PRE-CONFERENCE WORKSHOPS

Workshop check-in begins at 7:30 am Wednesday morning in the lobby of the Sanford Center where refreshments will be provided. Workshop registration includes lunch and will be provided at the Sanford Center at 12:15 pm. All data and materials for the workshops will be provided by the instructors.

All hands-on workshops will be Bring Your Own Laptop and some hands-on workshops are Bring Your Own Mobile Device. If you would like to attend one of these workshops, you will need to have a laptop that you can bring to the workshop. Instructors will reach out to registered participants prior to the workshop if there are any additional materials or software requirements necessary.

♦ workshops are hands-on  ♦ workshops are lecture style.

ESRI HOLL

Format: Hands-On

The HOLL (Hands-On Learning Lab) is a training resource provided and developed by Esri Training Services. The lab is an excellent way to introduce ArcGIS® software users to a variety of Esri® solutions and training opportunities while learning to use Esri software. The Esri HOLL will be located in the Country Inn & Suites connected by walkway from the Sanford Center.

See the listing of courses at the end of this document, page 16.

AM WORKSHOPS

♦♦ WK0001 – Forestry and Mobile Technology (Room #5)

Presenters: Darryl Holman, USDA Forest Service; DJ Bakken, Beltrami County Natural Resources

Audience: Beginner

Format: Hands-On and Lecture

Hardware Required: Laptop or mobile device with GPS capabilities (iOS or Android)

Software required: Avenza PDF Maps

DJ Bakken, Forrester for Beltrami County and Darryl Holman, GIS mobile technology specialist from the Chippewa National Forest will be presenting some of their uses of mobile technology in Forestry. They will be showing examples of how mobile technology has evolved over the years. This will include use of Garmins, Trimbles, and ArcPad. They will show examples of using terracing for establishing property lines as well as different viewing different Bluetooth GPS units. They will focus primarily on Avenza PDF maps showing tips, tricks, and techniques to help develop efficiencies in the field while using this app. This will cover the basic setup, managing Maps, collection of data in the field, setting up attribute schemes, moving data between the PC and mobile devices, and making better maps for Avenza. There will be a hands-on activity using Avenza near the end of the session.

♦ WK0002 – Understanding the Public Land Survey System (PLSS) and Legal Descriptions (Green Room)

Presenter: Heather Vernlund and Neal Adam, Beltrami County

Audience: Beginner

Format: Lecture

Review of the PLSS, commonly used terminology, and how legal descriptions are produced. Learn how to interpret and draw out legal descriptions through lecture and hands-on exercises.

♦ WK0003 – Get Started Using Python with GIS (Room #3)

Presenters: Zeb Thomas and Jessica Schuler, MN.IT @ DNR

Audience: Advanced

Format: Hands-On

Hardware Required: Bring your own laptop

Software Required: ArcGIS 10+ preferably 10.2+

This class is for those with little to no experience with Python. We will cover how to use Python snippets in a field calculator, commands in the interactive window, and stand-alone scripts using arcpy. This includes cursors and other arcpy objects and basic programming logic. Students will also learn some general programming and setup tips, including how to install other Python packages. Software requirement: ArcGIS 10+ preferably 10.2+.
WK0004 – Introduction to Collector for ArcGIS (Room #6)
Presenter: Chris Pouliot and Mike Tronrud, MN.IT @ DNR
Audience: Beginner
Format: Hands-On
Hardware Required: Bring your own laptop and device (Android, iPhone, iPad, iPod Touch, Windows)
Software Required: ArcMap 10.2+ Advanced (ArcInfo), or Standard (ArcEditor) license level
On mobile device:
• Collector for ArcGIS
• Android: Android 4.0 (Ice Cream Sandwich or later, Armv7 or x86 processor, precise location (GPS and network-based) support
• iOS: iOS 7 or later
• Windows: Windows 10

Curious about how to configure a mobile Collector app? This course will walk you through the necessary steps, from beginning to end. In 4 hours, you’ll learn how to take a paper data entry form and turn it into a user-friendly mobile data collection app using ArcGIS Online, a File Geodatabase, and a smart phone or tablet. We’ll spend time discussing, developing and testing our end product: a Collector for ArcGIS application. Familiarity with geodatabase design and global positioning systems will be beneficial. In addition to the noted hardware requirements for this class, please bring a mobile phone or tablet if possible (cellular connectivity is not required).

WK0005 – Introduction to QGIS (Room #2)
Presenter: David Bitner, Boundless Spatial
Audience: Beginner
Format: Hands-On
Hardware Required: Bring your own laptop
Software Required: QGIS 2.18

QGIS provides a competitive alternative to the ESRI ARCGIS desktop environment. This workshop will describe many of the distinct advantages (and not just that it’s free!) of QGIS along with a hands on introduction to using QGIS.

WK0006 – Getting Started with ArcGIS Pro (Room #7)
Presenter: Micaella Penning, University of Minnesota Duluth
Audience: Beginner
Format: Hands-On
Hardware Required: Bring your own laptop
Software Required: ArcGIS Pro 1.4 installed on laptop.

This hands-on workshop will introduce Esri’s newest Desktop application, ArcGIS Pro. Participants will learn about the various changes from ArcMap and gain experience with the new interface through multiple exercises.

WK0007 – Parcel Fabric 101 – Introduction to the Parcel Fabric (Room #4)
Presenter: Frank Conkling and Brian Kelly, Panda Consulting
Audience Level: Beginner
Format: Hands-On
Hardware Required: Bring your own laptop
Software Required: ArcGIS 10.3 or higher with ArcGIS for Desktop standard or advanced license installed

This half day workshop will let attendees learn about the fundamentals of the data model and experience the editing procedures behind ESRI’s ArcGIS Parcel Editing Solution (aka the Parcel Fabric) prior to actually making the commitment to convert their data. Panda Consulting will provide a sample data set of a county that has already been converted and will review the new tools and procedures for performing consolidations (combines), splits, adjustments and inputting a subdivision (time permitting).

WK0008 – Intro to ArcGIS Online (Room #1)
Presenter: Sharvari Sangle, SRF Consulting
Audience Level: Beginner
Format: Lecture and Hands On (optional)
Hardware Required: Bring your own laptop (for hands on)
Software Required: Access to ArcGIS Online organization account

Learn about Basic concept of ArcGIS Online, leveraging the power of templates, best practices and introduction to how to take your online application to next level using web application builder.

WK0009 – Exploring the Utility Network & Tools with ArcGIS Pro (Room #5)
Presenter: Kim Sundeen, RAMTech Software Solutions
Audience Level: Intermediate
Format: Hands-On
Hardware Required: Bring your own laptop
Software Required: ArcGIS Pro 2.X Network Management and ArcGIS online login

The new Esri Utility Network is the next generation and replacement for the older geometric network technology. In this workshop, we’ll overview the basics of using ArcGIS Pro and what the Utility Network is all about. Digging in a little deeper, you’ll learn about viewing a geometric network in Pro and seeing it alongside a Utility Network of your choosing: electric or natural gas. We’ll practice tracing, cleaning up “dirty” areas, running custom geoprocessing tools, and building your own Utility Network within Pro. Finally, we’ll discuss some tools and what you need to know to facilitate the data migration process from non-geometric data and geometric network data to the UN. We will be using ArcGIS Pro on your laptop, and as such, you’ll need an ArcGIS Online user profile to login and use Pro.
WK0010 – Configuring Solutions for ArcGIS Online
(Room #1)
Presenter: Kyle Wikstrom, Pro-West & Associates, Inc.
Audience Level: Beginner
Format: Hands-On
Hardware Required: Bring your own laptop

ArcGIS Online organizational accounts and necessary account roles will not be provided by the instructor. Participants must have the necessary access listed in the description in order to participate in any hands-on activities. Every organization has the opportunity to unleash the full value of its data. Understanding data from the vantage point of location and visualizing information enables users of all kinds to make decisions that impact organizations and communities. ArcGIS Online apps are tools that help visualize and interact with data. In this workshop, participants will learn how to configure ArcGIS Online apps that engage users by sharing information effectively. You will learn how to use information to tell a story that shapes the way we view, interact with, and make decisions in the world around us. Participants must have an active ArcGIS Online organizational account with a Publisher or Administrator role and know how to access it. ArcGIS Online organizational accounts and necessary account roles will not be provided by the instructor.

WK0011 – Web AppBuilder for ArcGIS: Knowing Your Options (Room #2)
Presenters: Chad Nunemacher, Houston Engineering
Audience: Advanced
Format: Hands-On
Hardware Required: Bring your own laptop with admin permissions
Software Required: text editor installed, latest version of Web AppBuilder for ArcGIS (Developer Edition) installed

In this session you will become familiar with the components that make up the Web AppBuilder (WAB) framework. App creation using the integrated ArcGIS Online version of the Web AppBuilder as well as the installation, configuration, and deployment the developer’s version will be explained and demonstrated. We will also show how to incorporate shared widgets into the Web AppBuilder development software. Last but not least, we will provide instructions and guidance in creating a custom widget for use in the WAB development software.

WK0012 – Intermediate Collector for ArcGIS (Room #6)
Presenter: Chris Pouliot and Mike Tronrud, MN.IT @ DNR
Audience: Intermediate
Format: Hands-On
Hardware Required: Bring your own laptop, Android or iOS device
Software Required: ArcMap 10.2+ (Advanced (ArcInfo), or Standard (ArcEditor) license level). On mobile device:
  • Collector for ArcGIS
  • Android: Android 4.0 (Ice Cream Sandwich or later, Armv7 or x86 processor, precise location (GPS and network-based) support
  • iOS: iOS 7 or later
  • Windows: Windows 10

Building on foundational Collector for ArcGIS concepts, this course will teach students custom configuration techniques such as Collector database best practices, ArcGIS Online tips and tricks, and service, app, and custom basemap optimization techniques. Familiarity with subjects covered in Introduction to Collector for ArcGIS course or equivalent knowledge is suggested. In addition to the noted hardware requirements for this class, please bring a mobile phone or tablet if possible (cellular connectivity is not required).

WK0013 – High Accuracy Mapping with Esri’s Collector (Room #3)
Presenter: Roger Schultz, Frontier Precision
Audience: Beginner
Format: Hands-On
Hardware Required: Bring your own Laptop, Android or iOS device

This learning session will include information and hands on exercises using Esri’s Collector for ArcGIS V10.4 and support for high accuracy GNSS receivers like the Trimble R1 and R2. Topics covered will include, real-time corrections setup, best field practices and publishing (new and modifying existing) layers to record the high accuracy metadata from your Trimble R1 and R2 GNSS Receivers. We will also discuss the value of high accuracy data collection and how metadata can assist with record keeping and confidence with your high accuracy GIS. A device with collector is optional. This is both lecture and hands on.

SESSION DETAILS:
Publish a map with required metadata fields.
High Accuracy GNSS receiver integration (Trimble R1, Trimble R2).
Best field data collection practices (hands-on exercises).
Accuracy vs. Precision (Understanding datums).
WK0014 – ArcGIS Server: Administration and Advanced Topics (Room #7)
Presenter: Justin Hansen, WSB & Associates, Inc.
Audience: Advanced
Format: Lecture

This workshop serves as an advanced look into ArcGIS Server from both the IT and GIS management perspective. Existing users of ArcGIS Server will find the most benefit from this course as topics will range from installation recommendations, system architecture guidelines, security best practices, load testing and more. In addition, we will discuss how ArcGIS Server fits within Esri’s evolving Enterprise GIS platform and how you can best integrate it with your GIS portal: ArcGIS Online or Portal for ArcGIS. We will also discuss what’s new at ArcGIS Server 10.5 and its impact on your organization. This course will benefit both IT professionals and GIS Managers seeking to understand how to best manage their ArcGIS Server deployment and related resources. While this workshop is target at advanced users with ArcGIS Server experience, it will provide a solid introduction to core ArcGIS Server concepts.

WK0015 – Parcel Fabric 601 – Advanced Parcel Fabric (Room #4)
Presenter: Frank Conkling and Brian Kelly, Panda Consulting
Audience: Advanced
Format: Hands-On
Hardware Required: Bring your own Windows laptop

This half day workshop will explore the more advanced topics associated with implementing and using the ESRI ArcGIS Parcel Editing Solution (aka the Parcel Fabric.) Topics include: quality control in the Parcel Fabric, Cartographic Point Management, Control Points, identifying and fixing topology errors, advanced construction techniques, associated layers, ETL Procedures, updating control points and its impact and an exploration of adjustment techniques. Since the topics covered in this workshop are advanced in nature and not familiar to users not using the Parcel Fabric, it is highly recommended that attendees be familiar with the Parcel Fabric prior to attending this workshop. While not necessary, if the attendees wish to follow along with the demonstrations, they need to bring their own computer with ArcGIS 10.3 or higher with ArcGIS for Desktop standard or advanced license installed. Panda will provide a copy of the data used for all demonstrations.

CONFERENCE PLANNING COMMITTEE
Thank you to everyone who has helped shape the 27th Annual Conference into a success — and a special thank you to the Conference Planning Committee; without their help, this event would not be possible.

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