

# Agenda

- **Hazus Contacts and Help Desk**
- **Hazus Software Update**
- **Hazus Conference**
- **Tools Overview**
  - Accessing the Hazus Inventory
  - Accessing data from old hpr's
  - Hazus Export Tool
- **Trainings**
- **Open Discussion on future trainings, webinars, etc.**

# Hazus Program and Help Desk

- **Natural Hazards Risk Assessment Program (FEMA HQ)**
  - Hazus
  - National Risk Index
  - Risk Assessment Guidelines, Tools, and Methodological Resources
- **New Hazus Program Manager is Jesse Rozelle,**  
[Jesse.Rozelle@fema.dhs.gov](mailto:Jesse.Rozelle@fema.dhs.gov)
- **The new Hazus Help Desk can be reached at [hazus-support@riskmapcds.com](mailto:hazus-support@riskmapcds.com)**

# What's new with Hazus?

## Hazus Modernization/Version 3.0 (Nov. 2015)

- Update of all source code for the Hazus Flood Model from VB6 to C# and .NET (increased software stability/decreased run times)
- Incorporation of dasymetric (Land Use/Land Cover) data for level 1 flood losses
- Integration of Benefit Cost Analysis depth damage functions (flood)
- Transition from personal gdb's to SQL spatial
- Full list of enhancements by Hazus version at <https://www.fema.gov/hazus-modernization>

# What's new with Hazus?

## Hazus Modernization/Version 3.1 (April 2016)

- Update of Hazus EQ source code from VB6 to C# and .NET (increased software stability/decreased run times)
- Improvement of the installation process
- Upgraded SQL Server version from 2008 to 2014
- Replaced MS Access Jet Engine Access Database Engine (ACE)
- Removed registry key usage for modifying Hazus software settings and replaced with settings.xml file
- 6 enhancements, 21 defects addressed

# What's new with Hazus?

## Hazus Modernization/Version 3.2 (Oct. 2016)

- USGS ShakeMap integration feed now allows direct import of USGS ground motions for Hazus earthquake. (Note – only includes actual events, not scenarios)
- Enhanced summary reports (graphs, charts, embedded maps)
- Upgraded to ArcGIS desktop 10.4. Reduced dependency on ArcGIS versions based on elimination of ArcObjectcalls
- All Hazus source code updated from VB6 to C# and .NET (increased software stability/decreased run times)

# What's new with Hazus?

## Hazus Modernization/Version 4.0 (March 2017)

- Hazus Tsunami model released
  - First model to include support for Guam, American Samoa, USVI, Commonwealth of Northern Mariana Islands)
- Hazus General Building Stock now includes point based USACE “National Structure Inventory” datasets
- Case Studies –Tsunami model includes user-provided data for select west coast communities (Note: One is Grays Harbor County)
- Two types of tsunami damage analysis –near source (earthquake and tsunami) and distant-source (tsunami only)
- Use of untested ArcGIS desktop versions no longer blocked

# Hazus 4.1 (September 2017)

- ArcGIS Desktop 10.4 Compatible
- 35 Defects/Enhancements:
  - Software Shell –6
  - Flood –9
  - Earthquake –6
  - Hurricane –1
  - Tsunami –3
  - Comprehensive Data Management System –10
- Will share detailed bug list

# Lessons Learned

- Can directly load UDF or AEBM data into CDMS and it will show up in the study region for that community. Do this process instead of loading into the Hazus study region. You will have to complete these prior to creating a study region.
- When importing UDF or AEBM data you need to store them on C:\\HazusData for them to work. I normally load any of the data used in Hazus locally such as ShakeMaps and Depth grids
- Coastal flood analysis will not work with a depth grid
  
- If you have problems e-mail [hazus-support@riskmapcds.com](mailto:hazus-support@riskmapcds.com) and cc Cynthia McCoy, [Cynthia.mccoy@fema.dhs.gov](mailto:Cynthia.mccoy@fema.dhs.gov) and Kelly Stone, [Kelly.stone@fema.dhs.gov](mailto:Kelly.stone@fema.dhs.gov)



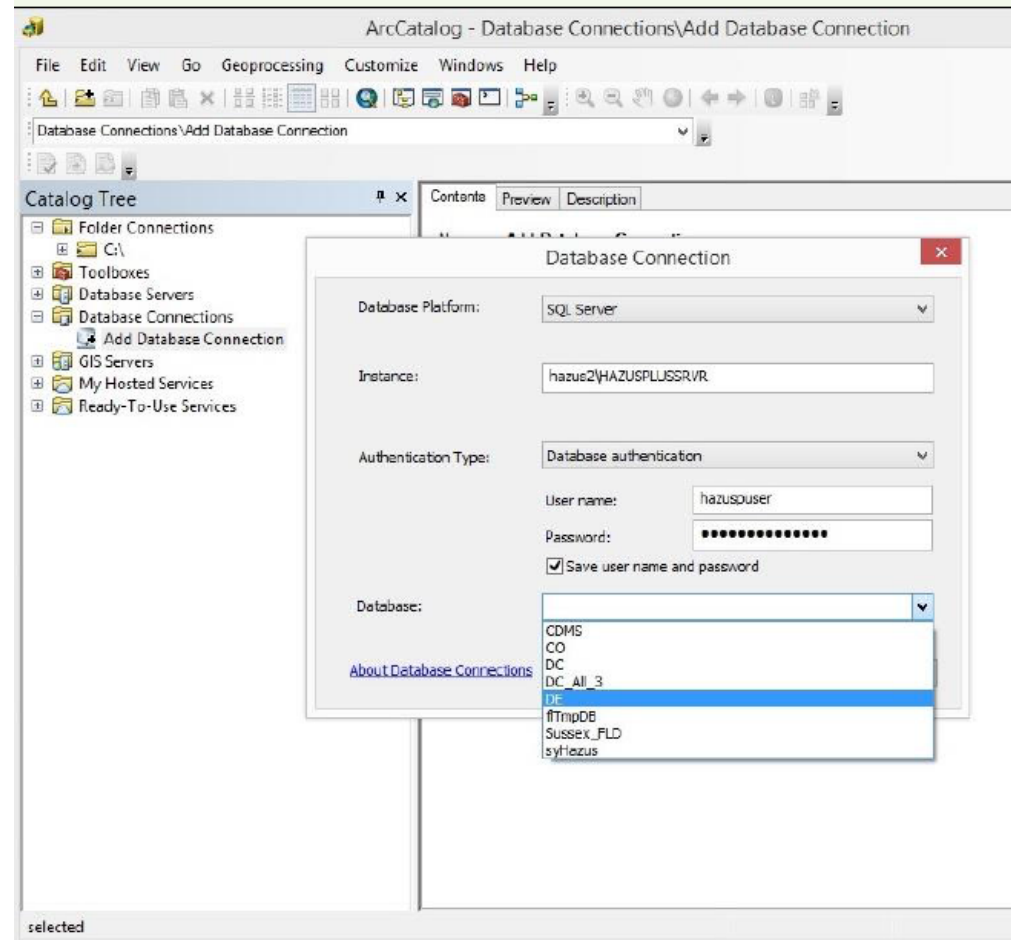
# Hazus Conference

- **Will be hosted by the College of Charleston in Charleston, SC**
- **October 16-18<sup>th</sup>**
- **Official announcement will be coming soon**

# Tools/Workarounds - Accessing the Hazus State Databases

## ■ Accessing the Hazus State Databases

- Once the data is downloaded create a study region first so you can view the state inventory
- To connect the SQL database in ArcCatalog
  - Add a database connection
  - Instance: combination of Computer Name\HAZUSPLUSRVR
  - Username: hazususer
  - Password: gohazusplus\_01
  - Select the State Database abbreviation
- Rename the database
- You can now view the data in ArcCatalog and ArcMap

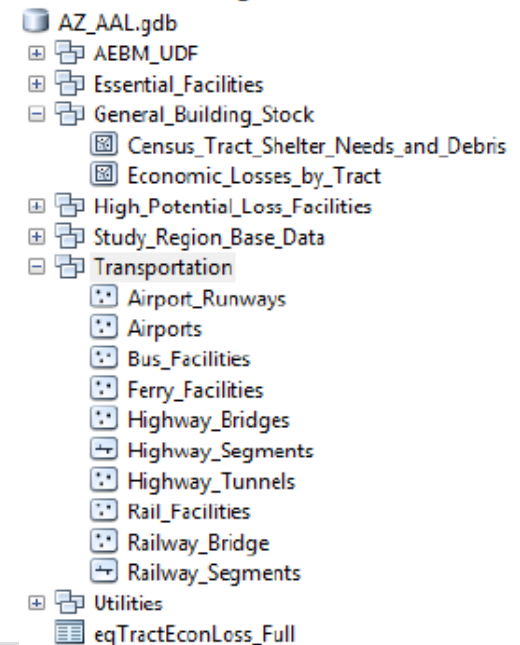
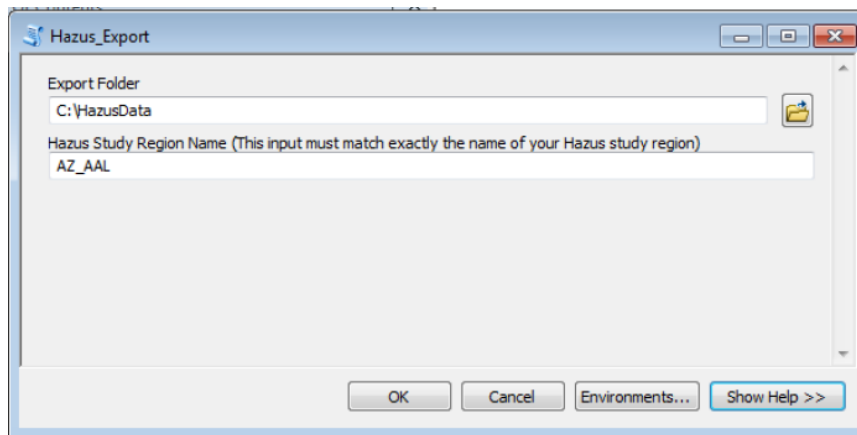


# Tools/Workarounds – USGS Scenario ShakeMaps

- **Within Hazus you can download actual earthquake events, but not the scenarios that have previously been developed for much of the northwest**
- **Many ShakeMaps are no longer available on the USGS site since they have re-organized the site. We are working with USGS to update those scenarios and add them back to the their site**
- **If you need a scenario based ShakeMap that previously existed please e-mail at [Kelly.stone@fema.dhs.gov](mailto:Kelly.stone@fema.dhs.gov) and I can get this to you**
- **To prepare a ShakeMap for Hazus you need to do the following:**
  - You will need to add a PARAMVALUE field to each of the four ShakeMap tables. You will then input the data in the Value field into the PARAMVALUE field.
  - Create a new **personal** geodatabase > Import the 4 shapefiles into the geodatabase
  - Make sure the shakemaps are shown in the GCS NAD 1983 projection

# Tools/Workarounds – Hazus Export Tool

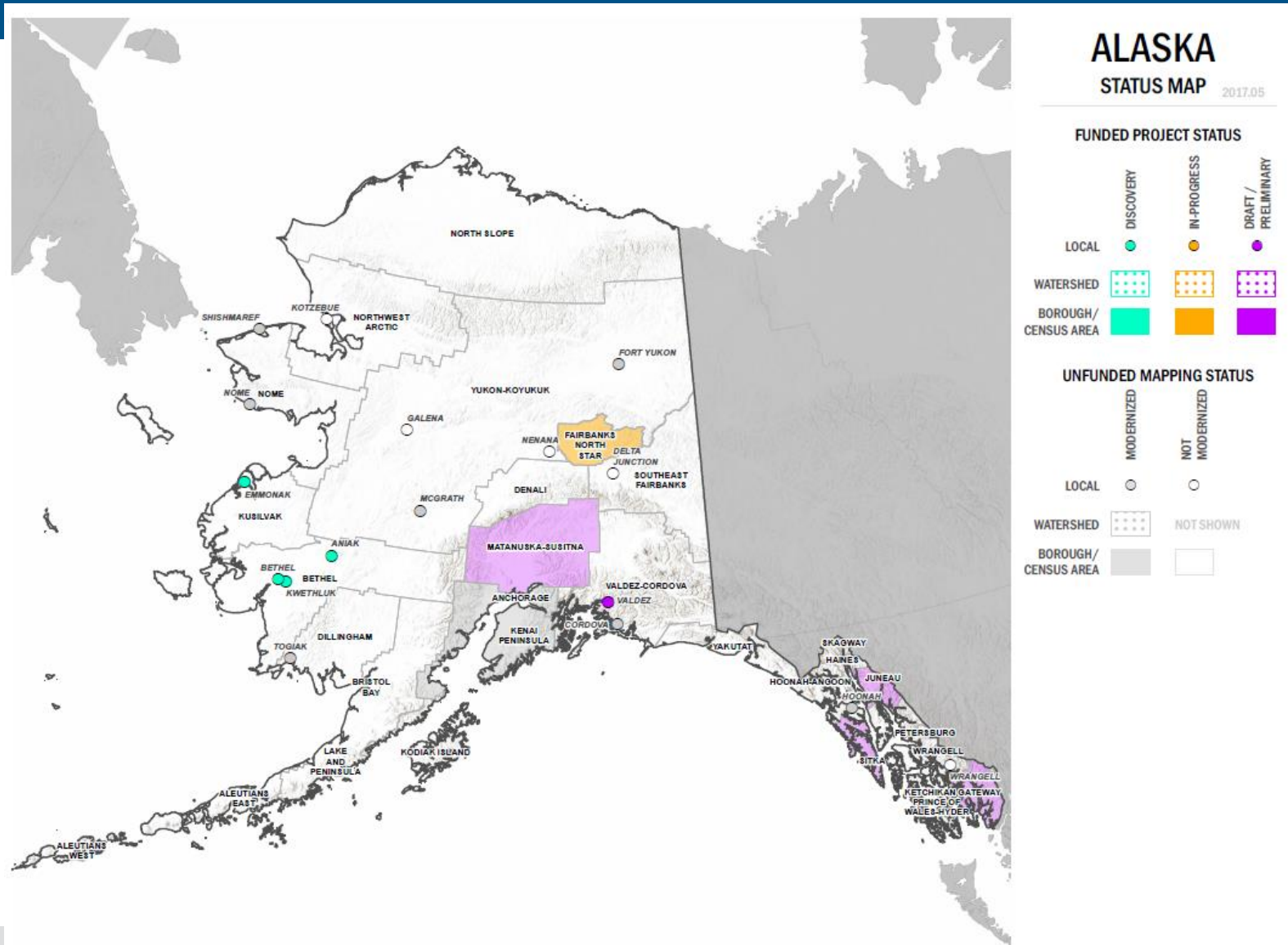
- Script was developed by FEMA Region 8 for extracting Hazus results for earthquake and flood from Hazus 3.1 and 3.2
- Updated tool is expected in 2017 for new versions to include tsunami
- A python script and toolbox have been created
- The tool will export results found for all modules ran in a study region into a clean geodatabase with the same name as your study region



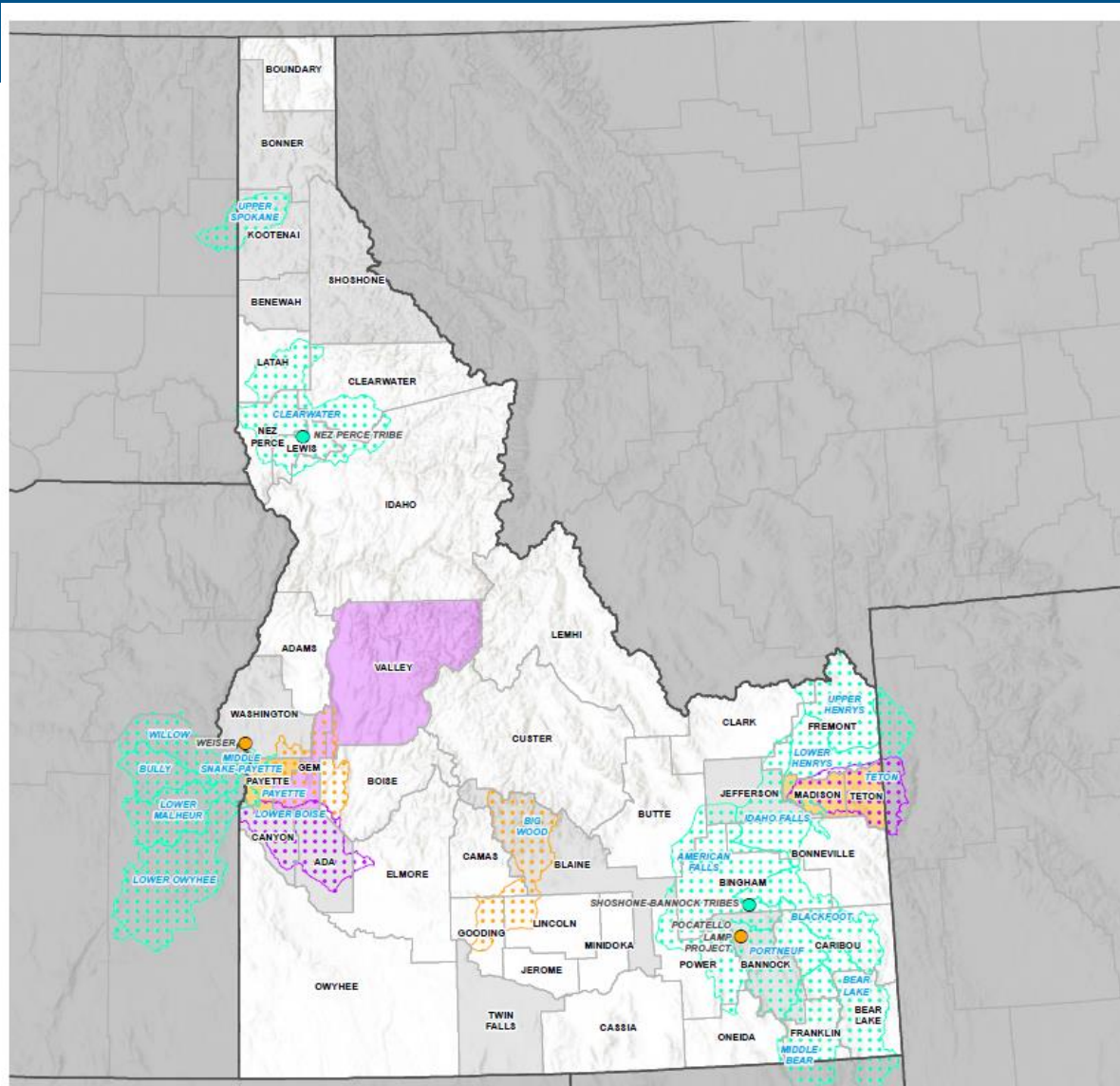
Tool can be download here:

[https://data.femadata.com/Region10/Hazus/Hazus\\_Export.zip](https://data.femadata.com/Region10/Hazus/Hazus_Export.zip)

# Alaska – RiskMAP Updates



# Idaho – RiskMAP Updates



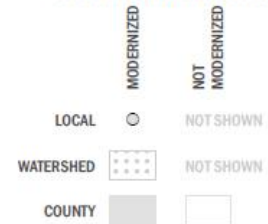
## IDAHO

STATUS MAP 2017.05

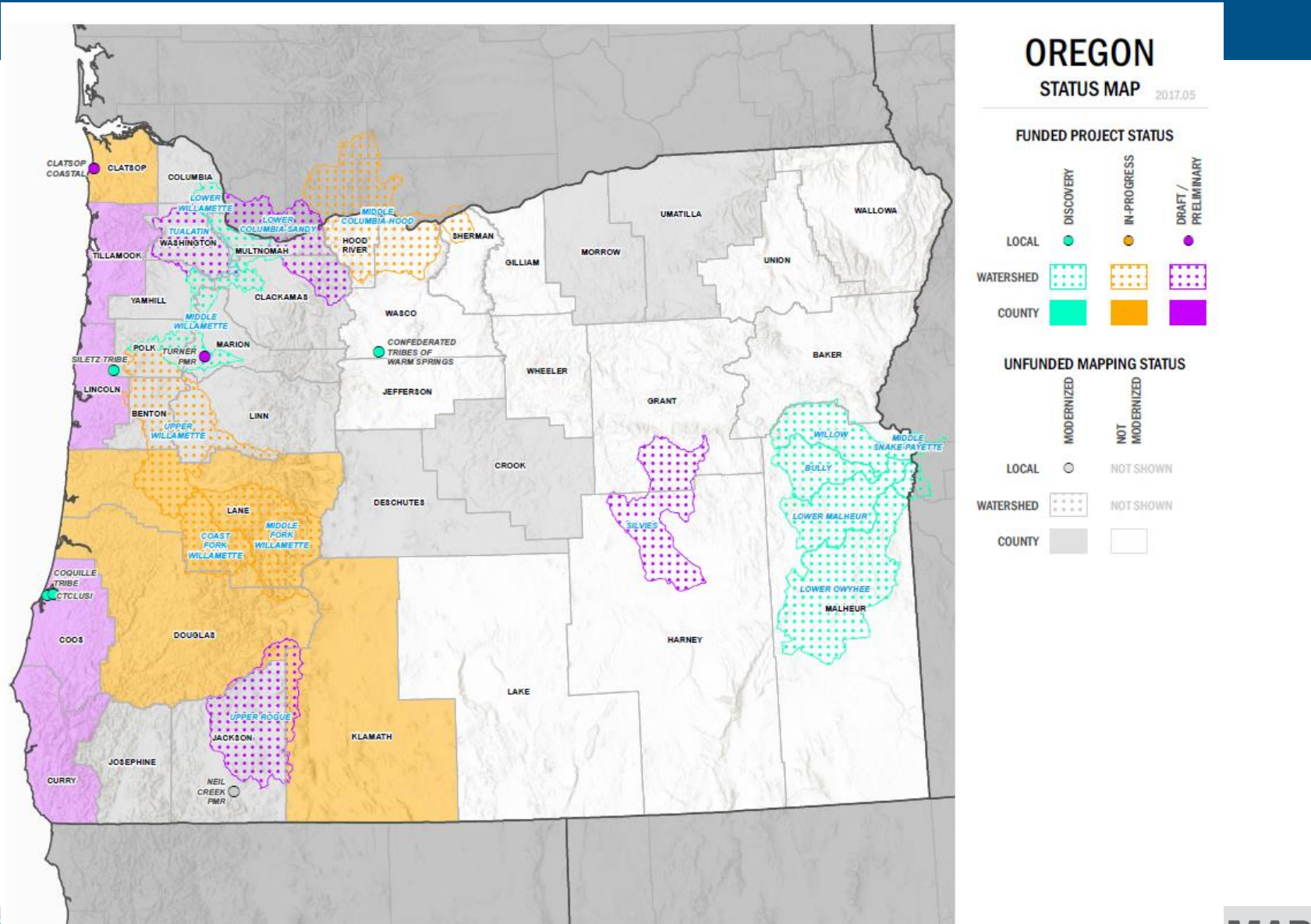
### FUNDED PROJECT STATUS



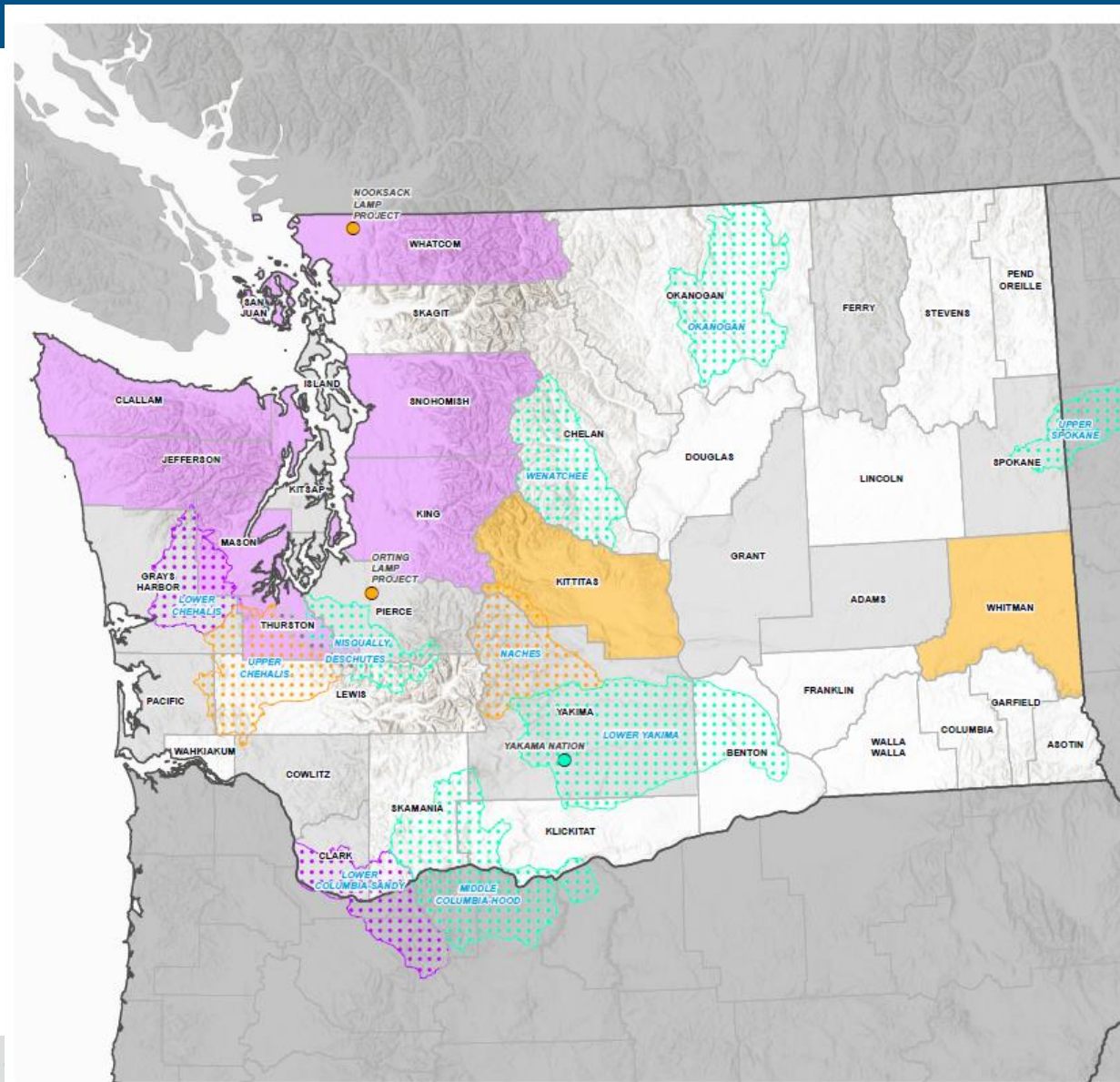
### UNFUNDED MAPPING STATUS



# Oregon – RiskMAP Updates



# Washington – RiskMAP Updates

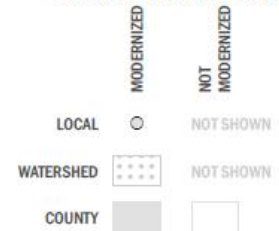


## WASHINGTON STATUS MAP 2017.05

### FUNDED PROJECT STATUS



### UNFUNDED MAPPING STATUS





# Risk Report/Database Demo

# Survey Results

- **Quarterly calls**
- **Thursday afternoon preferred**
- **Topics Discussed**
  - Latest information on the software – 72%
  - Tutorials on using Hazus – 72%
  - How to use Hazus results – 63%
  - Using Hazus for Mitigation plans – 63%
  - Hazus resources – 54%
  - Presentation about Hazus projects – 45%

# Survey Results

## ■ What Hazus trainings would you like?

- Tailored Hazus courses focusing on UDF, Tsunami etc. – 63%
- Hazus for Disaster Operations – 55%
- Hazus for Risk Assessment – 45%
- Hazus for Flood – 27%
- Hazus for Earthquake – 27%
- CDMS – 27%
- All of the above – 54%

## ■ Additional Comments

- Website which hosts webinars and resources
- Ensure there is enough beginner focused to the discussion
- How to best communicate risk assessments
- Best practices
- More tutorials
- Presentations from local/State detailing Hazus examples and challenges

# Training

- **Hazus training at EMI in Maryland (travel and lodging costs are funded by FEMA for local, State, and Tribal governments)**
  - Comprehensive Data Management for Hazus – August 15 - 18, 2017
  - Application of Hazus for Disaster Operations – Sept. 11-14, 2017
  - Basic Hazus – Sept. 25 – 28, 2017
  - Hazus for Flood – Oct. 30 – Nov. 2, 2017
  - Comprehensive Data Management for Hazus – December 11 – 14, 2017
- **Basic Hazus Courses are also available through ESRI at <https://www.esri.com/training/>**
- **Planning Hazus for Flood course in May 2018 in Olympia. More details to come.**

# Future Needs??

- **Trainings**
- **Webinars**
- **Meetings**
- **Technical Issues**
- **Best practices – would like more of this.**
- **Communicating to a non-technical audience – what has worked and what hasn't worked.**
- **Tsunami model tutorial**

# Questions??

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<http://www.usehazus.com/wahug/>

<https://www.linkedin.com/groups/4523542>

<https://www.fema.gov/hazus>