Idaho Geospatial Council

2015 Fall Bi-Annual Meeting

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Geography at the Nexus of Collaboration

WELCOME / INTRODUCTIONS

Bill Farnsworth

Geospatial Information Officer

Leveraging GIS in Wildland Fire

Ben Butler
GIS Specialist
Wildland Fire Management RD&A

Launch Slide Show

WHAT'S GOING ON IN IDAHO?

Quick Project Updates

Hot Topics

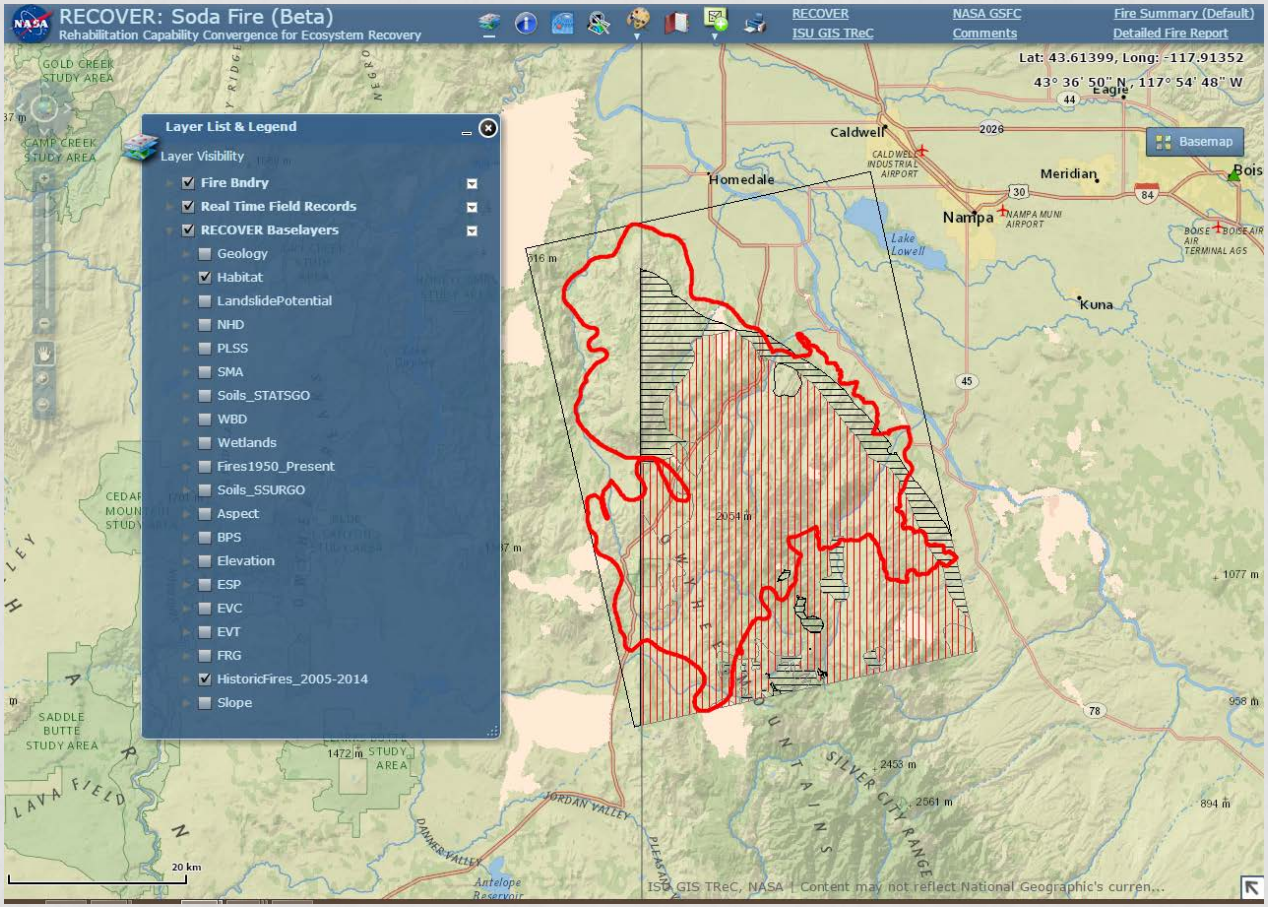
NASA RECOVER DECISION SUPPORT SYSTEM & DEVELOP NATIONAL PROGRAM

Idaho State University GIS TReC, Keith Weber

- The RECOVER DSS (Decision Support System) was requested for six wildfires in Idaho and California for the 2015 fire season.
- NASA RECOVER was highlighted in presentations given to NASA's Office of the Administrator by Mike Freilich, NASA's Earth Science Division Director.
- New partnerships formed between NASA RECOVER and researchers from the University of Arkansas and Michigan Technical University to deliver post-fire landslide models to end-users.
- The NASA DEVELOP National Program welcomed the GIS Training and Research Center at Idaho State University as its newest facility in the DEVELOP network. NASA DEVELOP provides opportunities and funding for students and young professionals to work on multidisciplinary feasibility studies that seek to discover new and innovative applications for NASA technology to address environmental and societal concerns.

NASA RECOVER DECISION SUPPORT SYSTEM & DEVELOP NATIONAL PROGRAM

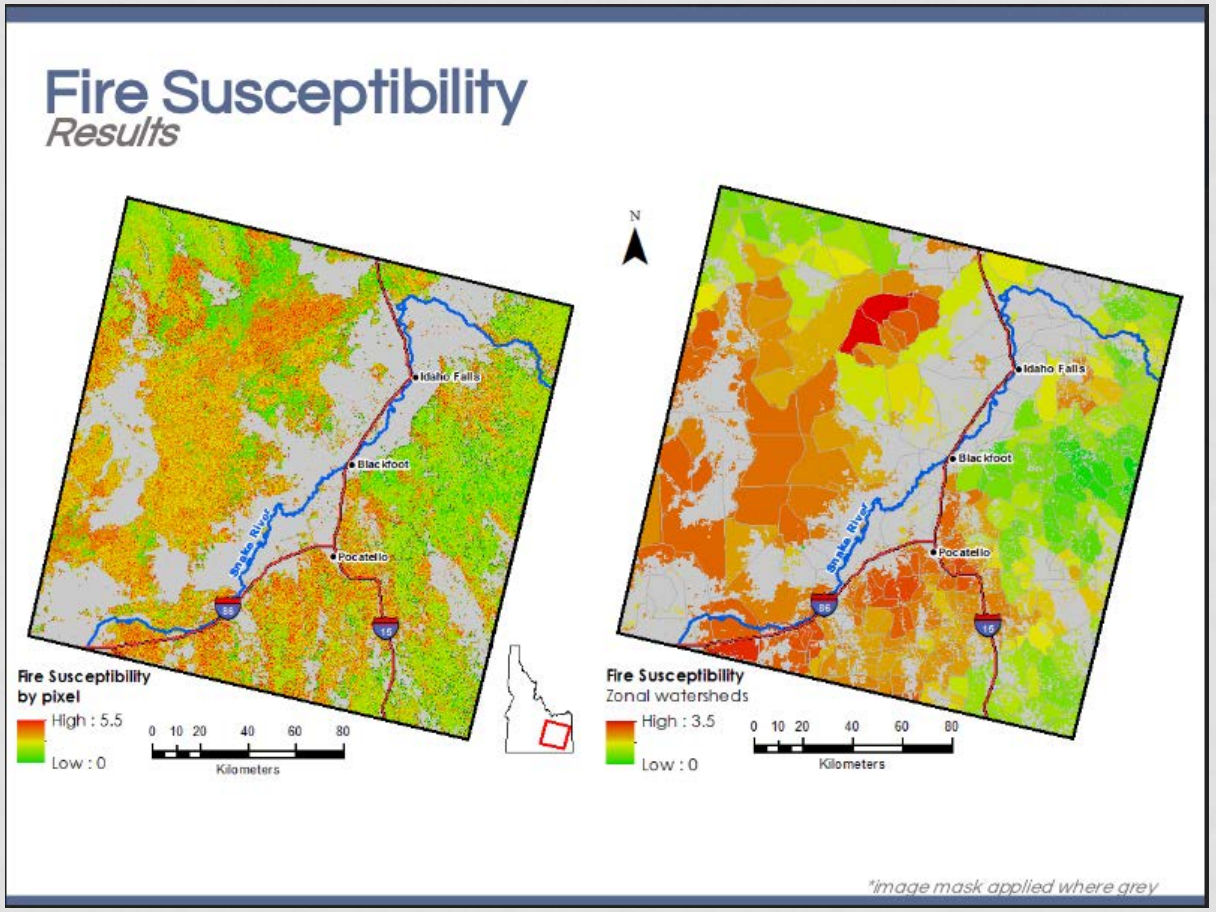
Idaho State University GIS TReC, Keith Weber



An image of the RECOVER Web Client that was created to provide decision support to fire managers working on the Soda Fire which burned southeast of Boise, along the Idaho-Oregon boarder during the 2015 fire season.

NASA RECOVER DECISION SUPPORT SYSTEM & DEVELOP NATIONAL PROGRAM

Idaho State University GIS TReC, Keith Weber



This summer, researchers from the NASA DEVELOP program located at Idaho State University used NASA Earth observations to classify cheatgrass (B. tectorum) distribution in SE Idaho and created a fire susceptibililty model to assist with fire planning in the region.

NASA RECOVER DECISION SUPPORT SYSTEM & DEVELOP NATIONAL PROGRAM

Idaho State University GIS TReC, Keith Weber

Members of the NASA RECOVER project and NASA DEVELOP National Program at Idaho State University. (from right to left: Roger Gill, Katherine Bradford, Dr. John Schnase, Keith Weber, Lauren Childs-Gleason, James Favors, Kiersten Newtoff, Mark Carroll, Jeff May, Maggie Wooten, Colin Doyle)

INVASIVE SPECIES MONITORING WITH MOBILE DATA STUDIO & ESRI COLLECTOR

Idaho Department of Agriculture, Stephen Cox

Aquatic Invasive Species Boat Check Station:

- 7 Seasons of data collected using **Mobile Data Studio application** on Google Nexus tablets. MiFi units are used at each inspection station allowing data to be synchronized real-time back to the Boise office.
- Preliminary numbers for 2015:
  - 60,000+ inspections performed
  - 20 Inspection stations throughout the state
  - 24 Watercraft inspected and found to have Quagga/Zebra Mussels attached – all watercraft decontaminated.
- 2 Story Maps highlight the last waterbody the boat owner recreated at, and the home residence (based on Zip Code) of the boat owner.

http://idaho.maps.arcgis.com/apps/MapSeries/?appid=8cbab9b3bfb84ce0b9d8f77029427a32
http://idaho.maps.arcgis.com/apps/MapSeries/?appid=3adf7a46d9324d87971f93869baba929

  - These maps highlight how far people will travel to recreate. These watercraft owners may knowingly, or unknowingly be transporting non-native aquatic invasive species.

INVASIVE SPECIES MONITORING WITH MOBILE DATA STUDIO & ESRI COLLECTOR

Idaho Department of Agriculture, Stephen Cox

Early Detection Water Monitoring Program:

- Looking for non-native aquatic organisms in high-use, high-risk waters. The main goal is to find the veliger (baby or planktonic stage) of the Quagga/Zebra mussel in early stages of infestation. To date no water samples have come back from the lab as positive for Quagga/Zebra mussels in Idaho.
- Surveys are collected using the **Esri Collector application** on Google Nexus tablets.
- 60+ Water bodies, 500+ Water samples per year, 2300+ Water samples have been taken to date.
- A Story map was created to highlight this program and increase public awareness about where samples are taken.

http://idaho.maps.arcgis.com/apps/MapSeries/?appid=30b457e794af4cc287b88dc65deeccea

INVASIVE SPECIES MONITORING WITH MOBILE DATA STUDIO & ESRI COLLECTOR

Idaho Department of Agriculture, Stephen Cox

Hydrilla Surveys:

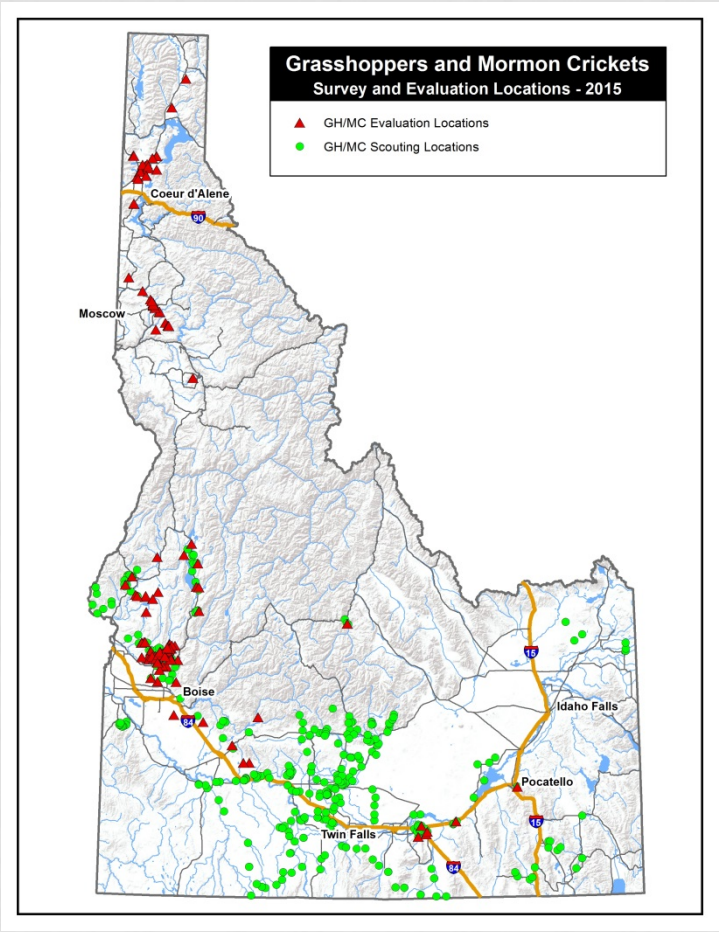
- Hydrilla is one of the most aggressive and environmentally disruptive aquatic plants in the world. The biotype of Hydrilla found in Idaho only exists in warm water. Due to the abundant geothermal locations in Idaho this plant has the opportunity to populate many areas. So far Hydrilla has been found in the Bruneau River, a hot spring ditch in Boise, and multiple locations between Twin Falls and Hagerman.
- Field crews record Hydrilla locations throughout the summer and hand remove all plants found. In addition to plant locations, soil and water temperature locations are recorded as well.
- Surveys are collected using the **ESRI Collector application** on Google Nexus tablets. Due to the remoteness of the locations surveyed, the Collector app is run in off-line mode and updated each night when the field staff returns.

INVASIVE SPECIES MONITORING WITH MOBILE DATA STUDIO & ESRI COLLECTOR

Idaho Department of Agriculture, Stephen Cox

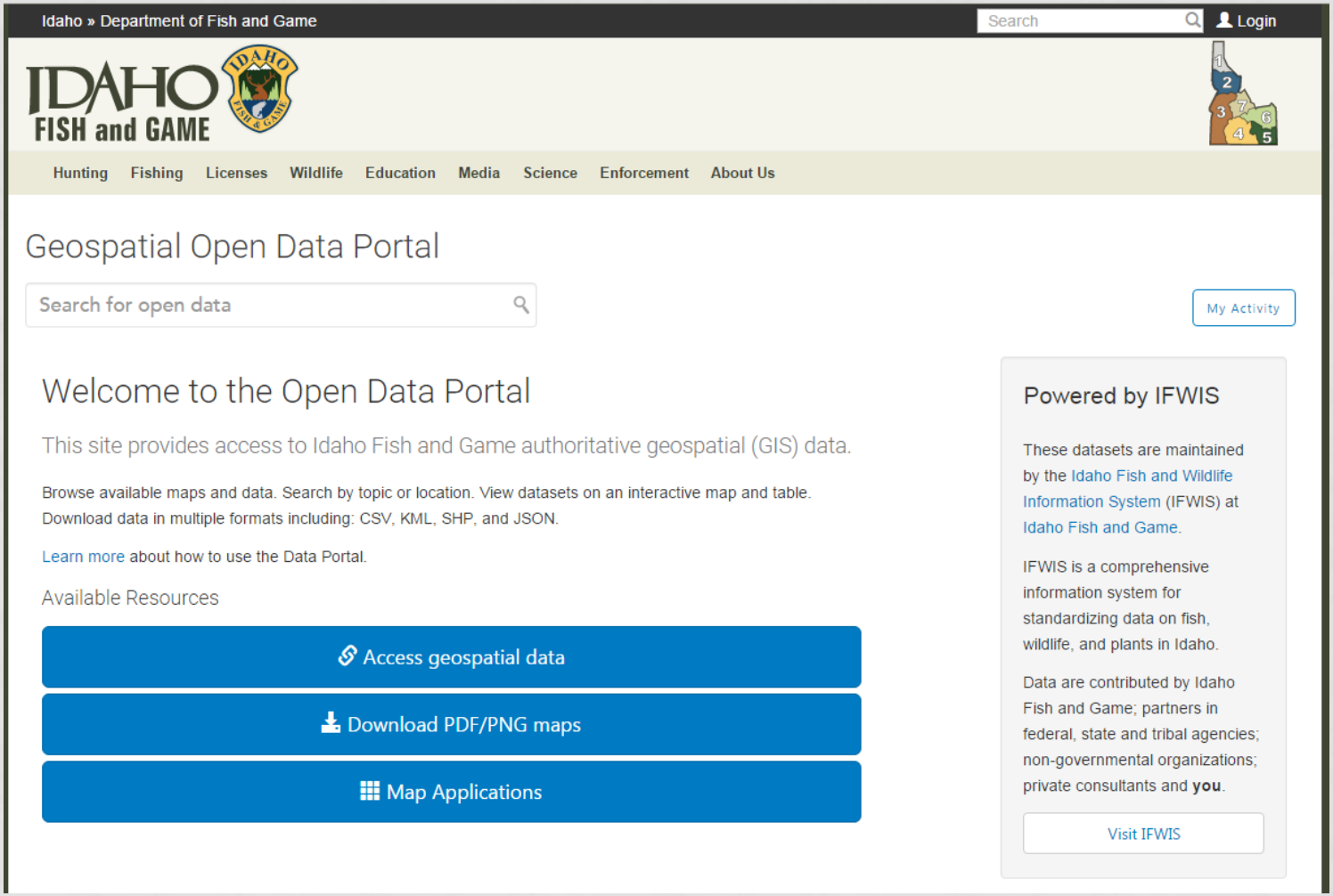
Grasshopper/Mormon Cricket Program:

- Offers help to ranchers, farmers, and the general public.
- Data was collected digitally for the first time in 2015 with the **Mobile Data Studio application** on a Google Nexus tablet. This decreased greatly the time to get reported infestation locations and severity to management.
- Online reporting form used for the first time in 2015 allowed the public to notify ISDA of an infestation without traveling, and included the ability to include pictures for verification.
- 2015: 365 Field surveys, in 24 Counties
- 143 Field evaluations generated by land owner complaints representing 33,500 acres.



ARCGIS ONLINE OPEN DATA PORTAL & INSIDE IDAHO INTEGRATION

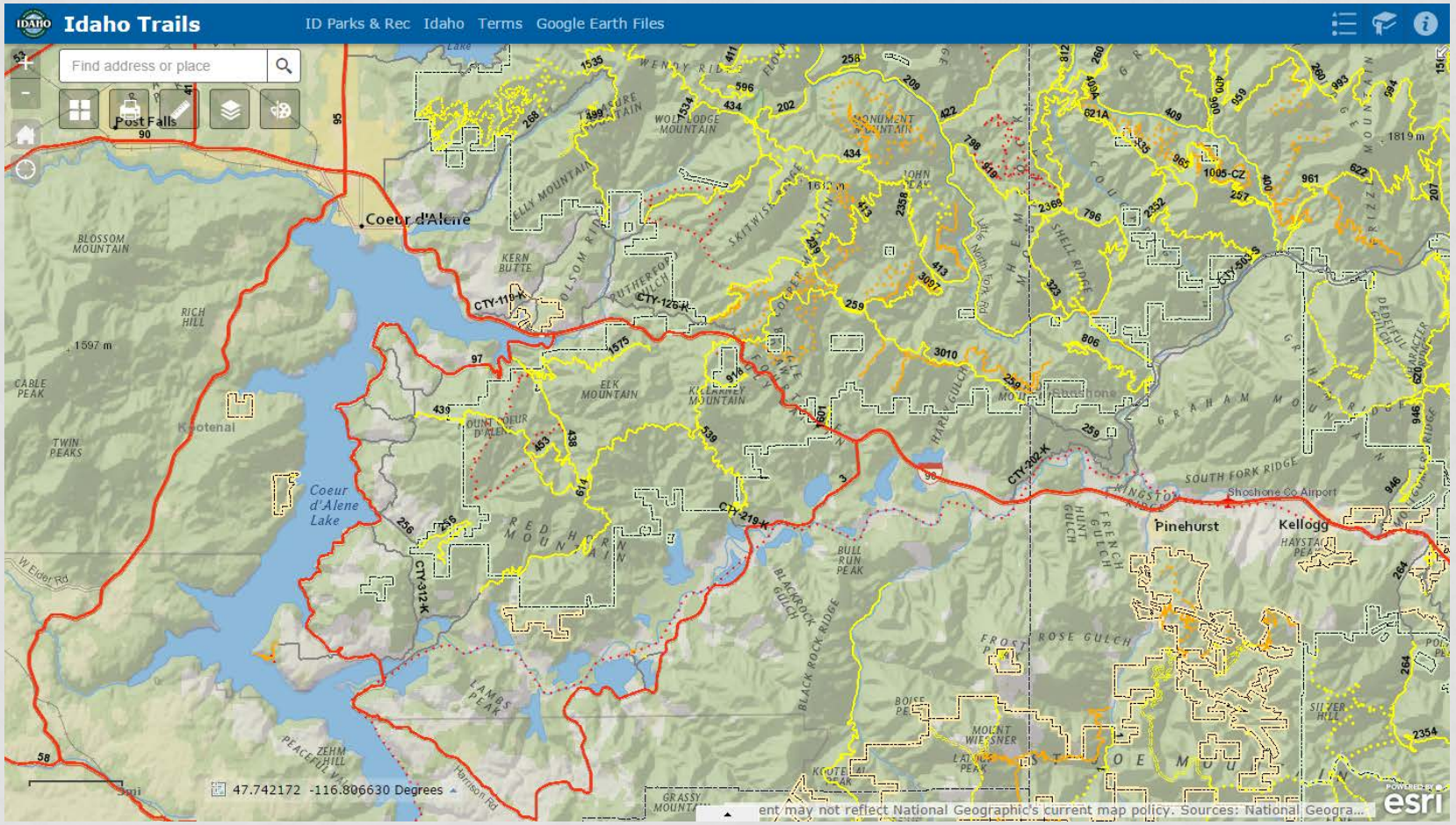
Idaho Department of Fish & Game, Pam Bond



http://data.idfggis.opendata.arcgis.com/ http://inside.uidaho.edu/

PARKS & RECREATION INTERACTIVE WEB MAPPING APPLICATIONS

Idaho Department of Parks & Recreation, Jeff Cook



www.trails.idaho.gov

PARKS & RECREATION INTERACTIVE WEB MAPPING APPLICATIONS

Idaho Department of Parks & Recreation, Jeff Cook

Other ArcGIS.com Web Map and Applications:

- Idaho Trail of the Coeur d'Alenes
- Idaho Centennial Trail
- Idaho OHV, Snowmobile, and Boat Registration Vendor Locations
- Idaho Park N' Ski Locations & Permit Vendors
- Idaho City Yurt Locations
- Idaho Campground Locations

ARCGIS ONLINE DATA SHARING & INTERACTIVE WEB MAPPING APPLICATIONS

Idaho Department of Water Resources, Dan Narsavage

- Updated interactive maps at http://research.idwr.idaho.gov
  - ***General Map***, ***Geothermal Resource Map***, ***Ground Water Quality Map***, and ***Water Right Accounting Map*** web applications are mobile friendly
  - The ***Well Drillers' Locator*** tool was rewritten to use the same framework as the applications mentioned above.
  - ***hydro.online*** was rewritten so it is now a fully interactive map, on that same framework.
  - The ***Irrigation Rights Finder*** is being transformed, as well.

ARCGIS ONLINE DATA SHARING & INTERACTIVE WEB MAPPING APPLICATIONS

Idaho Department of Water Resources, Dan Narsavage

- IDWR is serving many of its data sets under ArcGIS Online https://idwr.maps.arcgis.com/home/

ARCGIS ONLINE DATA SHARING & INTERACTIVE WEB MAPPING APPLICATIONS

Idaho Department of Water Resources, Dan Narsavage

- Water Data Exchange (WaDE)
  http://www.westernstateswater.org/wade/
  - Working with Western States Water council to serve IDWR data via an exchange framework that will allow for real-time access to state water allocation, supply, and demand data in a common format.

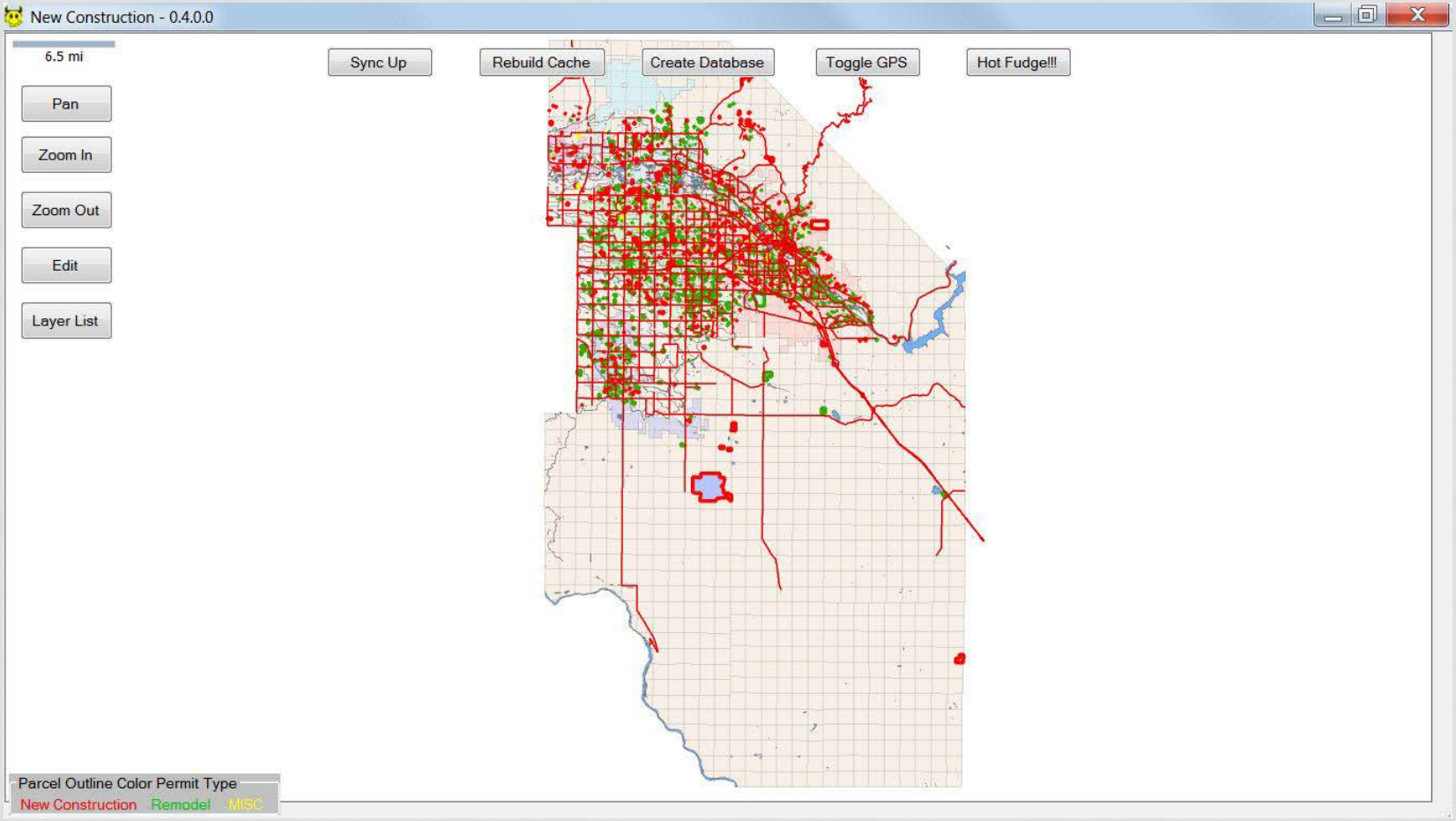
ADA COUNTY MOBILE IMPLEMENTATION PROJECT

Ada County, Anne Kawalec

- Mobile data collection system for the Assessor's Office appraisal staff.
  - Integrated with the Computer Aided Mass Appraisal (CAMA) system
  - Spatially view workflow
  - Collect property characteristic data for new construction, remodel renovation projects, and reappraisal validation processes.
  - Field appraisers can return to the office and sync collected data to update the CAMA system.
- Currently working on Phase II of the project - culmination of this phase represents the core of our technology deployment and includes the creation of the mobile data collection software with a GIS interface.

ADA COUNTY MOBILE IMPLEMENTATION PROJECT

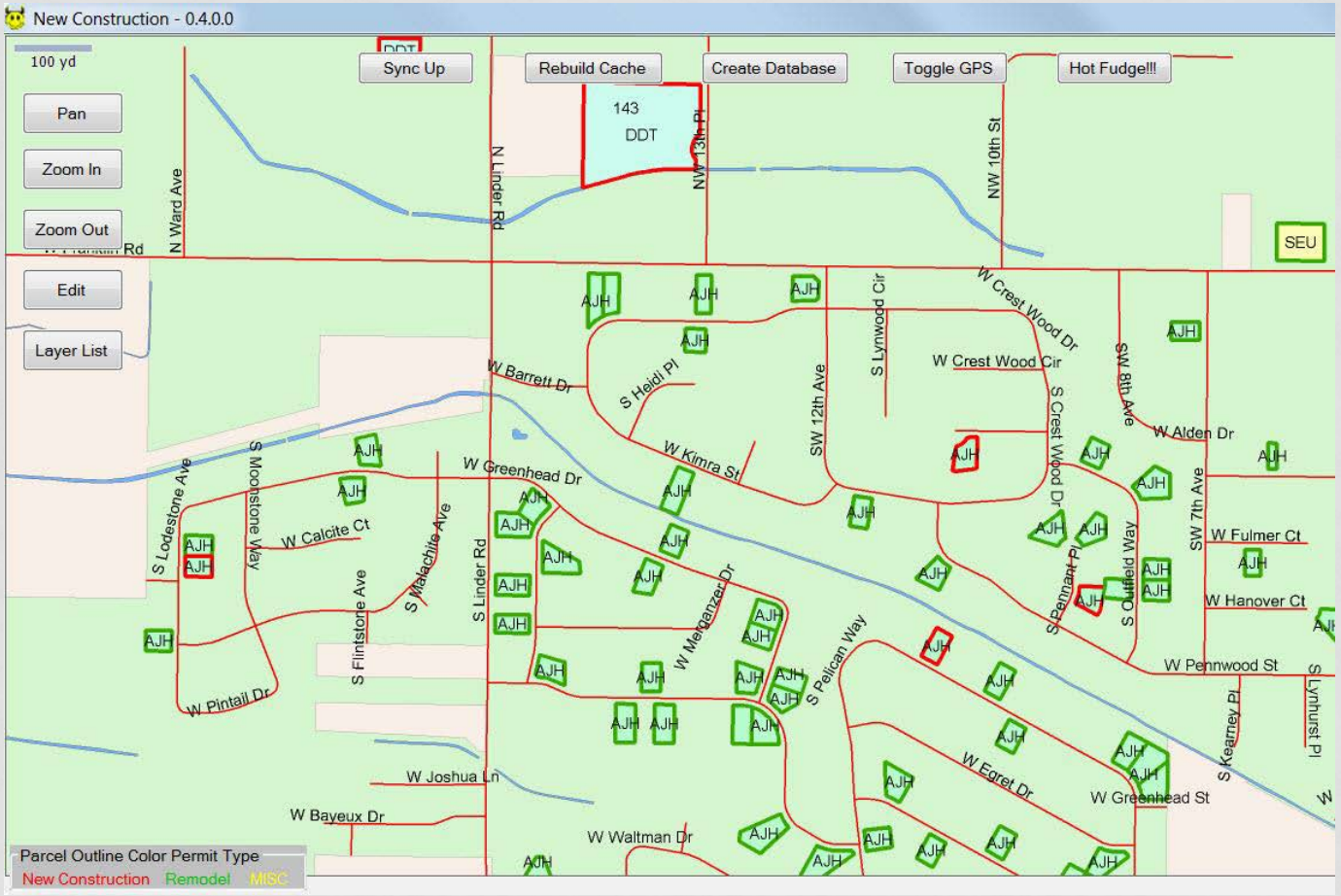
Ada County, Anne Kawalec



Ada County Mobile System GIS Interface

ADA COUNTY MOBILE IMPLEMENTATION PROJECT

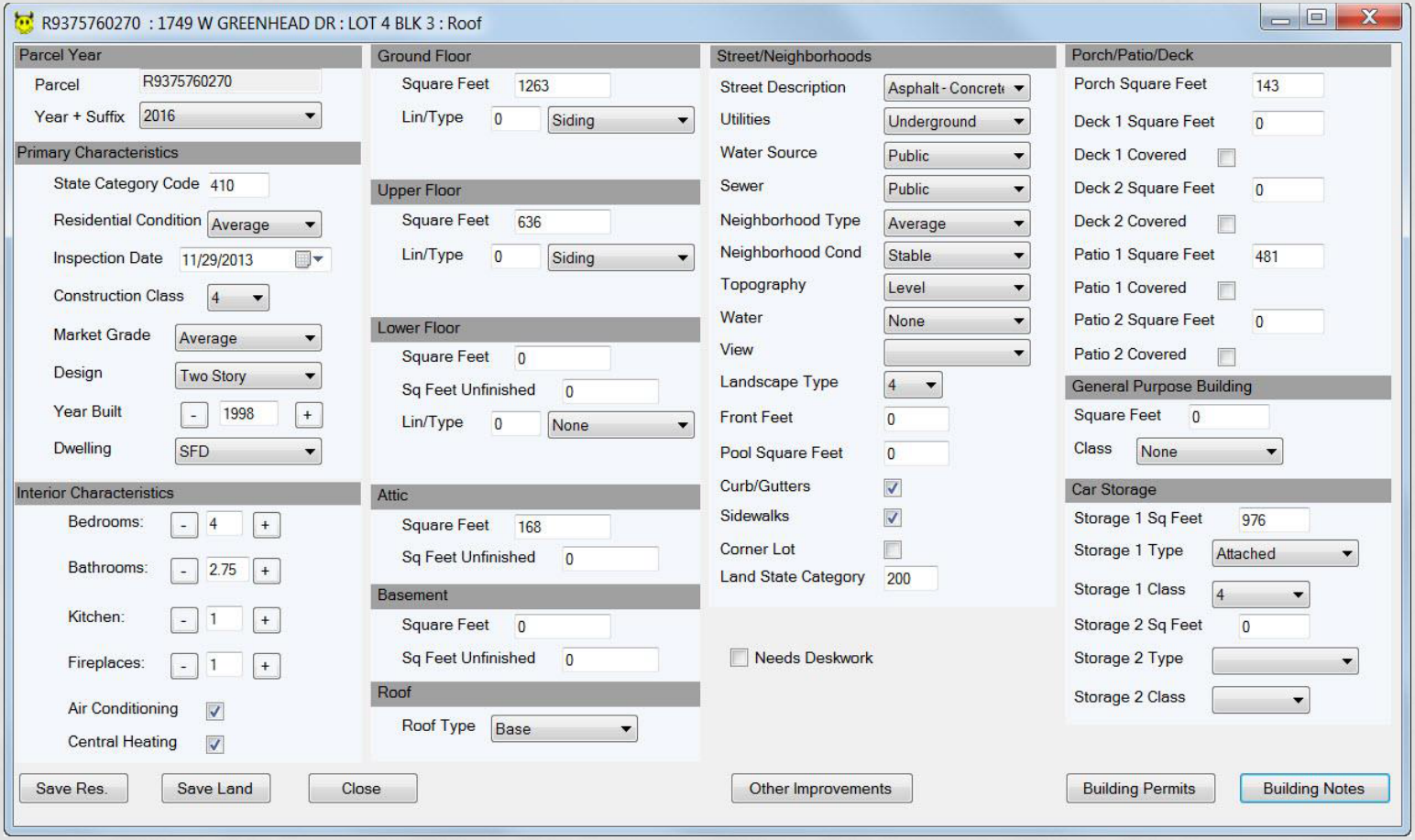
Ada County, Anne Kawalec



Ada County Mobile GIS Interface: Neighborhood Zoomed View

ADA COUNTY MOBILE IMPLEMENTATION PROJECT

Ada County, Anne Kawalec



Ada County Mobile Data Collection Form

ADA COUNTY MOBILE IMPLEMENTATION PROJECT

Ada County, Anne Kawalec

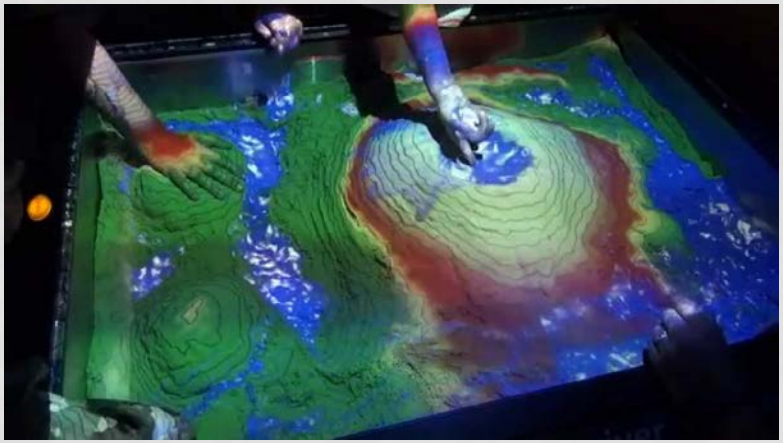
For more info contact:

Mike Hickok
mhickok@adaweb.net

GIS ACCOMPLISHMENTS & HIGHLIGHTS

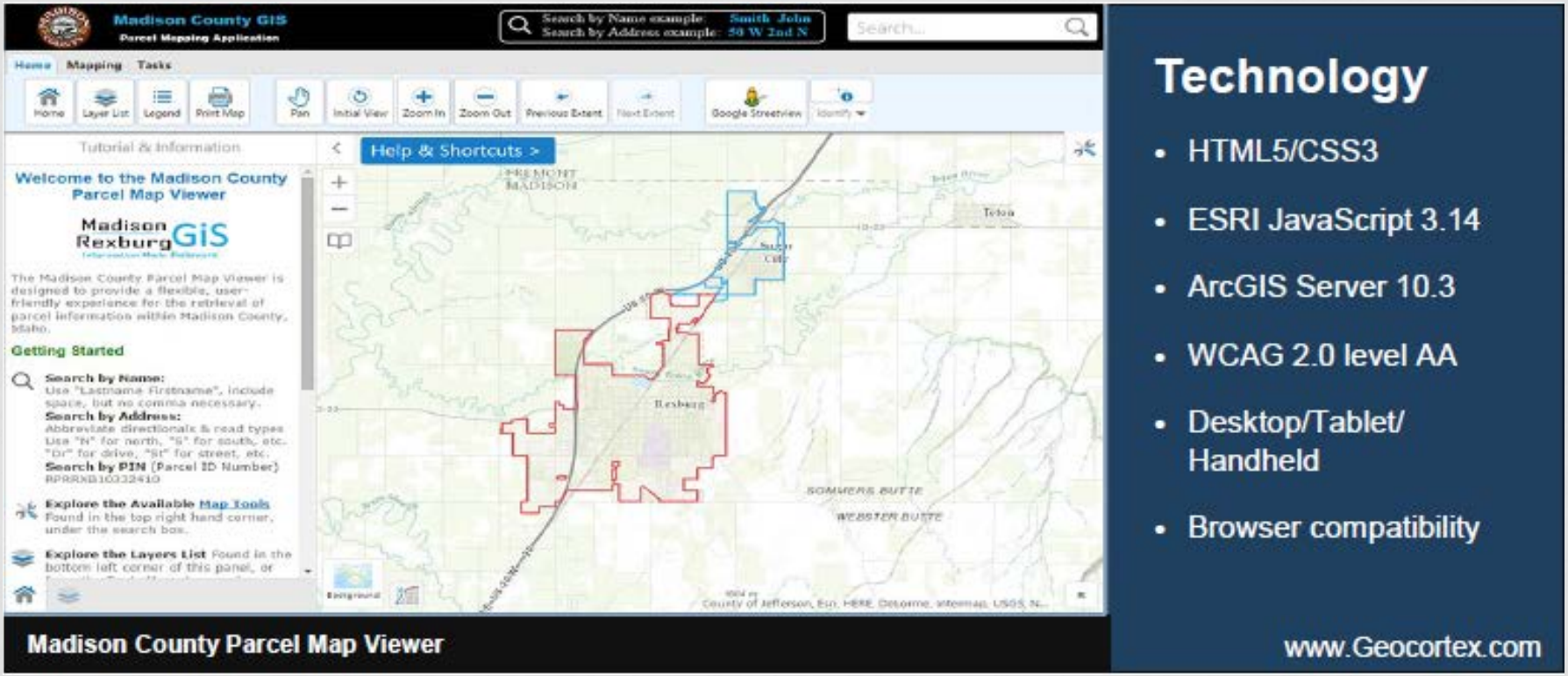
City of Boise, Jim Hetherington

- Energize our Neighborhoods
- Enterprise Computerized Maintenance Management System (CMMS)
- HTML5 BoiseMaps
- ArcGIS Online Open Data – opendata.cityofboise.org
- Augmented Reality Sandbox



PARCEL VIEWER PROJECT

Madison County/City of Rexburg, Craig Rindlishbacher



http://madison.rexburg.org/Html5Viewer2.4/?viewer=public

TWG UPDATES

- **Hydrography**
- **Elevation**
- **Imagery**
- **Geodetic Control**
- Parcels
- **Cadastral Reference**
- Transportation
- Government Boundaries
- **Public Safety**
- Utilities
- Land Use Land Cover Theme

HYDROGRAPHY

CHAIR: Linda Davis

- Stewardship
- Data Integration
- Resources and Tools

HYDROGRAPHY

Last meeting: Sept. 10, 2015, Next Meeting: March 10, 2016

- Full minutes: http://idwr.idaho.gov/GIS/NHD/hydro-TWG.html

Framework

- The Idaho Hydrography Data Exchange Standard was ratified at the Sept. 17, 2015 IGC-EC meeting.
  - http://gis.idaho.gov/portal/coordination/standards.html and click on the link under ITA Established Standards | Hydrography.
- The National Hydrography Dataset is recognized by the Idaho Geospatial Council-Executive Committee as the Framework Dataset for the Water Features Element of the Hydrography Framework Data Theme for Idaho. (March 19, 2015)
- The Watershed Boundary Dataset is recognized by the Idaho Geospatial Council-Executive Committee as the Framework Dataset of the Watershed Element of the Hydrography Framework Data Theme for Idaho. (March 19, 2015)

HYDROGRAPHY

National Hydrography Database (NHD)

- Moved to 10.x Products
- New Staged Products for Download
- Upcoming Edit Projects: Big Lost (17040218) and Lemhi (17060204) Basin

Watershed Boundary Dataset (WBD)

- Upcoming: Submitted Edits include the South Fork Payette (17050120) and Canyon Creek (17040204) area of the Teton.

NHD Web Services:

http://serivces.nationalmap.gov/ArcGIS/rest/services/nhd/MapServer

For More Information:

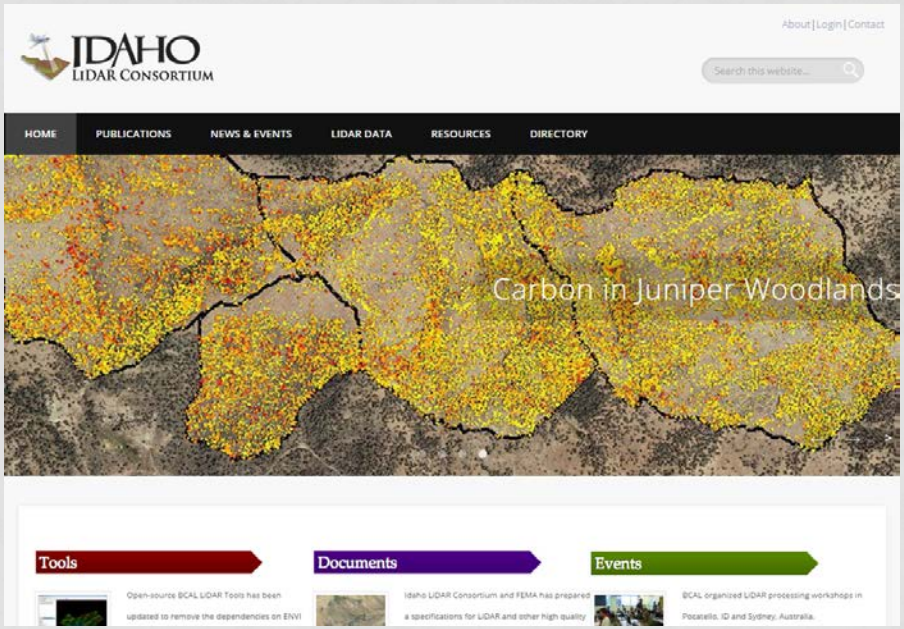
http://idwr.idaho.gov/GIS/NHD/datasets.html

Danielle Favreau (208) 287-4800 nhd.wbd@idwr.idaho.gov

ELEVATION

CHAIR: Nancy Glenn, Boise State Univ.

LiDAR is the focus of the Elevation TWG. FEMA funding for floodplain management, as well as other federal and state agency requirements, are generating opportunities for consortium purchases of LiDAR, reducing costs and avoiding duplication.



ELEVATION

Activities:

- Statewide lidar-acquisition plan draft underway – there have been many contributors but would love more editors! Please email Nancy
- Several groups are interested in coordinating for 3DEP proposal (due Oct 23)
- Website will be re-formulated to be more user friendly
  - Lidar data map is up-to-date and data downloads via Globus @ ISU GIS Training and Research Center continue
  - Please send shapefiles of LiDAR data acquisitions (collected or planned) so we can post. We typically post the boundaries and as many attributes of the data collection as shared.
  - If you would like data posted, we can do this with ISU GIS TReC (Keith Weber).
- Please email Nancy Glenn (nancyglenn@boisestate.edu) with additional suggestions on how the elevation TWG may proceed with activities.

IMAGERY

CHAIR: Margie Wilkins

- Leadership
- Image Services
- Imagery Resources and Miscellaneous Tools

IMAGERY

2015 Idaho NAIP:

- NAIP is currently on a 2-year cycle (dependent on funding)
- Collection: Statewide, 1.0 meter resolution, 4-bands.
- Idaho collection scheduled for: June 10 – September 25.
- DOQQs (4-band Geotiffs) estimated availability beginning Sept 14.
- CCMs (3-band MrSIDs) estimated availability beginning Sept 29.
- USDA's Geospatial Data Gateway will provide CCM data download.
- NAIP Collection status maps available thru ArcGIS Online option.
- Data available for purchase directly through APFO/USDA/FSA. Data is essentially free and APFO only charges for production costs.
- Idaho GIO plans to purchase disks/data.
- APFO accepts feedback regarding the NAIP imagery. Use the NAIP Imagery Feedback map or send an email to NAIP.Problem.Tracking@slc.usda.gov

IMAGERY

Various ways to access earlier Idaho NAIP data (Layer file, KMZ, OGC, etc) and/or to add the GIS Servers in ArcGIS Desktop.

Info may be found at these pages:

https://gis.northwestknowledge.net/arcgis/rest/services/aerial-imagery/ortho_2013_idaho/ImageServer***

http://naip.giscenter.isu.edu/arcgis/rest/services/NAIP2013_ImageService/ImageServer

http://gis.apfo.usda.gov/arcgis/rest/services/NAIP/Idaho_2013_05m/ImageServer

****Downloading of source rasters is enabled for the service at the gis.northwestknowledge.net link*

IMAGERY

Imagery Technical Working Group

Meets on a semi-annual basis

First Wednesday of the month

NEXT MEETING:

Tentatively scheduled for: NOV 4th

Idaho Water Center

322 East Front Street

Contact: margie.wilkins@idwr.idaho.gov

208.287.4884

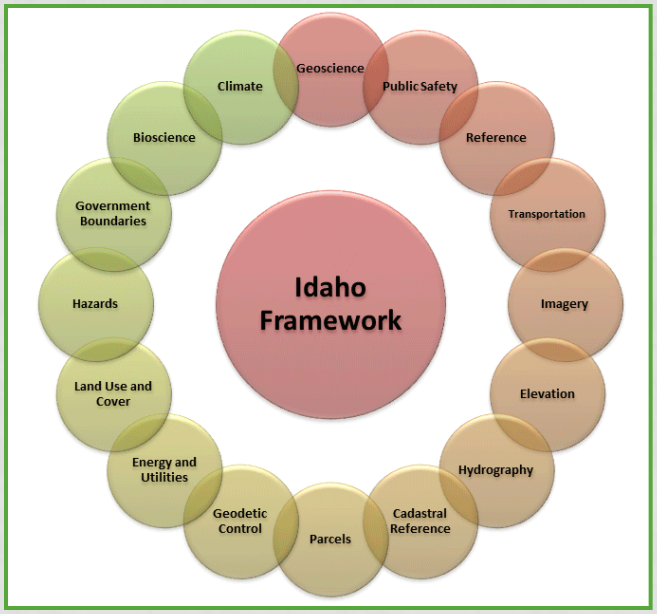
GEODETIC CONTROL

CHAIR: Keith Weber

The Geodetic Control Theme provides the positional underpinnings of all spatial datasets and survey measurements, both horizontal and vertical. The current focus is on implementing a *real-time network* over a densified CORS (continuously operating reference station). As part of grant-funded project, Montana and Idaho are writing a business plan to establish a Regional Geodetic Reference Center. Developing a multi-state control point database and application is also part of the project.

We need your help…

We're working on an assessment of **Idaho's Spatial Data Infrastructure (SDI)** and **Strategic Plan** and are seeking *YOUR* recommendations!



Please use this link to our survey, which should only take about 20 minutes of your time and will help us with our assessment:

https://www.surveymonkey.com/r/IdahoSDI

CADASTRAL REFERENCE

CHAIR: Renee Bettis

Cadastral Reference is the spatial grid of township, range, section, quarter-quarter lines, special surveys, mineral surveys or any line or corner established by a federal survey generally referred to as the Public Land Survey System (PLSS). BLM and the workgroup are developing ways to improve CadRef and publish one version.

CADASTRAL REFERENCE

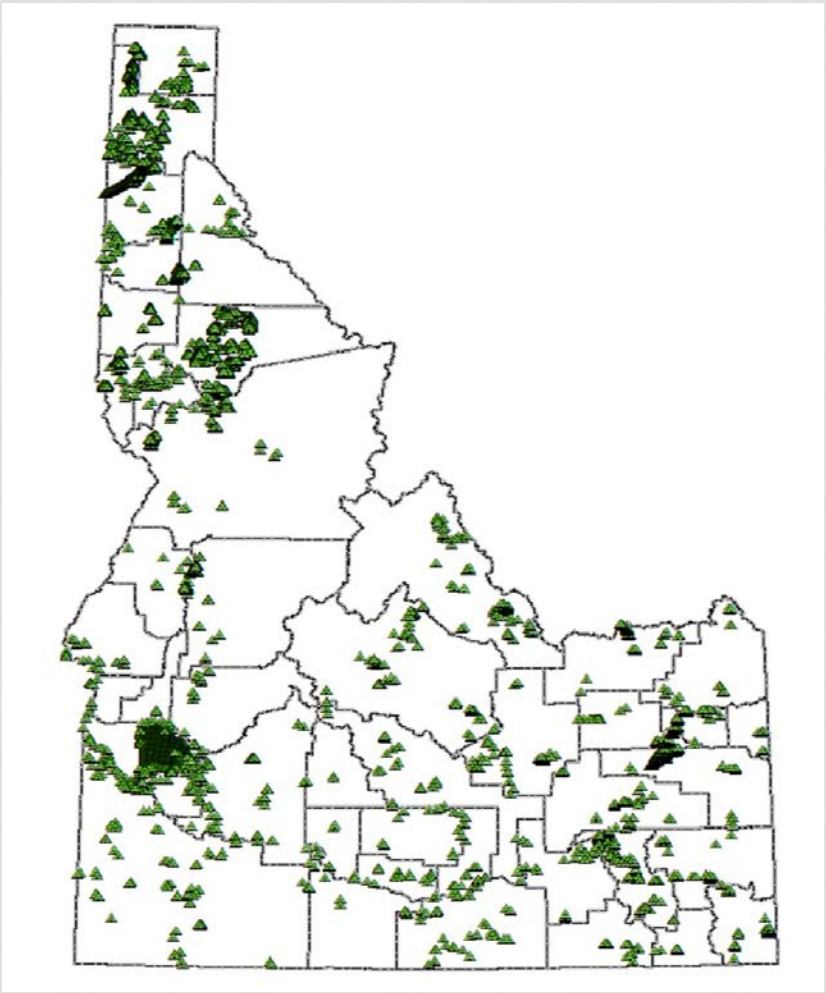
CADNSDI in the Parcel Fabric

The CADNSDI is now in the parcel fabric and many areas have been adjusted. With more survey grade points being collected we will start adjustments on others areas.

IDL has started with state ownership and will in the future expand to private ownership parcels to get the entire state into the parcel fabric.

IDAHO DEPARTMENT OF LANDS

CADASTRAL REFERENCE



Survey Points Collected

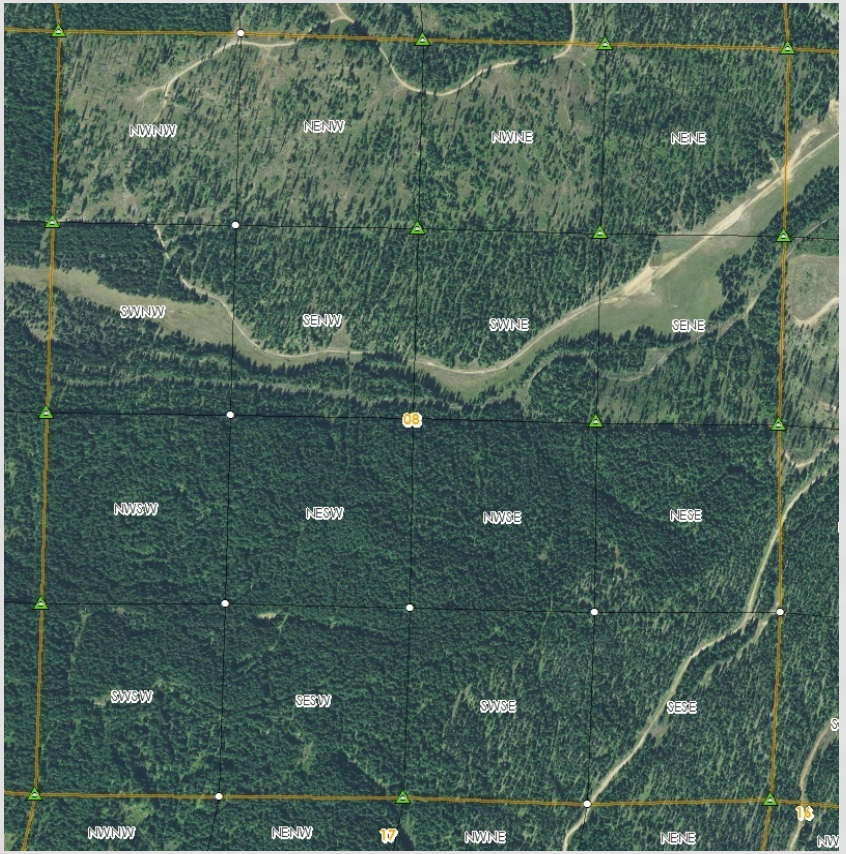
- Survey grade points collected from various sources
- Slide shows points currently in the parcel fabric that will be used for future adjustments.

IDAHO DEPARTMENT OF LANDS

CADASTRAL REFERENCE

Examples of current section and new adjusted section.

Current Land Records Control



New Land Records Control

Note the new alignment with the timber stand boundary on the aerial photo, NWNW.

CADASTRAL REFERENCE

NEXT MEETING:

November 5th

For additional information on the Cadastral Working Group email Renee Bettis, rbettis@idl.idaho.gov

IDAHO DEPARTMENT OF LANDS

PUBLIC SAFETY

CHAIR: Bill Reynolds

The Public Safety Theme is composed of three elements: Structures and Landmarks, Emergency Services Zones and Critical Features. The first two are required for NextGen 911, and standards have been established. The current focus is on adding new partners to the Structures stewardship circle.

CLOUD POLICY AND GIS

Bill Farnsworth

CLOUD POLICY AND GIS

Best Practices

- The right terms
- The right questions to ask
- Long-term questions
- Ownership of the Service and Data
- What Data should be at a cloud service
- What external factors are in play
- Not just a GIS issue

Contract vehicle

- Enterprise Solutions
- Cover all the Legal issues one time
- Best pricing

FIRSTNET

Bill Farnsworth

FirstNet

- Background – what is it
- Funding
- Current State of Project
- Future direction

ADJOURNMENT

See you in the spring !