



Expediting Project Delivery Webinar - Streamlining Decision Making in Project Delivery

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DOT

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Governments

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U.S. Department of Transportation
Federal Highway Administration

AMERICAN ASSOCIATION
OF STATE HIGHWAY AND
TRANSPORTATION OFFICIALS

AASHTO



SHRP2 & Its Focus Areas



Safety: Fostering safer driving through analysis of driver, roadway and vehicle factors in crashes, near crashes, and ordinary driving.



Renewal: Rapid maintenance and repair of the deteriorating infrastructure using already-available resources, innovations, and technologies.

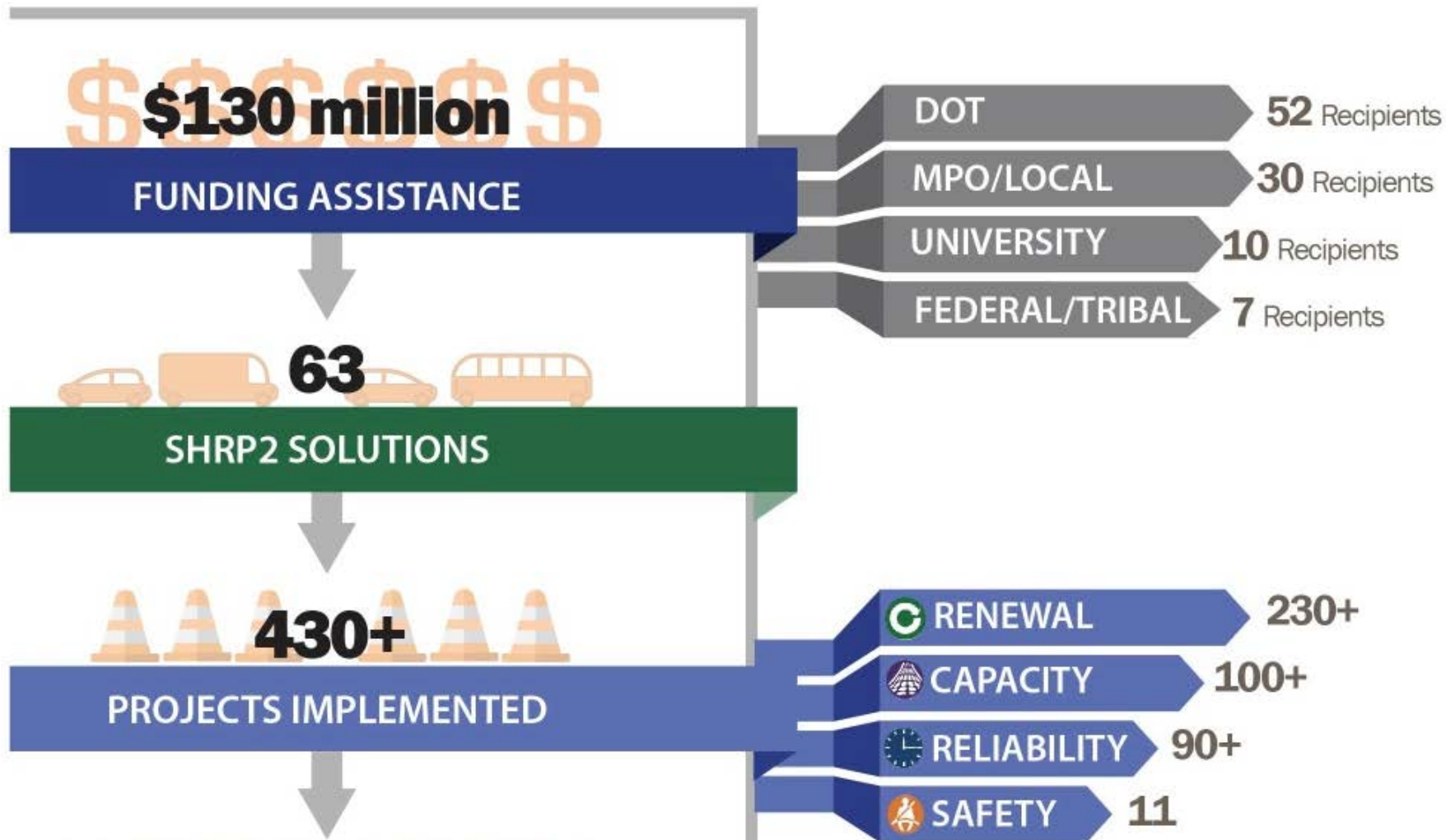


Capacity: Planning and designing a highway system that offers minimum disruption and meets the environmental, and economic needs of the community.



Reliability: Reducing congestion and creating more predictable travel times through better operations.

SHRP2 Implementation: INNOVATE.IMPLEMENT.IMPROVE.



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SHRP2 at a Glance

- **SHRP2 Solutions** – 63 products
- **Solution Development** – processes, software, testing procedures, and specifications
- **Field Testing** – refined in the field
- **Implementation** – 430+ transportation projects; adopt as standard practice
- **SHRP2 Education Connection** – connecting next-generation professionals with next-generation innovations



13 agencies were selected to implement C19 strategies.



Expediting Project Delivery

- *Expediting Project Delivery* identifies 24 strategies for addressing or avoiding 16 common constraints in order to speed delivery of transportation projects.
- Strategies Grouped Under Six Objectives:
 - Improve internal communication and coordination;
 - Streamline decision-making;
 - Improve resource agency involvement and collaboration;
 - Improve public involvement and support;
 - Demonstrate real commitment to the project; and
 - Coordinate work across phases of project delivery.

Expediting Project Delivery

Strategy	Stage of Project Planning or Delivery				
	Early Planning	Corridor Planning	NEPA	Design/ROW/ Permitting	Construction
1. Change-control practices			●	●	●
2. Consolidated decision council		○	●	●	
3. Context-sensitive design and solutions	○	○	●	●	○
4. Coordinated and responsive agency involvement	○	●	●	●	●
5. Dispute-resolution process		○	●	●	○
6. DOT-funded resource agency liaisons		○	●	●	
7. Early commitment of construction funding	●	●	●		
8. Expedited internal review and decision-making	●	●	●	●	
9. Facilitation to align expectations up front	○	●	●		
10. Highly responsive public engagement	●	●	●	●	○
11. Incentive payments to expedite relocations				●	
12. Media relations manager		●	●	●	○
13. Performance standards	○	●	●	●	
14. Planning and environmental linkages	●	●	●		
15. Planning-level environmental screening criteria	●	●			
16. Programmatic agreement for Section 106			●	●	
17. Programmatic or batched permitting			●	●	
18. Real-time collaborative interagency reviews	○	○	●	○	
19. Regional environmental analysis framework	○	●	●	●	
20. Risk management	●	●	●	●	●
21. Strategic oversight and readiness assessment	○	●	●		
22. Team co-location		○	●	●	
23. Tiered NEPA process	○	●	●		
24. Up-front environmental commitments		●	●	●	



Implementation Award Recipients



- Arizona Department of Transportation (ADOT)
- Arkansas State Highway and Transportation Department (AHTD)
- Association of Monterey Bay Area Governments (AMBAG)
- California Department of Transportation (Caltrans)
- Florida Department of Transportation (FDOT)
- Idaho Transportation Department (ITD)
- Maricopa Association of Governments (MAG)
- Massachusetts Department of Transportation (MassDOT)
- Nebraska Department of Roads (NDOR)
- South Carolina Department of Transportation (SCDOT)
- South Dakota Department of Transportation (SDDOT)
- Vermont Agency of Transportation (VTrans)



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SHRP2 on the Web

- **GoSHRP2**

www.fhwa.dot.gov/GoSHRP2

- Apply for Implementation assistance
- Learn how practitioners are using SHRP2 products

- **SHRP2 @AASHTO**

<http://SHRP2.transportation.org>

- Implementation information for AASHTO members

- **SHRP2 @TRB**

www.TRB.org/SHRP2

- Research information



- **FHWA C19 Website**

<https://www.environment.fhwa.dot.gov/stmlng/shrp2-c19/default.asp>



OHIO DEPARTMENT OF TRANSPORTATION

Streamlining With NEPA Assignment at ODOT

March 2017

Office of Environmental Services

Tim Hill, Administrator

Jacque Annarino, NEPA Assignment Coordinator

Streamlining at ODOT

- ▶ ODOT's need to integrate and streamline
- ▶ How ODOT changed approach to project development
- ▶ Accomplishments and Benefits of new approach

Why the need to Integrate and Streamline?





ODOT's Approach to Project Development

- ▶ Project Development Process
- ▶ Consultant Scoping Fees Guidance
- ▶ Online Environmental Documentation System (EnviroNet)

ODOT's Approach to Project Development

► Programmatic Agreements

Farmlands

Coastal

Ecological

Indiana & Northern Long-Eared Bat

Cultural Resources

Categorical Exclusion (CE)

Scenic River

Section 6(f)

Section 4(f)

Environmental Justice (guidance approved by FHWA- similar to an MOA)

► Future Programmatic Agreements

Emergency Projects

Endangered Species

NEPA Assignment Potential Benefits for Ohio

- ▶ Estimated 20-25% time savings to program
- ▶ Estimated savings of up to **\$23 million annually**
 - ▶ Reduced project inflation
 - ▶ Project user delay costs
- ▶ Low risk - maybe 1 lawsuit every 8-10 years

Potential Streamlining Opportunities with NEPA Assignment

For projects under \$20 million

- ▶ FHWA reviews 4(f) and other support documents = 15-30 days
- ▶ 40 per year = 1,000 review days per year
- ▶ 35% performed concurrently = 650 project review days
- ▶ Out of the 650, only 15% result in critical path reviews = 98 days
- ▶ 3.9% inflation and delay cost = \$500,000 per year

Potential Streamlining Opportunities with NEPA Assignment

For projects \$20 million to \$149 million

- ▶ FHWA performs reviews on:
 - ▶ Purpose and Need = 30 days
 - ▶ Feasibility Study = 30 days
 - ▶ Alternative Evaluation Report = 30 days
 - ▶ Section 4(f) actions = 45 days
 - ▶ Review and approval of the CE = 60 days
 - ▶ ...plus multiple reviews (drafts, etc.)

Potential Streamlining Opportunities with NEPA Assignment

For projects \$20 million to \$149 million

- ▶ FHWA review for a medium sized project- 390 days
- ▶ 30% performed concurrently = 273 project review days
- ▶ ODOT averages 12 projects per year = 3,276 review days
- ▶ Out of this, 25% results in critical path reviews
- ▶ = 819 days of delay
- ▶ 3.9% inflation and delay cost = \$5.7 million per year
- ▶ User costs/crash reduction benefits = \$13.2 million per year

Potential Streamlining Opportunities with NEPA Assignment

For biggest projects...



cha-ching!

ODOT's *New* Approach to Project Development

▶ NEPA Assignment

▶ For environmental actions on transportation projects

▶ Does not include FTA or FRA



Implementation of NEPA Assignment

- ▶ 10/21/14 - Letter of Interest submitted
- ▶ 12/01/14 - Brief ODOT Executive Leadership & Agencies
- ▶ 12/15/14 - Draft Application submitted
- ▶ 12/15/14 - Begin district visits and meetings with Associations
- ▶ 12/24/14 - Letters to Tribes sent
- ▶ 04/12/15 - Draft Application Public Notice
- ▶ 04/22/15 - Draft MOU submitted
- ▶ 05/28/15 - Final Application submitted
- ▶ 10/15/15 - MOU Public Notice
- ▶ 12/28/15 - MOU Effective Date

Updated Agreements

- ▶ Section 106 Programmatic Agreement
- ▶ Ecological Memorandum of Agreement
- ▶ Categorical Exclusion Programmatic Agreement
- ▶ Indiana Bat Programmatic Agreement
- ▶ Tribal Letter Agreement
- ▶ Sole Source Aquifer Agreement
- ▶ Section 106 Consulting Party Guidance
- ▶ Section 4(f) Manual
- ▶ Section 6(f) Manual
- ▶ Farmlands Letter Agreement
- ▶ Federal National Scenic River Agreement
- ▶ Cover Letter for Other Agreements

New Guidance Documents

- ▶ Escalation Procedures
- ▶ 4(f) Guidance
- ▶ CE Guidance
- ▶ Emergency Projects Guidance
- ▶ File Management & Documentation Guidance
- ▶ Internal Communication Guidance
- ▶ Legal Sufficiency Review Guidance
- ▶ QC/QA Guidance
- ▶ Records Retention Guidance
- ▶ Self-Assessment Guidance
- ▶ Self-Assessment Checklists
- ▶ Signature Authority Guidance
- ▶ Statute of Limitations Guidance



Other New Items

- ▶ Performance Measures
 - ▶ Goals
 - ▶ Baseline Data
- ▶ Training Plan



NEPA Assignment Benefits for Ohio

- ▶ Opportunity to “refresh” environmental staff
 - ▶ Updated manuals and guidance
 - ▶ Updated process improvements Department wide
 - ▶ Updated training

NEPA Assignment removes
“personal preferences”

- ▶ 1st Quarter Actual Savings was \$4.6 million

NEPA Assignment Audit Results

Audit Report

- ▶ Eleven Observations (mostly positive)
- ▶ Three successful practices
 - ▶ Dedicated legal counsel as part of environmental team
 - ▶ Pre-qualified consultants for environmental work
 - ▶ Required to take same training as ODOT environmental staff to be prequalified
 - ▶ Required, on-going training of all environmental staff and consultants



Lessons Learned

- ▶ Good team is important

- ▶ Dedicate time

- ▶ Push FHWA

- ▶ Bi-Weekly Conference Calls with detailed agenda to keep everyone on task

- ▶ Elevate issues quickly and push for resolution



- ▶ Proactive outreach

- ▶ Executive Management

- ▶ Districts

- ▶ Partner Agencies

- ▶ Environmental Groups

- ▶ Contractors

- ▶ Locals

- ▶ ACEC

- ▶ Etc.





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C19: Expediting Project Delivery

Expediting Planning and Environmental Review of Key Global Transportation Projects in the Intermountain West Region



U.S. Department of Transportation
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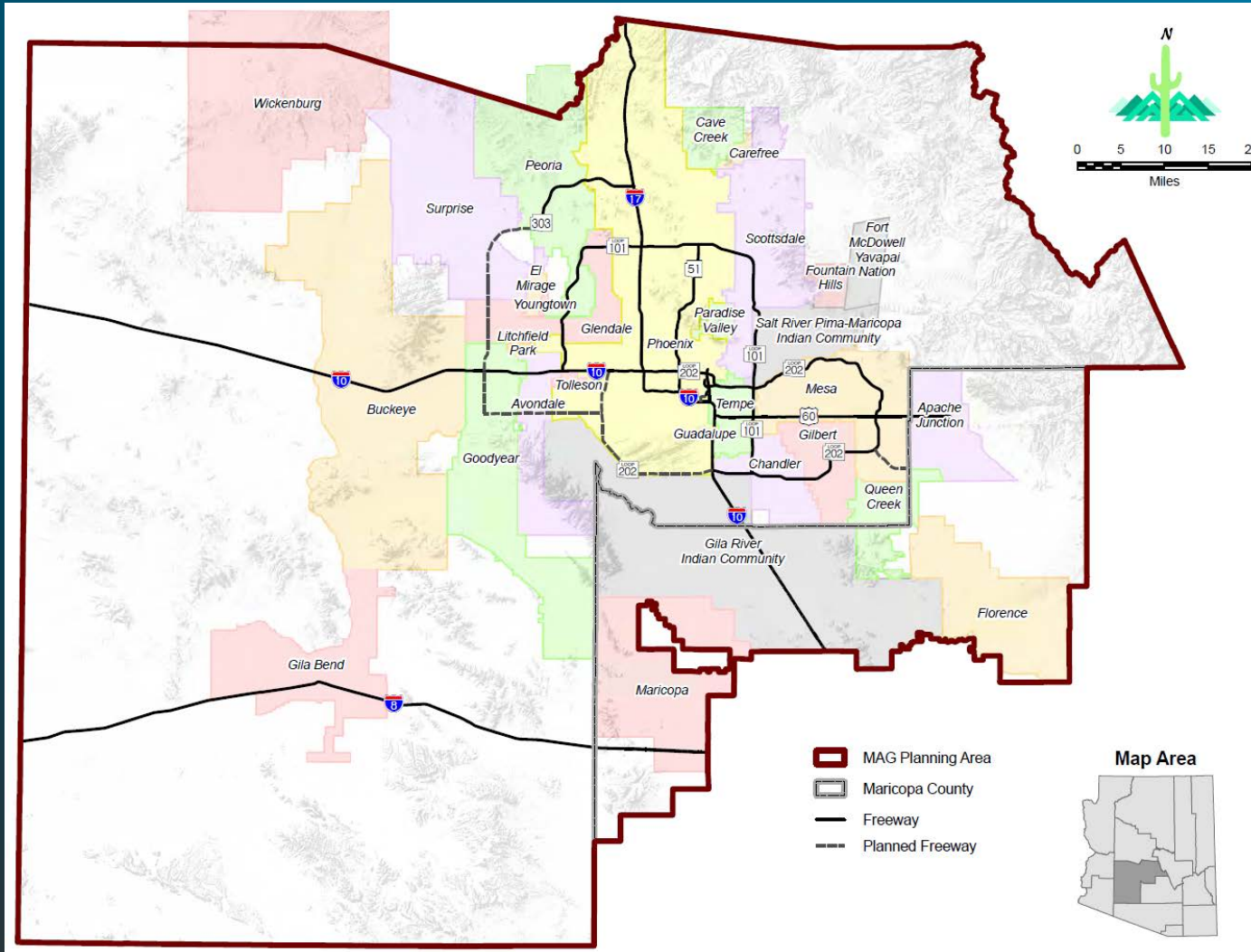
AMERICAN ASSOCIATION
OF STATE HIGHWAY AND
TRANSPORTATION OFFICIALS

AASHIO

March 2017

MAG Region

Maricopa Association of Governments



- 27 cities and towns, 3 Indian communities, 2 counties
- Area: 14,590 sq. mile
- Population: 4.4 Million
- Employment: 1.8 Million

Nine Live Applications

<http://ims.azmag.gov>

- ✓ Ongoing Data Updates
- ✓ Constant User Feedback
- ✓ Hands-on training sessions
 - ✓ 381 attendees since Feb 2014
 - ✓ 18 events scheduled in 2016
 - ✓ 3 regional locations & user sites



Demographic



Statewide



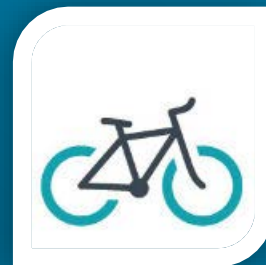
Employment



MapLIT



Land Use



Bikeways



Building Landmark
Inventory



Projections

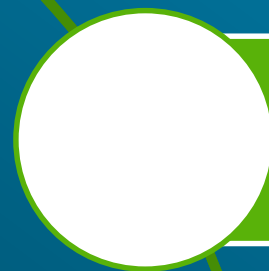


Victim Services



C19 SHRP2

PROJECT OVERVIEW



Safety



Renewal



Reliability



Capacity

America's Trade Corridor

Connecting Canada, the United States, and Mexico

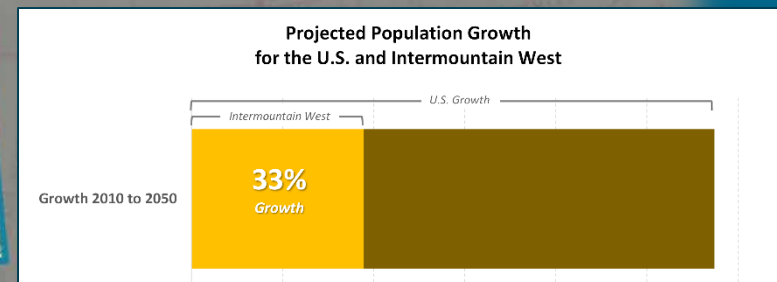


- I-11 Proposed Route
- Canamex Route
- I-11 Alternate Routes
- I-17 Possible Extension
- Deep Water Port

Intermountain West

Quick Facts

- 9 states
- 935,000 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



Partners



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



Outreach (ongoing)

- Communications Network across the Intermountain West Region includes:
 - GIS/Technical
 - Transportation
 - Policy contacts
- Extend connection to other key contacts as the GIS Tool is developed.
 - Federal, Tribal, State, local agencies, non-profits, and Universities



Surveyed Partners

GIS Survey; reviewed analytics; assessed available data in region; and conducted follow up interviews with 14 agencies for data gathering

Intermountain West Region Survey

Identifying Key Data Resources to Develop Common GIS Vision/Platform

Your input is greatly needed on this survey of the Intermountain West Region. We are using a SHRP2 grant to conduct outreach; develop a GIS Common Operating Vision/platform for easier data information sharing; develop a report with Risk Register. We are seeking your critical input to identify available data resources that are used/can be used to assist with current and planned transportation corridors and projects. We believe in information sharing and decision making.

Section One: Contact Information

Your Name: _____ Agency: _____
 Title: _____ Work Phone: _____
 Email Address: _____ Web Address: _____

Section Two: Data Related Questions






























Please provide details on what GIS data sets your organization has access to. For each data set, identify:	Primary agency that maintains the data (if other than your agency)	Contact information of agency maintaining the data (if other than your agency)	What is the geographic extent for this dataset? What is the scale for this dataset (state/county/city/parcel)?	What is the most current data available (Year)?
a. Current Land Use				
b. Planning/Zoning				
c. Development Projects (pipeline projects)				
d. Employment Inventory				
e. Housing (dwelling units inventory)				
f. Land Ownership (private, federal, state, military, etc.)				
g. Demographic Data (other than Census)				
h. Open Space				
i. Natural Constraints (terrain, wildlife corridors, floodplain, etc.)				
j. Current and future transportation networks (highways, major roads, rail, airport, etc.)				
k. Buildings and landmark location (education, facilities, etc.)				
l. Other (please specify)				
m. Other (please specify)				
n. Other (please specify)				

Section Three: Socioeconomic Projections Related Questions

Do you have access to county and sub-county socioeconomic projections for your region? If Yes please provide details, otherwise skip to the next section.	Which agency develops these projections?	Contact information of agency developing projections	Please describe this dataset - including the geographic extent and detailed attributes if available	When were the most recent socioeconomic projections developed? How often are the projections updated?
a. Population				
b. Housing				

Results

- High level of similarity in data sets being collected and maintained
- Differences in scope and schedules due to size and resources
- Highlighted the need for collaboration in data purchase and tools

Survey Responses	Available		Sharable		Data Source			
	Yes	No	Yes	No	MPO/Member Agency	State	Multiple	Other
Section Two: Data Related Questions								
a. Current Land Use	11		11			9		2
b. Planning/Zoning	11		11			11		
c. Development Projects (pipeline projects)	7	4	7			6		1
d. Employment Inventory	11		8	3		5		5
e. Housing (dwelling units inventory)	11		11			10		1
f. Land Ownership (private, federal, state, military, etc.)	11		11			7		4
g. Demographic Data (other than Census)	6	5	6	1		5		1
h. Open Space	10	1	10			9		1
i. Natural Constraints (terrain, wildlife corridors, floodplain, etc.)	11		11			5		2
j. Current and future transportation networks (highways, major roads, rail, airport, etc.)	11		11			6		1
k. Buildings and landmark location (education, facilities, etc.)	8	3	8			3		2
Section Three: Projections								
a. Population	11		11			7		4
b. Housing	11		11			8		3
c. Employment	11		11			9		2
Section Four: Transportation								
a. Current and future transportation networks (highways, transit, etc.)	11		11			10		1
b. VMT	11		11			10		1
c. VHT	11		11			10		1
d. TAZ to TAZ travel times	11		11			10		1
e. TAZ geography	11		11			10		1

NOTE : 11 responding MPOs tallied. 4 state DOTs not tallied due to different types of data and organizational responsibilities.



Continued Outreach

- ✓ Held over 12 Webinars
 - ✓ Participants: ADOT, UDOT, DRCOG, MAG, MRCOG, Pikes Peak, Spokane RTC, RTC of Southern Nevada, WRP, WGA, FHWA, WECC
 - ✓ Information sharing on data resources, tools, challenges
- ✓ Surveyed Partners
 - ✓ Reviewed analytics
 - ✓ Assessed available data
 - ✓ 14 follow-up interviews
- ✓ Key Meeting Held (Denver)
 - ✓ 26 technical staff attended
 - ✓ 14 different agencies represented

A night-time photograph of the Denver skyline, featuring several illuminated skyscrapers and a bridge in the foreground. The image is dark with blue and yellow tones from the city lights.

The Denver Meeting

August 2015

- First time meeting face-to-face
 - Roundtable discussion highly effective
- Diverse Perspectives
 - Shared Best Practices
 - Discussion on common data purchase
 - Sharing of local resources and tools
- Input into common GIS tool
 - Needs/users
 - Incorporate local resources and practices
 - One size may not fit all

Aligning Expectations

- Tiered approach
 - Tech: working with GIS/technical experts to develop GIS Common Operating Vision/Platform
 - Executive: highlight technical efforts to transportation and policy makers to get their input
 - Policy: inform policy makers of efforts, lessons, and tools. Highlight importance of IMW region
- More fully address critical infrastructure needs
 - Need to work across political boundaries; collaborate and leverage efforts
 - Identify: stakeholder expectations, issue priorities, areas of commonality, potential areas of conflict, and methods of reducing or resolving areas of conflict



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



Risk Register

Expedite planning and environmental review of key transportation projects

- Proof of concept for the Risk Register is: ~450 miles
- International border crossing at Nogales to Las Vegas (Connecting Las Vegas to Phoenix)



Risk Register

Thematic Area	Subject	Categories
Land	Land ownership	BLM
		National Forest
		National Monument
		National Park
		Other Protected
		Military
		Native American
		State Trust
		State Park
		Park
	Railroad Right of Way (ROW)	
	Topography	0-15%
		15% - 20%
		20% +
	Land Cover	Developed
		Forest
		Barren/Scrub/Grassland
		Pasture/Crops
	Future Land Use	Water/Wetlands
		Open Space/Undevelopable
Remaining Uses		
Hydro	Lakes/Rivers/Streams	

Thematic Area	Subject	Categories
Environmental	ACEC	Areas of Critical Environmental Concern (ACEC)
	Critical Habitat	Critical Habitat
	Superfund Sites	Superfund Sites
	National & State Parks	National & State Parks
	Herd Management	Herd Management
	Population	Proximity to population
Proximity to housing		Housing
Infrastructure	Electricity	Electrical lines
	Education Institutions	Proximity
Economy	Public Policy	Overall Tax Base
		Select Tax Credits/Exemptions
		Infrastructure Investment
	Fiscal Policy	Budgeting
		Business Cycle
	Economic Development Policy	Organization(s)
	Economic Conditions	Regulatory Policy
		Employment Base/Diversification
		Employment Growth Potential
	Geographical Location/Economic	Population Base
Proximity & Connectivity to Intl. Markets		
Proximity to U.S. Markets		
Proximity & Connectivity to Interstate		
		Proximity to Employment Centers

Common GIS Platform

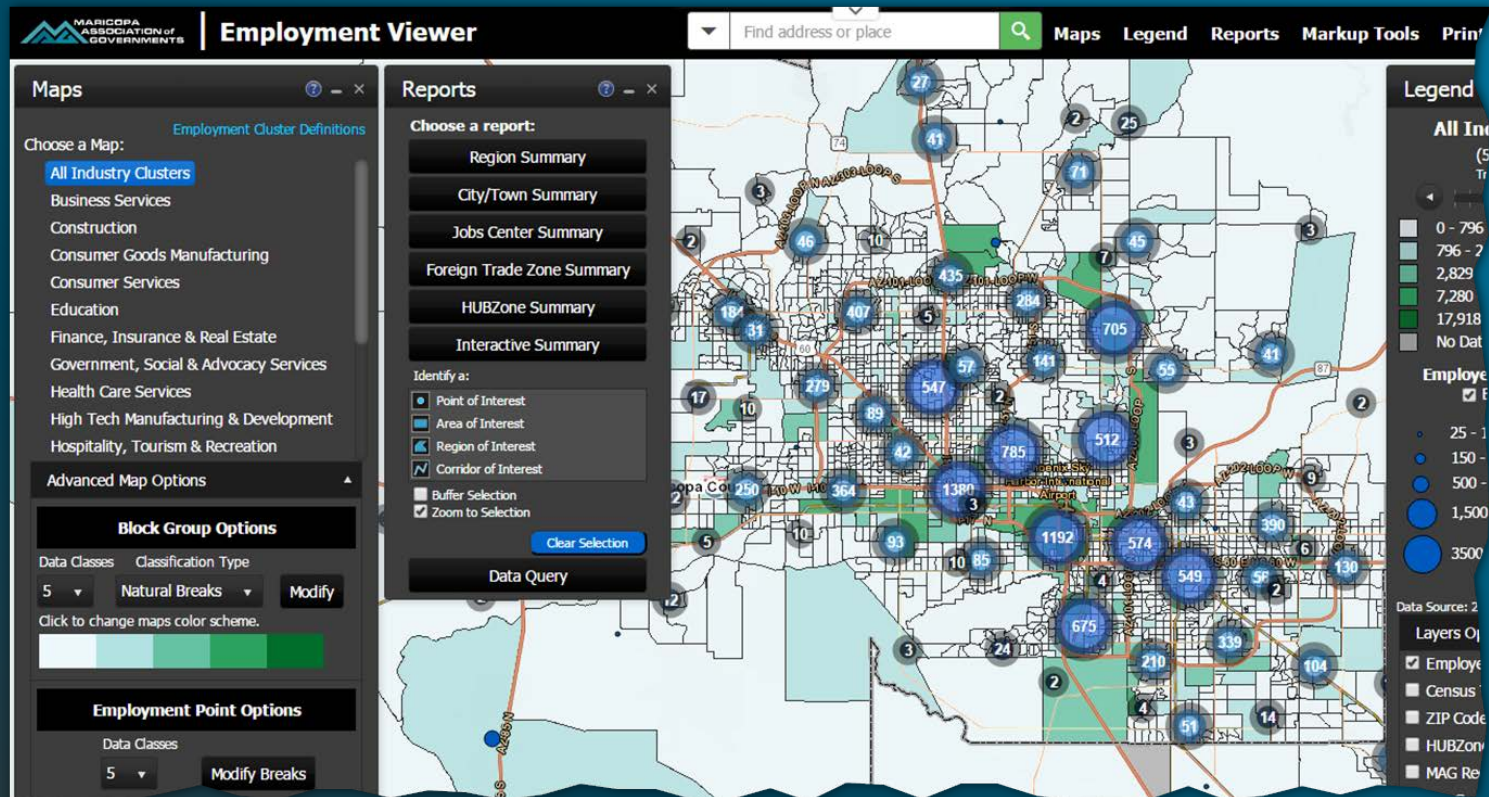
35+ tools identified

Agency	Name	Site
COLORADO		
DRCOG	Denver Regional Equity Atlas	http://www.denverregionalequityatlas.org/
	Regional Data Catalog	http://gis.drcog.org/datacatalog/
	Metro Vision	https://drcog.org/planning-great-region/metro-vision
CDOT	Online Transportation Information System (OTIS)	http://dtdapps.coloradodot.info/otis
RTD Denver	RTD Data Downloads	http://maps.rtd-denver.com/gisdatadownload/datadownload.aspx
Piton Foundation	Colorado Data Engine	http://codataengine.org/
State of Colorado	Colorado Information Marketplace	https://data.colorado.gov/
NFRMPO	NFRMPO GIS	http://nfrmopo.maps.arcgis.com/apps/OnePane/basicviewer/index.html?appid=1748dc541c40454084c67d2e83a66dba
	Crosswalk Cooperative Planning (AECOM)	http://www.cooperativeplan.com/
El Paso County	Geographic Information Systems	http://adm.elpasoco.com/InformationTechnologies/GeographicInformationSystems/Pages/default.aspx
Colorado Springs	Interactive Maps	https://gis.springsgov.com/
IDAHO		
COMPASS	Mapping and GIS	http://www.compassidaho.org/prodserve/mappgis-maps.htm
Bolse	Property Viewer	http://gis.cityofboise.org/
Ada County	Mapping Services	https://adacounty.id.gov/Mapping-Services
Ada County Highway District	RITA	http://achdidaho.org/gis/
Canyon County	Interactive Map	http://gis.canyonco.org/flexviewers/Test/
State of Idaho	Highway Info	http://hb.511.idaho.gov/main.jsf
UTAH		
Mountainland AOG	MAG GIS Data	https://mountainland.org/site/categories/view/103
Utah County	County Maps and GIS Data	http://www.co.utah.ut.us/OnlineServices/maps/index.asp
Utah AGRC	Automated Geographic Reference Center	http://gis.utah.gov/
UDOT	Data Portal	https://www.udot.utah.gov/ugate/f?p=111:2:0::NO::
	Uplan UDOT Map Center	http://uplan.maps.arcgis.com/home/
WFRC	WFRC Map Gallery	http://www.wfrc.org/public-maps-gallery/index.html
ARIZONA		
PAG	Interactive Maps	http://www.pagnet.org/RegionalData/GISDataandMaps/InteractiveMaps/tabid/109/Default.aspx
	Travel Data and Forecasting	http://www.pagnet.org/RegionalData/TravelDataandForecasting/tabid/87/Default.aspx
Tucson	ZoomTucson	http://maps.tucsonaz.gov/zoomTucson/
	Map Resources	http://it.tucsonaz.gov/gis/map-resources
Marana Arizona	Marana Map	http://maranae.gov.com/webmap3/webmap3.aspx?xml=marana2c.xml
Oro Valley Arizona	Oro Valley Maps - GIS	http://www.orovalleyaz.gov/town/departments/maps-gis
Pima County	Pima Maps	https://pimamaps.pima.gov/Silverlightviewer/Viewer.html?ViewerConfig=https://pimamaps.pima.gov/Geocortex/Esri/REST/sites/main/site/viewers/mainmap/virtualdirectory/config/viewer.xml
	Interactive Map Viewer	http://ims.azmag.gov/
NEW MEXICO		
University of New Mexico	Earth Data Analysis Center	http://edac.unm.edu/
Albuquerque New Mexico	ABQ Maps	http://www.cabq.gov/gis
NMDOT	Maps	http://dot.state.nm.us/en/Maps.html
NEVADA		
Clark County	Open Web	http://gisgate.co.clark.nv.us/openweb/
RTCWashoe	Map Warehouse	http://www.rtcwashoe.com/planning-94
WASHINGTON		
SRTC	Maps	https://srtc.maps.arcgis.com/home/
Spokane County	SCOUT	http://maps.spokanecounty.org/
Spokane	Maps Spokane	http://maps.spokanecity.org/
WSDOT	WSDOT GeoData Distribution Catalog	http://www.wsdot.wa.gov/mapsdata/geodatacatalog/default.htm
State of Washington	Washington State Geospatial Open Data Portal	http://wa-geoservices.maps.arcgis.com/home/

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



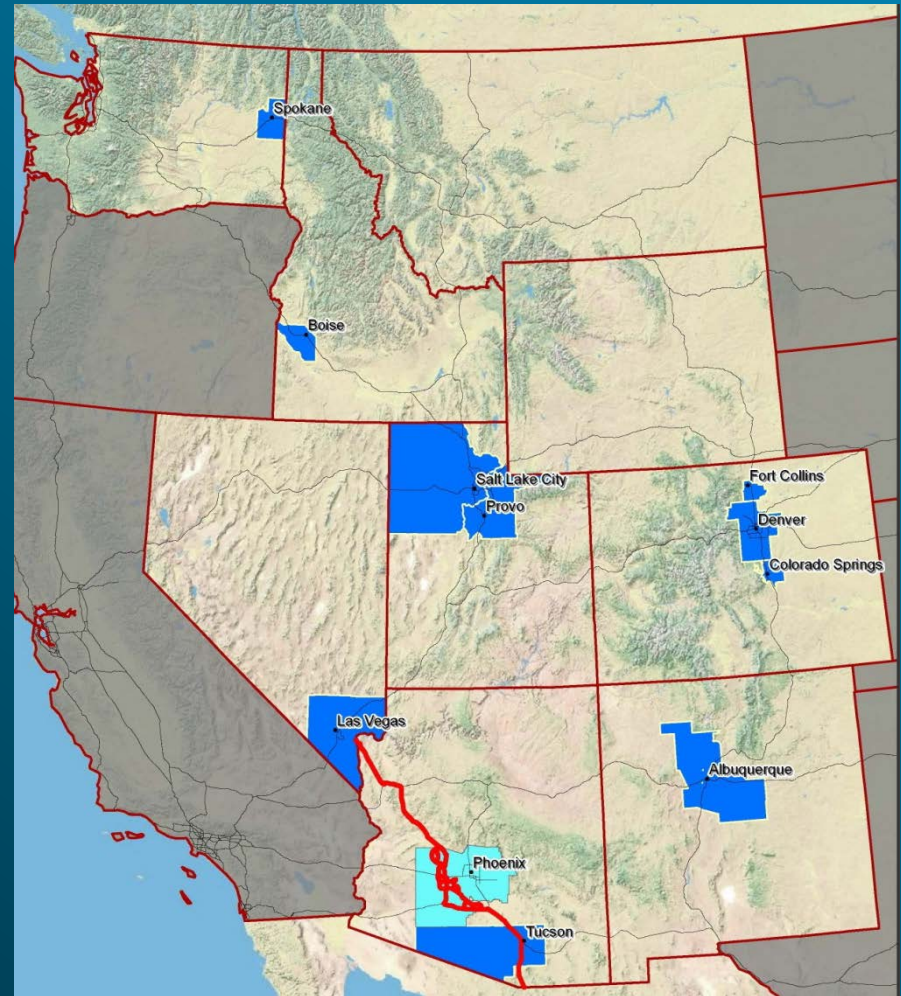
Resources

http://www.azmag.gov/information_services/shrp2-expediting-project-delivery-grant.asp

Story Map

GIS data sets & Common formats

<http://arcg.is/1MThxpp>





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Questions?



Please remember to type in
your questions to the
question prompt.

Thank you for participating!



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