

IGC-EC Meeting

November 1, 2016

9:30 am (Pacific) / 10:30 am (Mountain)

Minutes

- September 15, 2016
ACTION: To be approved

Interim Appointment of New Member

ACTION: To be ratified

State GIS Strategic Plan

ACTION: To be approved

2016 IGC Fall Meeting

November 1, 2016

10:00 am (Pacific) / 11:00 am (Mountain)

GIO Update

Bill Farnsworth

Enterprise Servers

- External Facing
- Internal Facing

ArcGIS Online

- GIS Professional more usage
- Business Units continue to get more into it
- Publish a map
- Customers can add any layer they want



NSGIC Conference

NSGIC
National States Geographic Information Council

HOME ABOUT NSGIC ADVOCACY COMMITTEES CONFERENCES PEOPLE RESOURCES SPONSOR Enter Search Terms

Annual Conference
October 24 - 28 in Indianapolis

NSGIC BLOG
Important news from around the geospatial community.

NSGIC GMA
See the detailed results of the 2015 Geospatial Maturity Assessment.

Natural Disasters
Working together to manage the Continuum of Natural Disasters.

PLATINUM SPONSORS
esri spatial NORTH WEST GROUP

GOLD SILVER GOLD
Google 911 Datamaster DigitalGlobe

STATE INFO

443.840.1075 info@nsgic.org 8 Newport Drive, Suite 200, Poolesville, Maryland 21088
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- Addressing at the National Level
- Hydro and Elevation Integrated Committees
- NG 911 GIS Data Model
- Census
- Fresh look at Metadata (more on this later.....)

How to coordinate with InSide Idaho:

www.insideidaho.org



The screenshot shows the homepage of the INSIDE IDAHO website. At the top left is the logo for INSIDE IDAHO, which includes a map of Idaho and the text "INSIDE IDAHO Interactive Numeric & Spatial Information Data Engine". To the right of the logo is the text "Idaho's Geospatial Data Clearinghouse". Below the logo and text is a navigation menu with links for "Home", "Browse Data", "Online Maps", "Web Services", and "Learn More". A large search bar is centered below the navigation menu. Below the search bar are three main content blocks: "2015 Aerial Imagery" with a link to "View Web Map" and "Image Web Services"; "GIS day" for November 16, 2016, in Moscow, Idaho, with a link for "More information"; and "Popular Idaho Layers" with a link to an "ArcGIS Map Document". At the bottom of the page is a footer with links for "Contact Us", "About", "Disclaimer", and "Give to INSIDE".

- How to do MetaData
- Plans?

Framework for Public Safety GIS / North Idaho Counties

Bill Harp,
Bonner County

The Evolution of 9-1-1 Technology and the Potential Role of a Collaborative, Multi- jurisdictional Public Safety GIS in Northern Idaho

**Idaho Geospatial Council Bi-Annual Meeting
1 November 2016, Coeur d'Alene, Idaho**

**By Bill Harp, Director
Bonner County Technology Department
bharp@bonnercountyid.gov**



Biography

- **Sixteen years as a consultant in defense and intelligence geospatial applications, Department of Defense, US Southern Command, Panama**
- **Seven years at Esri – Retired as Defense and Intelligence Industry Manager**
- **Manager, National Mapping Project - Land Use and Vegetation Cover of the Republic of Panama, United Nations and Panamanian Ministry of the Environment**
- **Three years, Director, Technology – Bonner County Government**

The Framework of the Next Generation of 9-1-1 Technology

- **Multijurisdictional collaboration is critical**
- **Cell and smart phones change everything**
- **GIS and IP technology will therefore play an increasingly important role in 9-1-1**
 - **real time video, VoIP, photos, audio files and other forms of digital media at the PSAP**
 - **9-1-1 calls come from cell phones more often than landlines. Even in Bonner County, which is pretty much a rural area, 70% of the calls are from cell phones.**
 - **major geospatial problem in correctly locating the emergency caller with a high level of accuracy and a high level of success.**

The Framework of the Next Generation of 9-1-1 Technology (continued)

- **Mountainous terrain and the phone's metadata**
- **Cell tower triangulation is a shot in the dark and could be miles off**



The critical function of 9-1-1

- **Calls from one jurisdiction to another**
- **Several well-documented cases when caller's died because the wrong jurisdiction responded to the call or the 9-1-1 center could not correctly identify the location**

GIS and Public Safety

- **One of the key solutions can be solved by a shared, multi-jurisdictional GIS**
- **GIS increasingly important to agencies and staff regardless of where your position in the decision making matrix**
- **Technologist at the table – a bridge too far ...**

GIS and Public Safety (continued)

- IP technology, regional collaboration and GIS are actually closely related:
- SMS Text to 9-1-1 example
- Telecommunicator's culture
- Initial taste of things to come and the press release
- “Technology is complex but changing culture is even more challenging” or as the team bluntly says it not the technology it's the people.

The problem of location

- **As cell calls may now be made in one jurisdiction and handled by a PSAP in another,**
- **Jurisdictions will need to integrate and share addressing systems and geospatial data**
- **This will ensure that the emergency caller receives the correct service at the correct location.**

Common Operational Picture

- **Standard addressing system, unified road names and precise jurisdictional boundaries for shared and collaborative situation awareness.**
- **“one map, one fight.”**



A grant ...

- **IPSCC – Idaho Public Safety Communications Commission**
- **An invitation to Boundary, Bonner, Kootenai, Benewah and Shoshone counties and the Coeur d'Alene and Post Falls municipalities to participate**
- **Each jurisdiction would control their data and updates and all jurisdictions would share and benefit from their work.**

Click to toggle the visibility of the various layers

- PUBLIC SAFETY
- ADDRESS
- TRANSPORTATION
- PARCELS
- PUBLIC SERVICES
- ADMIN BOUNDARIES
 - Maintenance Districts
 - Trustee Zones
 - Legislative Districts
 - Commissioners Districts
 - Voting Precincts
 - Herd Districts
 - Public Land Bonner County
 - Public Land
 - Zip Codes
 - Counties
- HYDRO Pts Lines
- HYDRO Area
- FEMA Pts Lines
- FEMA Area
- NAT RESOURCES
- GEOGRAPHIC FEATURES
- ZONING/LANDUSE
- TRAILS
- TRAIL AREAS
- TOWNSHIP/RANGE
- ISTD
- LPO BATHYMETRY

Project components ...

Esri's ArcGIS Server

- Robust data server with redundant data drive arrays
- Ample connectivity to handle the public safety traffic.
- Hosted centrally to the participatory jurisdictions
- A designated location for fail over
- Application similar to the existing Bonner County Interactive Mapping system use by the Bonner County 9-1-1 center and found at:

- <http://maps.bonnercounty.us/apps/public/>

The project governance...

- **Technical support for jurisdictions to prepare and integrate their authoritative GIS data**
- **Promotes inter-agency collaboration all with a minimum of effort and resources**
- **Critical geospatial framework for integrating the next generation of 9-1-1 technology**

Thank you ...

**The Evolution of 9-1-1 Technology and the Potential Role of
a Collaborative, Multi-jurisdictional Public Safety GIS in
Northern Idaho**

**Idaho Geospatial Council Bi-Annual Meeting
1 November 2016, Coeur d'Alene, Idaho**

**By Bill Harp, Director
Bonner County Technology Department
bharp@bonnercountyid.gov**



Overview

- <http://maps.bonnercounty.us>
- The Bonner County Interactive Mapping Application provides the public with a sophisticated geographic browser that displays the entire Bonner County digital mapping data. It represents the most up-to-date collection of local and regional geographic data ... all compiled in an easy-to-use interactive environment.
- Review high resolution aerial photography of Bonner and adjacent counties as well as detailed ownership information of every parcel as well as all the County land use, zoning, other administrative and geographic data. Create cartographic maps with annotation in PDF, jpeg and other graphic formats in a variety of pre-determined standard sizes including large formats.

Bonner County Mapping Application

The screenshot displays the Bonner County Mapping Application interface. The browser address bar shows the URL `maps.bonnercounty.us/apps/public/`. The application title is "Bonner County Map Public Map Viewer". The interface includes a search bar at the top right with the placeholder text "Search for an address". A toolbar is located at the top left of the map area. The map itself shows Bonner County, Idaho, with various geographical features and data layers overlaid. A legend panel on the right side lists various data layers, including "PUBLIC SAFETY", "ADDRESS", "TRANSPORTATION", "PARCELS", "2016 Parcels", "Tax Roll Parcels", "2016 Lots", "Tax Roll Lots", "Blocks", "Subdivisions", "ROW", "Taxlots by Tax Code", "HYDRO Pts Lines", "HYDRO Area", "FEMA Pts Lines", "FEMA Area", "NAT RESOURCES Area", "ADMIN Pts Lines", "ADMIN BOUNDARIES", "ZONING/LANDUSE", "TRAILS", "TRAIL AREAS", "TOWNSHIP/RANGE", and "ISTC". A "Draw & Export" section is also visible at the bottom right. The bottom left of the map shows coordinates `48.305277, -117.587055` and a scale bar for 10km and 10mi. The scale is indicated as 1:530628. The bottom right corner of the map area says "Bonner County GIS". The bottom right of the browser window shows the "Bonner County Website" link.

Tool Bar

Search for an address

Data Layers

**Annotate
Draw
Print Layout
Search
Tools**

Scale and coords.

Legend

Data Layers

Click to toggle the visibility of the various layers

- PUBLIC SAFETY
- ADDRESS
- TRANSPORTATION
- PARCELS
- 2016 Parcels
- Tax Roll Parcels
- 2016 Lots
- Tax Roll Lots
- Blocks
- Subdivisions
- ROW
- Taxlots by Tax Code
- HYDRO Pts Lines
- HYDRO Area
- FEMA Pts Lines
- FEMA Area
- NAT RESOURCES Area
- ADMIN Pts Lines
- ADMIN BOUNDARIES
- ZONING/LANDUSE
- TRAILS
- TRAIL AREAS
- TOWNSHIP/RANGE
- ISTC

Draw & Export

Search

Bonner County Website

BREAK

Mobile Data Collection Program

Riley Tschida,
Stimson Lumber Co.



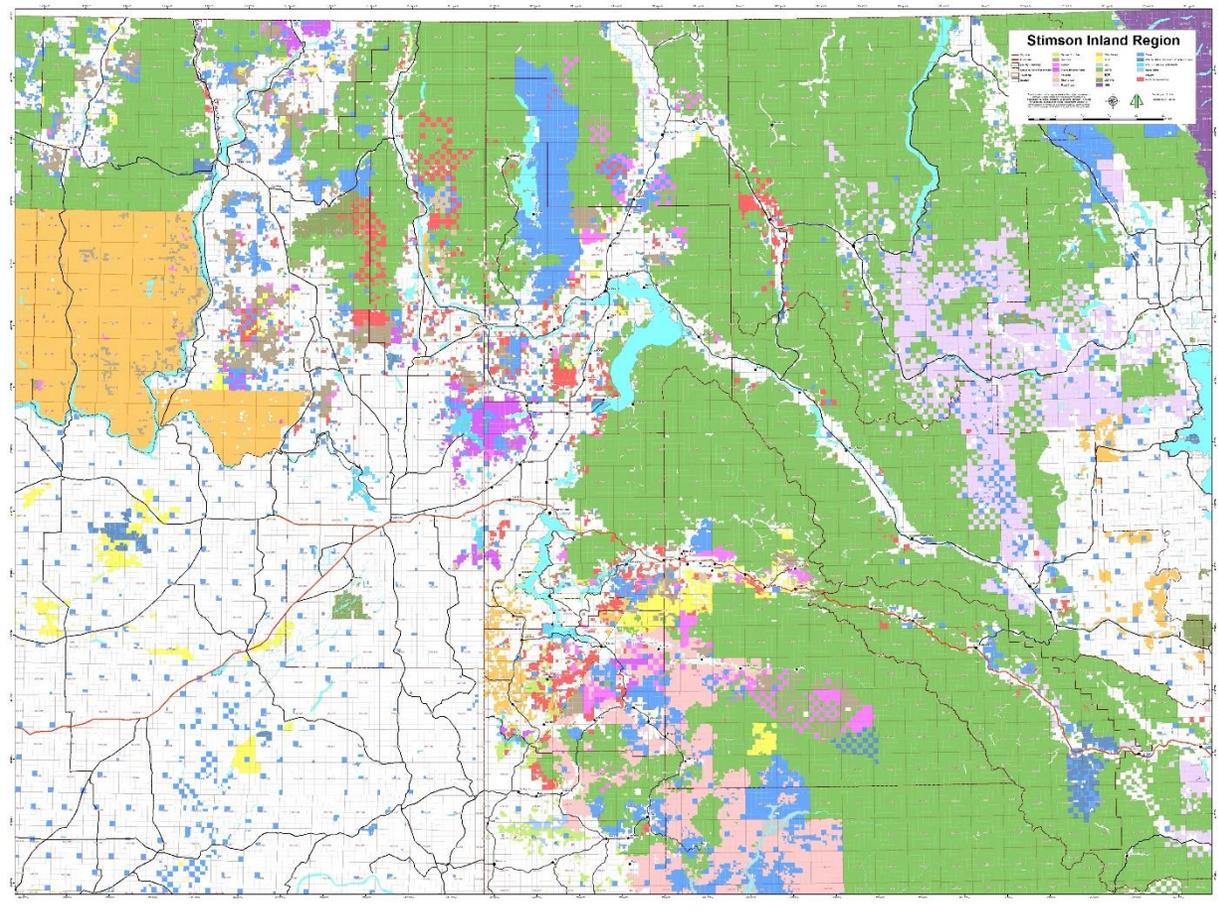
Stimson Lumber Mobile Data Acquisition





Stimson Lumber Company Ownership

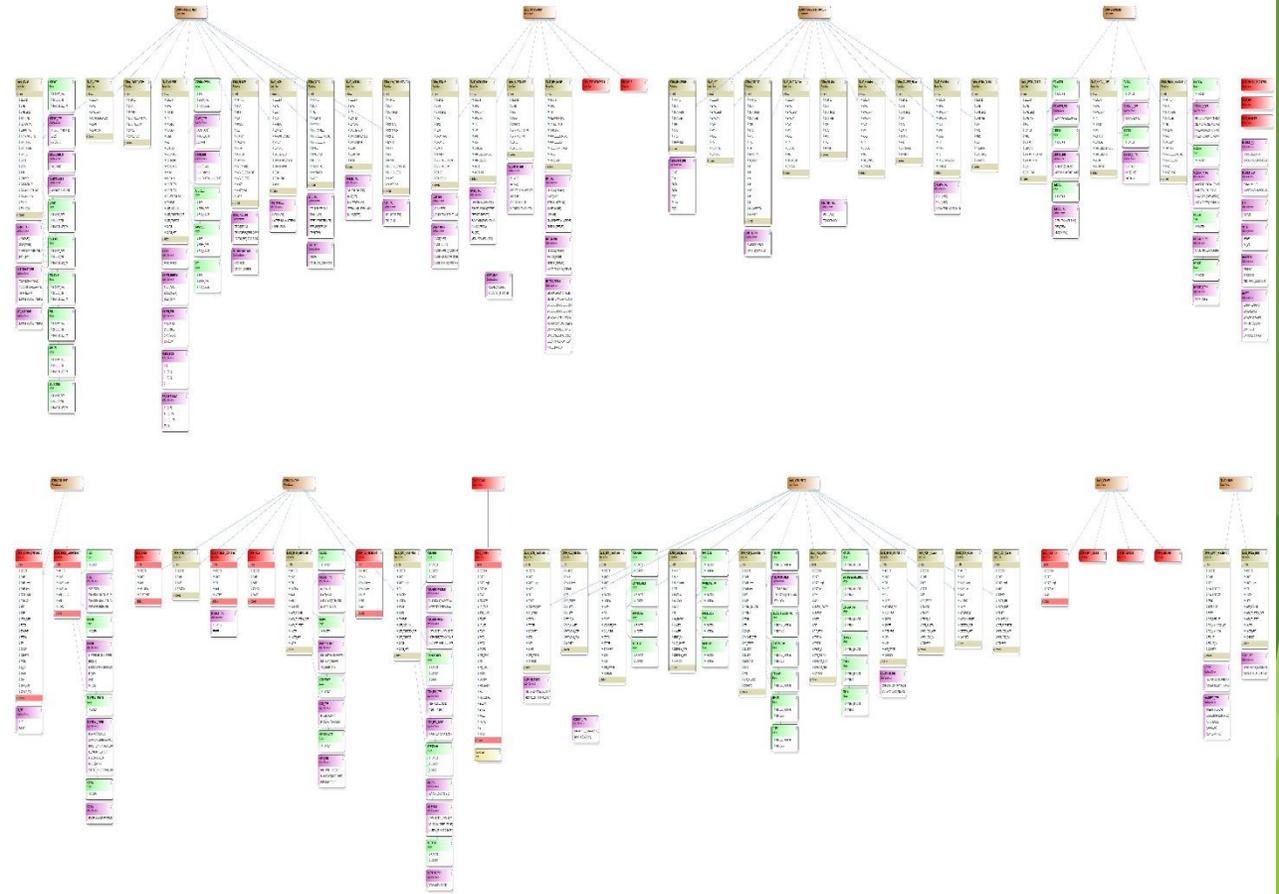
- ▶ Stimson Lumber owns and manages ~340,000 acres in the Inland Region
- ▶ Ownership across 3 states
- ▶ 3 mills, 2 fee offices
- ▶ 20+ foresters/staff who use GIS
- ▶ Minimal to no cellular coverage





Stimson Lumber GIS

- Arcview 3.3 to ArcMap 10.1
- Single Use Basic Licenses
- Data Schema Redesign





Stimson Lumber GIS

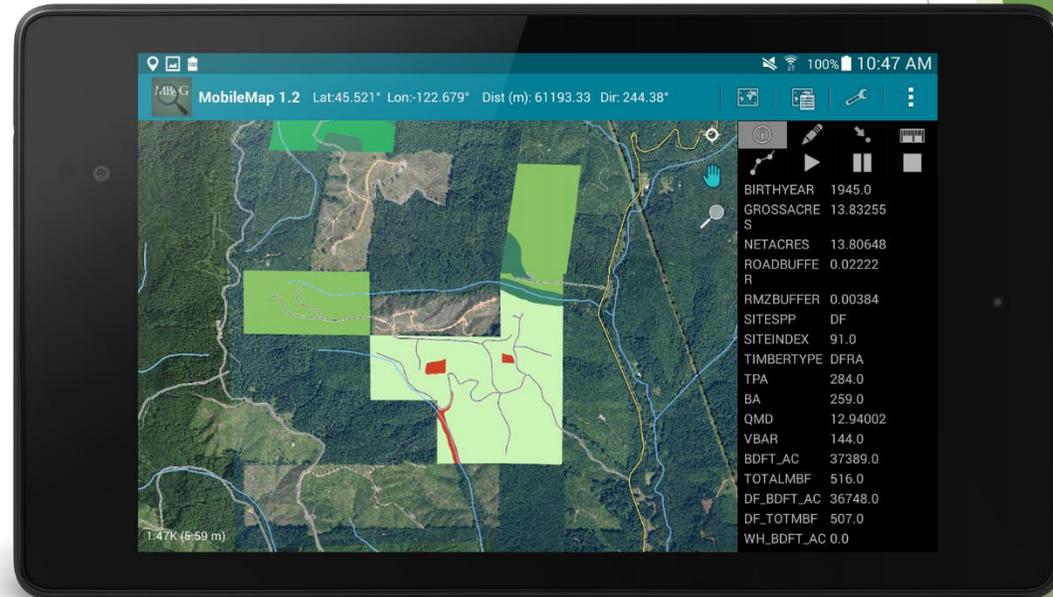
- ▶ Increasing need to collect data in the field that fits with the new data schema
- ▶ Easy to use and easy to get data on and off of
- ▶ PDF Maps





MobileMap - Mason, Bruce & Girard

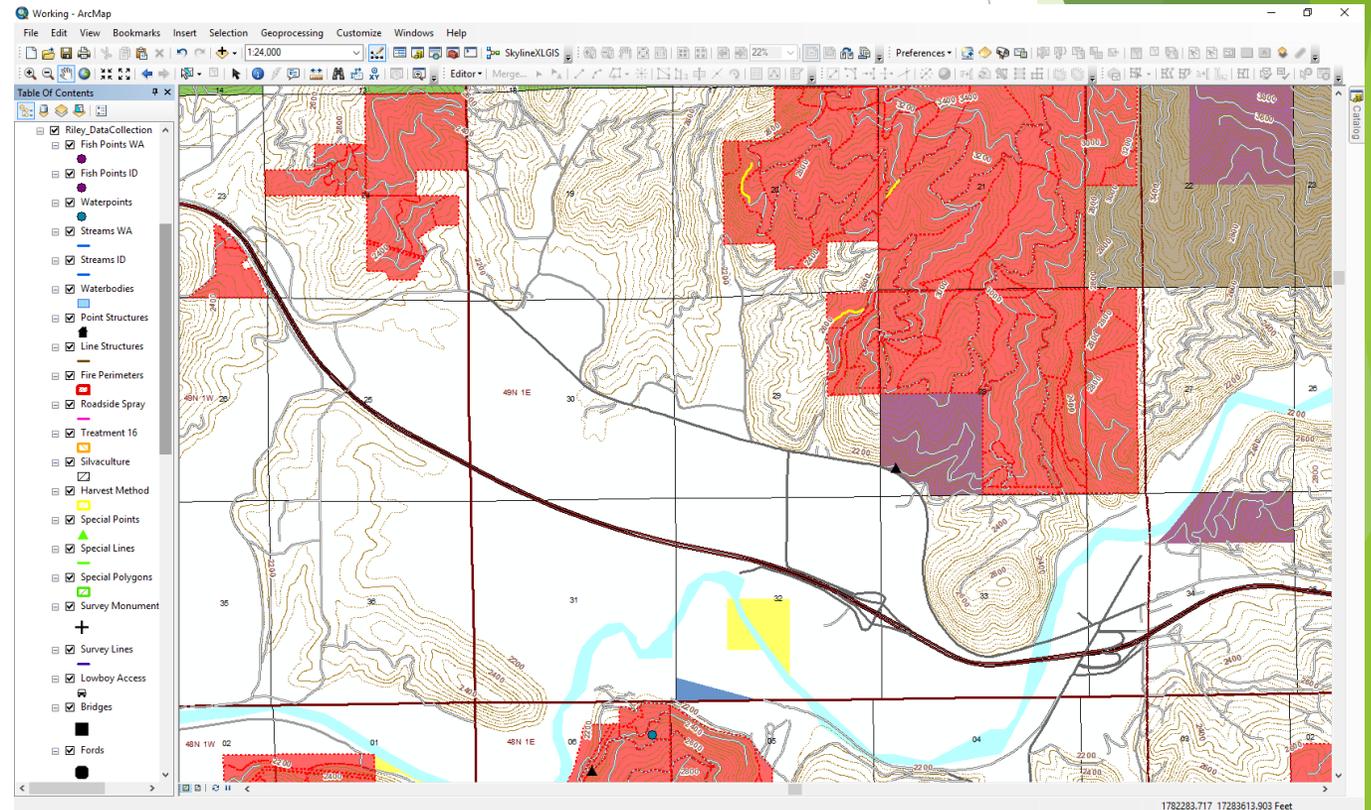
- ▶ <http://www.masonbruce.com/technology/mobilemap/>
- ▶ Mobile Data Acquisition solution deployed on Samsung 8 inch tablets
- ▶ Tablets are easy to use, cost effective, large screen, used with Otterbox
- ▶ MobileMap is SD card friendly





MobileMap - Mason, Bruce & Girard

- ▶ Map Caches - Custom maps at multiple resolutions
- ▶ ArcGIS Online - Check in/Out data that fits data schema and easy to add to projects





MobileMap - Mason, Bruce & Girard

► Demo

The screenshot shows the MobileMap application interface. At the top, there is a status bar with icons for notifications, location, signal strength, Wi-Fi, 100% battery, and the time 8:02 AM. Below the status bar is a header with the MobileMap logo and a title bar. The main area is a map with a grid overlay. A dark overlay form titled "Enter attributes new Culverts ID feature" is displayed over the map. The form contains several fields with dropdown menus and text input boxes. At the bottom right of the form, there are icons for home and back.

Field Name	Value
OBJECTID*	
FUNCTION_*	STREAM CROSSING
TYPE*	null
MATERIAL*	null
DIAMETER*	0
CULVERT_LENGTH*	0
SIZE*	null
CONDITION*	null
STREAM_TYPE	null
FISH_PASSAGE	null
ROCKED_OVER*	null

2016 Idaho Risk MAP Program Update

Ryan McDaniel,
Idaho Military Division

Risk Mapping, Assessment and Planning (Risk MAP) Program Update



**IDAHO GEOSPATIAL COUNCIL
EXECUTIVE COMMITTEE**

TUESDAY, NOVEMBER 1, 2016

**RYAN MCDANIEL, CFM PMP
IDAHO OFFICE OF EMERGENCY MANAGEMENT**

RiskMAP

Increasing Resilience Together

Contact Information



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Cell: (208) 954-6148
rmcdaniel@bhs.idaho.gov



Presentation Summary



Risk Mapping, Assessment and Planning
Risk MAP

BHS Enterprise Assessment Common Operating Picture
BEACON

State Hazard Mitigation Plan GIS Data Development and Distribution
SHMP

Spatially Explicit Resilience Vulnerability Model
SERV

Soil Type, Liquefaction and National Earthquake Hazard Reduction Program
IGS & NEHRP

LiDAR
Risk MAP, Cooperatives and Partnerships



Risk Mapping, Assessment and Planning



RiskMAP

Increasing Resilience Together

- Collaborative approach
- Goals: quality data, public awareness, **action that reduces risk**
- Watershed-oriented
- Multi-Hazard
- Focus on up-front coordination
- Discovery is required if you want funding to reduce risk

Risk Mapping, Assessment and Planning



Through collaboration with State, Local, and Tribal entities, Risk MAP will deliver quality data that increases public awareness and leads to action that reduces risk to life and property



The Portfolio



Idaho Multi-Hazard Risk Portfolio



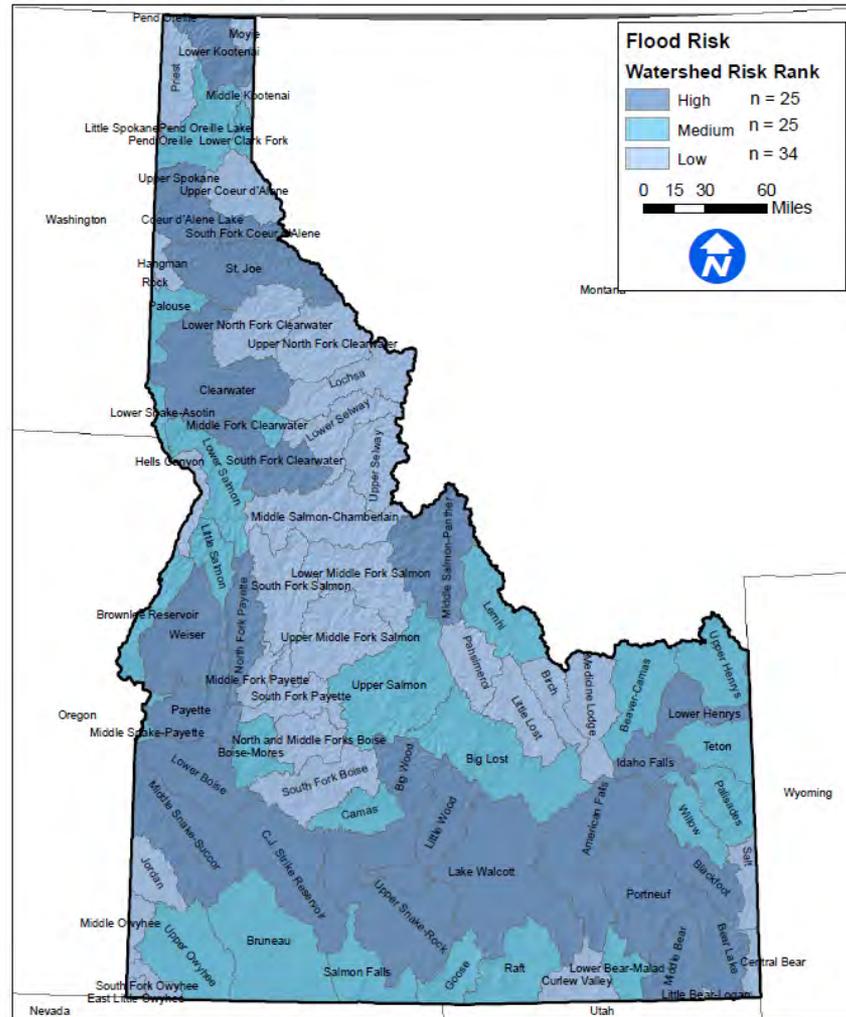
Idaho Multi-Hazard Risk Portfolio

2014



The Flood Risk

Idaho Multi-Hazard Risk by HUC-8 Watershed Flood Risk Rankings

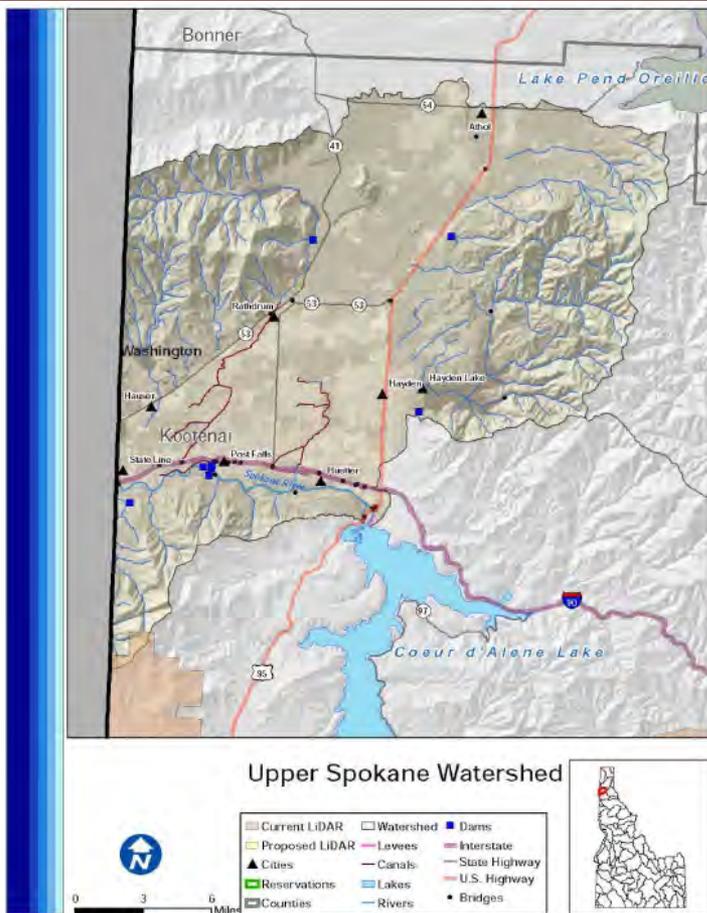


The Flood Risk



Idaho Multi-Hazard Risk Portfolio

Flood



Upper Spokane

Risk Rank: H

Introduction

The Upper Spokane watershed is heavily populated and largely privately owned. Areas of concentrated population within the watershed boundaries are Athol, Coeur d'Alene, Dalton Gardens, Hauser, Hayden Lake, Hayden, Huettner, Post Falls, Rathdrum and Stato Line. There are 99,092 total people who live within the watershed, of which 1,608 are at risk of flooding.

What is the risk?

The Spokane River is highly variable as can be seen on gauge near Post Falls. According to the Kootenai County AHMP, there is a single report of significant flooding since major settlement of the valley. There are 7 high or significant hazard dams in the Upper Spokane watershed. There are 5 communities participating in the NFIP with 193 policies contributing to \$152,278 of premiums paid in exchange for \$49,083,500 of coverage.

- 0 out of the 1 county in the Upper Spokane watershed identified flood as their number one hazard.
- 0 out of the 1 county in the Upper Spokane watershed identified flood as their number two hazard.
- 1 out of the 1 county in the Upper Spokane watershed identified flood as their number three hazard.

LIDAR data availability

LIDAR availability within the Upper Spokane watershed is as follows:

- Coeur d'Alene Reservation (2005)

Conclusion

Due to the high population, variable flows of the Spokane River, large amount of private property and presence of moderate hazard dams, the Upper Spokane is considered a high risk watershed.

Counties and Tribes

Kootenai

Cities

Athol, Coeur d'Alene, Dalton Gardens, Hauser, Hayden Lake, Hayden, Huettner, Post Falls, Rathdrum, Stato Line

Subbasin Metrics

Area (sq. miles)	562
Population (2010)	99,092
Miles of Stream	394
Miles of Canal	21
Min. Elevation (ft)	1,716
Max. Elevation (ft)	5,643
Dams of Concern	7
Pop. at Flood Risk	1,608

Subbasin Ownership

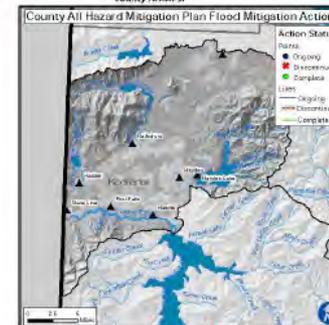
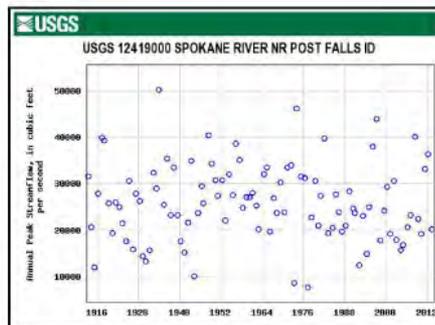
Owner Type	% Subbasin Area
Private	50%
Federal	9%
Reservation/BIA	0%
State	5%
Out of Idaho	37%

NFIP Statistics (2014)

NFIP Policies	193
Total Coverage	\$49,083,500
Total Premiums	\$152,278
# Claims	8
Paid Claims	\$80,744

Total flood mitigation actions: 22

A majority of the proposed mitigation actions are not location specific and can be found in the the county AHMPs.

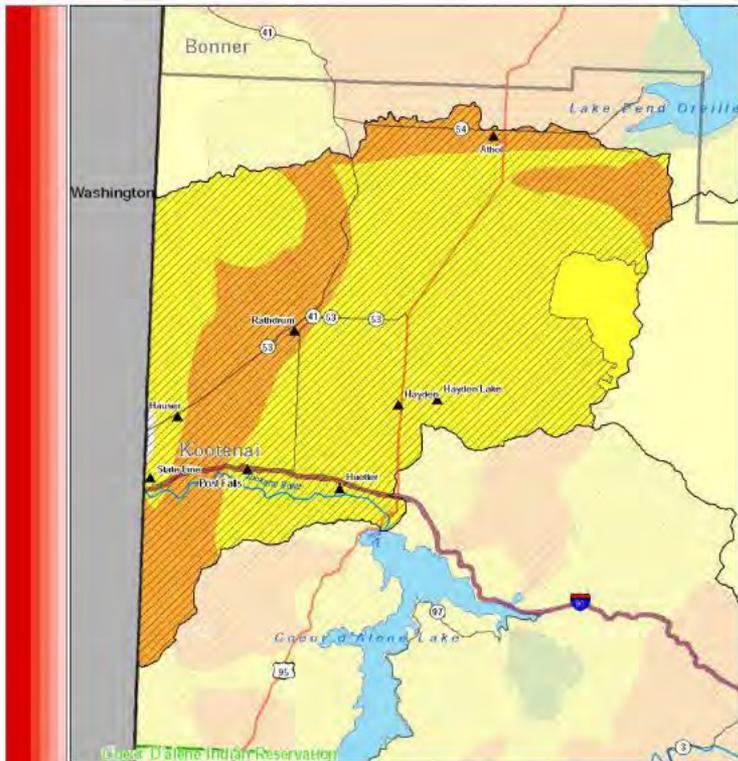


The Flood Risk



Idaho Multi-Hazard Risk Portfolio

Wildfire



Upper Spokane Watershed

Communities at Risk of Wildfire	▲ Cities
Low	■ Counties
Low-Moderate	■ Reservations
Moderate	■ Interstate
Moderate-High	■ State Highway
High	■ U.S. Highway
Wildland Urban Interface	■ Rivers
Watershed	■ Lakes



Upper Spokane

Risk Rank: H

Introduction

The Upper Spokane watershed is home to 99,092 people, the vast majority of which live in or near the Wildland Urban Interface. Areas of concentrated population within the Upper Spokane watershed boundaries are Athol, Coeur d'Alene, Dalton Gardens, Hauser, Hayden Lake, Hayden, Huetter, Post Falls, Rathdrum and State Line.

What is the risk?

Fires within the Upper Spokane watershed have the potential to severely disrupt life, property and economic activity. There are 14,123 structures located within the WUI of the Upper Spokane watershed. Since 2000, 50 acres have burned in 20 individual wildfire events. Based on data from the Idaho Forest Action Plan (2010), the Upper Spokane watershed has 0% low risk, 0% low-moderate risk, 71.4% moderate risk, 28.6% moderate-high risk and 0% high risk of wildfire to the communities within the watershed.

- 1 out of the 1 county in the Upper Spokane watershed identified wildfire as their number one hazard.
- 0 out of the 1 county in the Upper Spokane watershed identified wildfire as their number two hazard.
- 0 out of the 1 county in the Upper Spokane watershed identified wildfire as their number three hazard.

Conclusion

The Upper Spokane watershed is one of the most populated watersheds in the state. Additionally, the majority of it is privately owned. The overall risk of wildfire to people and property in the Upper Spokane watershed is high.

Counties and Tribes

Kootenai

Cities

Athol, Coeur d'Alene, Dalton Gardens, Hauser, Hayden Lake, Hayden, Huetter, Post Falls, Rathdrum, State Line

Subbasin Metrics

Area (sq. miles)	562
Population (2010)	99,092
Miles of Stream	394
Miles of Canal	21
Min. Elevation (ft)	1,716
Max. Elevation (ft)	5,643
Structures in WUI	14,123
Historic Fire Events	20
Acres Burned (1995-)	50

Subbasin Ownership

Owner Type	% Subbasin Area
Private	50%
Federal	9%
Reservation/ BIA	0%
State	5%
Out of Idaho	37%

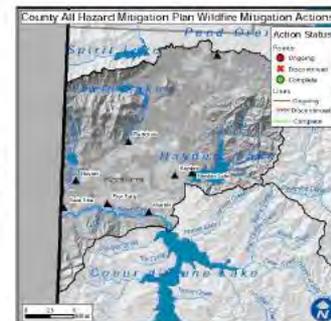
Watershed Fire Risk

Risk Level	% Watershed Area
Low	0%
Low-Moderate	0%
Moderate	71.4%
Moderate-High	28.6%
High	0%



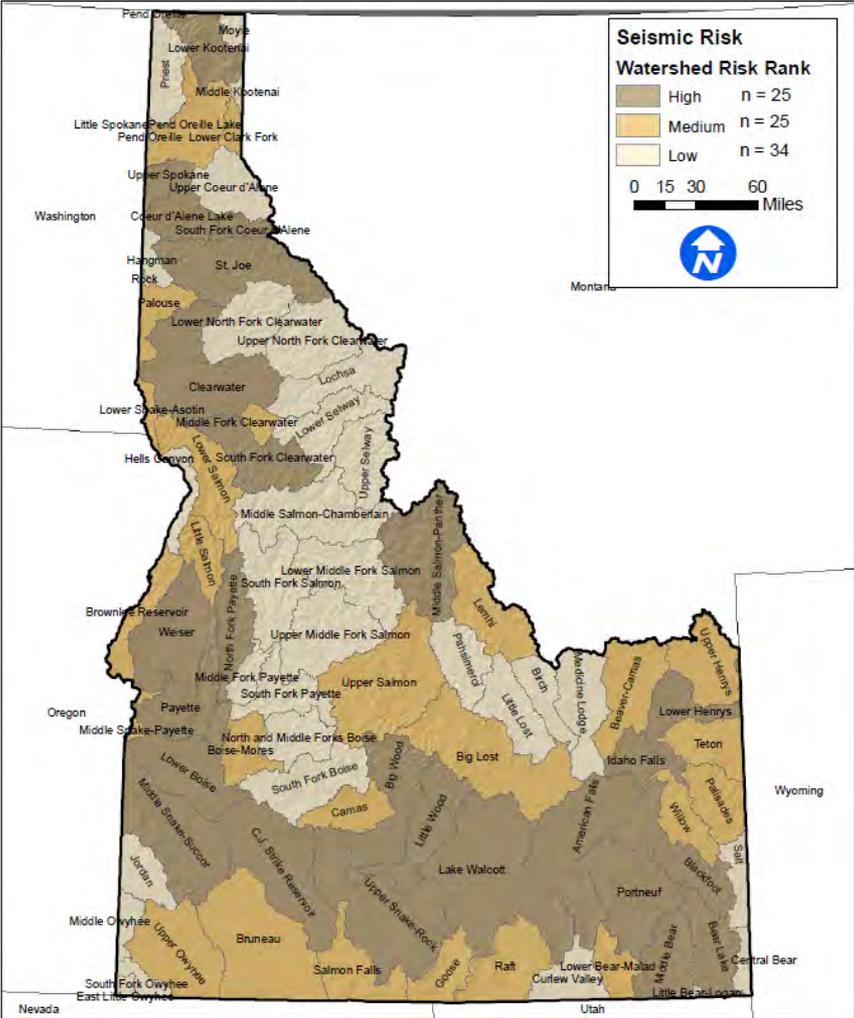
Total wildfire mitigation actions: 29

A majority of the proposed mitigation actions are not location specific and can be found in the county AHMPs.

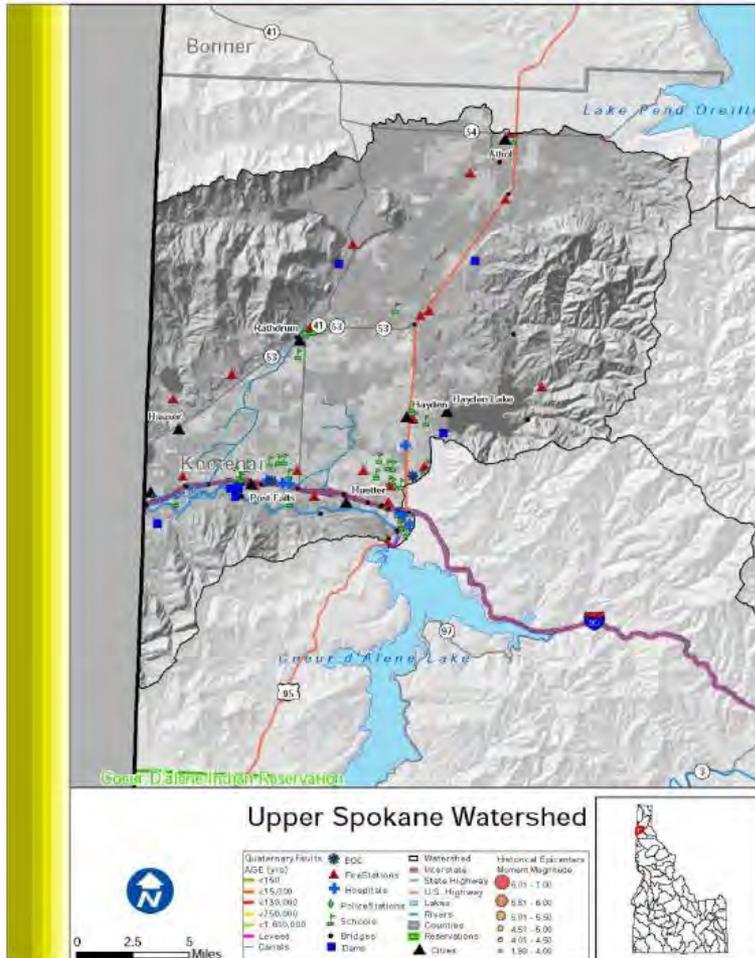


The Seismic Risk

Idaho Multi-Hazard Risk by HUC-8 Watershed Seismic Risk Rankings



The Seismic Risk



Upper Spokane

Risk Rank: M

Introduction

Areas of concentrated population within the Upper Spokane watershed boundaries are Athol, Coeur d'Alene, Dalton Gardens, Hauser, Hayden Lake, Hayden, Huetter, Post Falls, Rathdrum and State Line.

What is the risk?

An earthquake within the watershed has a moderate potential to cause damage to the life and property of those within these areas. There are also 21 miles of canals and 3 levees that are receptive to seismic disturbances.

There are 0 essential facilities within 25 miles of a quaternary fault.

- 0 out of the 1 counties within the Upper Spokane watershed identified seismic as their number one hazard.
- 0 out of the 1 counties within the Upper Spokane watershed identified seismic as their number two hazard.
- 0 out of the 1 counties within the Upper Spokane watershed identified seismic as their number three hazard.

Countries and Tribes

Kootenai

Cities

Athol, Coeur d'Alene, Dalton Gardens, Hauser, Hayden Lake, Hayden, Huetter, Post Falls, Rathdrum, State Line

Subbasin Metrics	
Area (sq. miles)	562
Population (2010)	99,092
Miles of Stream	394
Miles of Canal	21
Min. Elevation (ft)	1,716
Max. Elevation (ft)	5,643
Est. Facilities Near Fault	0
% Watershed w/in 25 Miles of Fault	0%

Subbasin Ownership	
Owner Type	% Subbasin Area
Private	50%
Federal	9%
Reservation/ BIA	0%
State	5%
Out of Idaho	37%

Ground Acceleration	
Accel. Amount	% Watershed Area
Low	69%
Low-Moderate	31%
Moderate	0%
Moderate-High	0%
High	0%



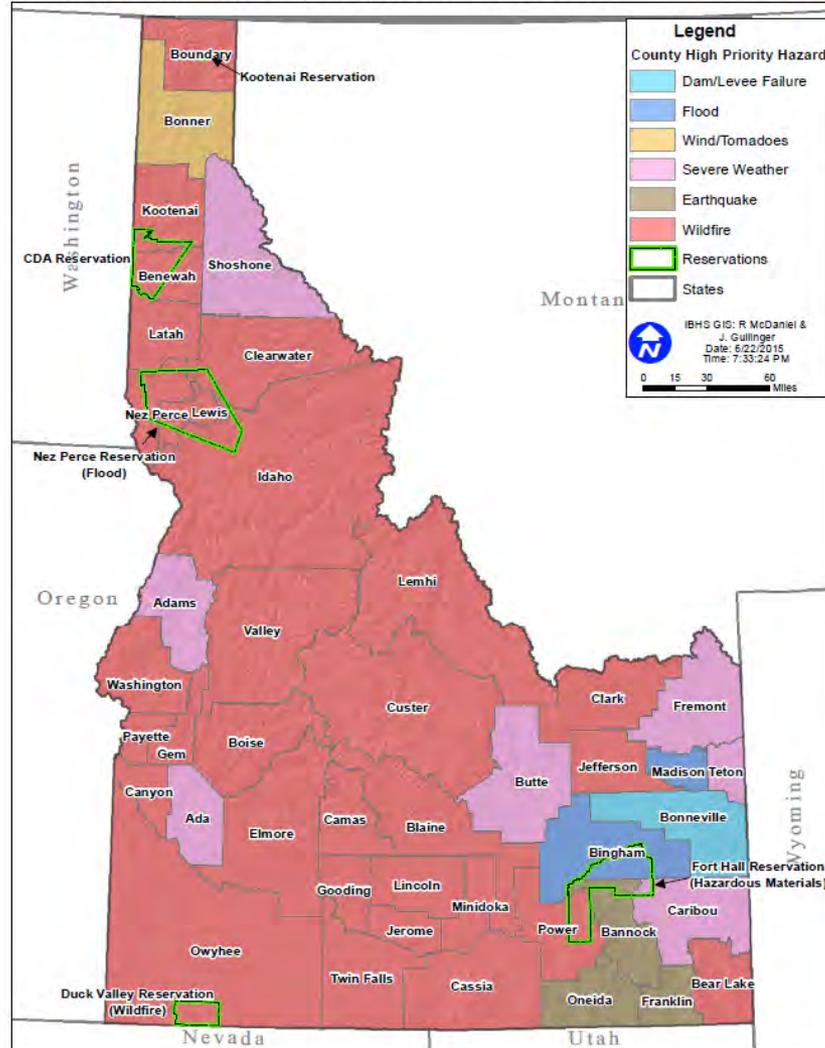
Total seismic mitigation actions: 3

A majority of the proposed mitigation actions are not location specific and can be found in the county AHMPs.



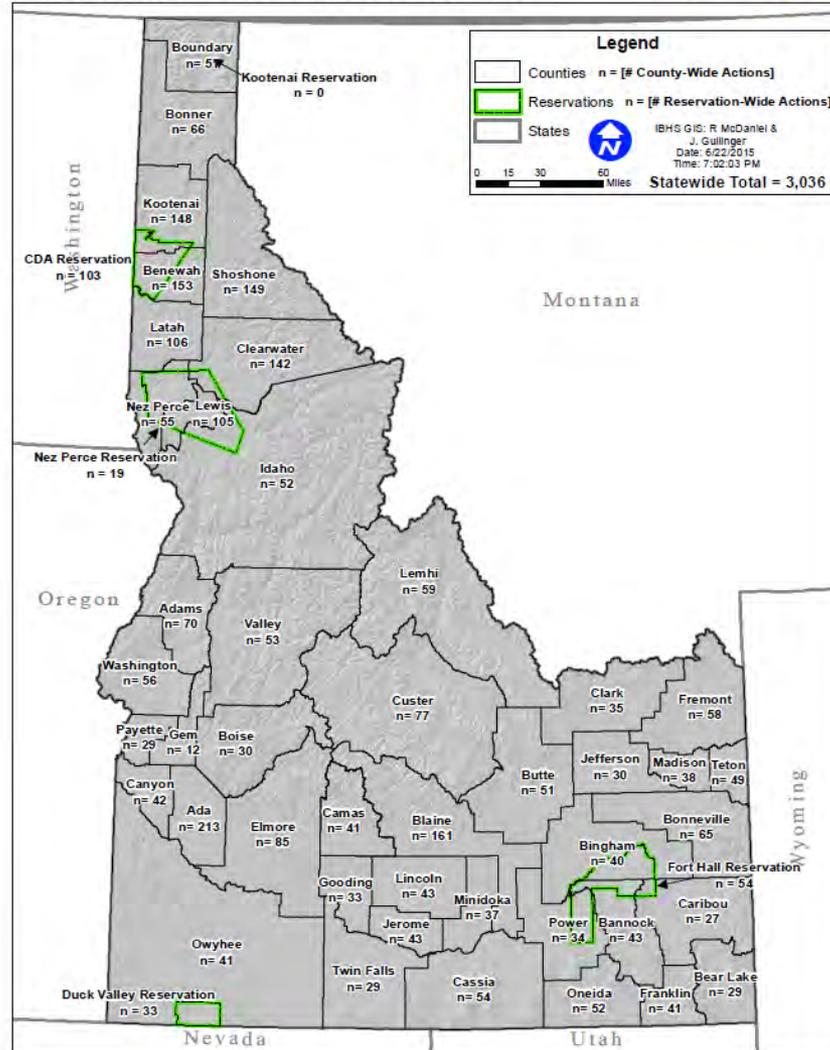
The County High Priority Hazards

County AHMP High-Priority Hazards - 6/22/15



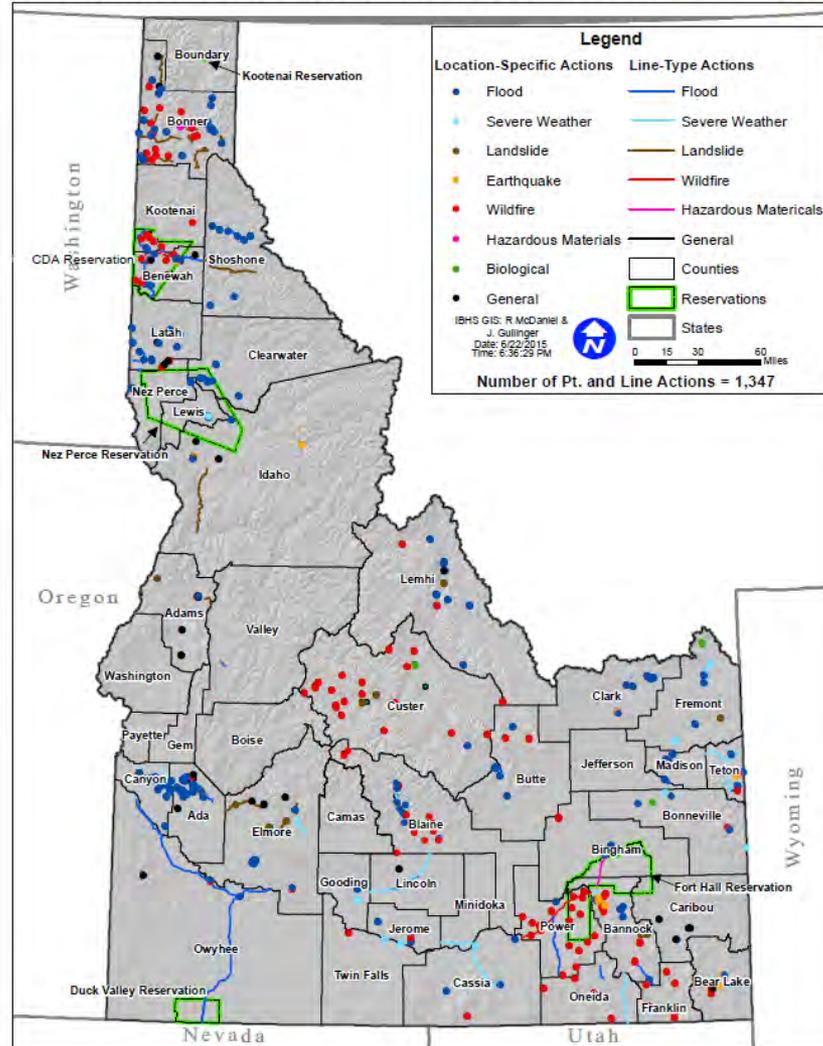
The Proposed County Mitigation Actions

County-Wide AHMP Actions - 6/22/15



The Proposed County Mitigation Actions

County AHMP Point and Line Actions - 6/22/15   

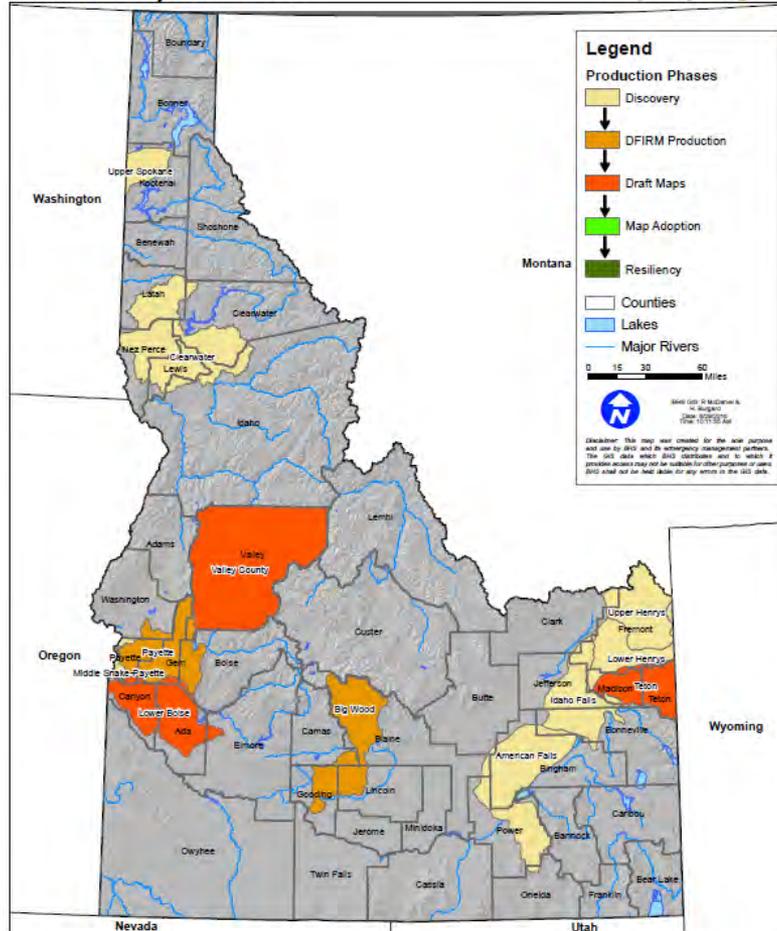


The Risk MAP Projects



Idaho Mapping Activity Risk MAP Projects - 8/29/16

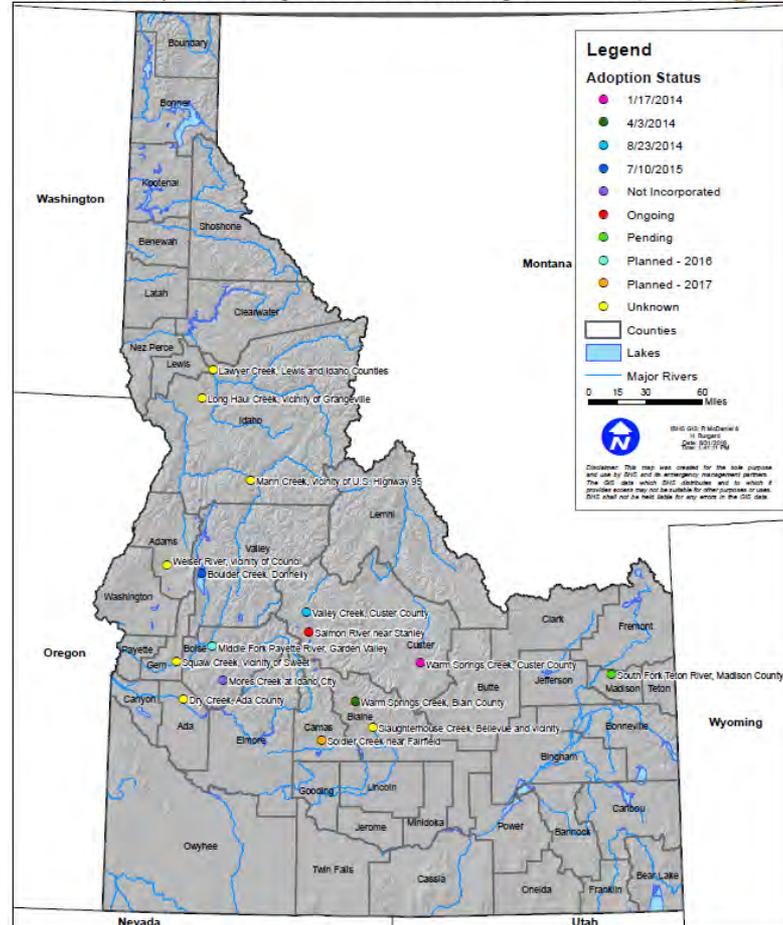
RiskMAP
Promoting Resilience Together



The USACE Projects



Idaho Mapping Activity USACE Floodplain Management Services Program

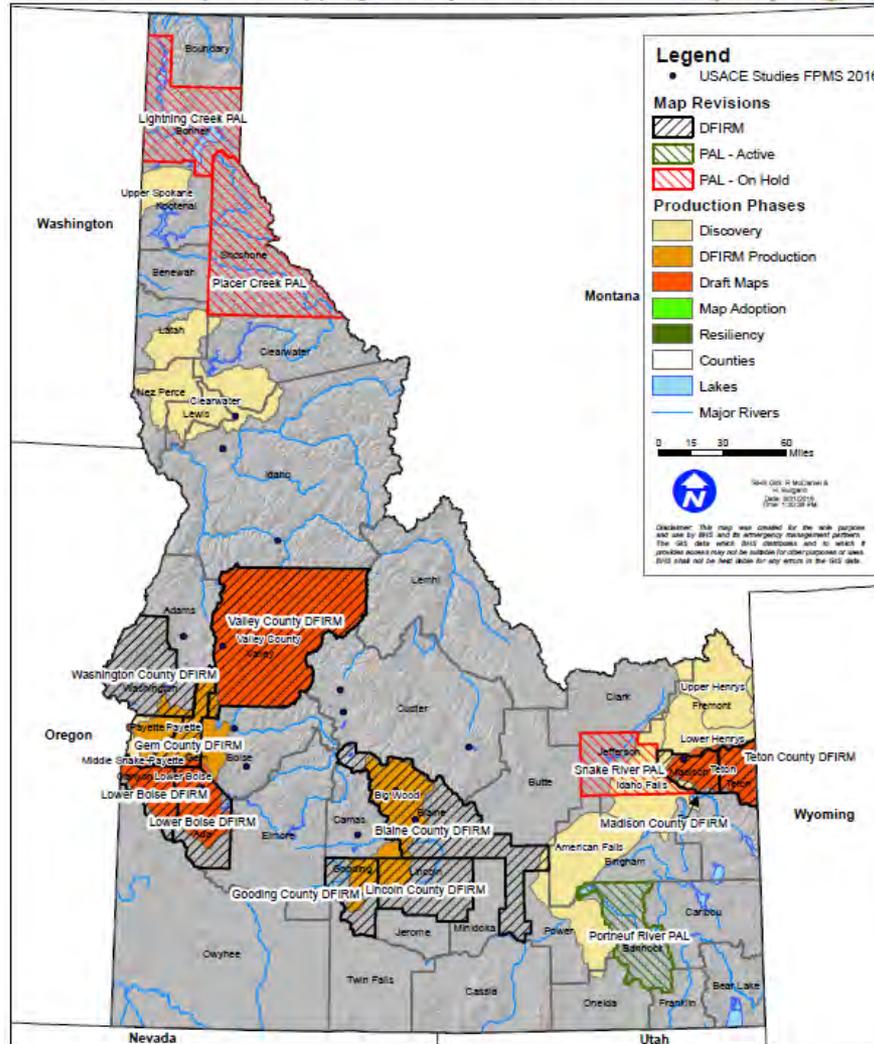


The Cumulative Mapping Activity

Idaho Mapping Activity

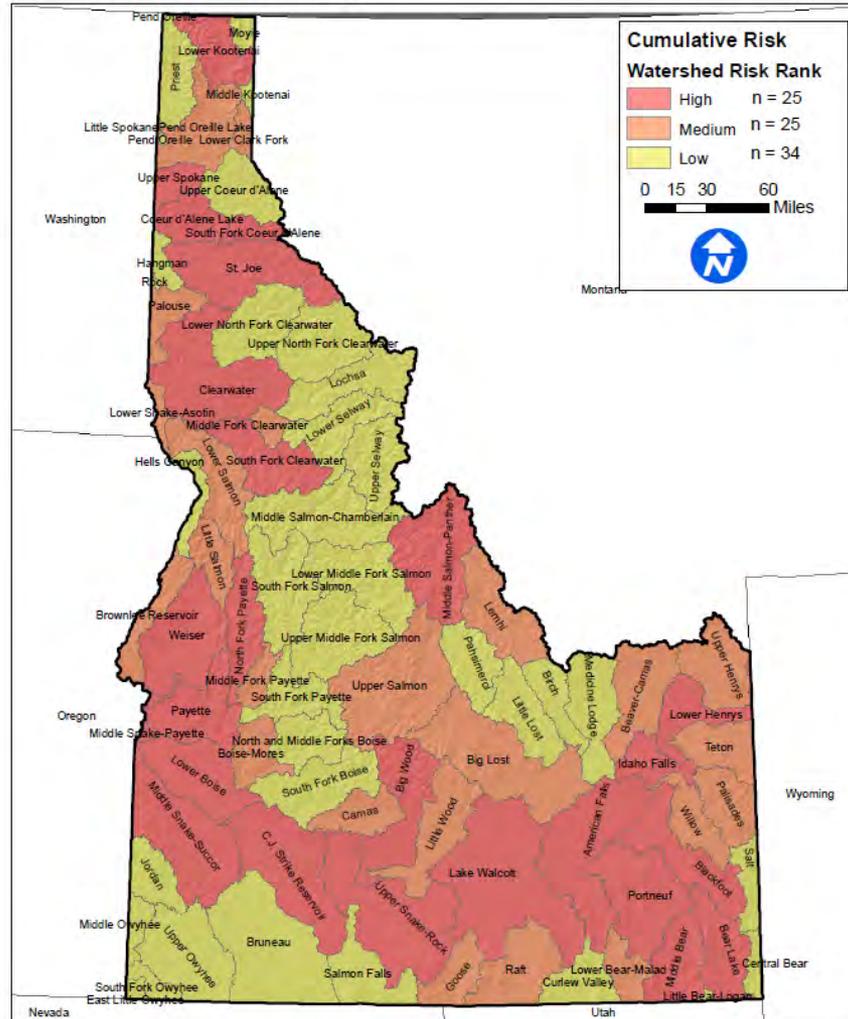
Collective Floodplain Mapping Activity - 8/31/2016

RiskMAP
Increasing Resilience Together

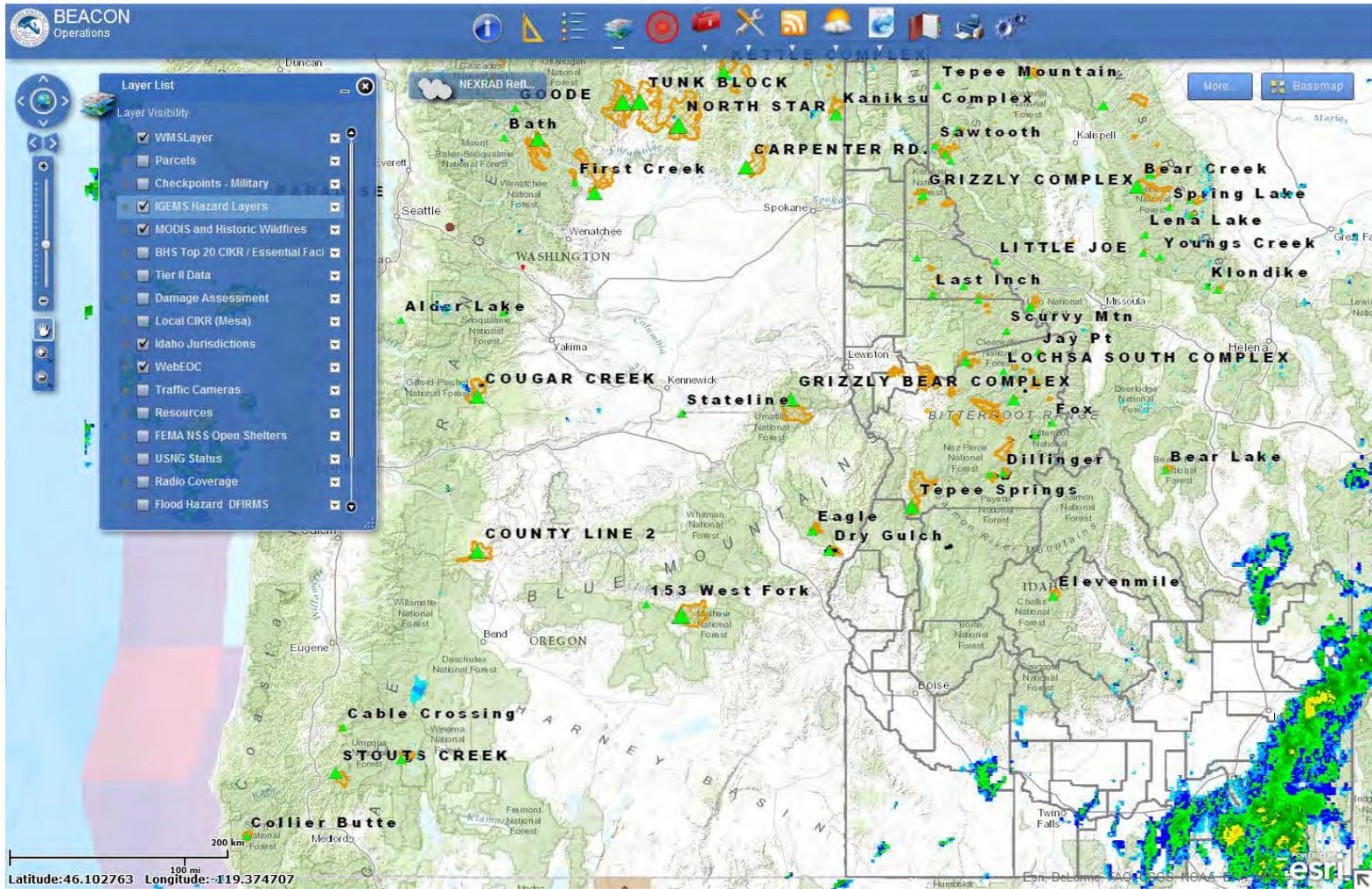


The Cumulative Risk

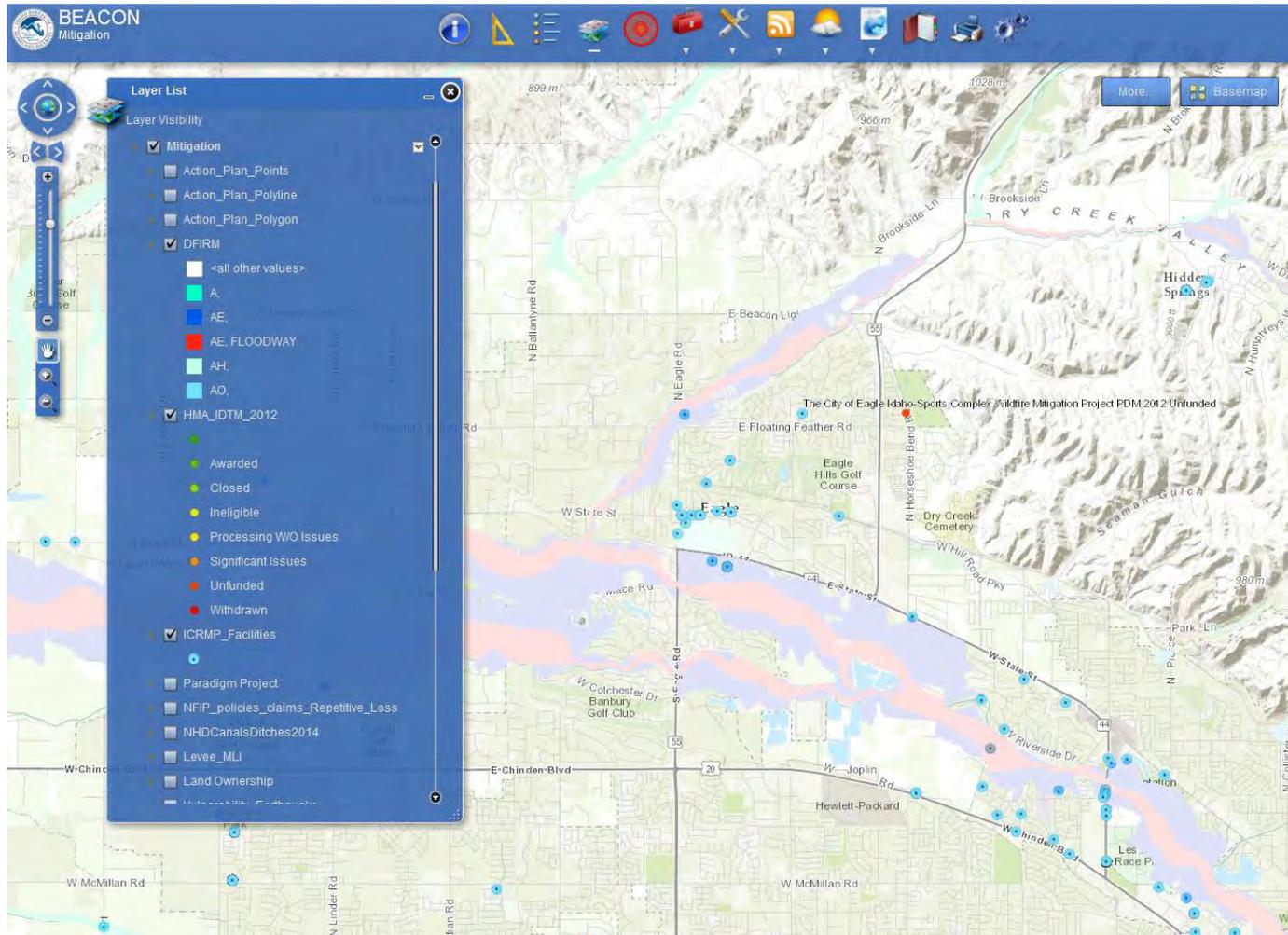
Idaho Multi-Hazard Risk by HUC-8 Watershed Cumulative Risk Rankings



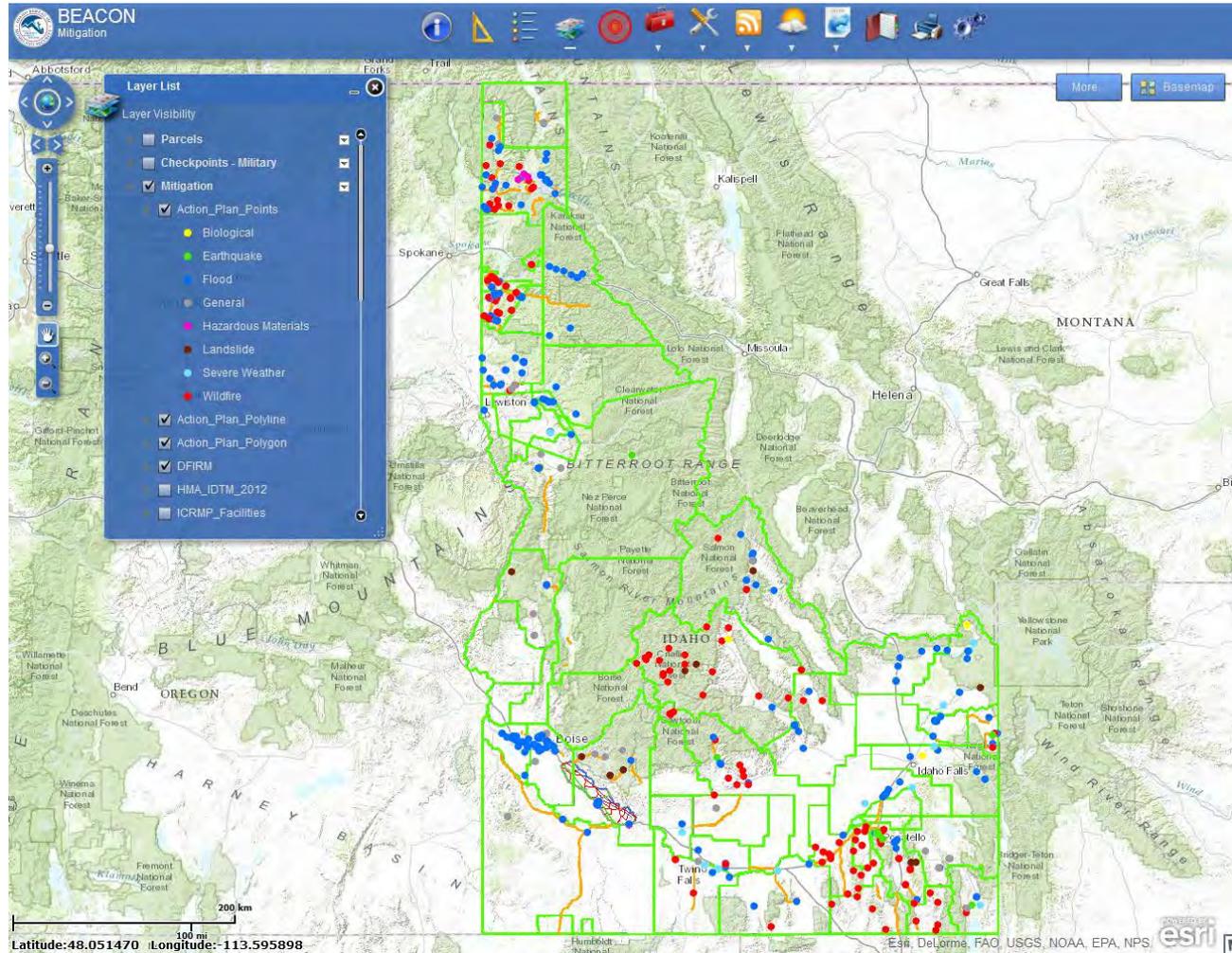
BHS Enterprise Assessment Common Operating Network



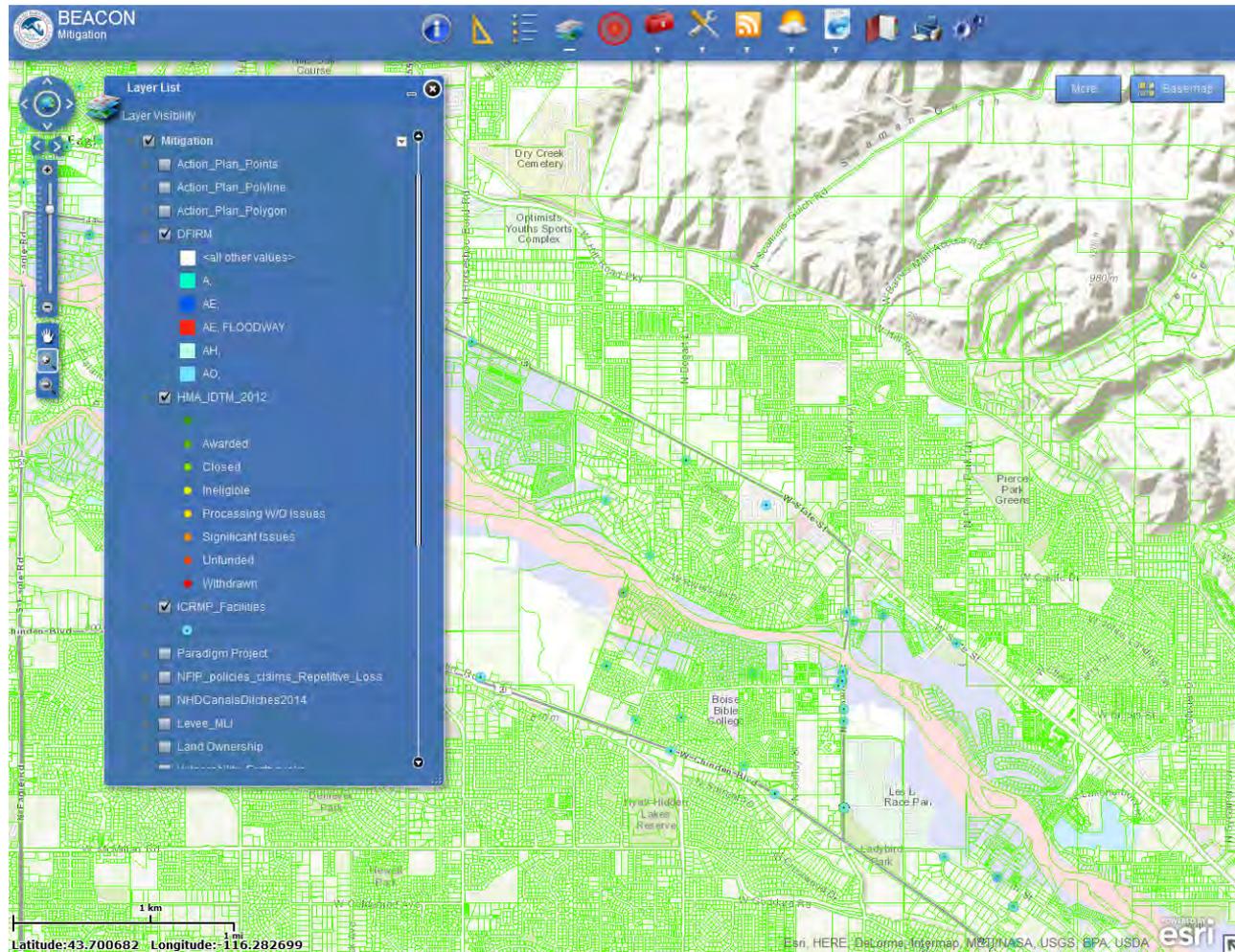
BHS Enterprise Assessment Common Operating Network



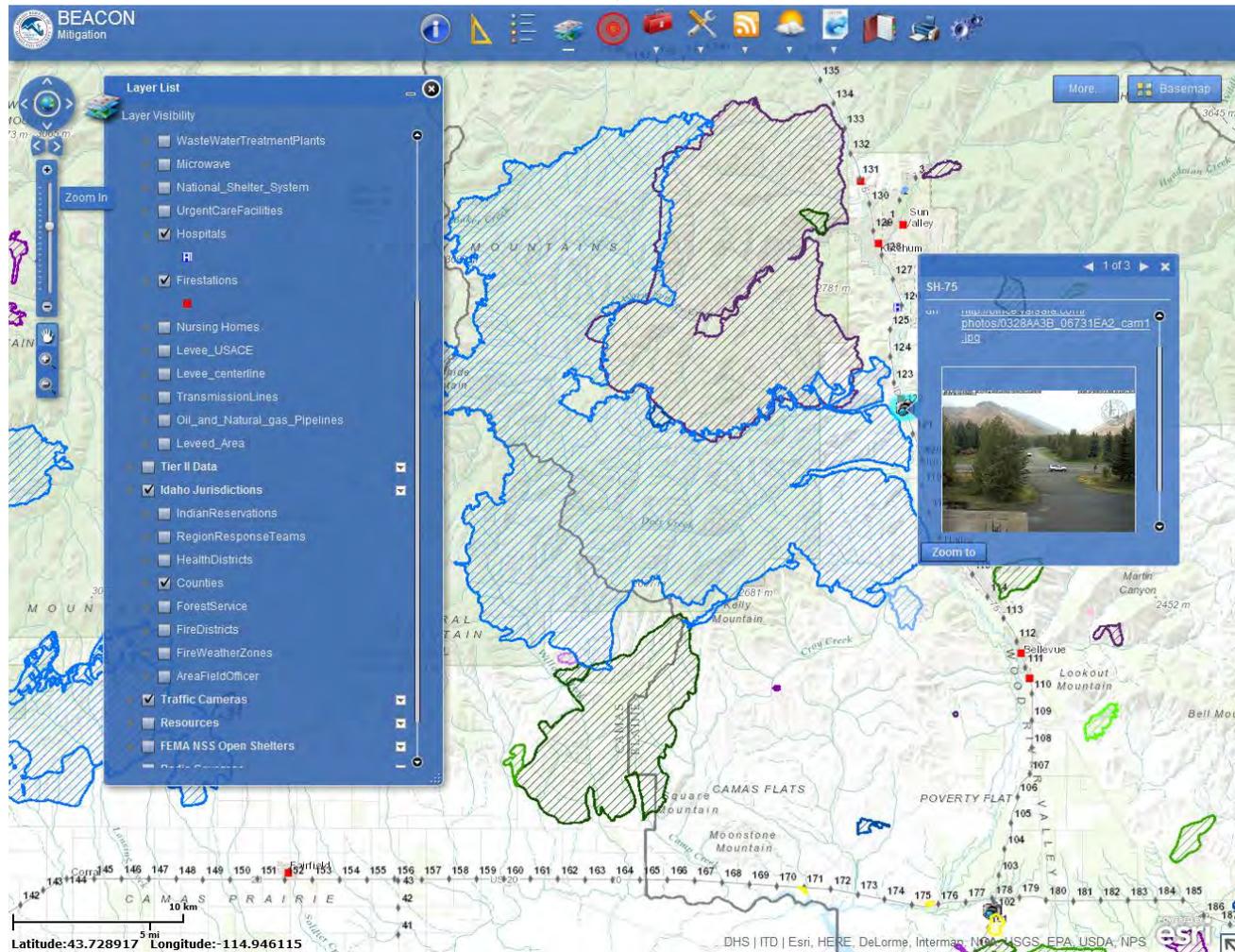
BHS Enterprise Assessment Common Operating Network



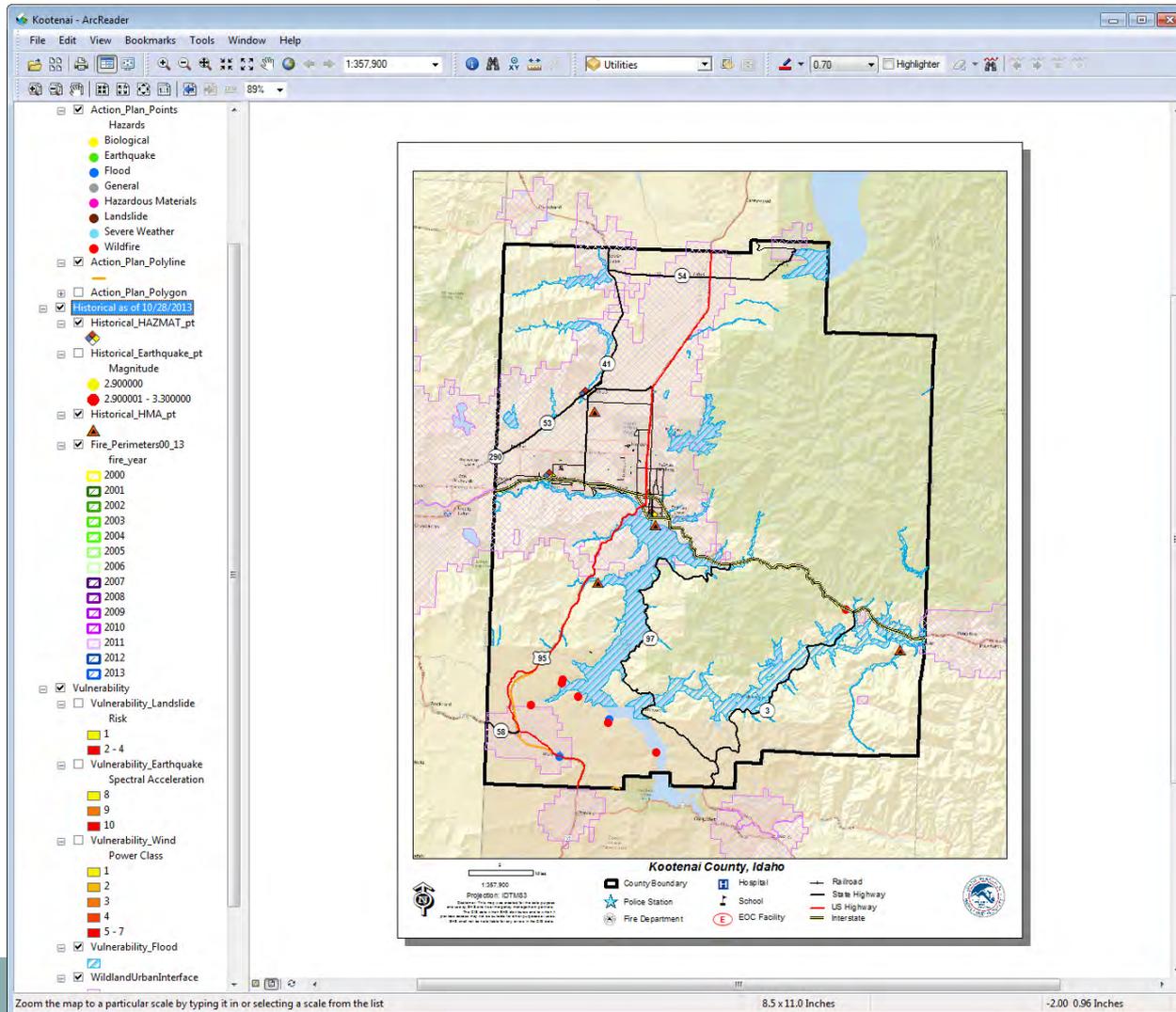
BHS Enterprise Assessment Common Operating Network



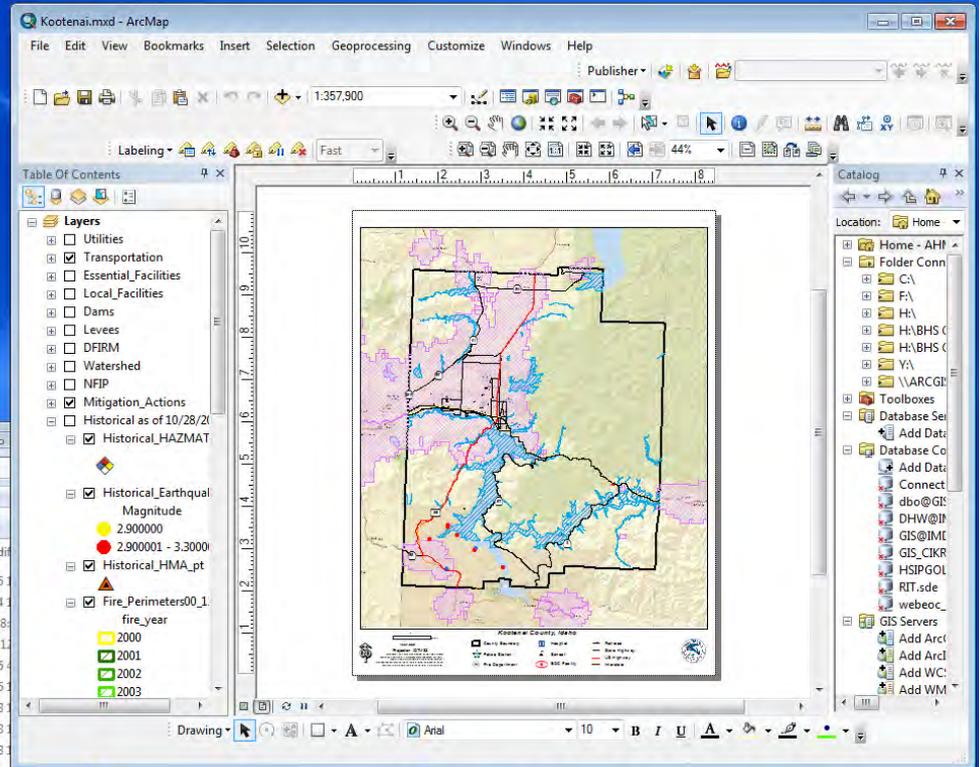
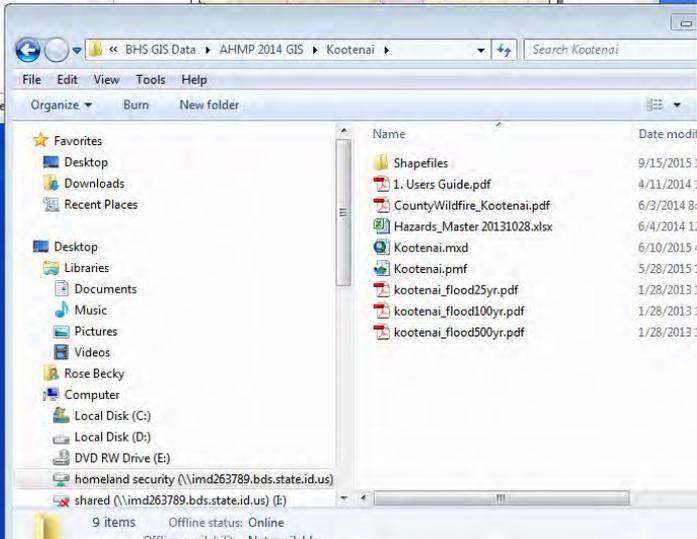
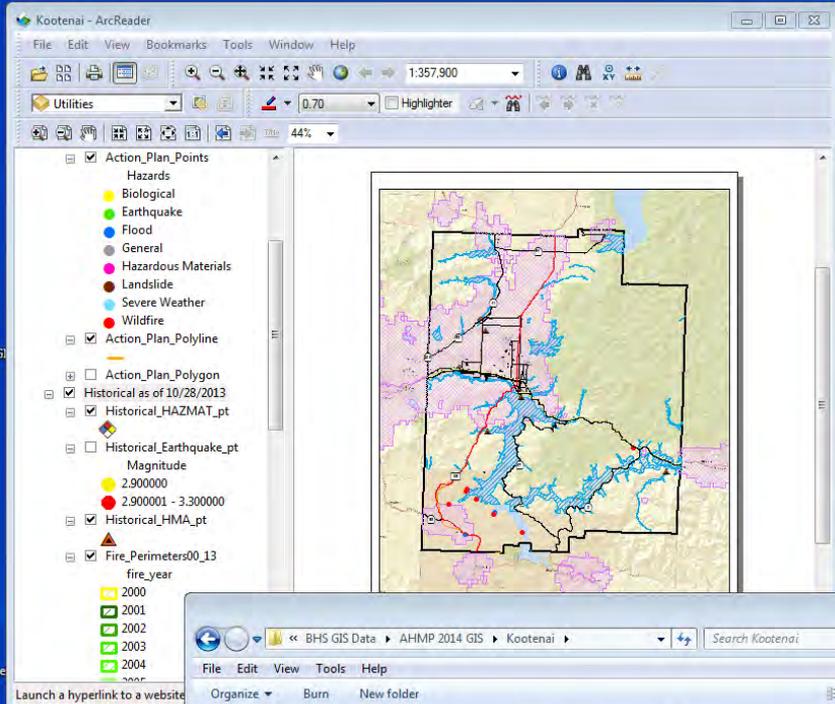
BHS Enterprise Assessment Common Operating Network



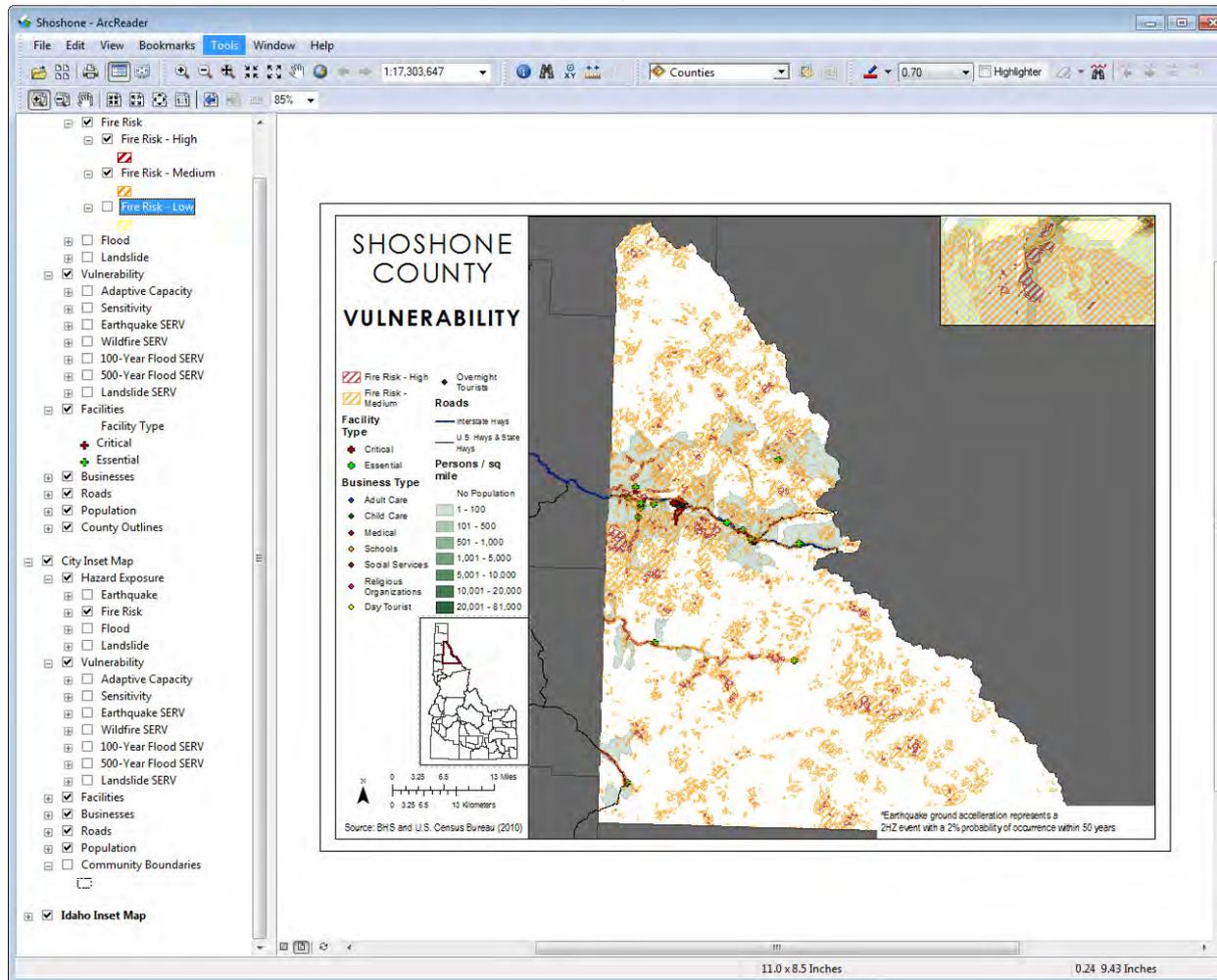
State Hazard Mitigation Plan - GIS



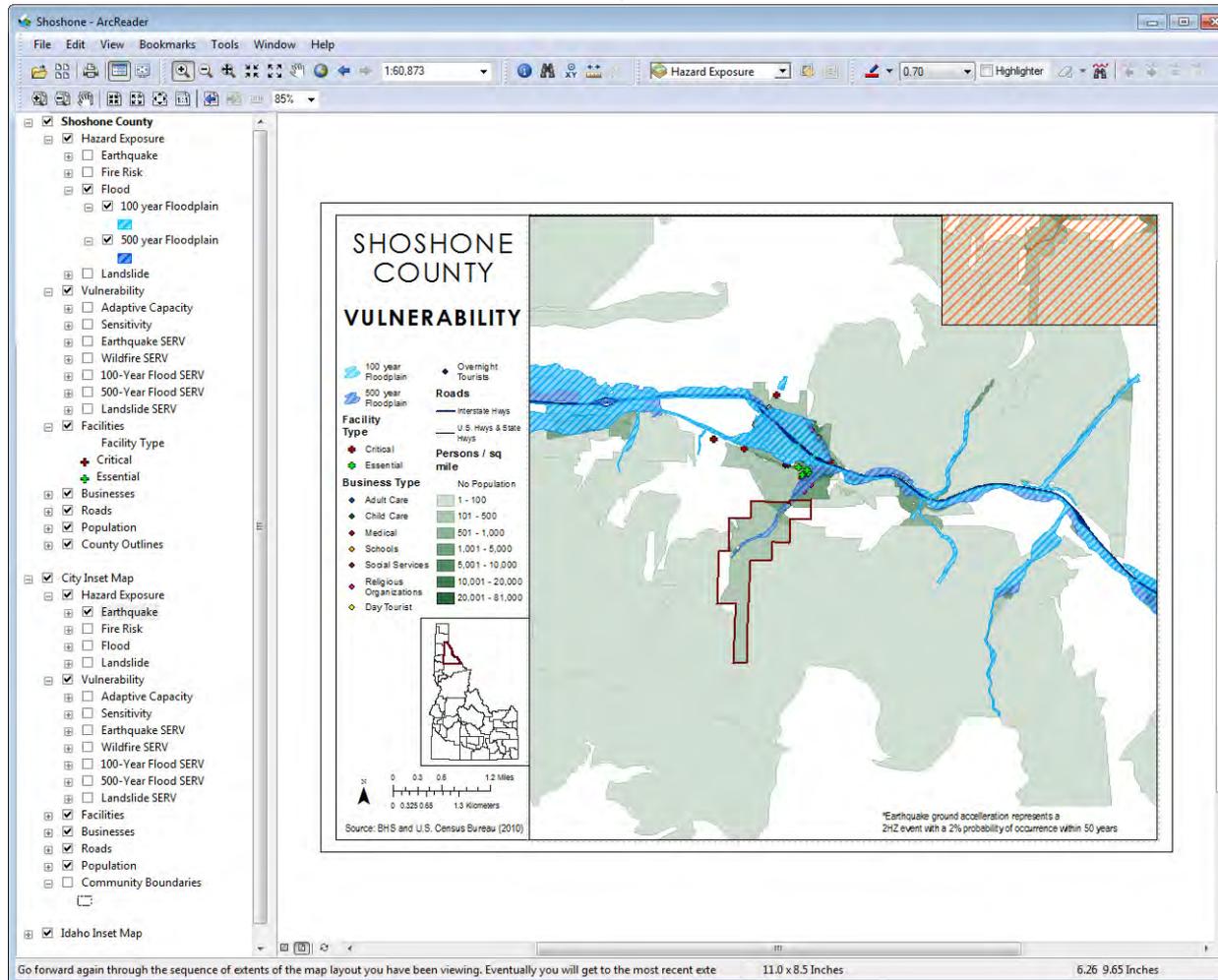
Data Distribution to Counties



Spatially Explicit Resiliency Vulnerability - SERV



Spatially Explicit Resiliency Vulnerability - SERV



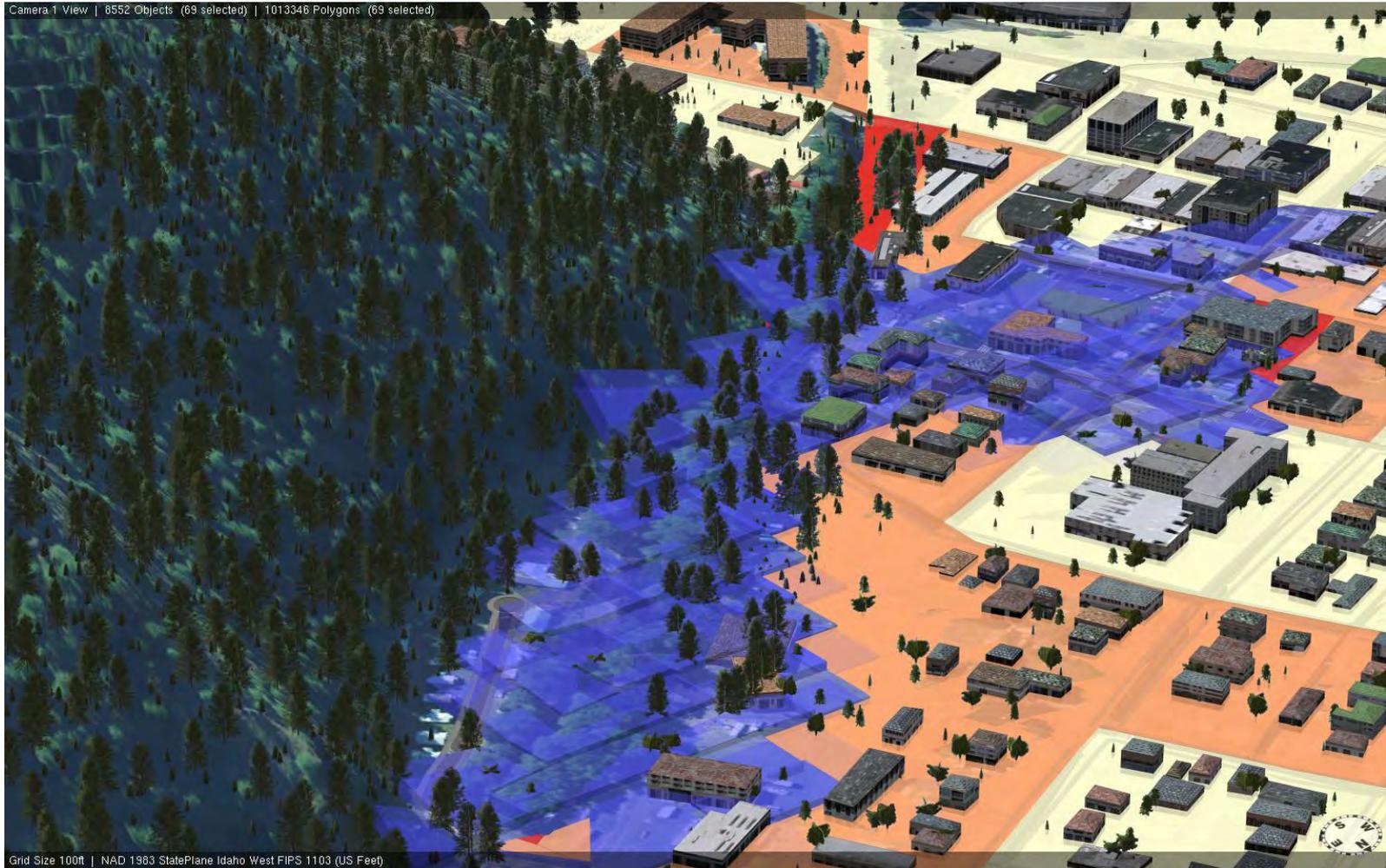
Go forward again through the sequence of extents of the map layout you have been viewing. Eventually you will get to the most recent exte 11.0 x 8.5 Inches 6.26 9.65 Inches



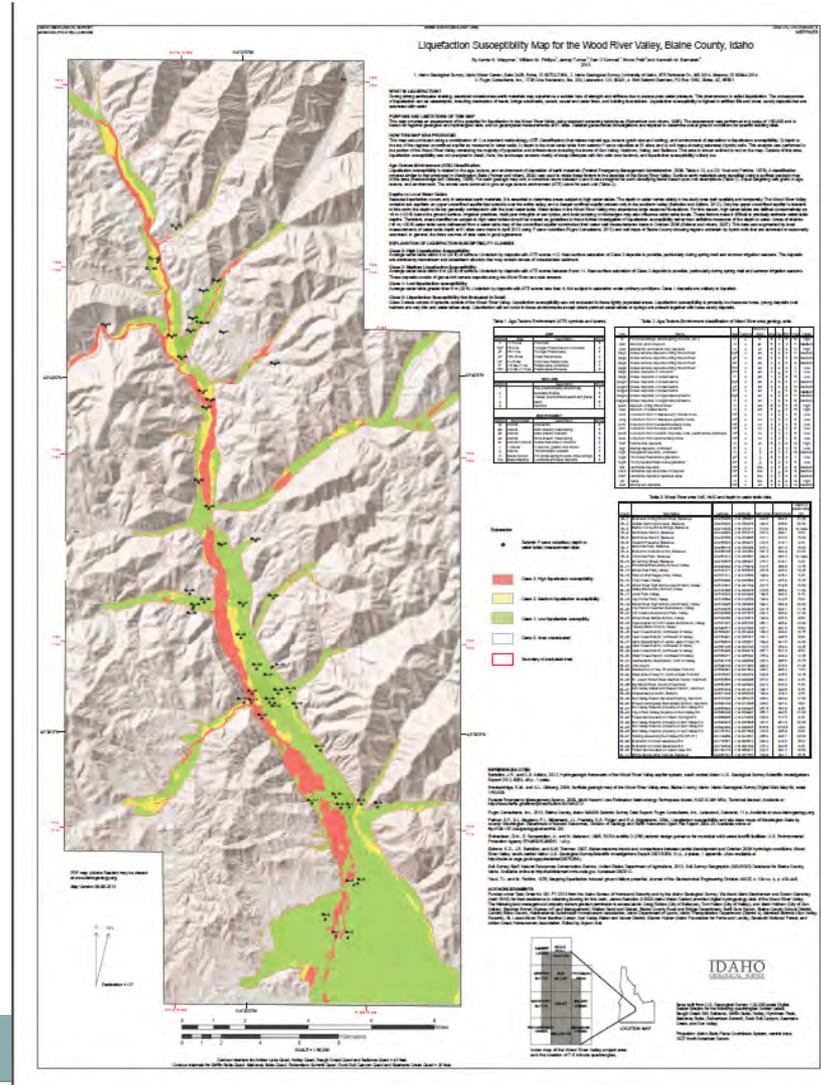
Spatially Explicit Resiliency Vulnerability - SERV



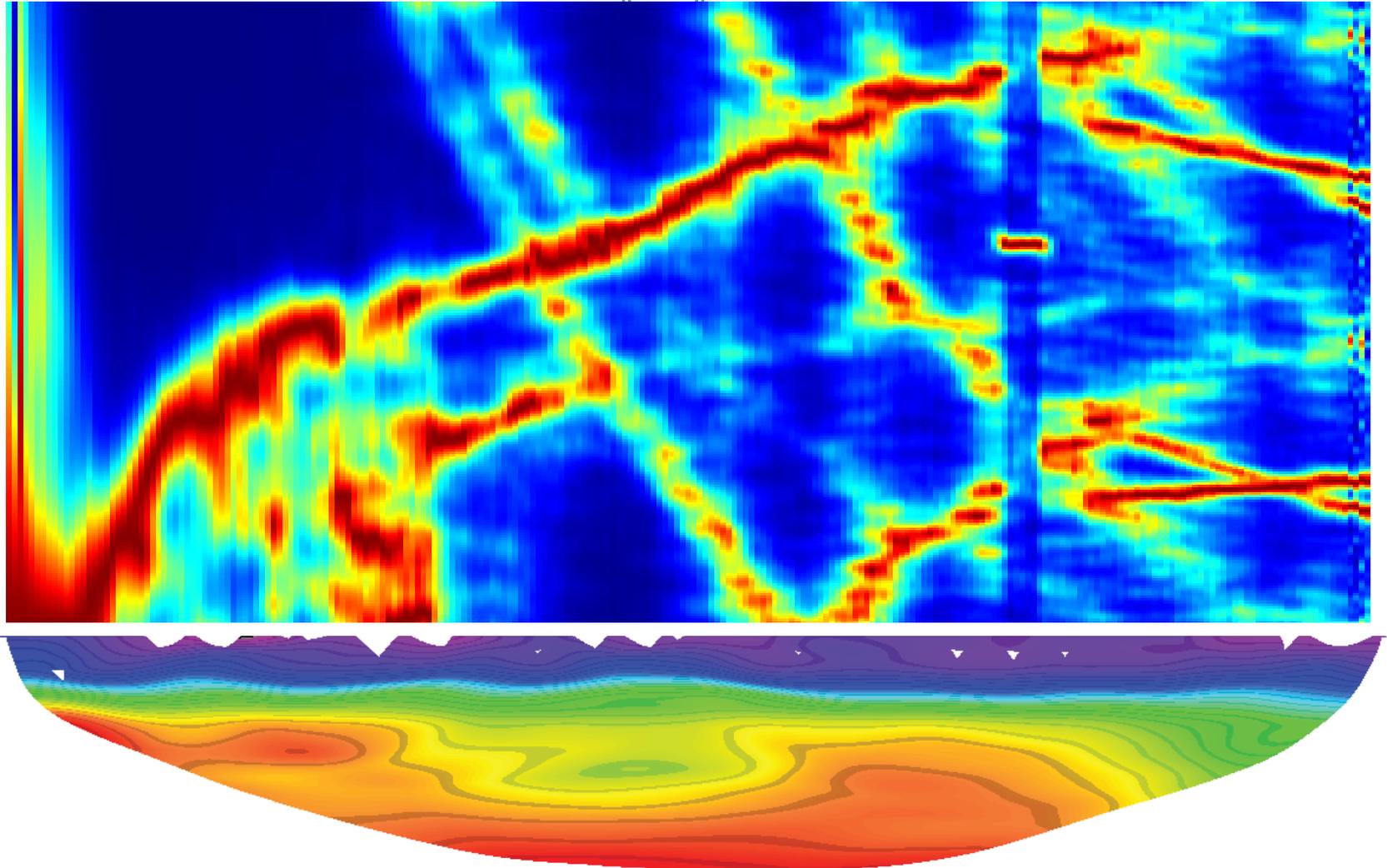
Spatially Explicit Resiliency Vulnerability - SERV



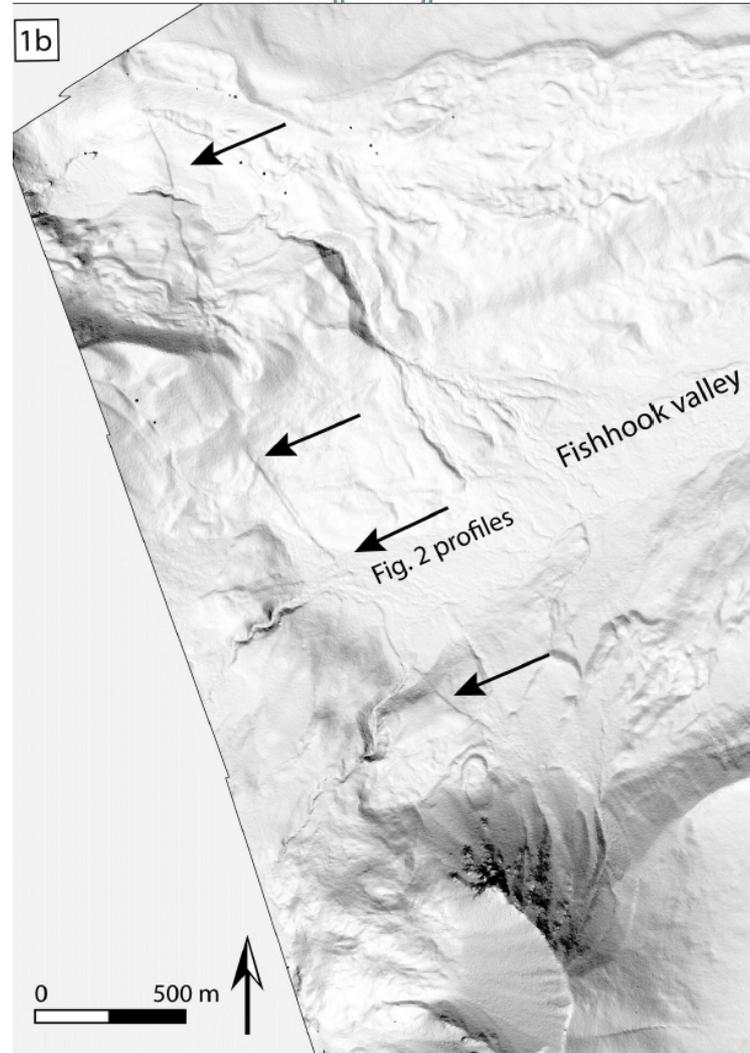
Soil Type Geologic Mapping - IGS



Soil Liquefaction and NEHRP Mapping - IGS

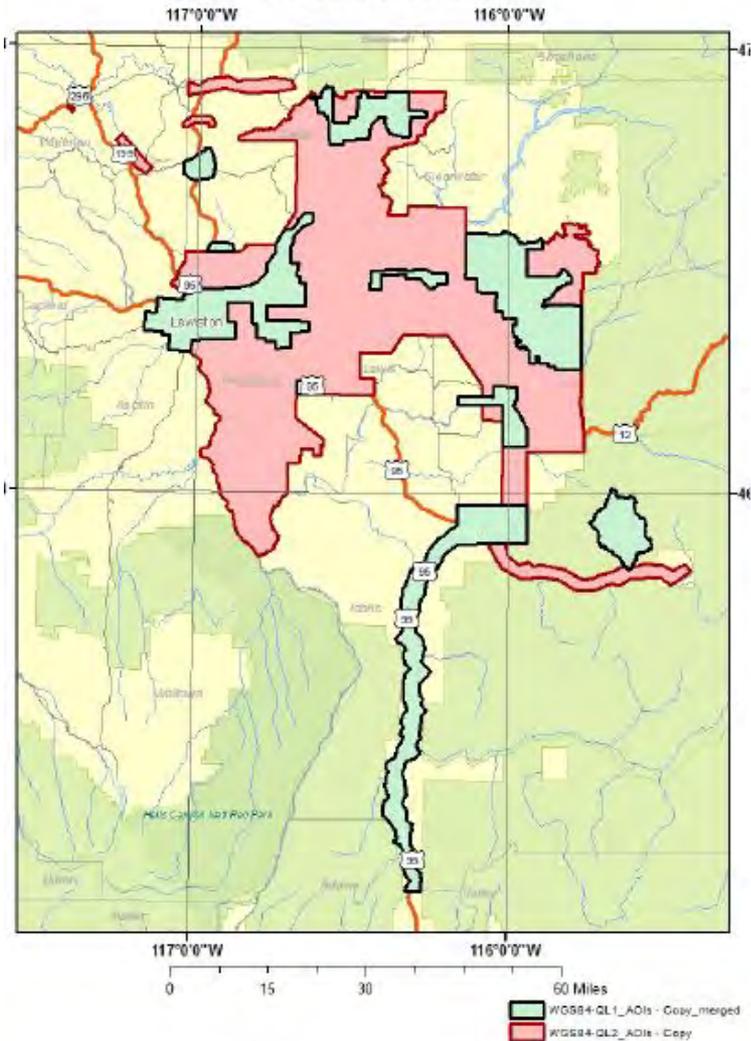


Topography, Geology and Land Forms - IGS



LiDAR

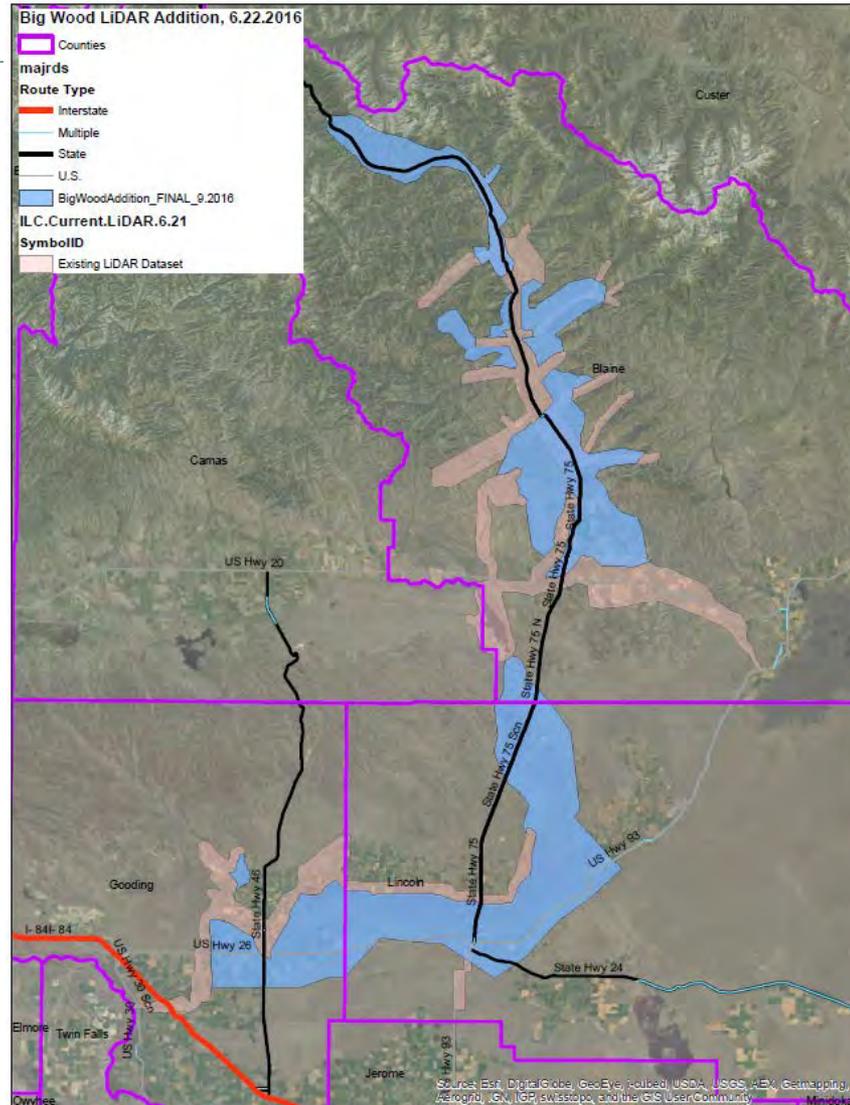
ID Nez Perce LiDAR 2016 B16
QL1 AOIs = 847 sq mi; QL2 AOIs = 1,815 sq mi
TOTAL = 2,662 sq mi



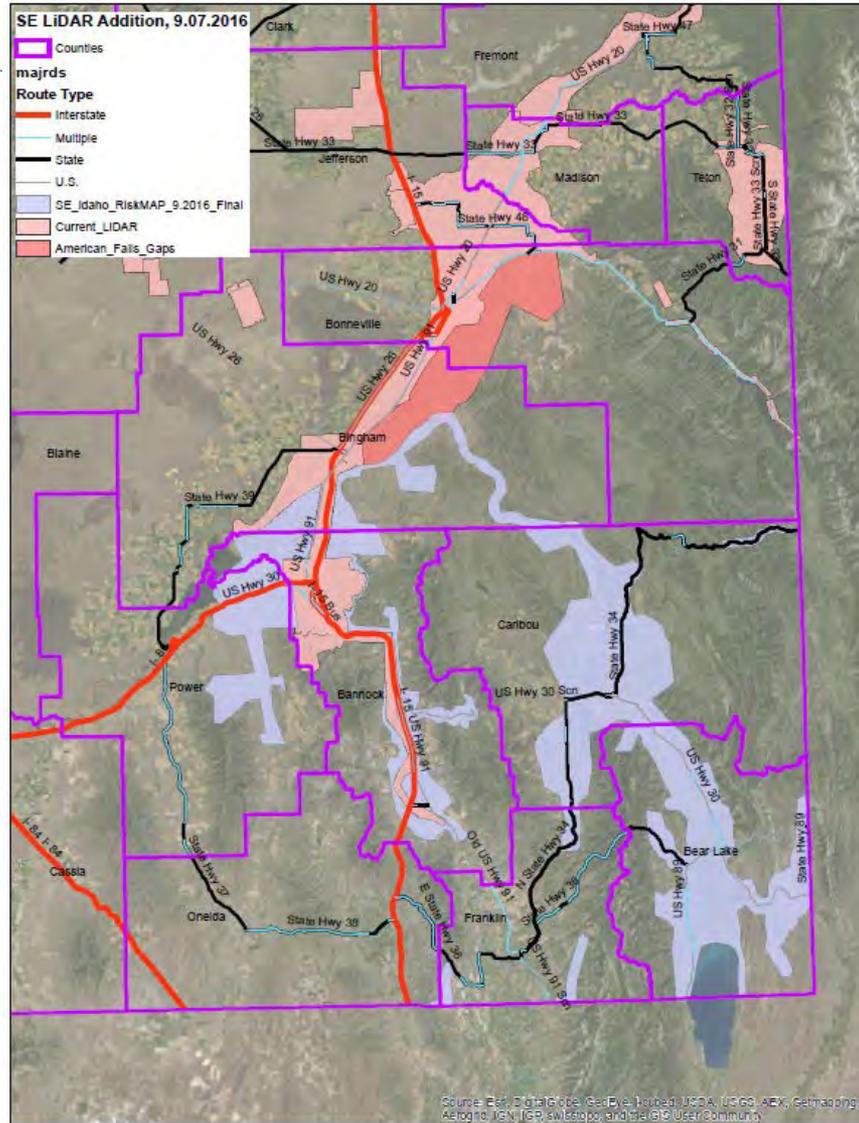
Partner	Est. Contribution
Nez Perce County	\$137,000
Idaho Dept. of Lands	\$100,000
Nez Perce Tribe	\$3,000
City of Lewiston	\$3,600
Port of Lewiston	\$500
Lewiston MPO	\$3,650
Idaho Dept. Transportation	\$30,000
Asotin County	\$7,560
Asotin PUD	\$7,560
Asotin MPO	\$3,390
Total Non-Federal	\$296,260
USGS-3DEP	\$112,320
FEMA HQ	\$31,680
NRCS-NGCE	\$100,000
FEMA Region X	\$350,000
USFS	\$40,000
Total Federal	\$634,000
Total project funds	\$930,260



LiDAR



LiDAR



The Question and Answer Period

Thank you!



Ryan McDaniel CFM, PMP
IOEM
Risk MAP Program Manager
Desk: (208) 258-6593
rmcdaniel@bhs.idaho.gov



LUNCH

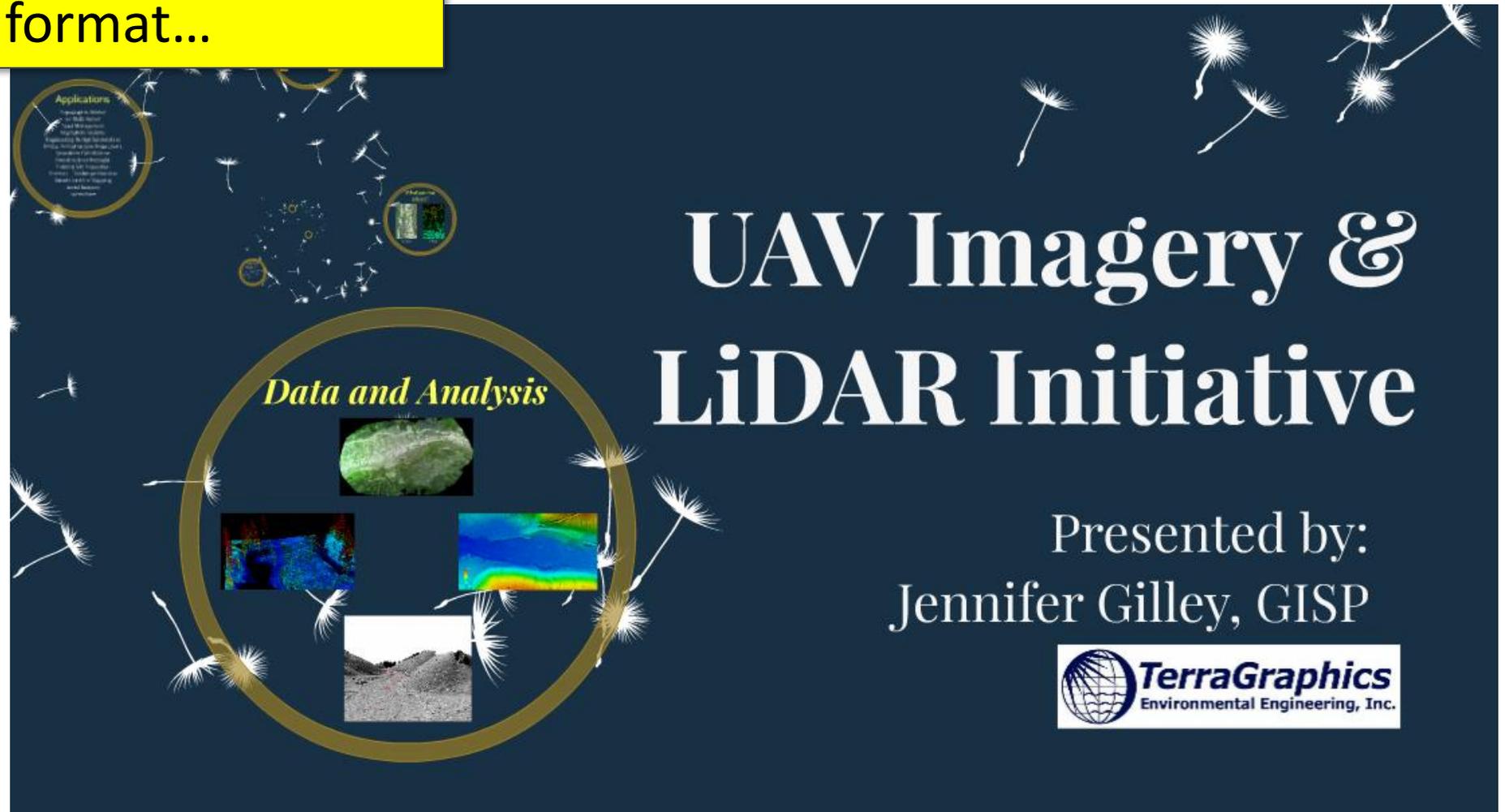
GIS
Accomplishments:

*What's going on
in Idaho?*

Drone Imagery & LiDAR Initiative

Jennifer Gilley,
TerraGraphics

Click [here](#) to view the presentation for this agenda item in Prezi format...



The slide features a dark blue background with a decorative border of white dandelion seeds. On the left, a circular graphic titled "Data and Analysis" contains four images: a green 3D terrain model, a blue and red false-color aerial image, a yellow and blue topographic map, and a grayscale ground-level photograph. Above this circle is a smaller circular graphic titled "Applicators" with a list of bullet points. The main title "UAV Imagery & LiDAR Initiative" is written in large white serif font on the right. Below the title, the presenter's name "Jennifer Gilley, GISP" is listed. At the bottom right is the TerraGraphics logo, which includes a globe icon and the text "TerraGraphics Environmental Engineering, Inc."

UAV Imagery & LiDAR Initiative

Presented by:
Jennifer Gilley, GISP

 **TerraGraphics**
Environmental Engineering, Inc.

State GIS Strategic Plan Update

Pam Bond,
IGC-EC Chair

2016 Idaho SDI Strategic Plan Update

Pam Bond, IDFG, IGC-EC chair



What is SDI?

The Idaho Spatial Data Infrastructure (SDI) is the technology, policies, standards, human resources, and related activities necessary to acquire, process, distribute, use, maintain, and preserve spatial data for the use of the Citizens of the State of Idaho.

In a nutshell....



**ALL THINGS
GIS**

Background

- The initial version released 2009
 - 71 page strategic plan, 97 page business plan
 - Created with the help of a consulting firm
 - Lots of good information about all things GIS in Idaho
- The proposed update
 - 14 page strategic plan, no business plan
 - Consider it to be a living document
 - 3-5 years before next major revision
- Both plans
 - Conducted statewide GIS user surveys



Guiding Principles



6 of 10 still considered important/relevant:

- Seek to clearly represent the interests of my organization **with other** governing bodies and organizations (97%).
- **Act collaboratively** on programs or activities that can be better accomplished through collaboration or team work (95%)
- Seek solutions to issues of **common concern** (93%)
- **Inclusive** and open communication throughout Idaho's GIS community (93%).
- Seek resources from county, regional, state and federal agencies that will benefit Idaho's GIS **Community** (93%).
- Optimize efficiency in all aspects of GIS data development and use (92%).

“Demonstrate the importance of professional communities working collectively toward a better geographic information system for Idaho.”

GOAL #1

- Create/support a robust geospatial data clearinghouse for sharing current and historical TIM Framework and other authoritative data layers.
 - *Objective:* Seek and secure the funding and staffing needed for an official TIM geospatial data clearinghouse.
 - *Strategy:* Have a designated clearinghouse administrator who can reach out and support TIM/authoritative data stewards, review datasets and documentation and help keep them current, and maintain the clearinghouse website; acquire and maintain dedicated funding for this position.



GOAL #2

- Provide best available statewide TIM Framework data layers.
 - *Objective:* Increase the number of officially recognized TIM Framework data layers and create a recognizable TIM “brand”.
 - *Strategy:* Create an inventory of Framework data layers currently available from metadata; reinvigorate the Framework Leadership Team; start with the top 10 (as defined by current survey results) and work with the associated agencies/TWGS to get the data layers nominated – host TIM nomination workshop and TIM metadata workshop; host the Framework data layers in the geospatial data clearinghouse and brand as TIM.



GOAL #3

- Improve geospatial data quality.
 - *Objective:* Improve the quality and currentness of publically available GIS data through education and have data stewards publish their geospatial data as Open Geospatial Consortium (OGC) services (WMS, WFS, WCS, etc.).
 - *Strategy:* Increase education on and encouragement to follow State GIS policies and standards; education on proper metadata; education on transition to web services.



GOAL #4

- Improve delivery and accessibility of GIS services and information.
 - *Objective:* Increase stakeholder exposure to geospatial data and leverage the more user-friendly mapping applications to make geo-information more sharable and usable.
 - *Strategy:* Explore the use of data sharing applications such as Esri Open Data and data.gov; encourage not only GIS staff but others to use tools like Story Maps and Web Map Applications to relay geo-information to their customers and the public; encourage the use of mobile-friendly templates; funding for and encourage data stewards to use ArcGIS Server/shared State ArcGIS Server and enterprise ArcGIS Online accounts.



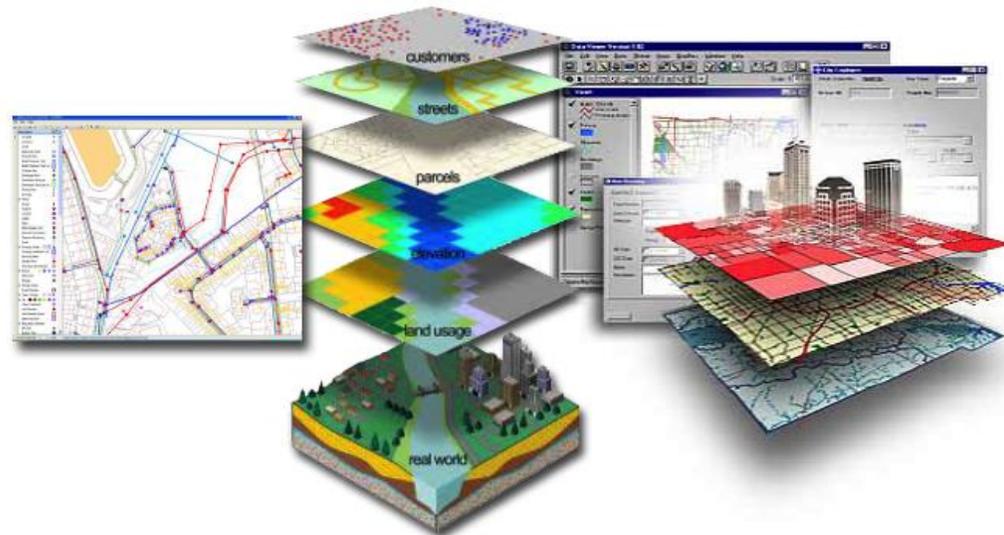
Business Drivers

- Very similar results from 2008 and 2015 surveys
 - Improved response to citizens or customer
 - Improved land use planning and decision making
 - Improved geospatial data quality and consistency



Geospatial Data Priorities

- Received consistent prioritization in 2008 and 2015 surveys:
 - Orthoimagery (high resolution)
 - Parcels and legal lots
 - Transportation
 - Government boundaries



Limitations & Obstacles

- Very similar results from 2008 and 2015 surveys
 - Funding Limitations
 - Staff Limitations
 - Problems with data quality and currentness



Strength

3 of 6 still considered important/relevant:

- There is a large and **knowledgeable** community of GIS users in Idaho (90%)
- Effective, **long-term use** of GIS technology exists in many state agencies (88%)
- There is an **active** GIS user groups in my region (80%).

***Who We
Are!***

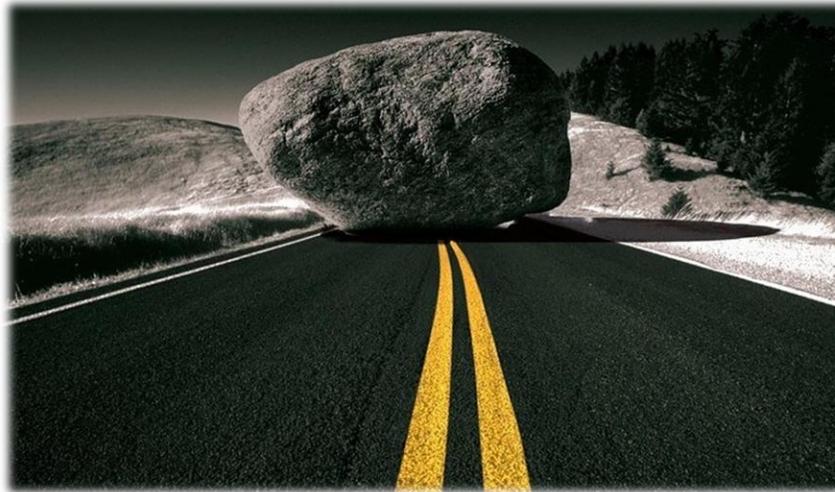


Weaknesses

3 of 5 still considered important/relevant:

- There is a **lack of funding** for GIS (SDI) initiatives (95%)
- Organizational and political **barriers** present obstacles to collaboration and consensus (87%)
- State government IT planning and management is highly **decentralized** without sufficient level of central coordination and authority (81%)

“[Obstacles to collaboration and consensus] ... is an important weakness as collaboration and community of proactive was previously identified as a critical guiding principle for Idaho’s geospatial community.”



Opportunities



5 of 6 still considered important/relevant:

- GIS is an **accepted** “core information technology” and is effective in enabling information and organizational integration (90%)
- INSIDE Idaho could be basis for an **enhanced geospatial portal** (88%)
- Extensive GIS **educational offerings** in the state higher education system support future training and professional development (94%)
- Professional and industry associations are potential **“allies”** in garnering support and creating heightened awareness for the SDI (91%)
- **Increased demands** by the public for information from government agencies create potential role for GIS (100%)

“... Idaho reflects a trend seen across the nation where geospatial information is increasingly valued, demanded, and expected.”

Highlights from Comments

- Need better State management & funding (need full-time GIO and resources for INSIDE) for creation, maintenance & sharing of SDI data (or lack thereof)
- Lack of young professionals taking GIS (this seems a little contradictory; under opportunities 91% agreed there is extensive GIS educational offerings)
- Limitations on low-resourced jurisdictions, low wages and high staff turnover
- Flooded with data that may not be shared properly (with metadata, etc.)
- State should be responsible for sharing data BUT agencies/organizations/etc. should be responsible for maintaining and updating; need a workflow to support this, top-level people need to make framework dataset creation/sharing a priority

Where to Start?

Goal 1: Create/support a robust geospatial data clearinghouse for sharing current and historic TIM framework and other authoritative data layers.

“This priority goal is closely tied to Idaho’s primary weakness “a lack of funding for GIS initiatives” and will be insurmountable unless this weakness is addressed first.”



Low Priority Analysis

It is also important to look at low priority/relevance strengths, weaknesses, opportunities, and challenges.

63% of respondents indicated they “pay close attention to quality in the creation, maintenance, and archiving of Idaho SDI data and services”. This response does *not* suggest that Idaho’s geospatial professionals do not care about their organizations GIS data but rather seems to imply that ...

**STATEWIDE SPATIAL
DATA
INFRASTRUCTURE OF
IDAHO IS PERCEIVED AS
SOMEONE ELSE’S
RESPONSIBILITIES.**



Conflicting Results

OPPORTUNITY: Extensive GIS educational offerings in the state higher education system support future training and professional development (94%, 45 of 48)

STRENGTH TURNED WEAKNESS: Young professional completing undergrad and graduate GIS courses and degree programs at the universities (also GIS Certificates are available) (54% True, 22 of 41)



**LACK OF YOUNG
PROFESSIONALS
COMPLETING
COURSES OR
STAYING IN IDAHO?**

GIS Awareness

“..., GIS is currently perceived as a ubiquitous and even common place technology where awareness campaigns are really no longer necessary.” #WINNING

BUT could we better educate stakeholders about specific GIS topics like TIM “branding”, using a centralized data repository, and how to utilize newer GIS technologies?



**WHAT DOES
THIS REALLY
MEAN?**



THANK YOU!

TWG Updates

Hydrography Technical Working Group (TWG)

Next Meeting: March 9, 2017

Last meeting: Sept. 8, 2016

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

Hydrography Requirements & Benefits Survey Results (HRBS)

- **Will allow for Expansion and Improvement of Hydrography in the National Map**
 - Lots of State and Local Gov't participation
 - Identified Mission Critical Activities grouped by Business Uses
 - Estimated Annual Benefits of National Hydrography: \$538 – 544 Million

HRBS Executive Summary: http://nationalmap.gov/docs/HRBS_ExecSummary.pdf

USGS NHD Funding Opportunities

- **No funding until FY18 (or after)**
 - Moving to Broad Agency Announcement (BAA) process
 - Per the Hydrography Goals of FY 2015-2017 (http://nhd.usgs.gov/documents/NHD_Plan.pdf), a goal is to “Create an NHD and WBD well-integrated with high resolution elevation data”.
 - May be possible to leverage hydrography work with 3DEP (LiDAR acquisition areas).

Hydrography Technical Working Group (TWG)

NHDPlus HIGH RESOLUTION

- **Using:**
 - NHD High Res
 - WBD
 - 10 m DEMs (NED or LiDAR)
 - Ancillary: GNIS
- **Updating NHD :**
 - Network Adjustments/Improvements
- **Process:**
 - Adapting NHDPlus v.2 Tools
 - Automation
 - Iterative Process
 - including refresh
 - Generalization
- **Updating WBD:**
 - GNIS Names Review
 - Overlapping NHD/WBD at 4 digit level

Timeline: Cont. US first round completed 2018

- **For More Information:**

<http://idwr.idaho.gov/GIS/NHD/hydro-TWG.html> - First Presentation

Al Rea – NHDPlus High Resolution Update

Hydrography Technical Working Group (TWG)

Watershed Boundary Dataset (WBD)

- Model version 2.2.1, WBD Edit Tool at ArcGIS 10.3.1
- HUC 2 & National Datasets Available

National Hydrography Database (NHD)

- Model version 2.2.1, NHD Edit Tool at ArcGIS 10.3.1
- Working with GNIS to expedite naming process with Provisional Names Tool.
- State Extract Datasets Now Available

FY 15-16 IDWR Projects: Treasure Valley (17050114), Big Lost (17040218) and Lemhi (17060204) Basins

- Geometry Edits Complete and available in latest NHD State Extract

QUESTIONS:

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

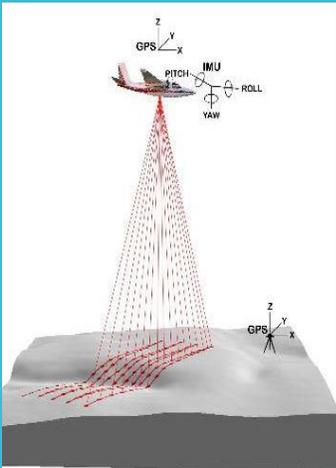
Imagery TWG



CHAIR: Margie Wilkins

- Next Imagery TWG meeting is tentatively scheduled for Dec 7th but may be cancelled.
- NAIP is scheduled to be collected in Idaho next summer – 2017
- Bruce Godfrey with INSIDE Idaho has set up a [test REST point](#) for a new image service and encourages users to provide feedback. This service combines all individual services into one, allows for queries, improves data discovery, and decrease management overhead.
- Imagery users are encouraged to read meeting notes and related items posted on [website](#) to review imagery options the group recently researched/discussed this year (Google, SICS, Hexagon [Valtus], Planet Labs)

Elevation TWG



CHAIR: Nancy Glenn



Elevation Technical Working Group

Nancy Glenn

November 2016 update

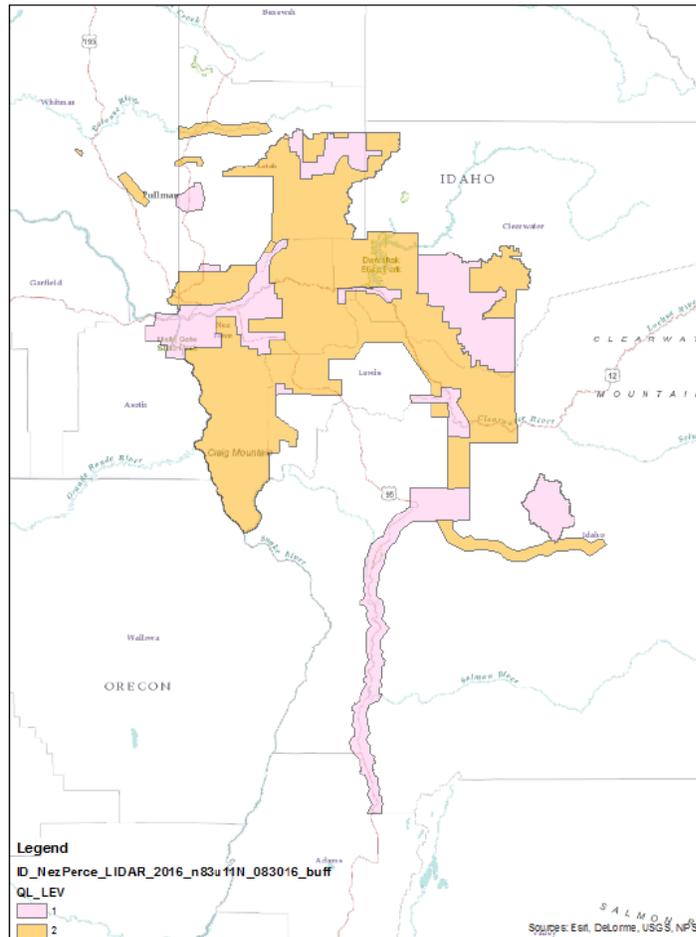
Activities

- Idaho Lidar Consortium: <https://www.idaholidar.org/>
- Statewide lidar acquisition plan
- USGS 3DEP lidar acquisition: Clearwater
- FEMA lidar acquisition: Big Wood & SE Idaho



USGS 3DEP lidar acquisition: Clearwater

Acquisition 2016-2017



- 2662 sq miles
- QL1 (8 pts/m²): 847 sq mi
- QL2 (2 pts/m²): 1815 sq mi

Clearwater Partners

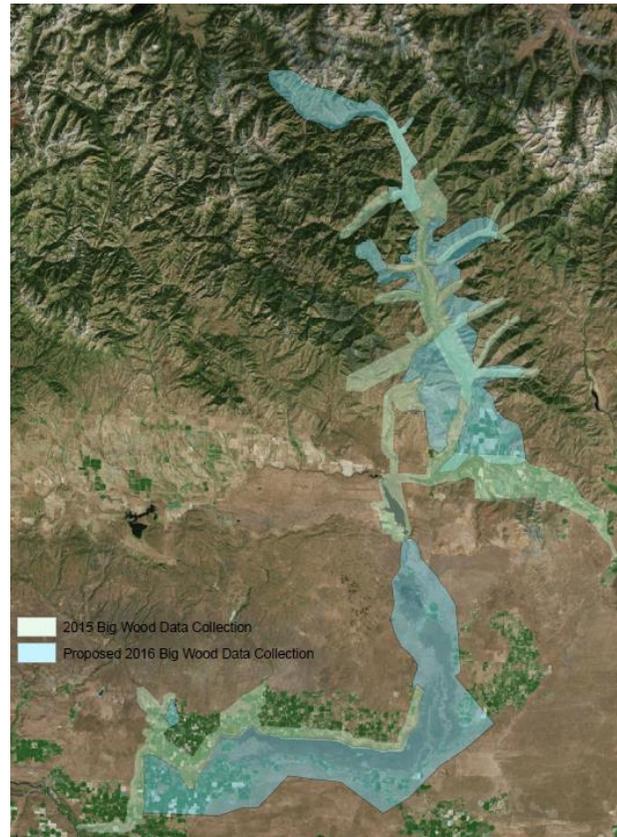
- Nez Perce Tribe: Land Services
 - Nez Perce Tribe: Forestry
 - Nez Perce County
 - City of Lewiston
 - Lewiston MPO
 - Port of Lewiston
 - Idaho Dept of Lands
 - Idaho Transportation Dept.
 - Asotin County
 - Asotin PUD
 - Asotin MPO
- USGS
 - USFS
 - FEMA
- Alison Tompkins
Bill Reynolds
Laurie Ames
Ryan McDaniel
Kelly Stone
Tom Carlson

*Idaho County



FEMA Big Wood Acquisition

Fall 2016, QL1

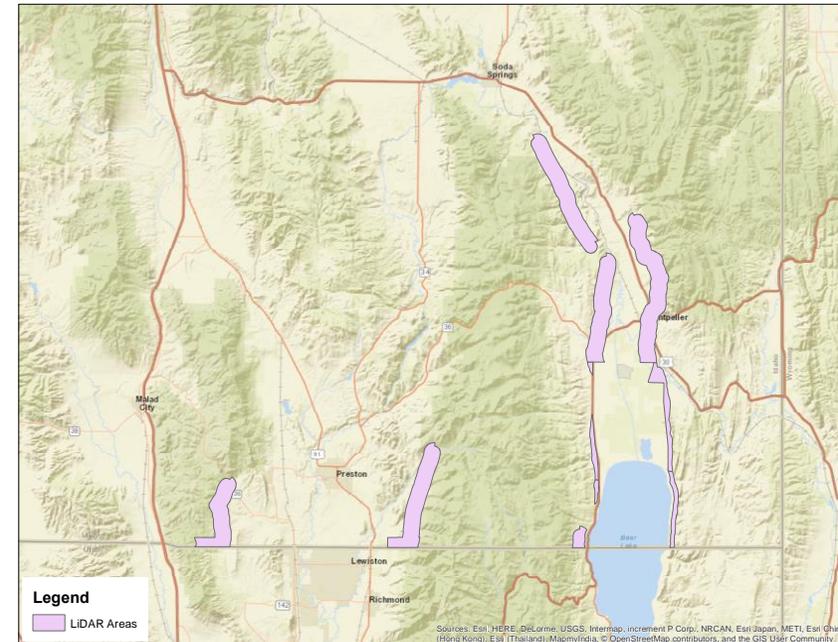
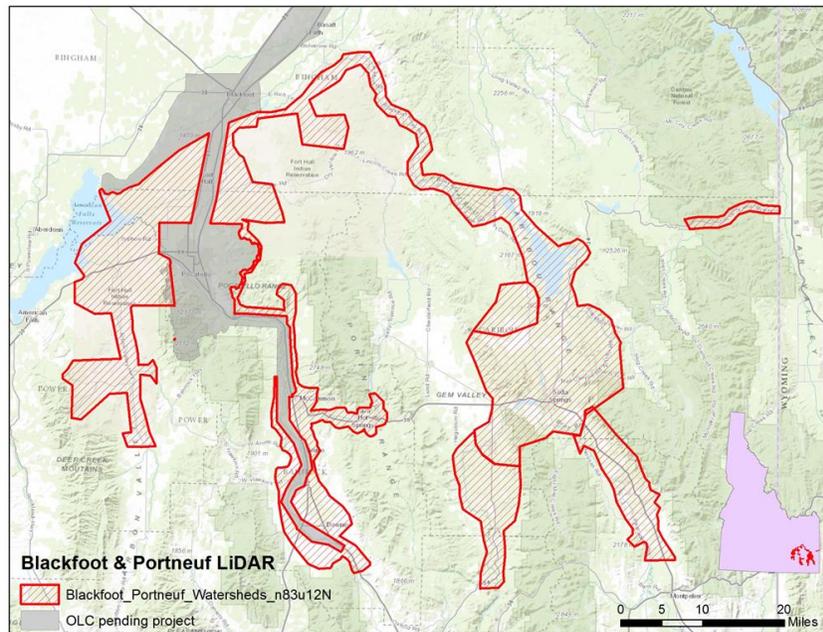


<https://www.idaholidar.org/>



FEMA SE Idaho Acquisition

Spring 2017, QL1



<https://www.idaholidar.org/>



Lidar Coordinator Position

- Lead development of Idaho's statewide multi-year lidar acquisition plan
- Help coordinate interested agencies and groups in lidar data collection throughout the State of Idaho
- Assist with lidar education throughout the State of Idaho
- Coordinate with FEMA and its partners on lidar priorities and acquisitions
- Update and maintain the Idaho Lidar Consortium website (<https://www.idaholidar.org/>)

BREAK

Open Data Portal

**Bill Farnsworth,
Office of the CIO**

Open Data Portal

Idaho Open Data Portal

Search for open data SEARCH WITHIN MAP [My Activity](#)

CEAN Portland Seattle Vancouver Calgary Edmonton
NORTH ATLANTIC OCEAN
San Francisco Sacramento Denver Salt Lake City
Minneapolis Milwaukee Chicago Detroit Cleveland Pittsburgh Kansas City Indianapolis Saint Louis Gronowati Philadelphia New York Ottawa Montreal Boston
Copyright may not reflect National Geographic's current map policy. © 2014 National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, MITI, NRCAN, GEBCO

IDAHO   **Open Data Portal**

Welcome to the Idaho Open Data Portal

Idaho has several open data portals, this Idaho Geospatial Office [open data homepage](#) for open data. This site provides the ability to search for open Geospatial (GIS) data and to download the data in a variety of formats. Additionally, you can access and view a wide variety of [interactive maps](#).

Idaho Geospatial Office

Our mission is to provide leadership and coordination for the creation and maintenance of statewide base geospatial data (Framework) and overall support to the GIS community. We facilitate the use, development, access, sharing, and management of geospatial data and assist with communicating the value of geospatial information to citizens and decision-makers in the state of Idaho.

Recent Data 

- Multiple Agencies
- Enterprise
- How to organize them
- Open Data Portal and ArcGIS Online:
- data.gis.Idaho.gov

Other Business

Planning for the 2017 IGC Spring Meeting

West Yellowstone, Montana | April 2017

Details to follow...

Adjourn

NEXT MEETING:

*See you in West Yellowstone
at the Spring IGC Bi-Annual Meeting!*
April 2017