S. in Resource Development from Michigan State University. She spent 13 years working for an engineering consulting firm focusing on water resource management projects.

At GVMC, her programs include the facilitation of 23 NPDES Municipal Stormwater Permits in Kent and Ottawa counties, implementing the strategic plan for the Lower Grand River Organization of Watersheds (LGROW), and assisting the project team in bringing back the rapids and restoring connectivity and habitat in the Grand River, working with Grand Rapids Whitewater and its many partners. Wendy also serves on the board of the West Michigan Sustainable Business Forum, connecting businesses with the watersheds and minimizing their impact on the natural resources.

Matt Chapman serves as the Project Manager for GRWW. Matt came to Grand Rapids Whitewater in September of 2015 after serving as the Executive Director of Alternatives in Motion for four years. Matt has over 12 years of experience in the nonprofit sector and is knowledgeable in marketing, special events management, grant writing & management, the donor development process, and organizational development. Matt holds a Bachelor's of Science in Advertising and Public Relations and a Graduate Certificate in Nonprofit Administration from Grand Valley State University

Schedule of Events

Sunday, June 9, 2019

2:00pm – 4:00pm	Early Vendor Registration Open *(Eberhard Center)*
2:45pm	Departure for Beer/Non-Beer tour and dinner *(Holiday Inn Downtown)*
7:00pm	Dinner Meet Up *(New Holland Knickerbocker, 417 Bridge St NW Grand Rapids)*

Sunday Social Event Sponsor

Transportation Provided By

Sunday Social Event Destinations

Monday, June 10, 2019

Time	Session
7:30am	Registration Opens *(Eberhard Center General Session Room)*
8:00am	Breakfast *(General Session Room)*
9:00am	Opening Remarks and Keynote Session: Adam Carnow *(General Session Room)*
10:15am	Break *(Conference Center)*
10:30am – 5:30pm	**Esri Hands on Learning Lab** *(Room 314)*
10:30am	**Technical Session 1**

ArcGIS Apps, Better Together: A How-To Session *(Auditorium)*	Free Tools from the National Geodetic Survey *(Room 310)*	Using Interactive Mapping & 360° Imagery to Promote Parks & Trails *(Room 311)*	Getting Started with Operations Dashboard for ArcGIS *(Room 316)*	Engaging DNR Customers with Story Maps *(Room 317)*

Time	Session
11:30am	**Technical Session 2**

Utilizing Survey123 for Damage Assessment Across the State *(Auditorium)*	Impervious Surface GIS and the Influences on Stormwater Billing & Credits in Ann Arbor *(Room 310)*	From GDAL to SAGA: Tips & Tricks from the World of Open Source *(Room 311)*	Monroe County: Transforming Education with ArcGIS & Geospatial Technologies *(Room 316)*	Utility Network & Productivity Tools *(Room 317)*

Time	Session
12:30pm	Vendor Networking Lunch *(General Session Room)*
1:00pm	Guest Speaker: Ismael Chivite *(General Session Room)*
1:45pm	**Technical Session 3**

GIS For Leaders: Seven Elements of a Successful Enterprise GIS *(Auditorium)*	Field Asset Collection – Survey123 & The Journey to Populate Vertical Asset *(Room 310)*	Geospatial Applications of Unmanned Aerial Vehicles at Western Michigan University *(Room 311)*	St. Clair County Equalization Leveraging GIS and Native Mobile App to Update Exempt Property Information *(Room 316)*	Campus Facilities Management GIS/GNSS Implementation *(Room 317)*

Time	Session
3:00pm	**Technical Session 4**

ArcGIS Enterprise: An Introduction *(Auditorium)*	SAW: A GIS Success Story *(Room 310)*	Transportation Accessibility: Matching Needs & Resources in Kalamazoo *(Room 311)*	Michigan Geographic Framework Technology Upgrade *(Room 316)*	A Road Commissions GIS Journey *(Room 317)*

Time	Session
4:15pm	Vendor Social Event *(Conference Center)*
5:30pm	Downtown Bingo Launch/Dinner on Own *(Downtown Grand Rapids)*
9:00pm – Midnight	Downtown Bingo Finale (9:00pm) / Social Networking *(J. Gardellas – Basement, 11 Ionia Ave SW)*

Tuesday, June 11, 2019

8:00am	Registration Opens *(Eberhard Center General Session Room)*

8:00am	Breakfast *(General Session Room)*

9:00am	Opening Remarks and Keynote Session: Wendy Ogilvie & Matt Chapman *(General Session Room)*

9:45am	Break *(Conference Center)*

10:15am – 4:00pm	**Esri Hands on Learning Lab** *(Room 314)*

10:15am	**Technical Session 1**				
	Digital History: Sanborn Fire Insurance Maps *(Auditorium)*	Where is the Lead? Utilizing ArcGIS to Create a Water Service Material Inventory in the City of Muskegon *(Room 310)*	Mapping & Using NOAA Weather Data to Measure Climate Change *(Room 311)*	The Crystal Lake "Tragicomedy" and the Johnstown "Flood" *(Room 316)*	GISP Update *(Room 317)*

11:15am	**Technical Session 2**				
	Survey123 for ArcGIS: Tricks of the Trade *(Auditorium)*	Transportation Asset Management: Tools & Reporting Requirements & Good Planning *(Room 310)*	Living the Parcel Fabric Life *(Room 311)*	A Spatial Analysis of Microplastics in Lake Michigan *(Room 316)*	Mapping Wine Grape Suitability Across Michigan *(Room 317)*

12:15pm	Vendor Networking Lunch *(General Session Room)*

2:00pm	**Technical Session 3**				
	Creating, Gathering, & Utilizing GIS Data to Help the Land Bank Recycle Land to Productive Use Across the State of Michigan *(Auditorium)*	Advanced Field Data Collection Using ArcGIS Collector & Survey123 *(Room 310)*	The Power of PostGIS *(Room 311)*	Coral Reef Study & Story Map: Bunaken National Park, Indonesia *(Room 316)*	How to Manage Highways In the Sky *(Room 317)*

3:00pm	**Technical Session 4**				
	ArcGIS Pro: Migrating from ArcMap *(Auditorium)*	Field Data Collection on a Budget with QField & QGIS *(Room 310)*	Adjusting Zoning Land Area & Density Standards to Better Match Existing Parcels in the City of Kalamazoo *(Room 311)*	Urban Tree Canopy Cover Change in Denver, Colorado 2005-2013 *(Room 316)*	Water Quality & Potential for Green Infrastructure in Detroit *(Room 317)*

4:00pm	IMAGIN General Membership Meeting *(General Session Room)*

4:15pm	Drawing for Drone *(General Session Room)*

4:30pm	Conference Closes

Technical Sessions

Monday, June 10
10:30 am

Technical Session 1

Auditorium

ArcGIS Apps, Better Together: A How-To Session

In this technical session we will introduce techniques to integrate ArcGIS apps together. Learn how to launch a smart form in Survey123 from Explorer and Collector, how to integrate Workforce for ArcGIS with Survey123 and Collector and how to build real time dashboards on top of all data you capture in the field.

Moderator: Brett Heist
Presenter: Ismael Chivite, Senior Product Manager
Presenter Email:
ichivite@esri.com
Agency: Esri

Room 310

Free Tools From the National Geodetic Survey

NOAA's National Geodetic Survey (NGS) has several free-to-the-public computer programs that are very useful to geospatial information creators and/or users. John will discuss a number of tools, from NGS' OPUS, OPUS Projects, and GEOID18 programs, which enable users to create their own geodetic project control, to the "NGS Coordinate Conversion and Transformation Tool" (NCAT) which enables users to transform data between multiple national adjustments and do many types of data conversions. John will give a detailed demonstration of several of the features of NCAT. If time permits, he will demonstrate NGS' DSWorld tool that enables users to easily locate existing control in the area of their projects, as well as enable users to submit new updates on that control to NGS.

Moderator: Ulrika Zay
Presenter: John Ellingson, PE PLS, Regional Geodetic Advisor
Presenter Email:
john.ellingson@noaa.gov
Agency: National Geodetic Survey

Room 311

Using Interactive Mapping and 360° Imagery to Promote Parks and Trails

The Southeast Michigan ParkFinder is an online interactive map and mobile application that includes an inventory of more than 2,600 parks in Southeast Michigan, allowing users to search more than 50 options, including park location, size, and recreational amenities. ParkFinder was recently integrated with Trail Explorer, which allows users to virtually tour over 1,000 miles of regional water and land trails. These 360-degree visual maps are similar to Google Street where you can explore the region's diverse trails network. The goal of ParkFinder and Trail Explorer is to allow outdoor lovers the opportunity to preview regional assets in a virtual environment. This presentation will provide attendees an overview of how SEMCOG worked with Terrain360 to bring this exciting tool to the region.

Moderator: Janet Mocadlo
Presenter: Beheshteh Makari, Ryan Abrahamsen
Presenter Email:
makari@semcog.org
Agency: SEMCOG, Terrain360

Room 316

Getting Started with Operations Dashboard for ArcGIS

At first glance designing your first dashboard might seem like a daunting task. However, with a couple of clicks and a good dataset you can be well on your way to create eye-catching data visualizations that provide key insight and aid in decision making. The talk will introduce common dashboard elements, illustrate the power of interactivity, and share helpful tips and tricks.

Moderator: Michelle Lazar
Presenter: Magda DiFranco, GIS Specialist
Presenter Email:
m.difranco@clintontownship-mi.gov
Agency: Charter Township of Clinton

Room 317

Engaging DNR Customers with Story Maps

The Michigan Department of Natural Resources (DNR) has been using story maps in the last two years to tell the DNR's story and educate the public about natural resources in Michigan. See examples of story maps from the DNR Maps & Data page, including Prescribed Burns, Stewardship Stories and the State Forests Tour. Learn tips and tricks on building engaging story maps with narrative, images, videos and interactive maps.

Moderator: Karl Linderoth
Presenter: Paige Gebhardt, GIS Analyst
Presenter Email:
gebhardtp1@michigan.gov
Agency: Michigan Department of Natural Resources

Monday, June 10
11:30 am

Technical Session 2

Auditorium

Utilizing Survey123 for Damage Assessment Across the State

EMHSD is rolling out a new damage assessment tool for emergency managers around the state. This mobile application provides the capability to assess damage after a disaster and assist in preparation for a preliminary damage assessment (PDA) with FEMA. The application works on any mobile device and provides an all-in-one package for damage assessment. The goal is to replace the clipboard, paper, GPS, and a camera, which are usually taken into the field for damage assessment, and instead use this all in one mobile device. The application is based on FEMA damage assessment forms for both individual assistance (IA) and public assistance (PA) and is built at EMHSD using the Esri Survey123 software.

Moderator: Keith Rikli
Presenter: Shanna Haley, Geospatial Analyst
Presenter Email:
haleys1@michigan.gov
Agency: Michigan State Police – Emergency Management & Homeland Security Division

Room 310

Impervious Surface GIS and the Influences on Stormwater Billing and Credits in Ann Arbor

A computer analysis of infrared aerial photographs is able to distinguish hard, impervious surfaces and water in contrast to areas that can absorb stormwater, such as lawns and gardens. Impervious area is calculated for each property and input into a tiered billing structure in order to equitably assess a stormwater utility fee proportional to the property's impact on the system. The City of Ann Arbor is in the 4th cycle of utilizing impervious surface GIS analysis to distribute the rate structure to City property owners. Learn from City of Ann Arbor GIS and Systems planning staff about the program implementation, the impervious acquisition and processing, and lessons cultured along the way. The presentation will also highlight the Stormwater "Credit" program, which incentivizes property

Moderator: Chris Van Horn
Presenter: Anthony Bedogne, Ethan Miller
Presenter Email:
abedogne@a2gov.org,
etmiller@a2gov.org
Agency: City of Ann Arbor

Room 311

From GDAL to SAGA: Tips and Tricks From the World of Open Source

Have you ever wondered what is available in the world of open source? This presentation will highlight a selection of tools, software, and web applications available through various open source GIS applications. The talk will be part presentation, part live demo, and illustrate a selection of simple and efficient techniques for a variety of geoprocessing tasks including batch raster processing, terrain visualization, web mapping, and more. The presentation will conclude with a demo of an open source WMTS tile server housed in the AWS cloud for serving LiDAR derivative imagery.

Moderator: Everett Root
Presenter: Trevor Hobbs, GIS Program Manager
Presenter Email:
trevor@contourgeographic.com
Agency: Huron-Manistee National Forests

Room 316

Monroe County - Transforming Education with ArcGIS and Geospatial Technologies

This presentation will present the efforts of Monroe County GIS to work with GIS literate High School students on GIS projects for Monroe County. Jeff Boudrie, Monroe County GIS Manager, Russell Columbus, Monroe High Teacher and Randy Raymond, Cyber Alert School Safety LLC, will discussion how this project is Transforming Education in Michigan with ArcGIS and Geospatial Technologies.

Moderator: Keri Blough
Presenter: Randy Raymond, Jeff Boudrie, Russell Columbus
Presenter Email:
aerraymond@aol.com,
jeff_boudrie@monroemi.org,
rkc118@gmail.com
Agency: Monroe County

Room 317

Utility Network and Productivity Tools

Many organizations are adopting and migrating to Esri's new Utility Network Model. Pasadena Water & Power is one of these organizations, and Avineon has been helping them on this complex journey. We will go over Pasadena's experience and lessons learned, and how focused tools have helped along the way. The end result of migration to the Utility Network and its advantages will be highlighted.

Moderator: Chad Collins
Presenter: Chad Collins, Joel Campbell
Presenter Email:
ccollins@avineon.com,
jcampbell@avineon.com
Agency: Avineon

Monday, June 10
2:15 pm

Auditorium

GIS for Leaders: Seven Elements for a Successful GIS Enterprise

It takes more than technology for an enterprise GIS to be successful. It requires business and IT management skills. This session will review the seven elements of a successful enterprise GIS and provide strategies how GIS Managers can implement them. The seven elements are:
• Vision and Leadership
• Understand how GIS can contribute to your organization's success
• Develop and maintain a GIS Strategic Plan
• Implement effective governance
• Implement evolutionary approaches (change management)
• Deploy engaging apps
• Recruit, develop and maintain good staff

Moderator: Jessa Challa
Presenter: Adam Carnow, Community Evangelist
Presenter Email:
acarnow@esri.com
Agency: Esri

Room 310

Field Asset Collection – Survey123 and The Journey to Populate Vertical Asset Information for use within Cityworks

In 2018, Cleveland Ohio embarked on a project to collect vertical asset information. This presentation will discuss the journey it took to get asset information into a geodatabase, through Survey123, for use within Cityworks and the lessons learned along the way.

Moderator: Stephanie Edlinger
Presenter: Cheryl Spencer, GIS Specialist
Presenter Email:
cheryl.spencer@woolpert.com
Agency: Woolpert

Room 311

Geospatial Applications of Unmanned Aerial Vehicles at Western Michigan University

Western Michigan University is developing an ambitious series of educational and research programs than use Unmanned Aerial Vehicles. This presentation describes the educational programs, personnel, equipment, software and research initiatives that use this emerging technology.

Moderator: Keith Rikli
Presenter: Charles (Jay) Emerson, Professor
Presenter Email:
charles.emerson@wmich.edu
Agency: Department of Geography, Western Michigan University

Room 316

St. Clair County Equalization Leverages GIS to Update Exempt Property Information

St Clair County is working on a project to leverage remote sensing, GIS software, and CAMA data to clean and populate missing property data, specifically exempt properties. Equalization field staff will then utilize a BS&A integrated native mobile app, which combines GIS and Assessment data, to field review all parcels flagged in the analysis to assure accurate information.

Moderator: Jason Moore
Presenter: Dave Priest, Justin Sears
Presenter Email:
dave.priest@pivotpoint.us,
jsears@stclaircounty.org
Agency: Pivot-Point, St. Clair County

Room 317

Campus Facilities Management GIS/GNSS Implementation

Chad Collins of Avineon, Inc. (formerly InfoGeographics) will present on an exciting project that involves implementing a GIS program with the facilities department at Interlochen Center for the Arts. This effort encompasses many facets and is setting the stage for a more widespread GIS application use throughout their campus and operation. Interlochen Center for the Arts is an internationally known school just outside of Traverse City that has a full time middle school and high school, hosts a student summer camp that students attend from around the world, and is a concert venue with artists big and small.

Moderator: Andrew Michalowski
Presenter: Chad Collins, Project Manager/GIS Consultant
Presenter Email:
ccollins@avineon.com
Agency: Avineon

Monday, June 10
3:30 pm

Auditorium

ArcGIS Enterprise: An Introduction

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.

Moderator: Brodey Hill
Presenter: Chris Beyett, Solutions Engineer
Presenter Email:
cbeyett@esri.com
Agency: Esri

Room 310

SAW – A GIS Success Story

This presentation will discuss how a grant program to better manage our infrastructure has advanced Geographic Information Systems across Michigan in surprising ways. It will first review the objectives and components of the program, then discuss the tools and methods used to achieve them.   It will then explore the positive un-intended consequences of the program including organizing data, integrating the efforts of many different professions and professionals, proliferated GIS across Michigan and advanced awareness of its uses and application. It will conclude with a brief discussion of the challenges that remain and what the GIS community can do to help the "newcomers".

Moderator: Michelle Lazar
Presenter: Max George, PS CFM, Sam Lipscomb
Presenter Email:
mgeorge@fveng.com,
slipscomb@fveng.com
Agency: Fleis & Vandenbrink

Room 311

Health Disparities and Transportation Accessibility: Matching Needs and Resources in Kalamazoo County

Kalamazoo County has high rates of sexually transmitted infections and gestational diabetes among expectant mothers, and high disparities in the quality of birth outcomes. This research considers transportation network accessibility by public transit and private vehicle in terms of travel time and equity of site selection. We find that by looking at multi-modal transportation accessibility we gain an understanding of the underlying spatial structure of a community that, in turn, relates to public health outcomes.

Moderator: Ariana Toth
Presenter: Kathleen Baker, Professor
Presenter Email:
kathleen.baker@wmich.edu
Agency: Western Michigan University

Room 316

Michigan Geographic Framework Update

The State of Michigan's basemap, the Michigan Geographic Framework (MGF), is undergoing a significant technology upgrade. Once in place, this will create new opportunities for streamlined exchange of geographic data between the State and authoritative data sources. This presentation will provide an overview of the project with demonstrations on new tools and functionality for interacting with the system.

Moderator: Jessa Challa
Presenter: Mark Holmes, Geospatial Services Manager
Presenter Email:
holmesm3@michigan.gov
Agency: State of Michigan – Department of Technology, Management, & Budget – Center for Shared Solutions

Room 317

A Road Commissions GIS Journey

Planning and implementing a GIS Program that is successful, effective, and cost efficient is an art. The Antrim County Road Commission (ACRC) decided to begin a program for internal use and to reach out to the public in 2018. Avineon (then InfoGeographics) have assisted ACRC along the way, using its "application oriented" methodology to focus on system, data, and staff resources that will be the most valuable in the short to long term. ACRC now has a well thought-out program and a working GIS with internal and external applications in operation. We will describe and demonstrate the method and major milestones of this journey to successful GIS.

Moderator: Jon Merrick
Presenter: James Bennett, Chad Collins
Presenter Email:
jbennett@avineon.com,
ccollins@avineon.com
Agency: Avineon

Tuesday, June 11
10:15 pm

Auditorium

Digital History: Sanborn Fire Insurance Maps

When the Grand Rapids Public Library received a donation of original 1874 and 1878 Sanborn Fire Insurance maps, we knew they deserved special treatment. Straddling the divide between making the maps accessible to the public while preserving them presented a unique challenge. A collaboration with the GIS specialists at WMU's Upjohn Center for the Study of Geographical Change enabled the library to provide high-quality scans online. This session will look at how to handle historic maps, the process of geo-tagging and how GIS analysts and archives can work together.

Moderator: Pete Schneider
Presenter: Julie Tabberer, Heather Edwards, Gregory Anderson
Presenter Email:
jtabber@grpl.org,
hedwards@grpl.org,
Gregory.Anderson@wmich.edu
Agency: Grand Rapids Public Library

Room 310

Where is the Lead? Utilizing ArcGIS to Create a Water Service Material Inventory in the City of Muskegon

The State of Michigan's new Lead and Copper Rule requires public drinking water suppliers to create an inventory of all their active lead water service lines before January 1, 2020. Inventorying and mapping 100+ year old underground water pipes with limited records is not always a simple task. This presentation explains how ArcGIS was utilized in the City of Muskegon to create a lead water service line inventory.

Moderator: Ed Dempsey
Presenter: Tyler DeNooyer, Civil Engineer
Presenter Email:
tdenooyer@preinnewhof.com
Agency: Prein & Newhof

Room 311

Mapping & Using NOAA Weather Data to Measure Climate Change

The Actuaries Climate Index (ACI) presents a half dozen geospatial climate change indices (at ActuariesClimateIndex.org) for the USA and Canada. The ACI maps climate change measures of Temperature, Precipitations, Wind, Drought and Sea Level Rise. Steve Kolk, an actuaries who helped build the ACI, will explain how the ACI website was built to map. He will show how it maps a dozen climate regions of the USA and Canada and how it can be refined with NOAA data to map climate changes for US counties.

Moderator: Ulrika Zay
Presenter: Steven Kolk, Actuary & Climate Data Scientist **Presenter Email:**
kolkulations@gmail.com
Agency: Kolkulations, LLC

Room 316

The Crystal Lake "Tragicomedy" and The Johnstown "Flood"

Partial drainage of Crystal Lake, a large inland lake, in NW Lower MI, was 15 X greater than complete drainage from Lake Conemaugh, a small artificial lake above Johnstown, in SW PA. The "TragiComedy" of Crystal Lake (1873) occurred during an attempt to build a canal to nearby Lake Michigan. No lives were lost and 2,000 A of beach were created worth ~$500,000,000. The Johnstown Flood (1889), "the worst inland flood in U.S. history", completely destroyed a thriving steel town. Some 2,209 lives were lost and property damages were ~ $463,000,000. GIS analysis of a QL2 LiDAR dataset (MiSAIL) and the historical project map for Crystal Lake allowed a comparison of hydrological parameters of both events.

Moderator: Eric Kerney
Presenter: Dr. Stacy Leroy Daniels, President Pro-Tem
Presenter Email:
stacydan@chartermi.net
Agency: Benzie County River Improvement Company

Room 317

GISP Update

GISCI began providing GIS professional certification in 2003 and launched the GISCI Core Technical Knowledge Exam® as an addition to the GISP certification in 2015. This session will focus on the value and growth of GIS professional certification and where GISCI and the GISP certification will go from here.

Moderator: Scott Swan
Presenter: Scott Swan, Faculty Member
Presenter Email:
sswan@nmc.edu
Agency: Northwestern Michigan College on behalf of the GIS Certification Institute (GISCI)

Tuesday, June 11
11:15 pm

Technical Session 2

Auditorium

Survey123 for ArcGIS: Tricks of the Trade

A full hour with live demonstrations uncovering not so widely known techniques to get the best of Survey123 for ArcGIS. Learn how to automate e-mail notifications when a survey is submitted, how to create high quality reports out of your Survey123 data, how to edit existing GIS features with Survey123 and much more.

Moderator: Larry LaCross
Presenter: Ismael Chivite, Senior Product Manager
Presenter Email:
ichivite@esri.com
Agency: Esri

Room 310

Transportation Asset Management: Tools & Reporting Requirements & Good Planning

Recent changes to Public Act 51 call on local agencies to provide further reporting of road, bridge, culvert and other transportation assets. The Transportation Asset Management Council (TAMC) has been on the forefront of creating tools to assist Michigan agencies in meeting these requirements as well as using them for the advancement of condition goals and pursuing optimum performance.

Moderator: April Kibby
Presenter: Roger Belknap, Coordinator
Presenter Email:
belknapr@michigan.gov
Agency: Michigan Department of Transportation – Transportation Asset Management Council

Room 311

Living the Parcel Fabric Life

ESRI's Parcel Fabric has several tools to edit and maintain parcels, however moving an existing parcel dataset to the required data model can be intimidating. In 2014, I took the plunge and moved Livingston County's parcel maintenance to ESRI Parcel Fabric. Topics covered include converting the data, maintenance, and scripting with Python to bring new edits to county users for the permitting process. Most importantly, I will discuss the numerous lessons learned along the way.

Moderator: Jon Merrick
Presenter: Sandon Lettieri
Presenter Email:
slettieri@livgov.com
Agency: Livingston County

Room 316

A Spatial Analysis of Microplastics in Lake Michigan

The purpose of this research is to find which type of microplastic (bead, fiber, fragment) is most abundant in Lake Michigan and where spatially they are most abundant.

Moderator: Cassie Verras
Presenter: Brooke Veres, Undergraduate Student
Presenter Email:
veresb@mail.gvsu.edu
Agency: Grand Valley State University

Room 317

Mapping Wine Grape Suitability Across Michigan

Unlike most fruit production, wine grape cultivation is on the rise in Michigan, particularly in the Southwest and Northwest portions of the State. Finding the best locations to plant Vinifera grapes has typically been a completely field-based enterprise due to limited availability of precise data. Through a grant from the Michigan Horticulture Society, RS&GIS utilized expert knowledge in the industry, along with modern data and techniques, to create a precise Vinifera suitability dataset useful for grape production planning. This presentation will discuss data, scoring rubric and geospatial modeling techniques used to complete the project. A discussion on the usefulness of the data products, as well as future efforts, will follow.

Moderator: Keri Blough
Presenter: Robert Goodwin, Nick Weil
Presenter Email:
goodwinr@msu.edu,
weilnich@msu.edu
Agency: Michigan State University RS&GIS

Tuesday, June 11
2:00 pm

Technical Session 3

Auditorium

Creating, Gathering, and Utilizing GIS data to help the Land Bank recycle land to productive use across the State of Michigan

Whether using an unmanned aerial system or the resources of federal and state agencies and local governments, the Michigan Land Bank relies on many geographic information systems to ensure that the data for it's 2,800 properties is accurate and up-to-date. Working together, GIS Data Analyst Ryan McNeil, Disposition Specialist Jennifer Quinlivan, and Property Analyst Brian Woodin integrate multiple sources of data in their daily activities.

Moderator: Karl Linderoth
Presenter: Brian Woodin, Ryan McNeil, Jennifer Quinlivan
Presenter Email:
woodinb@michigan.gov,
mcneilr@michigan.gov,
quinlivanj@michigan.gov
Agency: Michigan Land Bank Fast Track Authority

Room 310

Advanced Field Data Collection Using ArcGIS Collector and Survey123

This presentation will detail the new version of ArcGIS Collector, specifically how to capture high accuracy Z-Values in the field and ways to spatially analyze this data. In this demonstration we will also use Survey123 to complete advanced inspection forms for asset management.

Moderator: Stephanie Edlinger
Presenter: Damien Finkbeiner, Kray Freestone
Presenter Email:
dfinkbeiner@gowightman.com
kfreestone@gowightman.com
Agency: Wightman & Associates

Room 311

The Power of PostGIS

This presentation will provide an overview of PostgreSQL and its spatial extender, PostGIS. Learn what PostGIS has to offer the geospatial community and how to leverage its power to run spatial queries and create topology checks.

Moderator: April Kibby
Presenter: Melissa Zagorski, Software Development Engineer
Presenter Email:
mazagors@umich.edu
Agency: Radiant Solutions

Room 316

Coral Reef Study and Storymap -- Bunaken National Park, Indonesia

In May of 2018, Northwestern Michigan College partnered with the Institute Politeknik Negeri Manado to complete an integrated marine, aerial, and water quality survey of the coral reef system around the Bunaken Island National Park located in North Sulawesi, Indonesia. One of the many challenges the team faced was how to effectively present the results of the data collection. The team settled on an Esri Storymap for the final product.

Moderator: Scott Swan
Presenter: Scott Swan, Faculty Member
Presenter Email:
sswan@nmc.edu
Agency: Northwestern Michigan College

Room 317

How to Manage Highways In the Sky

The rapid growth of the drone industry has outpaced the development of rules and systems to govern their use. Drone use is restricted by fragmented, non-existing data and systems for managing local government airspace. We will present the five dimensions that impact embracing drone technology within your state & local government.

Moderator: Sarah Merz
Presenter: Michael Healander, President & CEO
Presenter Email:
michael.healander@airspacelink.com
Agency: Airspace Link, Inc

Tuesday, June 11
3:00 pm

Auditorium

ArcGIS Pro: Migrating from ArcMap

Are you an ArcMap user? This is the workshop for users to learn tips and strategies for getting your job done right with ArcGIS Pro. Take the apprehension out of transitioning from ArcMap to ArcGIS Pro and gain the skills you need and learn where to find your favorite tools. We'll show you tips and tricks and share how to tackle essential workflows, such as editing, querying, basic analysis, and sharing with ArcGIS Pro.

Moderator: Shane Pavlak
Presenter: Chris Beyett, Solutions Engineer
Presenter Email:
cbeyett@esri.com
Agency: Esri

Room 310

Field Data Collection on a Budget with QField and QGIS

In January 2019 the release candidate of QField 1.0 was released. This open source mobile application works on Android devices and allows users to collect data in the field in offline environments, then sync that data back to a desktop QGIS project. We'll explore a field data collection workflow for gathering invasive species locations and information using these two open source (and free) solutions.

Moderator: Julie Feria
Presenter: Jessica Kane, Project Manager & GIS Developer
Presenter Email: jkane@line-45.com
Agency: Line 45

Room 311

Adjusting Zoning Land Area and Density Standards to Better Match Existing Parcels in the City of Kalamazoo

In January of 2019 The City of Kalamazoo City Commission approved an amendment to reduce the minimum land area, setback and lot frontage standards for residential zoned parcels in the City of Kalamazoo. In order to visualize this issue GIS was used in conjunction with assessing data to map the ranges of lot width and lot area standards to assist the Planning Commission, City staff and the City Commission with understanding the zoning concept. Using a green to red color scheme all the residentially zoned parcels were mapped showing the current standards and how they conform to existing zoning code and how they conform after the proposed amendments. The maps were used in addition to other items to successfully amend the Zoning Ordinance to remove an additional barrier to development based.

Moderator: Jon Gartha
Presenter: Robert Durkee, Planner
Presenter Email:
durkeer@kalamazoocity.org
Agency: City of Kalamazoo

Room 316

Urban Tree Canopy Cover Change in Denver, Colorado, 2005-2013

In 2006, the City of Denver introduced "The Mile High Million" initiative to plant one million trees in the Denver metropolitan area by the year 2025. This was an attempt to increase the "green space" within the urban environment, however the initiative was cancelled in 2012. The project will evaluate the success of the initiative, and determine whether or not Denver green space increased between 2005 (before the initiative) and 2013 (after).

Moderator: Jason Moore
Presenter: Ryan Taylor, Dr. Adam Mathews
Presenter Email:
ryan.z.taylor@wmich.edu,
adam.mathews@wmich.edu
Agency: Western Michigan University

Room 317

Water quality and potential for green infrastructure in Detroit

Detroit has one of the largest wastewater treatment plants in the world and a combined sewage and rainwater sewer system, both of which present challenges for controlling contamination of surface water. In this study, we evaluate water quality data from Detroit and then use spatial data to determine where in the city green infrastructure may be most suitable.

Moderator: Terry Zahniser
Presenter: Colleen Long, Research Associate
Presenter Email:
longcm@umich.edu
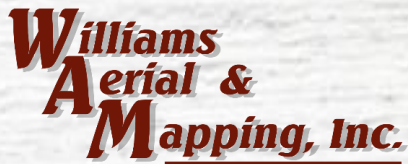**Agency:** University of Michigan - Graham Sustainability Institute

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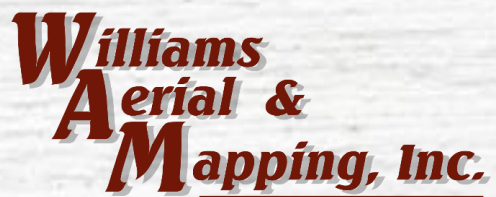# Conference Sponsors

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