Creating Data Partnerships

to Support Transportation Planning and Economic Development

AMPO Annual Conference
October 17-20, 2017

MARICOPA ASSOCIATION of GOVERNMENTS

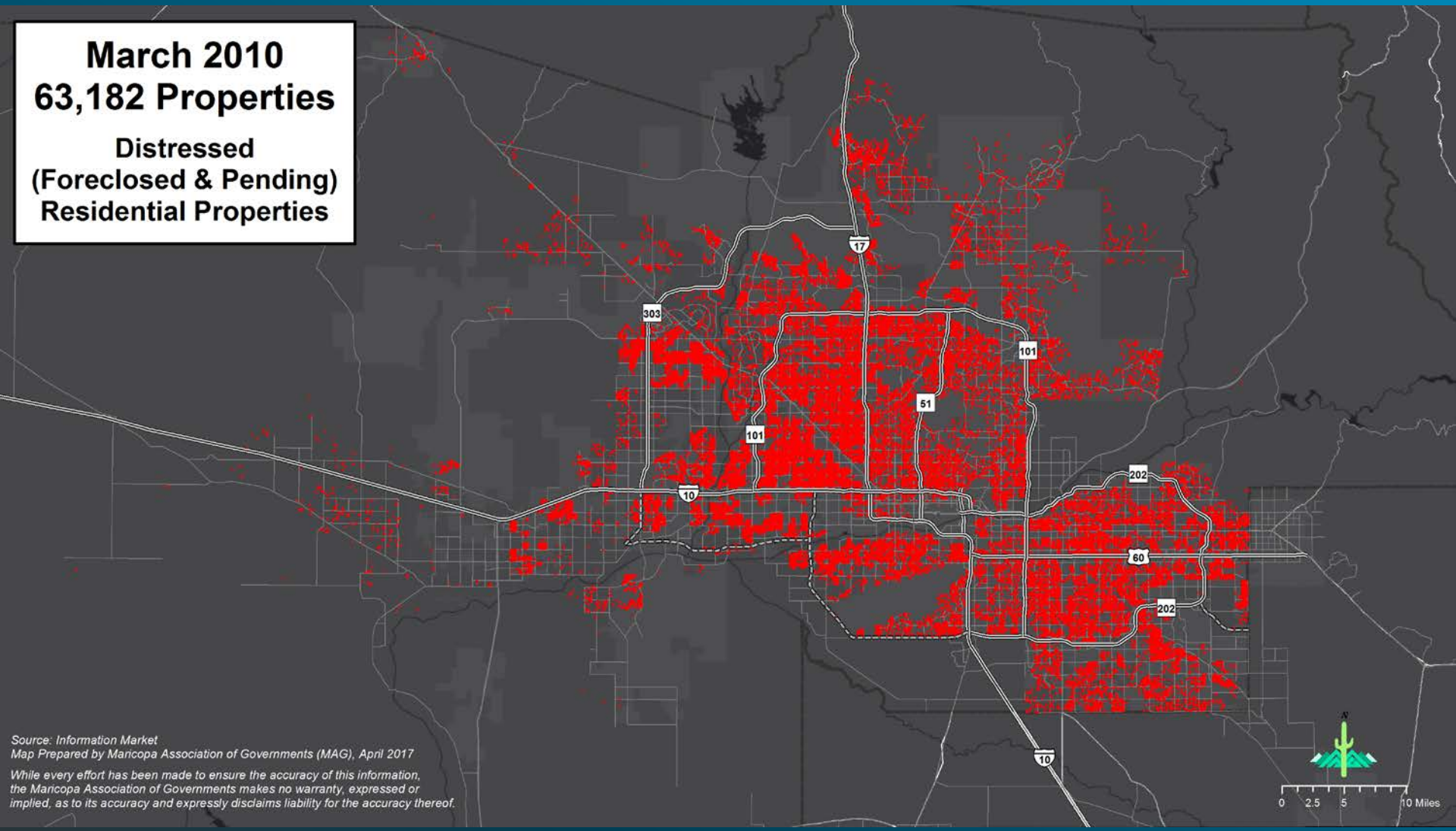
SHRP2 SOLUTIONS
STRATEGIC HIGHWAY RESEARCH PROGRAM

MAG Region

Maricopa Association of Governments

- ✓ **27 cities and towns, 3 Indian communities, 2 counties**
- ✓ **10,650 sq. mile**
- ✓ **4.4 Million Population**
- ✓ **1.8 Million Jobs**

Wake-up Call


March 2010
63,182 Properties
Distressed
(Foreclosed & Pending)
Residential Properties
17
303
101
51
101
10
202
60
202
10
Source: Information Market
Map Prepared by Maricopa Association of Governments (MAG), April 2017
While every effort has been made to ensure the accuracy of this information, the Maricopa Association of Governments makes no warranty, expressed or implied, as to its accuracy and expressly disclaims liability for the accuracy thereof.
0 2.5 5 10 Miles

MAG Economic Development Committee

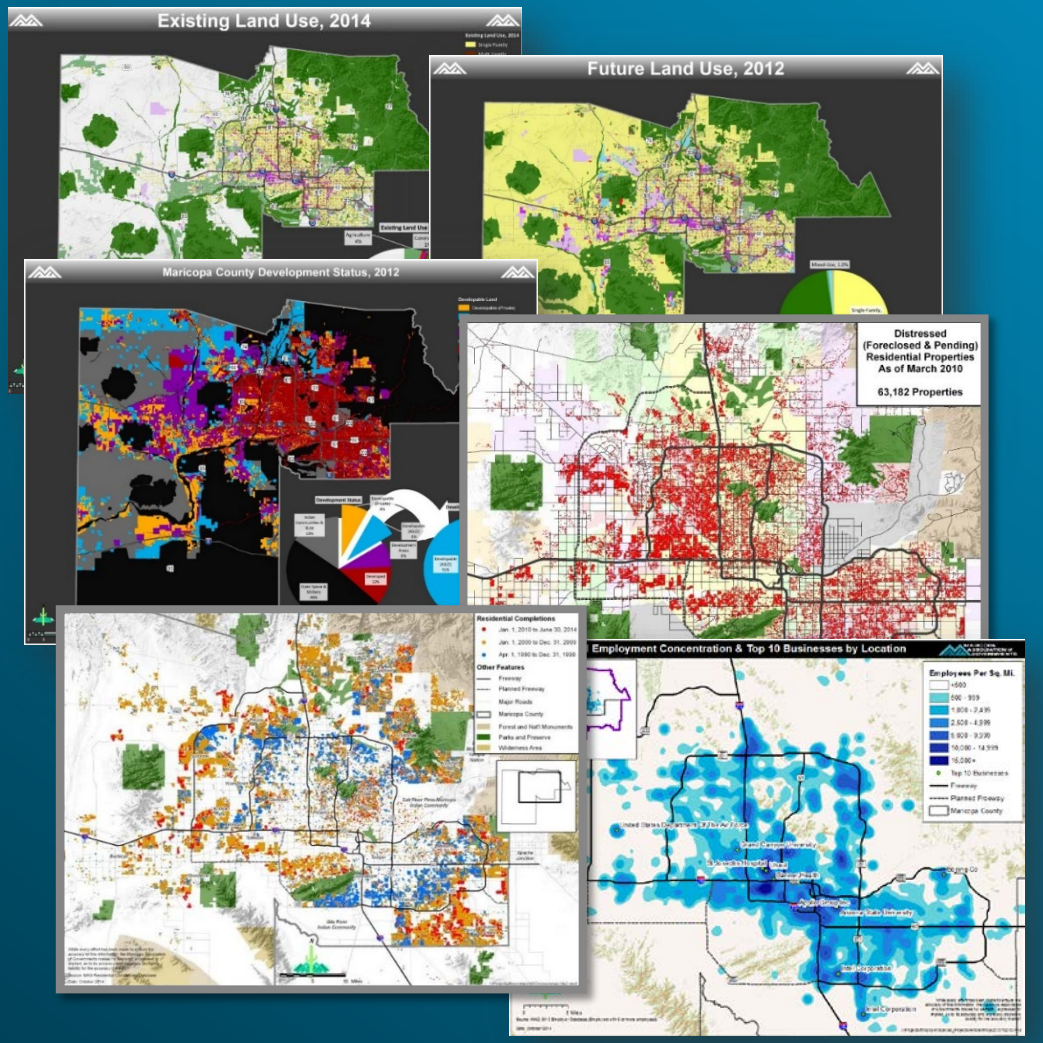
- **Transportation: To What End?**
- **Formed in October 2010**
- **Role**

  Advance infrastructure in the MAG Region, especially transportation infrastructure that would further economic development opportunities.

- **Membership – 35 Total Members**
  - 20 government agencies
  - 15 business representatives

Beyond traditional data and models

- Continuous care and feeding of:
  - Socioeconomic models
  - Transportation models
- Engaged primarily with Planning/ Engineering:
- Downturn required rethinking:
  - Visited Economic Development teams
  - Other public/private entities
    - Workforce
    - Education
    - Real Estate



C19: Expediting Project Delivery

PROJECT OVERVIEW

SHRP2

SOLUTIONS

STRATEGIC HIGHWAY RESEARCH PROGRAM

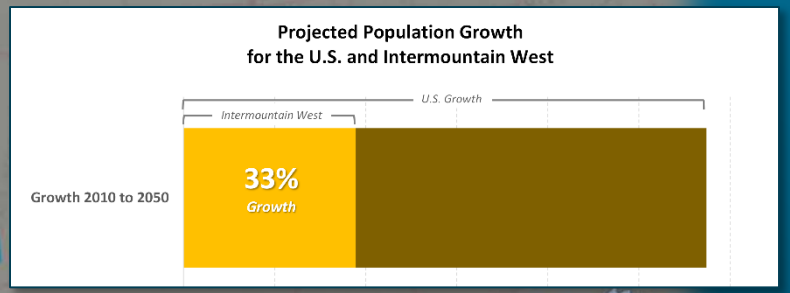
- Safety
- Renewal
- Reliability
- Capacity

America's Trade Corridor
Connecting Canada, the United States, and Mexico
Prince Rupert
Edmonton
Calgary
Vancouver
Bellingham
Seattle
Spokane
Portland
Billings
Boise
Reno
Cheyenne
Salt Lake City
San Francisco/Oakland
Sacramento
San Jose
Denver
Colorado Springs
Las Vegas
Los Angeles/Long Beach
Albuquerque
San Diego
Mexicali
Phoenix
Tijuana
Ensenada
Tucson
El Paso
Hermosillo
Guaymas
Ciudad Obregón
Culiacan
Monterrey
Mazatlán
Leon
Guadalajara
Mexico City
Manzanillo
Pacific Ocean
Atlantic Ocean
Gulf of Mexico
Caribbean Sea
I-11 Proposed Route
Canamex Route
I-11 Alternate Routes
I-17 Possible Extension
Deep Water Port

Intermountain West

Quick Facts

- 9 states
- 934,905 square miles
- Population:
  - 2010:29 million
  - 2050:48 million
- 9.5% of the U.S. population
- 26% of the U.S. land mass
- 13.3% of public road miles
- 46.4% federally managed
- Includes 6 of the top 10 largest states in the nation



Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA

Partners

DRCOG
Denver Regional Council Of Governments

ADOT

Pikes Peak Area
Council of Governments
Communities Working Together

SRTC
Spokane Regional Transportation Council

UDOT
udot.utah.gov

COMPASS
COMMUNITY PLANNING ASSOCIATION
of Southwest Idaho

RTC
rtcsnv.com

MR COG

PAG
Pima Association of Governments

WESTERN
GOVERNORS'
ASSOCIATION

MARICOPA
ASSOCIATION of
GOVERNMENTS

WRP
WESTERN REGIONAL PARTNERSHIP

U.S. Department of Transportation
Federal Highway
Administration

WECC

WASATCH FRONT REGIONAL COUNCIL

WSDOT

MOUNTAINLAND
ASSOCIATION OF GOVERNMENTS

NFRMPO
NORTH
FRONT RANGE
METROPOLITAN
PLANNING
ORGANIZATION

NEVADA
DOT

SHRP2 Project Goals

FHWA awarded a grant to MAG to advance deployment of multi-objective solutions that expedite transportation project delivery in the **broader Intermountain West Region**

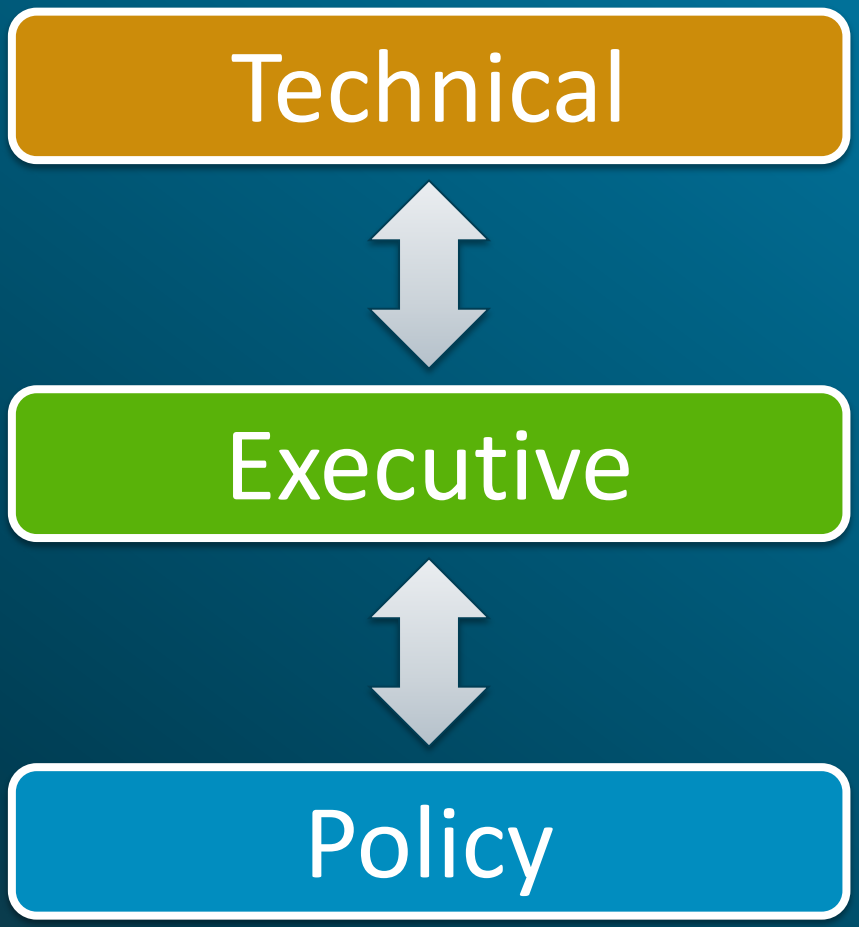
Ongoing Outreach

Connect and communicate with staff and stakeholders from partner agencies

- Webinars
- Partner Survey
- Data Collection
- Denver Meeting

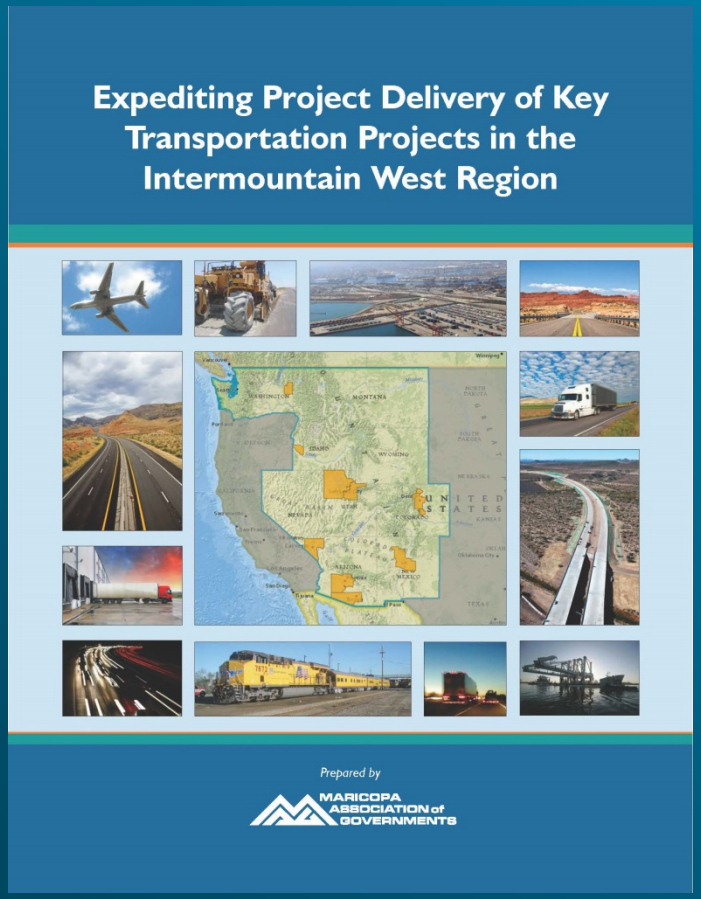
Aligning Expectations

Tiered approach



Report with Risk Register

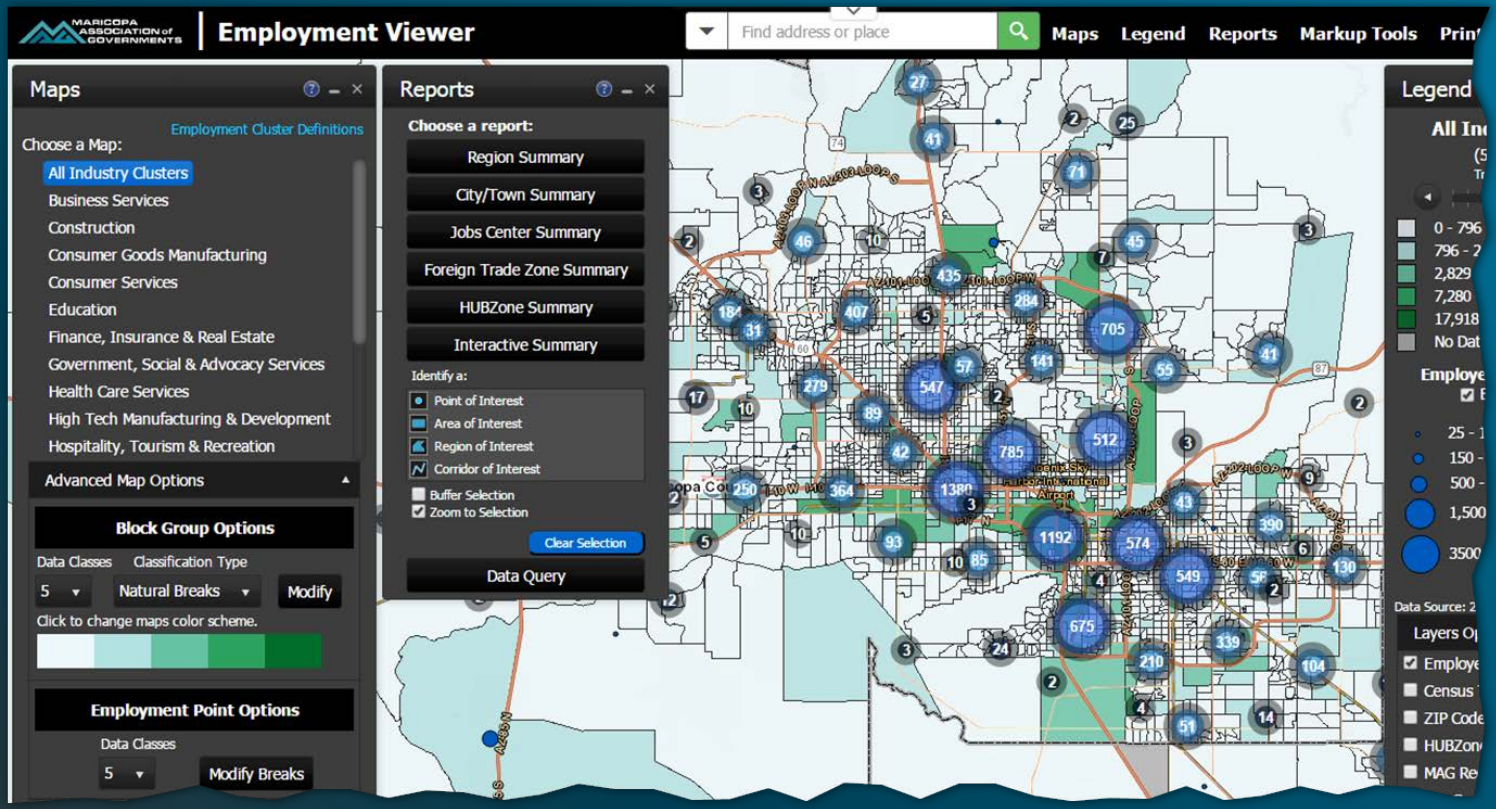
- Vision*: Intermountain Transportation **vision** that will focus on moving people and freight efficiently*
- Constraints and Opportunities
- Stakeholder expectations
- GIS data layers
- Public engagement and communication best practices
- Lessons Learned



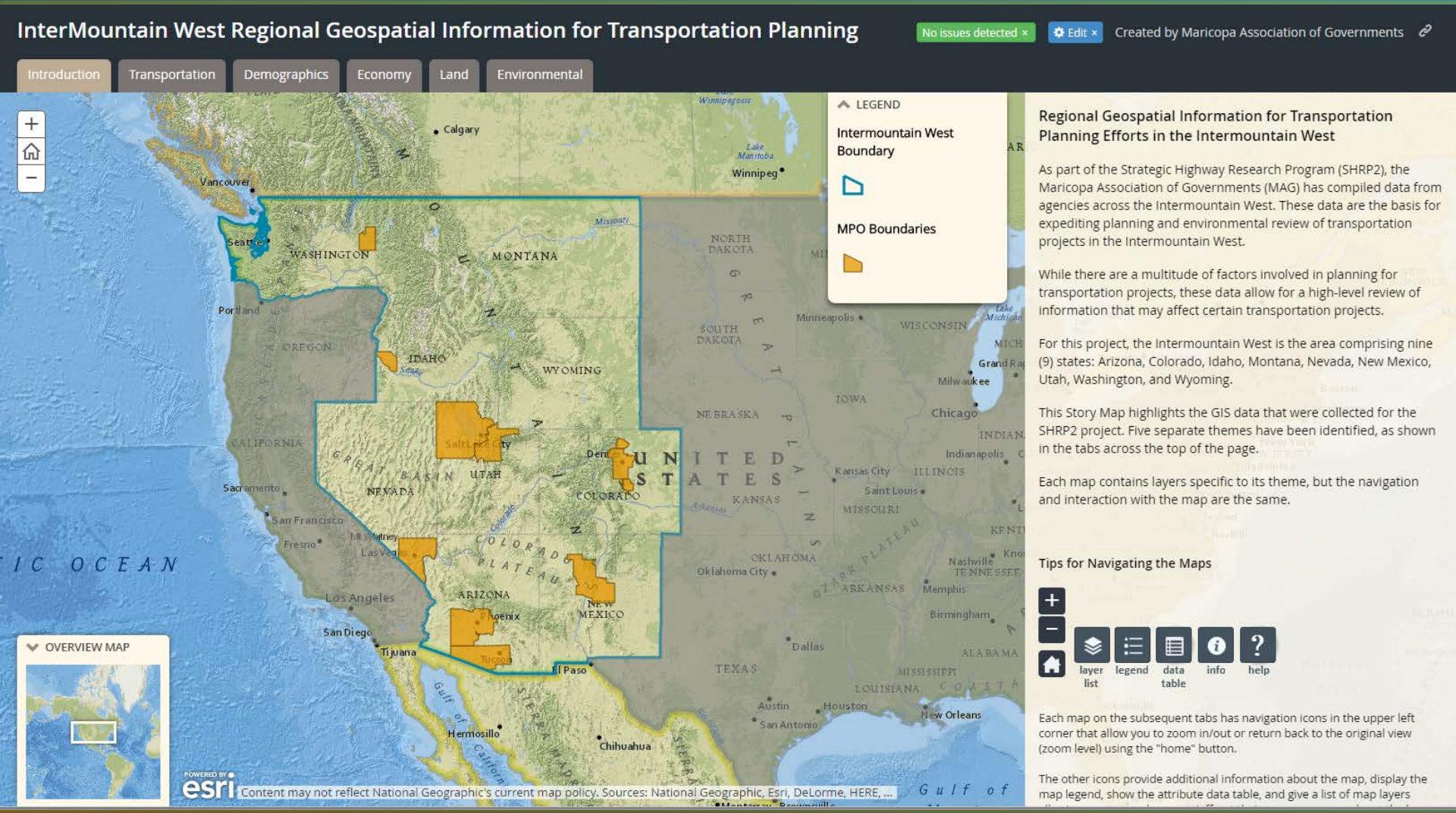
GIS Common Operating Platform

- Input from Stakeholders
  - Assessed relevant available data
  - Identified data gaps
  - Potential users & political realities
  - Provided input on story map

Goal: Provide decision makers with better situational awareness of the region and be able to make more fully informed decisions



Putting it all Together



http://arcg.is/1MThxpp

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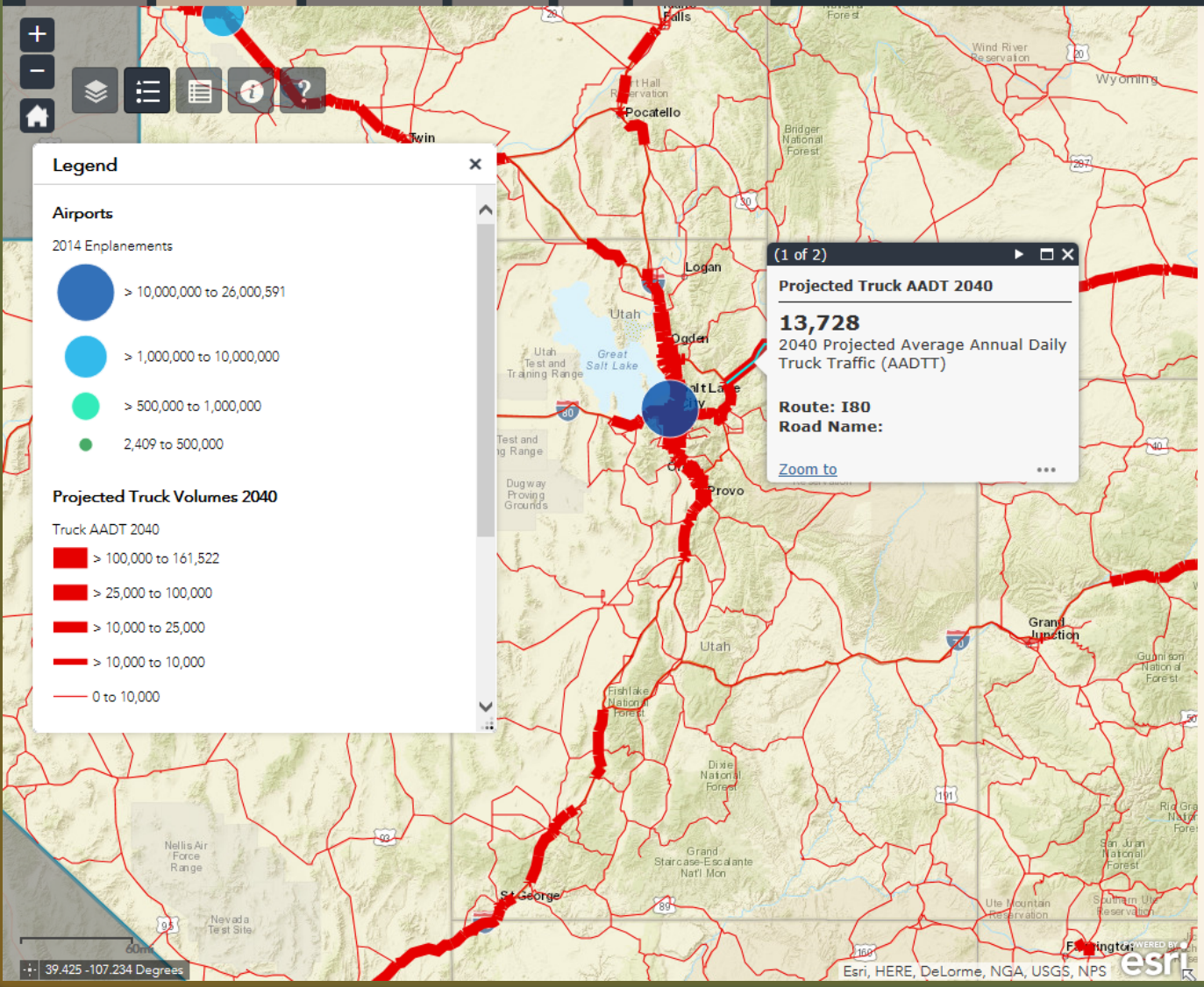
InterMountain West Regional Geospatial Information for Transportation Planning

Created by Maricopa Association of Governments

Introduction | Transportation | Demographics | Economy | Land | Environmental



Existing Transportation Infrastructure

Existing transportation infrastructure is used as a baseline for transportation projects. Statewide transportation networks are modeled for capacity to determine if expanding future volumes need to be addressed. Locations of border crossings and airports also need to be analyzed for volume trends to determine if these pose a risk or opportunity for a transportation project.

As a baseline, this map shows the existing transportation network base along with International border ports of entry and International airports. As you zoom in on the map, additional data layers become available including bridges and traffic volumes.

Transportation departments report measured traffic volumes in terms of Average Annual Daily Traffic (AADT). These values vary significantly across the Intermountain West region. For example, the largest reported AADT for 2013 (the most recent year for which data are available) was in the Phoenix, Arizona region along Interstate 10. This segment of roadway reported an average annual daily traffic count of 281,092 vehicles. On the end, Wyoming's highest reported AADT was just 33,691 on a segment of Del Range Blvd, just north of the Cheyenne Regional Airport. (See table below).

Highest Average Annual Daily Traffic (AADT) for Intermountain West States (2013)

State	2013 Max AADT	Location	Metro Area
Arizona	281,092	I-10 between Southern Ave and Broadway Rd	Phoenix
Colorado	257,000	I-25 between W 8th Ave and W Colfax Ave	Denver
Idaho	116,300	I-84 between S Eagle Rd and S Maple Grove Rd	Boise
Montana	48,860	US 87 between Hilltop Rd and E Airport Rd	Billings
Nevada	264,000	I-15 between W Sahara Ave and W Desert Inn Rd	Las Vegas
New Mexico	206,708	I-25 between Candelaria Rd NE and Comanche Rd NE	Albuquerque
Utah	260,882	I-15 between 2100 S and I-80	Salt Lake City
Washington	212,171	I-5 between Lakeview Blvd / [illegible] and Exit 168A	Seattle
Wyoming	33,691	Dell Range Blvd between Converse Ave and Grandview Ave	Cheyenne

Source: Federal Highway Administration, Office of Highway Policy Information, Highway Performance Monitoring System (HPMS) Public Release Geospatial Data 2013

Projected truck traffic can highlight potential areas of concern for capacity along freight corridors. Planners can use this information for a variety of tasks including scenario modeling, alternate route development, and more. To see the projected average annual daily truck traffic data show in the static map below, zoom in on the interactive map on the left.

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InterMountain West Regional Geospatial Information for Transportation Plann

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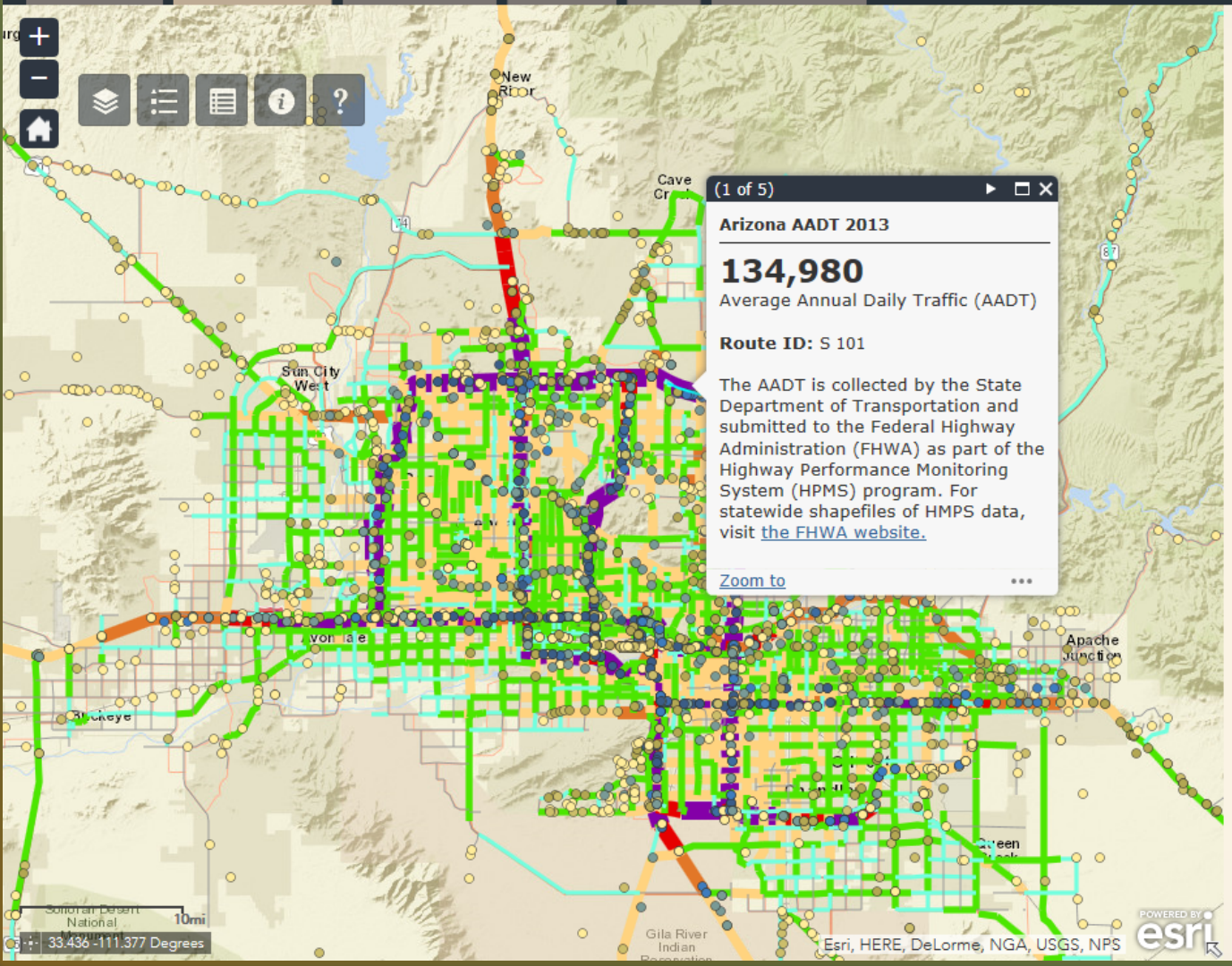

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Utah	260,552	I-15 between 2100 S and I 80	Salt Lake City
Washington	212,741	I-5 between Lakeview Blvd (Underpass) and I-5 NB	Seattle
Wyoming	33,691	Del Range Blvd between Converse Ave and Grandview Ave	Cheyenne

Source: Federal Highway Administration, Office of Highway Policy Information, Highway Performance Monitoring System (HPMS) Public Release Geospatial Data 2013

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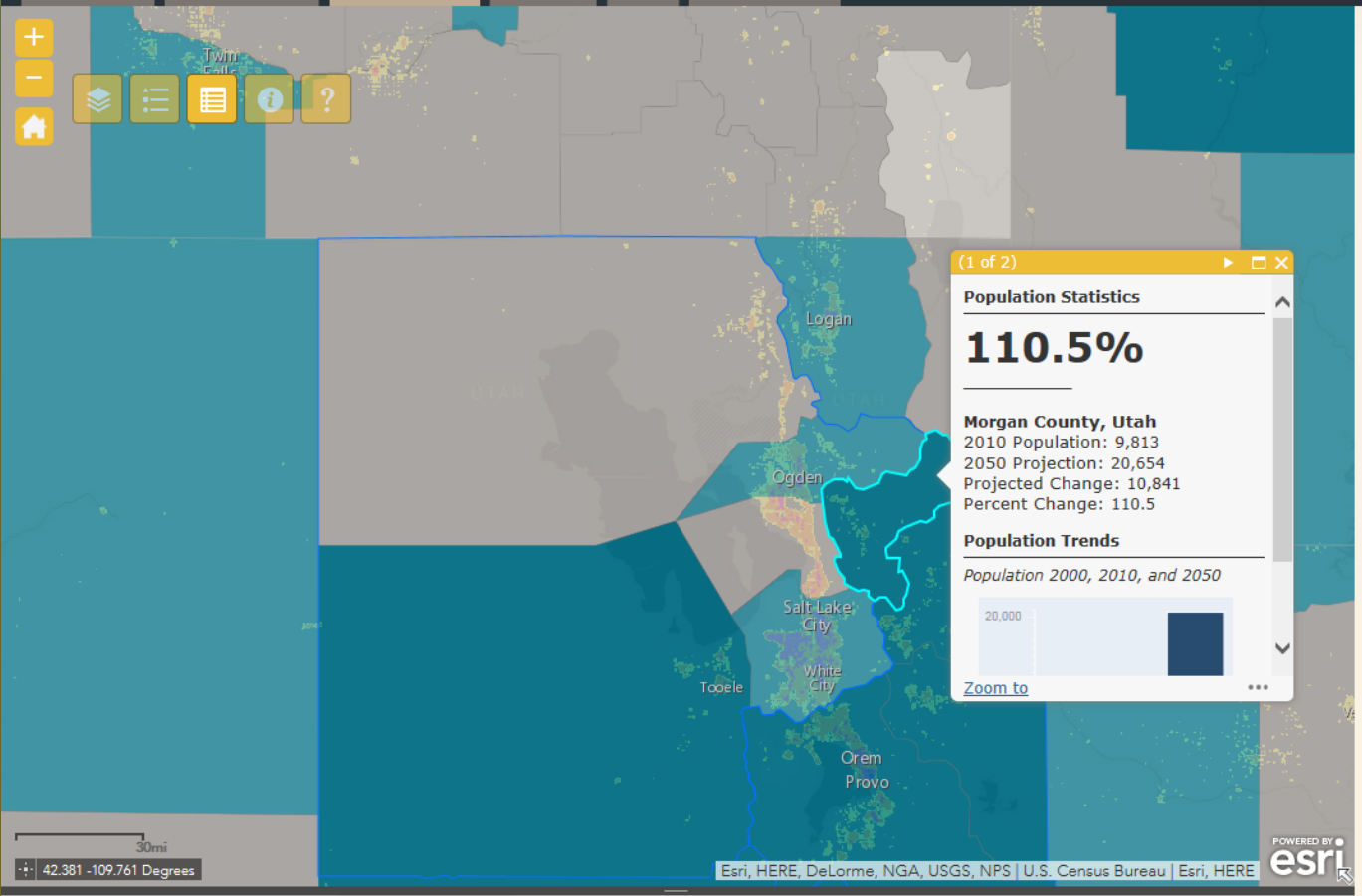


MPO Boundary | Population Growth 2010-2050 | Poverty by Block Group | Minority by Block | State Boundary

Options | Filter by Map Extent | Zoom to | Clear Selection | Refresh

GEOID	County FIPS	Tract	Block Group	2010 Population	2010 Housing Units	Population for Whom Poverty Status is Determined	Persons with Income Below Poverty	Percent Below Poverty
040130610111	013	061011	1	1,407	479	1,023	161	15.74

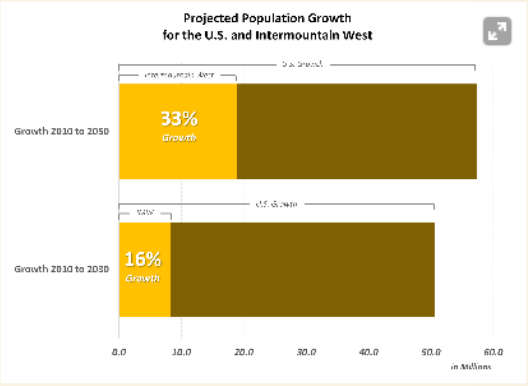
9450 features 0 selected

Demographics of the Intermountain West

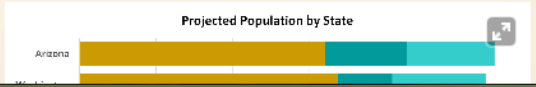
Transportation departments across the united states are tasked with planning and building projects that allow for the safe and efficient movement of people and goods. As population grows and concentrates within certain regions, how does this affect planning for transportation projects?

According to the 2010 Decennial Census, 9.3% of the U.S. population lives in this 9-state region. That's 28.8 million people. Ten years prior, in 2000, these same 9 states were home to just 8.6% of the U.S. population. It is a growing part of the nation, and indications are that it will continue to be. By 2030 it's projected that this region will be home to almost 10.5% of the nation's population. In addition, it is projected that the Intermountain West will grow by just over 30%, almost twice the projected growth for the nation.

The map to the left depicts the concentration of the population in 2010. As you zoom in, denser areas can be seen formed around urban areas with the most densely populated areas showing in shades of purple and pink.



Future growth by county can also be seen by turning on the "County Population Growth 2010-30" layer on the map. The counties expected to gain the most people by 2030 are shown in darker green. Click on any county to get the population counts and growth rates for that county.



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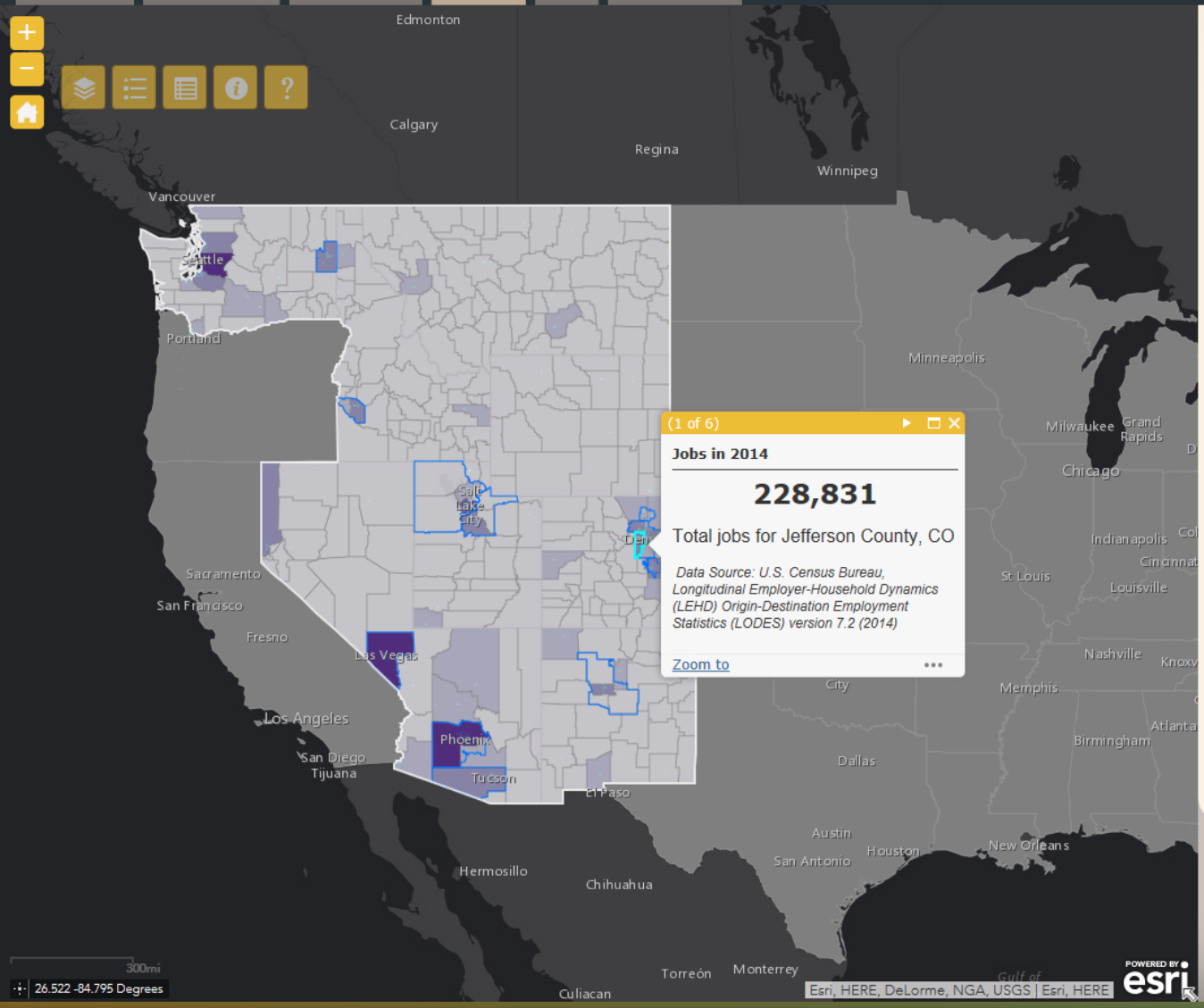
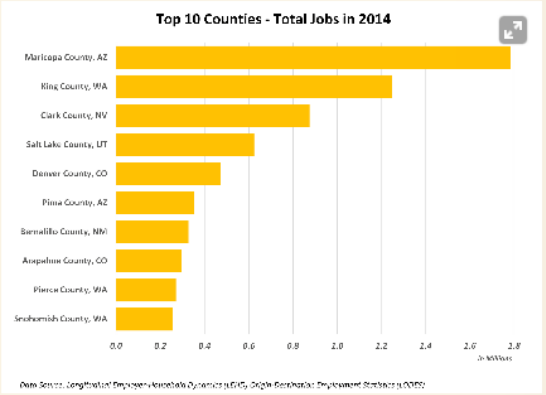


Economic Influences on Transportation

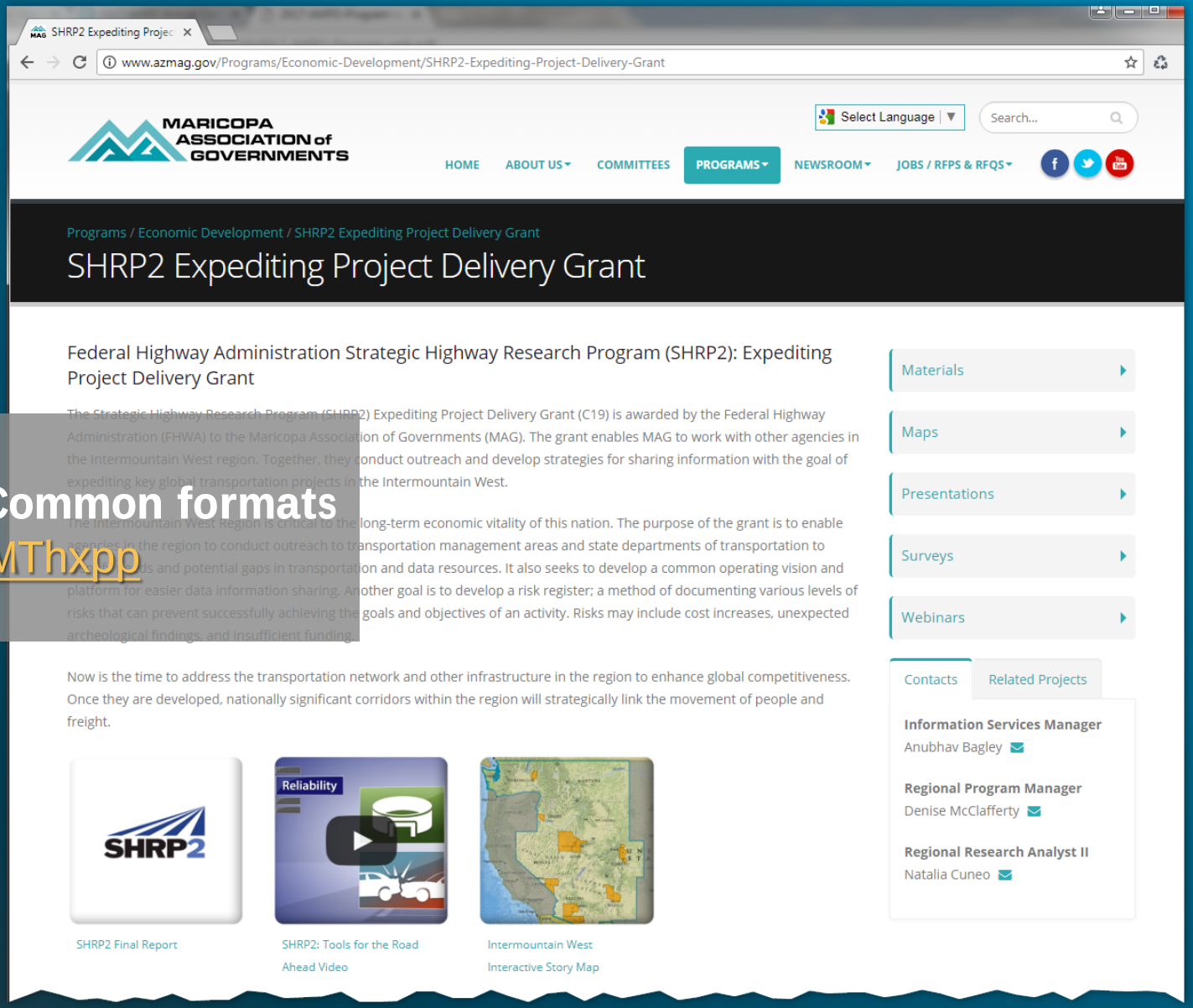
Transportation and economic development often go hand in hand. Businesses often choose to locate in accessible locations that combine efficient transportation with housing selections, good schools, community activities, and natural amenities. Transportation projects can have a significant impact on the economy as businesses and workers consider commute options when selecting a place to locate. The transportation of goods, or freight movement, is often another consideration that businesses have when locating. Additionally, businesses within the same or complimentary sectors often cluster together.

With this in mind, transportation planners may need to consider the effect that employment clusters have on roadway demands. For example, a growing warehouse and distribution sector will have much different demands for roadway use than an expanding financial services sector. And what about the sudden growth in jobs and businesses after the completion of a roadway project? With these types of questions in mind, a review of job trends in a region could be beneficial in evaluating transportation needs.



Project Resources

Story Map
GIS data sets & Common formats
http://arcg.is/1MThxpp



Interactive Tools

http://maps.azmag.gov

- ✓10 Live Applications
- ✓Ongoing Data Updates
- ✓Constant User Feedback
- ✓Hands-on training sessions
  - ✓55 Classes Held since 2014
  - ✓702 People Trained

Demographic

Statewide

Employment

MapLIT

Land Use

Bikeways

Neighborhoods

Projections

RAD

Spine Study

maps.azmag.gov

Staying Relevant & Reinventing

- Regional Agencies are repositories of big data
- Building trust as unbiased brokers of analytics & information
- Stretching beyond day to day transportation questions – connecting to the bigger picture
- Continued Collaboration:
  - AZ Statewide Tools
  - Las Vegas

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