2011

MAGIP SPRING MEETING

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Montana Association of Geographic Information Professionals

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The Montana Natural Heritage MapViewer

The Montana Natural Heritage Program recently released a new web application: the Natural Heritage MapViewer. The MapViewer is an interactive web mapping service that will, over time, enable users to perform a variety of tasks to access and use MTNHP databases and information. This first release includes tools to view and query the new Montana landcover data with ties-ins to the **Ecological Systems Field Guide**, and tools to access and view over 12,000 geo-reference habitat photos for Montana.

Recently, MTNHP added a new tool set to the MapViewer that enables the display and query of the Montana Land Management Data. The database depicts four main categories of land management: Public Lands / Conservation Easements / Special designated lands such as wildlife refuges, Research Natural Areas, wilderness, etc./ Lands owned by land trusts or other private conservation oriented entities.

- Meghan Burns, Landscape Ecologist – Montana Natural Heritage Program

GIS/GPS: Teaching with GIS across the curriculum

GIS can be a useful tool across the curriculum to help youth explore their environment and solve problems while meeting state and national standards in various disciplines. For instance, Science standards require that students develop the abilities necessary for scientific inquiry and to use appropriate tools and techniques to gather, analyze and interpret data. Lewistown teachers in grade 5-12 have come together to find ways to cross the curricular boundaries and use GIS in Science, Math, English, Social Studies, Computer Applications, Library, PE and Freshman Academy. GIS has also proven to be a valuable tool in helping us to meet the new state standards for addressing Indian Education for all. Students are developing an awareness of spatial thinking, the relationships between disciplines and the application of these technologies in the community and work place because they are using real data in actual situations to create and understand these visual representations. A community service learning project was adopted by our Lewistown Junior High School GIS Club to enhance their GPS and GIS skills. Working with the Lewistown Chamber of Commerce, the Watershed Council Committee, and the Trails Committee, the Club embarked on several mapping projects. A Historical Tour Map, a Tourist Running Trail Map, and a Brewery Flats Environmental Education Center / Interpretive Trail Map were developed. These students also utilized their skills to teach adults about GIS / GPS in a community education class.

- Susan Flentie, 8th Grade Science Teacher, Lewistown Junior High School

Administrative Boundaries Framework Using the Federated Approach: Presenting the Montana Automated Boundaries Application

The Base Map Service Center is about to release, for testing, an online boundary editing application. The application has been developed by GCS Research, Missoula, Mt, and built upon Esri's ArcGIS Server 10 technology. This application will allow for tribal/state/local governments to edit boundaries online and participate using the federated approach.

- Erin Geraghty, Administrative Boundaries Framework Coordinator, Base Map Service Center

GIS and Ranching

Come learn about how GIS, GPS, Remote sensing has changed, for the better, the operation of a Montana Ranch.

- Bob Rumney, Analyst, GeoEssentials & Rancher, Cascade, MT

GIS Cloud Computing

Report on the 4-state (Oregon, Utah, Colorado and Montana) project to determine the economic and technical feasibility of using the Cloud to provide government GIS services.

- Robin Trenbeath, Geographic Information Officer, Department of Administration, State Information Technology Services Division

Montana Spatial Data Infrastructure Framework Theme Updates

These MSDI Framework Theme Leads will be giving updates on their themes and data. For more information on MSDI data, Stewardship, or GIS policy please visit the MSDI website: http://giscoordination.mt.gov/msdi.asp

Administrative Boundaries - Erin Geraghty, Base Map Service Center
Cadastral - Stuart Kirkpatrick, Base Map Service Center
Elevation - Lance Clampitt, USGS
Geodetic Control - RJ Zimmer, DJ&A
Geographic Names – Gerry Daumiller, Nature Resource Information Systems
Land Use Land Cover - Linda Vance, Montana Natural Heritage Program
Orthoimagery - Evan Hammer, Nature Resource Information Systems & Stuart Kirkpatrick

Structures - Michael Fashoway, Structures Framework & Address Data Coordinator, BMSC
Transportation - Joshua Dorris, Base Map Service Center
Wetlands - Meghan Burns, Montana Natural Heritage Program

Hardware and Software for Mobile Mapping and Field Data Collection

This 30 minute presentation from Electronic Data Solutions focuses on improving the efficiency of GPS mapping and field data collection by using the latest technologies in the industry. We will look at several new products including Esri ArcPad 10 and the Trimble Geo 6000 and Juniper Mesa. This is a great opportunity to learn about integrating hardware and software for mobile mapping to ultimately save your projects time and money.

- Jackson Beighle is a GIS-GPS Specialist for Electronic Data Solutions. He graduated from the University of Montana in 1994 with a Geography degree and from Oregon State University in 1996 with a graduate degree in Geography and GIS. Jackson has over 15 years of experience working with a wide range of customers in the GIS industry. He lives in Missoula with his wife Traci and three children, Sam, Finn and Cole.

GIS Applications for Production Agriculture

Precision agriculture is a rapidly growing industry in Montana and around the world. While most of the uses of GPS in agriculture are for real-time positioning and guidance, more and more growers are using data to guide their operations. We'll look at commonly used agricultural GIS programs and how farmers turn data into decisions.

- DeImna Heicken, President, Triangle Ag-Services
  Bio: Born and raised on a farm in northern Idaho, DeImna earned her bachelor's degree in plant science from the University of Idaho. She then moved to Montana and worked in the fertilizer and chemical industries, both in retail and as a Technical Service and Research Representative for a manufacturer. She started Triangle Ag-Services as a crop consulting business in 1989 and it has grown into a family business that specializes in precision agricultural equipment and service especially for Montana. Based out of Fort Benton, MT they cover the state of Montana with products, support, and continuing education for GPS and GIS applications in farming.

Weeds Management and GIS

- Ricki Ann Ketterling, GIS Database Coordinator, Department of Environmental Quality

- Bob Montgomery, Owner, Noxious Weed Control
- Ward Mason, Owner, Noxious Weed Control

Using the BMSC Geocoding Web Service

Geocoding is the process of assigning X,Y coordinates to a street address (101 Main St, Lewistown, MT 59457). With geocoding, any spreadsheet or database that contains standardized address data can be converted to spatial data and displayed on a map. The Base Map Service Center is about to release a geocoding web service that is based on the MSDI Structures and Transportation Frameworks, as well as commercial address data. This presentation will explain how geocoding works and how you can use the new geocoding web service.

- Michael Fashoway, Structures Framework & Address Data Coordinator, BMSC

Publish Data You Have! Improving Montana's GIS Portal

This session will include a brief background on metadata with an overview of what metadata is, how it is created, and why it matters. There will be a demonstration of the Montana GIS Portal and a metadata record from the portal will be reviewed. We will discuss some of the shortcomings of the Montana GIS Portal and talk about how the Metadata work group is addressing some of those issues.

- Evan Hammer, NRIS Manager, Montana State Library

DNRC's Floodplain Program – Mapping, Management, & Partnerships

Provide an overview and information regarding the DNRC's Floodplain Program. This presentation will cover the DNRC Floodplain Program's floodplain mapping efforts including a discussion regarding the FEMA floodplain mapping programs, State funding, and mapping priorities and partnerships. Specifics will be provided on topics including, but not limited to, available GIS data, current project locations, and how to know if there is floodplain mapping data available for an area. This presentation will also cover floodplain management and how floodplain mapping and GIS data is utilized in the regulatory and planning world.

- Celinda Adair, CFM, CPP - Map Modernization/Risk MAP Program Coordinator - MT Department of Natural Resources & Conservation
- Traci Sears, CFM - CAP/NFIP Coordinator - MT Department of Natural Resources & Conservation

ArcGIS as a System

ArcGIS as a system showing the desktop, the mobile project center, and the template based support for editing portions of the system. Accessing, sharing information, creating and joining groups. Use online maps and tools that are a built in part of ArcGIS, whether you're using ArcGIS Desktop, a mobile device, a browser, or if you're developing applications using the ArcGIS Web Mapping API's. Find, share, organize, and use maps, apps and other resources via ArcGIS.com, a web-based gateway into the ArcGIS system. Discover, share, and present geographic information using ArcGIS Explorer Online, a new browser-based version of ArcGIS Explorer. Think of ArcGIS online as the iTunes for ArcGIS.

- TJ Abbenhaus, Esri

ArcGIS 10 New Desktop Enhancements

ArcGIS 10 new desktop enhancements that increase usability and streamline common workflows (searching, editing, and mapping). ArcGIS 10 is a major release that introduces powerful new tools and simplified workflows designed to increase your productivity and help you get better results from your GIS. This presentation will cover key improvements in Desktop including; interface enhancements, editing, data driven pages, and time-aware layers. ArcGIS 10 introduces the ability to automate mapping tasks through a new Python mapping module. Printing and exporting map documents and creating PDF map books via Python will be covered as will the creation of script tools that can be used in an interactive ArcMap session.

- TJ Abbenhaus, Esri

Imagery at ArcGIS 10

This presentation will demonstrate the key imagery display and analysis functionality in ArcGIS 10 including; accelerated image display, the Image Analysis Window for image interpretation and processing, the new mosaic dataset data model to manage massive image collections with dynamic mosaic and on-the-fly processing, Image classification to generate features and improved capabilities for serving imagery and raster data. Data management is central to all imagery projects, learn how ArcGIS 10 provides solutions for your large imagery holdings.

- TJ Abbenhaus, Esri