

# MACURISA2018

- B** Best Management Practices    **I** Business    **D** Demographics    **R** Drones & Web Mapping
- E** Emergency Management    **C** Emerging Technologies & Information Systems    **1** Enterprise GIS
- V** Environment    **G** GIS TECHSPO    **A** GIS Training    **K** Keynote Speaker    **L** LiDAR
- H** Lightning Talks    **M** Meal / Break    **N** NJGIN / State of NJ    **O** OneURISA    **2** Open Data & Sharing
- P** Parcels    **F** Pre-Conference Workshop    **S** Social After Gathering    **T** Transportation
- U** Un-Conference    **3** Utilities

## OCTOBER 23 • TUESDAY

4:30pm – 6:00pm    **S**    **Social Event #macurisa2018**    The Iron Room

Join us at [The Iron Room](#) for a tutored bourbon tasting with MAC President and Executive Chef Kevin Cronin. Together we will celebrate our MAC volunteers while enjoying the subtle smoothness of this MAC President favorite, alongside globally inspired contemporary American cuisine.

7:30pm – 9:00pm    **S**    **Social Event #macurisa2018**

“Its Quiz Time!”-I will attempt to host a quiz game using the Xbox and your smartphone where the winner will receive a delicious craft brew.

OCEAN TOWER 801

## OCTOBER 24 • WEDNESDAY

7:30am – 8:30am    **M**    **Breakfast**    Horizon Ballroom

The menu should include:  
 Omelet Station: Farm Fresh Eggs, Egg Whites & Egg Beaters, Mushrooms, Onions, Peppers, Baby Tomatoes, Bloomsdale Spinach, Shredded Cheddar, Diced Ham  
 Rendezvous Deluxe Buffet: Assorted Fruit Juices, Sliced Fresh Seasonal Fruits, Assorted Bagels, Breakfast Pastries, Butter, Cream Cheese, Greek Yogurt, Granola, Seasonal Berries, Challah Bread French Toast with Vermont Maple Syrup, Scrambled Eggs, Bacon, Sausage and Home Fried Potatoes

8:45am – 12:15pm    **F**    **Field Data Collection using ArcGIS**    Atlantic 8

*Speakers: Adam Ziegler*

The ArcGIS platform provides powerful tools for collecting, publishing, sharing, and using data to support a mobile workforce, within the structure of a modern web GIS. In this workshop, you will use ArcGIS Pro to create and publish an ArcGIS Online feature service. You will then learn how to use Collector for ArcGIS and Survey123 for ArcGIS to capture information around the facility. An ArcGIS Online Organization has been provisioned for use with the workshop, and your instructor will give you an identity to use for the workshop. This account will remain active for 5 days after the conference, then will be deleted.

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8:45am – 12:15pm	<b>F Introduction to Spatial SQL</b> <i>Speakers: John Reiser</i> This half-day workshop will provide you with an introduction to SQL and relational database management systems (RDBMS) with a special focus on using databases to maintain, query, and modify spatial data. Using the open-source DBMS PostgreSQL and its spatial extension PostGIS, we will explore using SQL to perform tasks you may have previously performed using a desktop GIS. ETL processes, data analytics, and modeling can all be extended and enhanced through the use of SQL in a spatially-enabled database.  Outline Introduction to SQL and the database Bringing GIS into the database using PostGIS and open source tools Querying your data  Intended Audience: Beginner to Intermediate Attendees must be familiar with desktop GIS software. Experience with QGIS is a plus. Attendees must bring their own laptop with wifi/wireless capabilities. Prior to the workshop, attendees must install the PostgreSQL software and workshop data on their laptop. Attendees are also encouraged to install the open source QGIS desktop GIS software if the laptop does not have an existing desktop GIS installed.	Atlantic 7
8:45am – 12:15pm	<b>F When to Use Ground, Aircraft and/or UAS Mapping Techniques</b> <i>Speakers: Justin Lahman</i> This session will cover today's decision-making process for employing three automated surveying technologies when approaching a mapping project. The session will present considerations for using land surveying, aircraft, UAS and/or a combination of the 3 techniques for a particular mapping project. Consideration of scope, accuracy, precision, site location, site conditions, site access, FAA airspace limitations, deliverables, budget and schedule are all factors to be evaluated in order to be competitive, meet client requirements and expectations, and be in compliance with applicable state and federal law.	Atlantic B

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8:45am – 5:45pm	<b>F A Conversation Between a Surveyor and a GIS Manager about Parcels</b> <i>Speakers: Peter Borbas, Peirce Eichelberger</i>	Atlantic A
<p>This Full Day Workshop will be presented with two instructors, one a GIS staffer (F. Peirce Eichelberger) and one a surveyor (Peter Borbas) using with many graphics, illustrations and photographs. The point/counterpoint format encourages attendee interest and engagement. The format allows for the development of two perspectives on many key issues that need to be discussed and better understood by all involved. Interactive sections in the workshop are planned.</p> <p>This workshop will benefit the larger GIS, survey and related communities, ex. title communities, assessment and Clerks and Recorders. GIS interests will get a new appreciation for the role of surveyors in GIS including, geodetic control, base map accuracy, precision, as-builts and other GIS theme/layer involvement. Surveyors will gain a new appreciation of what is GIS and better understand their important role with all things pertaining to legal descriptions. A goal of the workshop is for both the GIS and survey communities to better understand each other's perspectives and what each brings to the table.</p> <p>What Really is GIS?—What exactly is a GIS map?Role of the GIS base map.All layers are not created equal!Parcel role/Subparcels3-D DiscussionWhere does GIS data comes from?Imagery's Role Photogrammetrists and (versus) the SurveyorGeodetic Control—the real framework, yet still poorly understood. The Ideal vs. the Practical.State Plane Coordinates joint perspectives for parcel mappingParcels/lots survey/GIS perspectiveGet ready for a new datum in 2020.How the map is built/maintained/improved?IT Keys and Things that tie it all together. Addresses, names, contact information. Data standards. Surveyors/Developers /Engineers and the Title Community—How GIS can help?Why GIS Needs Surveyors? Read Legal Descriptions.Subdivision ordinances, SPS, monuments and workflow. Why the Title Community Needs Surveyors? Uniform Parcel Identifier (UPI) program in PennsylvaniaThe PRIA (Property Records Industry Association) Land Records/GIS Integration Initiative.GPS/GIS/CORS—the Europeans are coming, so are the Chinese!Monuments from A-ZPLSS Versus the Original 13 ColoniesStaffing/CertificationURISA's (Urban and Regional Information System Association) G-LIS' RoleVarying State Roles and Responsibilities</p>		
8:45am – 5:45pm	<b>F Hands-on Workshop: Data Documentation for ArcGIS Online, using ArcCatalog Metadata Editor</b> <i>Speakers: Edith Konopka</i>	Atlantic C
<p>Edith Konopka, NJ Office of Information Technology, Office of Geographic Information Systems</p> <p>This all-day workshop will cover hands-on use of Esri's ArcCatalog 10.3.1 (or later) ArcGIS metadata editor, as well as a brief overview of why writing metadata is important, what standard(s) are applicable, and a mention of alternate tools for non-Esri users.</p> <p>The goals of the course are:</p> <ol style="list-style-type: none"> <li>1. To prepare Geographic Information System users to create metadata that properly documents their geospatial data.</li> <li>2. To encourage and facilitate geospatial data documentation efforts on ArcGIS Online/Open Data and the revamped New Jersey Geographic Information Network (NJGIN 3.)</li> </ol>		
10:15am – 10:45am	<b>M Break</b>	Horizon Ballroom
<p>The menu should include:          Freshly Brewed Regular &amp; Decaffeinated Coffee and Assorted Hot Teas Assorted Soft Drinks and Bottled Waters          Chocolate Dipped Strawberries, Chocolate Brownies, Blondies, Assorted Cookies, Assorted Biscotti</p>		
12:30pm – 2:00pm	<b>M Lunch</b>	Horizon Ballroom
<p>The menu should include:          Vine Ripened Tomatoes, Buffalo Mozzarella &amp; Basil Salad, Aged Balsamic Oven Roasted Chicken with Cannellini Beans &amp; Prosciutto Ragu Meatballs with House Made Marinara Baked Ziti with Hand Dipped Ricotta Broccoli Rabe with Garlic &amp; Olive Oil Garlic Bread Rolls and Butter Tiramisu, Biscotti</p>		

2:15pm – 5:45pm	<b>F Advanced Spatial SQL</b> <i>Speakers: John Reiser</i>	Atlantic 7
	<p>This half-day workshop will provide you with a deeper understanding of analyzing, processing, and managing spatial data using SQL. Using the open-source DBMS PostgreSQL and its spatial extension PostGIS, we will explore using SQL to perform tasks you may have previously performed using a desktop GIS. ETL processes, data analytics, and modeling can all be extended and enhanced through the use of SQL in a spatially-enabled database.</p>	
	<p>Outline  Advanced SQL Queries  Creating New Data  Developing ETL Processes</p>	
	<p>Intended Audience:  Intermediate to Advanced</p> <p>Attendees must be familiar with desktop GIS software. Experience with QGIS is a plus.  Attendees must bring their own laptop with wifi/wireless capabilities. Prior to the workshop, attendees must install the PostgreSQL software and workshop data on their laptop. Attendees are also encouraged to install the open source QGIS desktop GIS software if the laptop does not have an existing desktop GIS installed.</p>	
2:15pm – 5:45pm	<b>F ArcGIS Pro: An Introduction</b> <i>Speakers: Rachel Weeden</i>	Atlantic 8
	<p>Whether you have many years experience working with desktop GIS or you are just starting out, chances are ArcGIS Pro is new to you. ArcGIS Pro is an essential application for creating and working with spatial data. With a completely redesigned interface and project-centric approach, ArcGIS Pro provides the capabilities you need from a desktop GIS but in a more modern application. In this workshop, you'll gain hands-on experience working with ArcGIS Pro by exploring a project that will guide you through authoring a map, symbolizing data, working in both 2D and 3D, common editing workflows, and analysis tasks. This is a half-day workshop.</p>	
2:15pm – 5:45pm	<b>F The EOC, E Team, and GIS</b> <i>Speakers: Tom Rafferty</i>	Atlantic B
	<p>The goal of this half day workshop is to strengthen the relationship between GIS and Emergency Management communities. The first topic to be covered will teach the GIS user how an Emergency Operations Center (EOC) is organized and where they fit into the overall response to the disaster. You will learn about the National Incident Management System (NIMS) and study the relationship between the EOC and the on-scene Incident Command System (ICS) used by first responders. Next you will learn how to create and view reports within E Team, the State of New Jersey's situational awareness platform. The workshop will conclude by teaching how to spatially enable the real time data so that they can be migrated into your agency's native GIS environment.</p>	
	<p>Requirement for registration: This workshop is intended for those who will staff or directly assist an EOC during a disaster. Since you will be receiving the same training and have the same access to E Team as all emergency managers you will need to receive permission from your local, county, or state Office of Emergency Management (OEM) prior to the workshop. When you submit your registration for the workshop you will be given instructions on how to contact your appropriate OEM for approval. Certain exemptions can be made for private sector employees, please contact Tom Rafferty at NJOEM for details. Walk in registrations will not be accepted.</p>	
3:45pm – 4:15pm	<b>M Break</b>	Horizon Ballroom
	<p>The menu should include:  Soft Philly Pretzels, Mustard, Route 11 Chips, House Made Pop Corn Jones Sodas, Bruce Cost Ginger Ale, Peanut Chew</p>	

5:30pm – 7:30pm      S    **Social Event #macurisa2018**  
It's Tuckahoe Time!  
Visit the workshop common area and join us for a delicious Tuckahoe craft beer. The menu should include Quatrain and Steelman Town Porter, (*please don't forget to tip your beer server*).

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9:30pm – 11:00pm      S    **Social Event #macurisa2018** TBA  
Project Karaoke with Johnny Bonez: so what is your singing voice like?  
  
OCEAN TOWER 801

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**OCTOBER 25 • THURSDAY**

8:00am – 9:00am    **M** **Breakfast - Horizon Ballroom**    Horizon Ballroom

The menu should include:  
 Rendezvous Deluxe Buffet: Assorted Fruit Juices, Sliced Fresh Seasonal Fruits, Assorted Bagels, Breakfast Pastries, Butter, Cream Cheese, Greek Yogurt, Granola, Seasonal Berries, Challah Bread French Toast with Vermont Maple Syrup, Scrambled Eggs, Bacon, Sausage and Home Fried Potatoes.  
 Home-Made Waffles, Warm Vermont Maple Syrup, Whipped Cream and Seasonal Berries.

9:00am – 10:00am    **K** **Keynote Speaker - Dan Martin, Northeast Regional Geodetic Advisor**    Horizon Ballroom

*Speakers: Dan Martin*

In 2022, the National Geodetic Survey will be replacing the U.S. horizontal and vertical datums (NAD 83 and NAVD 88). We will discuss the history of these datums, their relationship to other reference frames, the reasons for the change, and how it affects positioning professionals and their use of these datums. We will spot light how good coordinates can go really bad, without proper planning. The amount of data, how data is used and the type of data users have exponential increased since the NAD 27 to NAD 83 conversion, which has also increased the potential for introducing error.

10:15am – 11:45am    **R** **\*\*\*\*CANCELED\*\*\*\*Expanding UAS Capabilities\*\*\*\*CANCELED\*\*\*\***    Atlantic C

*Speakers: Megan Kelly*

As technology continues to improve, so does the capabilities of unmanned aircraft systems (UAS) within the field of engineering and surveying. Remote aircrafts are no longer viewed as a mere pastime for hobbyists, they are now valuable instruments for firms on a global scale. This cutting-edge technology aids in various applications such as emergency response, agricultural monitoring, volumetric data collection, marketing, etc. Quick and safe deployment of airframes enable inspectors to be more versatile than their previous practices. While LiDAR and other technologies serve their purpose, UAS proves to be a fast and efficient alternative to data collection. With this in mind, Michael Baker International is demonstrating an impressive effort in expanding their fleet; currently, there are over fifty certified remote pilots throughout the country. For clients seeking accurate data at an economical price, UAS applications are the best option to date.

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- 10:15am – 11:45am R **Field Team Manager - Building a Scalable Team Routing & Tracking System** Atlantic C  
*Speakers: Ed Farell, Chris Klaube*
- How does one build an application that creates optimized routes, schedules and collects data in real-time from teams of field technicians treating over 150,000 catch basins in NYC? This talk will cover all aspects of the "Field Team Manager" web and mobile applications, project inception and challenges, as well as technical features and lessons learned. Technical features include: web editing of routes with many stops (400+) and differing modes of transportation, optimizing of paths for treatment routes, viewing progress of active teams in the field, report generation and dashboard view. The custom mobile application enables field technicians to sequentially treat catch basins and provides a map view for navigation and route status. These applications were built using a combination of cloud, open source and Esri technology. The talk will discuss these technical components as well as architecture.
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- 10:15am – 11:45am R **Sussex County, NJ - The Integration of Hyland Onbase with Esri ArcGIS Online** Atlantic C  
*Speakers: David Kunz*
- Sussex County, NJ is leveraging two enterprise systems as part of an overall technology strategy to improve County workflows. The implementation of Hyland's OnBase electronic management system (EDMS) and Esri ArcGIS Platform has largely driven the County's success of managing county information at the enterprise level.
- This presentation will provide an overview of the County's implementation and the integration of these two technologies of managing and delivering information to the public, knowledge workers, and elected officials
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- 10:15am – 11:45am E **Atlantic County Planning & City of Ventnor Partnership for Improved Emergency Management and Fire Safety** Atlantic D  
*Speakers: Mike Cahill, Sarah Taylor-Deak*
- Atlantic County Office of GIS and the City of Ventnor Office of Emergency Management have worked together over the last year to produce several GIS products to help plan for Emergency Situations. Ventnor OEM has produced web maps showing the critical infrastructure that has been identified by both Atlantic County and Ventnor City. This web map is the foundation for the web mapping application, collecting and editing Fire Hydrant locations within the city. Points representing fire hydrants have value added information such as being coded with water pressure information as well as fitting information. This data will serve as the basis for the Ventnor Fire Department hydrant inventory so that Fire personnel can easily identify which hydrant is in the vicinity of an active fire.
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- 10:15am – 11:45am E **Mapping our Roads for 911 and Working with the State of New Jersey's Roadway Centerlines** Atlantic D  
*Speakers: Kiersten Gauntt, David Rickert, Merrilee Torres*
- Since 1998, Burlington County has been maintaining its own GPS road centerlines which are heavily used internally for mapping. However, the GPS centerlines do not contain address attributes thereby causing us to rely on commercial datasets for addressing. In 2012, the commercial dataset was replaced by the newly created road centerlines provided by the New Jersey Office of GIS.
- In order to support our 911 call center, it became necessary for Burlington County to review and edit the centerlines from NJ OGIS. This effort is still ongoing in a maintenance phase. Roads and addresses do not exist in a vacuum; they are related to and interdependent on many other layers as well as information and processes that can feed into GIS. Burlington County tries to account for this in our update methodology.
- This presentation will cover Burlington County's initial experience editing and enhancing the centerlines, the workflows and processes we have in place to continually update both the GPS road centerlines and the roads for 911, and our recent work to prepare the 911 centerlines to support an upgrade to our 911 CAD software. This upgrade will bring us a step closer to Next Gen 911.
- Throughout the past 6 years of editing and maintaining the 911 centerlines, we have worked with the New Jersey Office of GIS so our updates can be incorporated into their statewide NJ Roadway Centerlines. In 2018, we are embarking on a partnership with NJ OGIS to supply them with new roads and edits through a geodata service.
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**OCTOBER 26 • FRIDAY**

8:45am – 9:45am    **M** **Breakfast - Horizon Ballroom**    Horizon Ballroom

The menu should include:  
 Assorted Fruit Juices, Seasonal Fruit Salad, Assorted Bagels, Danish and Muffins, Butter, Cream Cheese, Preserves and Jams, Scrambled Eggs, Applewood Smoked Bacon, Home Fried Potatoes  
 Omelet Station-  
 Farm Fresh Eggs, Egg Whites & Egg Beaters, Mushrooms, Onions, Peppers, Baby Tomatoes, Bloomsdale Spinach, Shredded Cheddar, Diced Ham

10:00am – 12:00pm    **N** **New Jersey Geospatial Forum**    Horizon Ballroom

*Speakers: Patricia Leidner*

**New Jersey Geospatial Forum Meeting Announcement**

**Date:** Friday, October 26, 2018  
**Time:** 10:00 a.m. to 12:00 p.m.  
**Location:** Ocean Ballroom at Resorts Casino & Hotel. 1133 Boardwalk, Atlantic City, NJ 08401.  
**Scheduled Speaker:**  
**Karl Vilacoba, Urban Coast Institute’s Communications Director.**  
 The Urban Coast Institute is regarded as a leader in the fields of ocean planning and coastal law and policy. We are committed to supporting the implementation of coastal and ocean management actions and policies based on the best available science at the local, state and regional levels. The UCI also educates thousands of members of the public each year about emerging coastal policy and science issues through special events, such as our annual Future of the Ocean Symposium and Champions of the Ocean Symposium.  
 The UCI serves as the principal investigator among a team of research institutions developing the Mid-Atlantic Ocean Data Portal, a free, interactive mapping and information site focused on ocean areas from New York through Virginia. The site was initiated under the guidance of the Mid-Atlantic Regional Council on the Ocean (MARCO) with grant funding provided by the Gordon and Betty Moore Foundation and the National Oceanic and Atmospheric Administration. In 2016, the Portal served as a key information source for the creation of a historic first-ever Ocean Action Plan for the Mid-Atlantic region.

**Future General Meeting Dates:**

- Wednesday, December 12, 2018 - 10:00 am to 12:00 pm. NJ Office of Information Technology, ITC Room, 1st Floor, 300 Riverview Plaza, Trenton, NJ

**Future Executive Meeting Dates:**

- Wednesday, December 12, 2018 - 1:00 pm to 3:00 pm. Riverview Plaza, 200, Room 402

**Upcoming Election Dates to remember:**

- Nominations open September 28, 2018
- Nominations close on October 31, 2018
- Voting opens November 14, 2018
- Voting closes November 30, 2018



12:00pm – 1:30pm	<b>B Best Management Practices Implementation Attendee Round Table</b> <i>Speakers: Sara Taylor</i>	Atlantic C
As an alternative to the standard presentation format, please join us for a moderated Q&A session. We will break out into groups for discussion around the issues of GIS best management practices implementation at the organizational level.		
12:00pm – 1:30pm	<b>B GIS Platform Implementation Best Practices: Case Study New Jersey</b> <i>Speakers: Brian Embley</i>	Atlantic C
12:00pm – 1:30pm	<b>B GIS Platform Implementation: Best Practices</b> <i>Speakers: Brian Embley</i>	Atlantic C
When GIS is implemented as a platform, it connects maps, apps, data and people in ways that help organizations make more informed and faster decisions, extending the reach of GIS across the enterprise. Realizing the value of GIS as a platform, however, does not simply adhere to a “one size fits all” approach but rather one must understand system capabilities and deployment patterns in order to institute a GIS that meets an organization’s objectives. This session will present a number of established, conceptual Best Practices for enterprise GIS and in turn, relate each to a real world operational experience of the NJ Office of GIS, NJ Office of Information Technology.		
12:00pm – 1:30pm	<b>E Building a Public Safety Services Investment Tool- A More In Depth Review With Advanced Stats</b> <i>Speakers: Richard Quodomine</i>	Atlantic D
Expanding on yesterdays Techspo session, Building a Public Safety Services Investment Tool. Choosing how to allocate not just building dollars, but where and how to locate programs and capital assets across multiple locations. Using geographic principles such as multivariate and hotspot analyses, the City of Philadelphia and Geodecisions, Inc. have created a tool that helps better define where to place investment in municipal public safety services and how to improve the use of those services. The presentation will also highlight the multi-criteria Decisions Support System that was developed using Web App builder for ArcGIS and ESRI JavaScript API. The application uses hosted feature services data that covers the different criteria needed for evaluating public safety funds allocation. The widget that was developed for the project enables the users to give different weighting for each criteria and run the decision model to get an instant rank for fund allocation.		

- 12:00pm – 1:30pm      1      **The Five Precepts of Enterprise GIS**      Atlantic A
- Speakers: Peirce Eichelberger*
- The five precepts are useful as they provide a framework for defining, planning and implementing Enterprise GIS. While these precepts take a data focused view which experience has shown has delivered excellent results. The precepts also help determine needed GIS applications and datasets.
- Time Slices/Historic Data**
- A big change to accomplish Enterprise GIS is to begin to provide historic data for the most critical data in the GIS data model. This relates to pixels and vectors as well as attributes. The surveyor's role is especially critical when we add time slices and historic data to our Enterprise GIS.
- Highest Quality of Data**
- Almost by definition, all GIS data, themes or layers will need to be of the absolute highest quality. This includes pixels, vectors and many attributes too. With GIS data quality assured many more uses and applications are possible from GIS, especially many finance and Geoauditing opportunities. The surveyor's role is especially critical in this precept as others.
- Addresses and Supporting Framework**
- In forty years plus, implementing GIS has shown us the overwhelming importance of situs addresses as the most fundamental part of the GIS architecture and integral to the GIS' enhanced data model. The role of 3-D and addresses will also be covered. The important role of the centerline constructs will also be covered.
- Complete Data sets**
- This precept represents complete coverage of an activity, inventory, category or condition. QA/QC procedures will also be covered. Daily operations to ensure data quality will be covered.
- 3-D/Subparcels**
- This goes far beyond "building points" as we must include all apartments, suites, rooms and occupancies in our Enterprise GIS. Air and mineral rights are another perspective on 3-D/Subparcels. The plethora of underground and above ground utilities will also be needed for Enterprise GIS. The notion of subparcels is "catching on" and will change our entire perspective on Enterprise GIS. With parking spaces now being bought and sold we must also connect parking lots and spaces better to GIS.

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- 12:00pm – 1:30pm      L      **From Lidar to 3D Using ArcGIS Pro**      Atlantic 7
- Speakers: Rachel Weeden*
- Working with your GIS data in 3D allows you to see things in their true perspective, make better decisions and communicate your ideas with more impact. A common starting point to generating 3D content is lidar, which has evolved to become a common source of geographic data. As GIS professionals begin working with lidar, it can feel overwhelming to work with such large datasets and potentially new toolsets. Fortunately, getting started with 3D has never been easier! With ArcGIS Pro and Web GIS, there are clear, documented steps offered as solution templates to derive useful 3D datasets from lidar and share the results on the web to gain greater value. In this workshop, attendees will gain an understanding of the available tools and workflows that let you transform lidar into useful 3D scenes that can be the basis for advanced visualization and further analysis.
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- 12:00pm – 1:30pm L **Integration of Lidar-Derived Surface-Water With Storm-Water Systems as Part of the National Hydrographic Dataset for the Washington DC Area** Atlantic 7  
*Speakers: Roger Barlow*
- The District of Columbia Department of Energy & Environment (DOEE) have funded a project through the U.S. Geological Survey, National Geospatial Program (USGS) to create an integrated urban waterway system of surface water derived from lidar digital elevation models and hydro-enforced. Surface water is connected to infalls and outfalls of the storm-water network, and connecting pipes and culverts at the local resolution of the National Hydrographic Dataset (NHD). Local jurisdiction data has been obtained for guidance and transformation to the NHD and the Watershed Boundary Dataset (WBD). Lidar and local jurisdiction data will be used to update and delineate the WBD to the 14-digit level. The production work is being performed by Quantum Spatial Incorporated, the USGS and local partners will quality assure content, and the USGS will enter the completed hydrography data into the National Hydrographic Dataset.
- The project area includes eight HUC-12s that all have some area in the District of Columbia. A number partner datasets have been contributed from DC Water, Fairfax County, Virginia, City of Alexandria, Virginia, and Arlington County, Virginia to create a large scale metropolitan area hydrography dataset. The Maryland Department of the Environment is also creating a densified stream network for the HUC-12s upstream from those that are in the District of Columbia.
- This presentation will provide an overview of the submitted project data types, issues encountered in data consistency, data integration, production approaches, and a look at preliminary data from the production pilot area of the Anacostia Watershed in the District of Columbia, and follow-on projects now being planned. This presentation will also show the current lack of NHD data in large urban centers, and how this project will address that kind of data gap and support urban water studies. From the DOEE and other data partners perspectives, this integrated surface and storm-water network brings them closer to effective storm water management solutions as this will be available to monitor and manage as an integrated system. This project will provide a hydrography network to better evaluate “interior” flooding events identified by the U.S. Army Corps of Engineers in the District of Columbia not due to riverine or coastal flooding processes.

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- 12:00pm – 1:30pm L **Using 3D Visualization to Communicate Risk to Communities** Atlantic 7  
*Speakers: Jennifer Whytlaw*
- The combination of Hurricane Irene and Superstorm Sandy over such a short period of time was a game changer for many New Jersey communities. With Hurricane Irene, historic inland flooding throughout the State had prompted planners and water resource managers working in riparian areas to pay focused attention on measures that could be implemented to mitigate high impact flooding from regularly occurring storm events. Following Irene and Sandy, the concept of “resilience” became a pressing and operative priority for many New Jersey municipalities. Hurricane Irene and Superstorm Sandy provided a mechanism to begin the tough conversations with communities in New Jersey about how to understand their risks to future storm events. A team at Rutgers University with acknowledgements to the New Jersey Department of Environmental Protection and the New Jersey Office of Emergency Management, developed a 3D elevation model of all homes, businesses, and infrastructure in Ocean County shoreline communities located within current A and V Zones of the Preliminary Flood Insurance Rate Maps (FIRMs). An online viewer was developed to visualize the mobile-based LiDAR that was collected in these areas. First floor estimations were then calculated and examined against existing elevations from an individual property’s elevation certificate. These data can then be viewed alongside previous damage data (NFIP, Substantial Damages) and projected flood hazard data to understand which properties are at risk from future storm events.
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12:00pm – 1:30pm	T	<b>New Jersey Department of Transportation Mobile Inventory System</b> <i>Speakers: Jillena Yeager</i> The New Jersey Department of Transportation (NJDOT) has been performing roadway characteristics inventory statewide leveraging a 20+ year old application to capture LRS and GPS details. NJDOT has also been providing this tool for consultants as a standardized process for inventory. This tool is no longer functional on modern PCs, and the NJDOT has contracted to build a replacement application. This presentation will provide an overview of the newly developed system, which provides a modern inventory interface and code-base that maintains integration with standardized validation and loading procedures. This new application is meant to function completely disconnected and function on MS Windows 10 tablet devices.	Atlantic B
12:00pm – 1:30pm	T	<b>South Jersey Transportation Planning Organization's Traffic Signal Inventory Applications for Collection and Client Counties</b> <i>Speakers: Bob Pliszka, Andrew Tracy</i>	Atlantic B
12:00pm – 4:30pm	A	<b>ESRI Hands-On Learning Lab</b> <i>Speakers: Kevin Mumford</i> Hands-On Learning Lab offers self paced training sessions. The Lab is open from 10:15AM to 6:00PMThe HOLL consists of a group of laptops with headphones where students can work through lessons at their own pace. A lesson consists of a recorded presentation followed by a hands-on exercise. Each lesson typically takes about 45 to one hour to complete and students can generally come and go as they please. Ed Services instructors are on hand to assist with questions and to discuss Esri products, other training opportunities and Esri Technical Certification.	Atlantic 8
1:45pm – 2:45pm	M	<b>Lunch - Horizon Ballroom</b> The menu should include: Tossed Garden Salad Potato Salad Napa Cabbage Slaw Southern Fried Chicken Sliced Brisket with BBQ Sauce Mac n Cheese Seasonal Vegetable Medley Apple Pie.	Horizon Ballroom

3:00pm – 4:30pm      D    **Census 2020 Participant Statistical Areas Program (PSAP)**      Atlantic A  
*Speakers: Web Adams*

PSAP is the once a decade geographic program that offers local governments and regional planning agencies the opportunity to review and modify select statistical boundaries that the U.S. Census Bureau uses to count people and produce data for the 2020 Census and beyond.

Statistical boundaries are used by the Census Bureau to produce small-area statistics and spatial data to provide relevant, useful data about population, income and housing for small-area geographic analyses. These boundaries tabulate data for the 2020 Census, the American Community Survey and the Economic Census. Data tabulated to PSAP geographies are used by state and local agencies for planning and funding purposes, as well as by the private sector, academia and the public.

The standard statistical geographies include Census tracts, Census block groups and Census Designated Places. The program allows participants (primarily at the county level) to make modifications to Census tract boundaries when current boundaries are found to be invalid. Participants are also asked to suggest boundaries for splitting Census tracts when population thresholds exceed stated criteria. Participants may also modify Census block group boundaries to better reflect local data needs.

Census Designated Places (CDPs) are unincorporated sections of a town that are held as a statistical unit. Participants may suggest CDP boundary expansion, contraction or dissolution. This is also the only opportunity this decade to suggest new Census Designated Places.

To reduce participant burden, the Census Bureau anticipates creating 2020 Census statistical areas for review and update by PSAP participants. Participants may accept the Census Bureau’s 2020 Census proposed statistical areas, update the 2020 Census proposed statistical areas, or use the 2010 Census Statistical area geography as a base to make updates.

Participants reviewing standard statistical area geographies are required to use the Census Bureau’s Geographic Update Partnership Software (GUPS) to delineate updates. The GUPS runs in QGIS, which is an open source Geographic Information System (GIS), and it contains all functionality required to make PSAP updates, execute automated checks for program criteria compliance, and create standardized data output files for Census Bureau processing. The GUPS will be available for download from the Census Bureau’s website or available on DVD.

In July 2018, the Census Bureau will invite regional planning agencies and local governments to participate in PSAP. In January 2019, the delineation phase will begin. Participants have 120 calendar days to submit updates.

3:00pm – 4:30pm      D    **Loco for LUCA: How Burlington County...**      Atlantic A  
*Speakers: Merrilee Torres*

3:00pm – 4:30pm      D    **LUCA LUCA LUCA!**      Atlantic A  
*Speakers: Julia Gerdes, Erica Del Plato*

Middlesex County, NJ has recently completed the Local Update of Census Addresses Operation (LUCA) project during the spring and summer of 2018. This presentation will explain the methodology used to submit address data for the County and the 25 municipalities. County staff will explain how this data can be used as a baseline for address information while still adhering to the confidentiality regulations. The presentation will also consist of project management methods for working together as a County to submit the best available address information for the 2020 Census. This project served as the basis of our goal for Enterprise GIS within Middlesex County.

- 3:00pm – 4:30pm      **E Cape May Co, NJ - Implementation of Flood Management with ArcGIS**      Atlantic B  
*Speakers: David Kunz*  
Cape May Co, NJ is looking to provide its internal staff and the public with the graphical and textual status of flood related information such as real-time gauge station information, flood inundation levels based upon flood stages, and the identification of flood impacted infrastructure and areas with demographic information valuable to understanding of impacted citizens.  
Esri's Flood Management with ArcGIS template is a configuration of Web AppBuilder for ArcGIS and ArcGIS Online that can be used by County operational staff to track near-real time NOAA and USGS water level gauges and identify who will be impacted based upon predetermined flood stage levels. This application provides 24/7 access to the information which can be placed on the County's website for citizen access and/or other operational organizations.  
This presentation will focus on the County's needs and the implementation of the solution.
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- 3:00pm – 4:30pm      **E Data Life Cycle for Emergency Response**      Atlantic B  
*Speakers: Marlen Kokaz-Roy*  
The presentation will show the life cycle for data management during emergency responses. The process start with data collection in the field (with Collector, Survey123, FileMaker like technology) all the way to the lab and visualization via viewers, reports, story maps based on the client needs. Field data collection could be captured dynamically and visualized as it is being collected or after the initial QA is done. Once the field data is collected and QC is done utilizing one of the tools, it is loaded to an environmental RDBMS where the initial additional QC takes place. The data then is being sent to labs to be analyzed while the data is also served out via different mechanism feeding Story Maps, Viewers, Reports and a wide variety of other required outputs. When the results are received from the labs, after QC and data validation it gets to be loaded to the environmental RDBMS.
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- 3:00pm – 4:30pm      **E WaterWatch Web Map Application For Regional Flood Awareness from the U.S. Geological Surve**      Atlantic B  
*Speakers: Jon Janowicz*  
Real-time indication of regional flooding based upon streamflow conditions is available online at the U.S. Geological Survey's (USGS) WaterWatch web page (<https://waterwatch.usgs.gov/>).  
  
This web tool displays maps, graphs and tables of current and historic flood conditions at USGS streamgage locations across the United States. WaterWatch is a complement to forecasts, watches and warnings provided by the National Weather Service (NWS). Information from WaterWatch can be used to initiate early emergency coordination as well as plan post-flood data collection efforts.  
  
This presentation will introduce the capabilities of WaterWatch to identify conditions of flooding at various map scales and at various thresholds of severity related to NWS flood stages. WaterWatch can display current streamflow conditions, updated hourly, as well as display daily flood conditions from 2006 to present. The Flood Tracking Chart within WaterWatch relates the current condition to historic flood peaks at individual streamgages for their full period of record. The Flood Table Builder provides detailed hydrologic information across user-defined areas for user-specified dates in a flexible format. WaterWatch is easy to navigate and provides useful data for purpose of flood awareness and response.
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3:00pm – 4:30pm	H	<b>Lightning Talks</b> <i>Speakers: Justin Cusick, Brian Embley, Maya Thomas</i> <p>*ArcGIS Living Atlas of the World – Imagery: The ArcGIS Living Atlas of the World is the foremost collection of geographic information from around the globe. It includes maps, apps, and data layers to support your work. This talk will highlight the rich imagery content available through the Living Atlas and showcases some new and interesting imagery themes you can explore including World Imagery Wayback, Sentinel 2, Vector Tile Style Editor, and Earth Systems Monitor.</p> <p>**NJ OGIS' Map Service Strategy: One of the responsibilities of the NJ Office of GIS is to provide the NJ GIS community easy and ready access to the best available enterprise datasets. Specialized web services known as map services provide a self-service approach to accessing many of the spatial datasets that NJOGIS stewards. We will review the current map services available, how they are maintained and plans going forward.</p> <p>***NJOGIS Resources for Elevation Products in NJ: The New Jersey Office of GIS has released two new web apps to help GIS users understand elevation products for the State - the NJ LiDAR &amp; DEM Web App and the NJ LiDAR &amp; DEM Info Web App. These apps were developed on the ArcGIS Online platform and help users understand the spatial extents of our elevation products; identify which elevation products are available in a specific county or municipality; and view detailed information and metadata about each of the elevation products. This presentation will review the creation, functionality, and purpose of the elevation web apps.</p> <p>****NJ 2015 Natural Color Orthos Raster Tile Cache: The 2015 Natural Color digital orthophotos map service is the most heavily trafficked map service published by the NJ Office of GIS (NJOGIS). As the popularity of this valuable map service has grown, so has the load on the backend servers at NJOGIS. Maintaining the performance and reliability of the service for the user community has been a substantial challenge. In order to meet the growing demand, NJOGIS is launching a tile cache map service of the 2015 Natural Color orthos that excels at both performance and reliability while maintaining a consistently high visual image quality. We will take a look at how the raster tile cache was created, published and consumed.</p>	Atlantic D
3:00pm – 4:30pm	U	<b>***CANCELLED*** Un-Conference</b> <i>Speakers: Mike Cicali, Matthew Duffy, John Reiser</i> <p>What's an <b>unconference</b>? A session where topics to be discussed are set at the beginning. Participants are expected to bring questions as well as answers to whatever the group may decide to discuss.</p>	Atlantic C
3:00pm – 4:30pm	3	<b>GIS Infrastructure for the Passaic Valley Sewage Commission</b> <i>Speakers: Dom Elefante</i> <p>The PVSC is in the first stages of setting up its enterprise GIS solution for its 140-acre waste water treatment plant in Newark, NJ including all its assets along its main interceptor, branch lines and laterals. This presentation will cover existing setup, from master planning, existing GIS data inventory, schema design and to its build-out of portal and enterprise. An ESRI solution providing initial GIS infrastructure for PVSC.</p>	Atlantic 7
3:00pm – 4:30pm	3	<b>Integrating GIS Mobile Applications with External GNSS Receivers</b> <i>Speakers: Megan Turi</i> <p>This presentation will expand on the previous topic of integrating GIS software and mobile applications to improve field operations and integration with data from the office. This presentation will cover how to create web maps using ArcGIS Online and how to use Collector for ArcGIS paired with an Eos external GNSS receiver for collecting valve and hydrant locations and updating attributes for valve exercising and hydrant flushing operations. This presentation will go into more detail on how the external GNSS receiver paired with Collector for ArcGIS improves access to data in the field and office.</p>	Atlantic 7

3:00pm – 4:30pm	<b>3 Using GIS to Comply with the Water Quality Accountability Act</b> <i>Speakers: Michael Kolody</i>	Atlantic 7
<p>This presentation will give an overview of how GIS can be used to comply with New Jersey's Water Quality Accountability Act (WQAA). Specifically, the presentation will cover how to integrate multiple GIS software and mobile applications to optimize access to data and information from the office and field. The presentation will touch on using ArcGIS Online to create and serve web maps and applications, Collector for ArcGIS for collecting valve and hydrant locations and attributes and to capture the status of valve exercising and hydrant flushing from the field, Survey123 for performing valve and hydrant inspections using a mobile tablet in the field, and Operations Dashboard for ArcGIS to summarize data for office staff.</p>		
4:30pm – 5:00pm	<b>M Break - Atlantic Foyer</b> <i>Speakers: Dawn McCall</i>	Atlantic Foyer
<p>Closing remarks The menu should include: Soft Philly Pretzels, Mustard, Route 11 Chips, House Made Pop Corn Jones Sodas, Bruce Cost Ginger Ale, Peanut Chews. Chocolate Dipped Strawberries, Chocolate Brownies, Blondies, Assorted Cookies, Assorted Biscotti</p>		
5:00pm – 7:30pm	<b>S Social Event #macurisa2018</b>	TBA
<p>Let us discuss where the night will take us and consider a Hard Rock exploration perhaps.</p>		