
SHRP2 Expediting Project Delivery (C19)

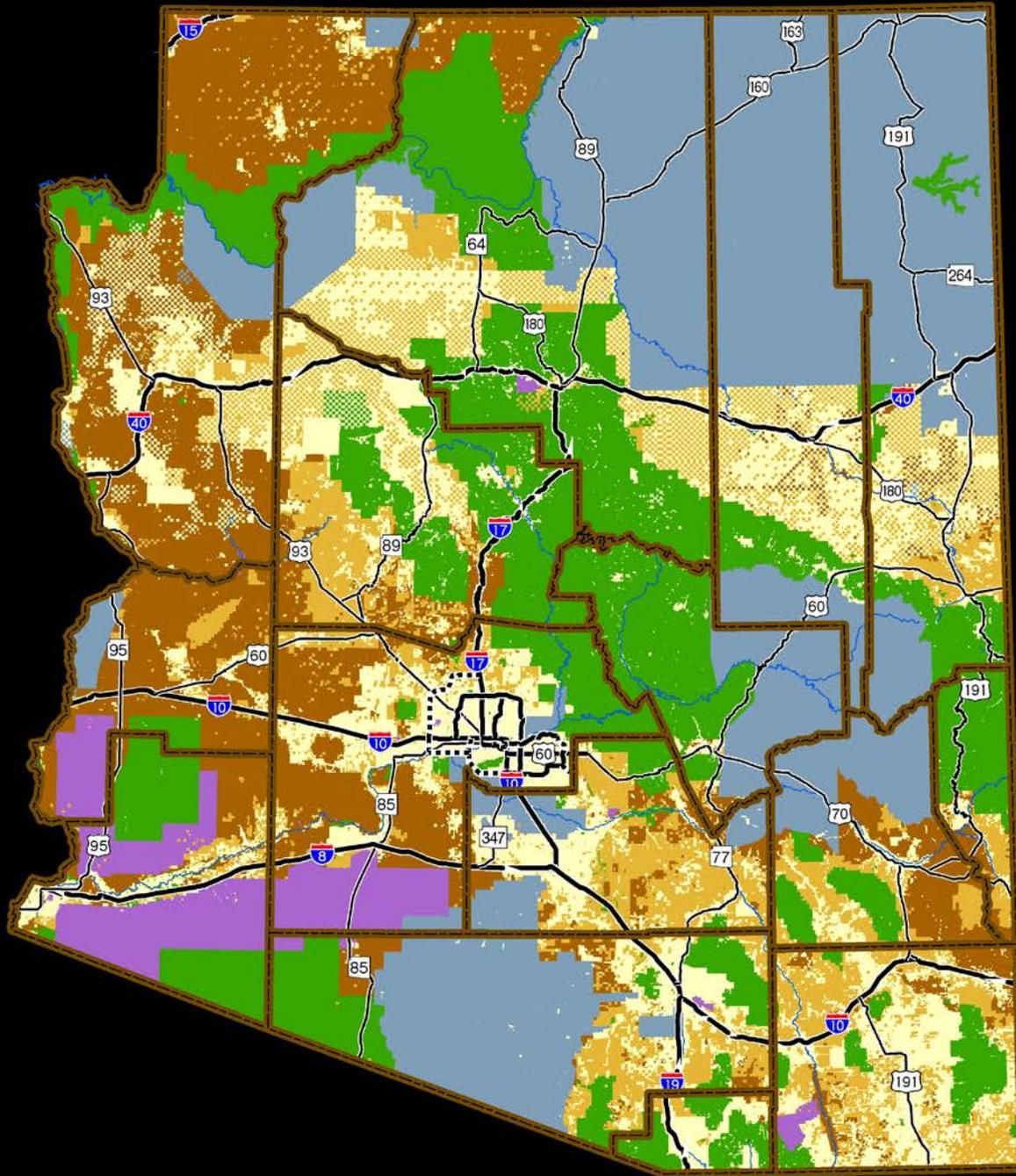
GROWTH PATTERNS

AUGUST 28, 2015

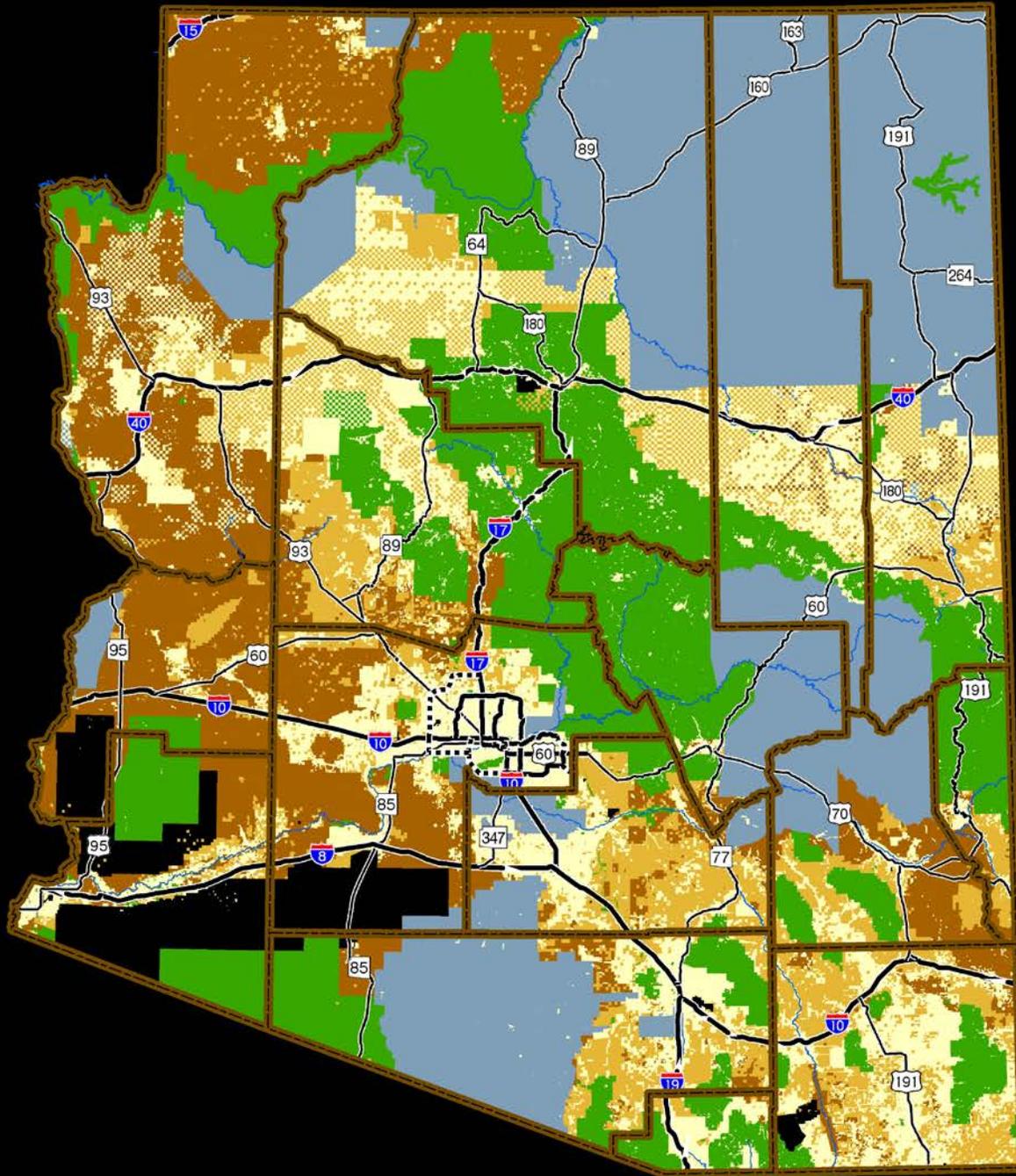
Arizona Red Dots

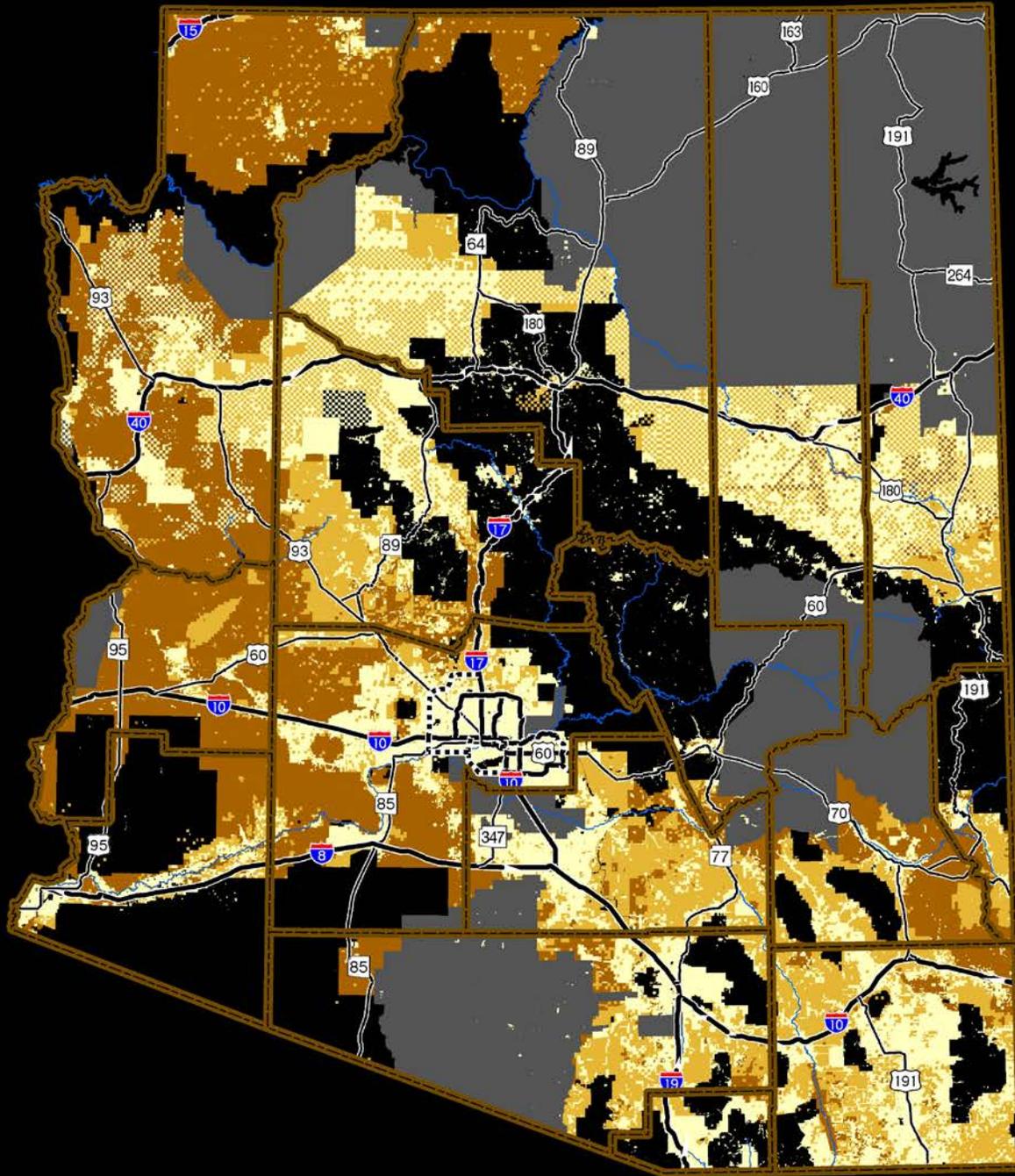
- 2004/2005 - on request from Arizona COG/MPO Director's
- Visualize long-term growth in Arizona
- Limited data – did not have access to land use etc. type data for areas outside major urban areas
- Out of date long term population projections from State (10 year old)
- One month to complete the project!!
- Utilized a grid based model – developed a simplistic methodology

Land Ownership



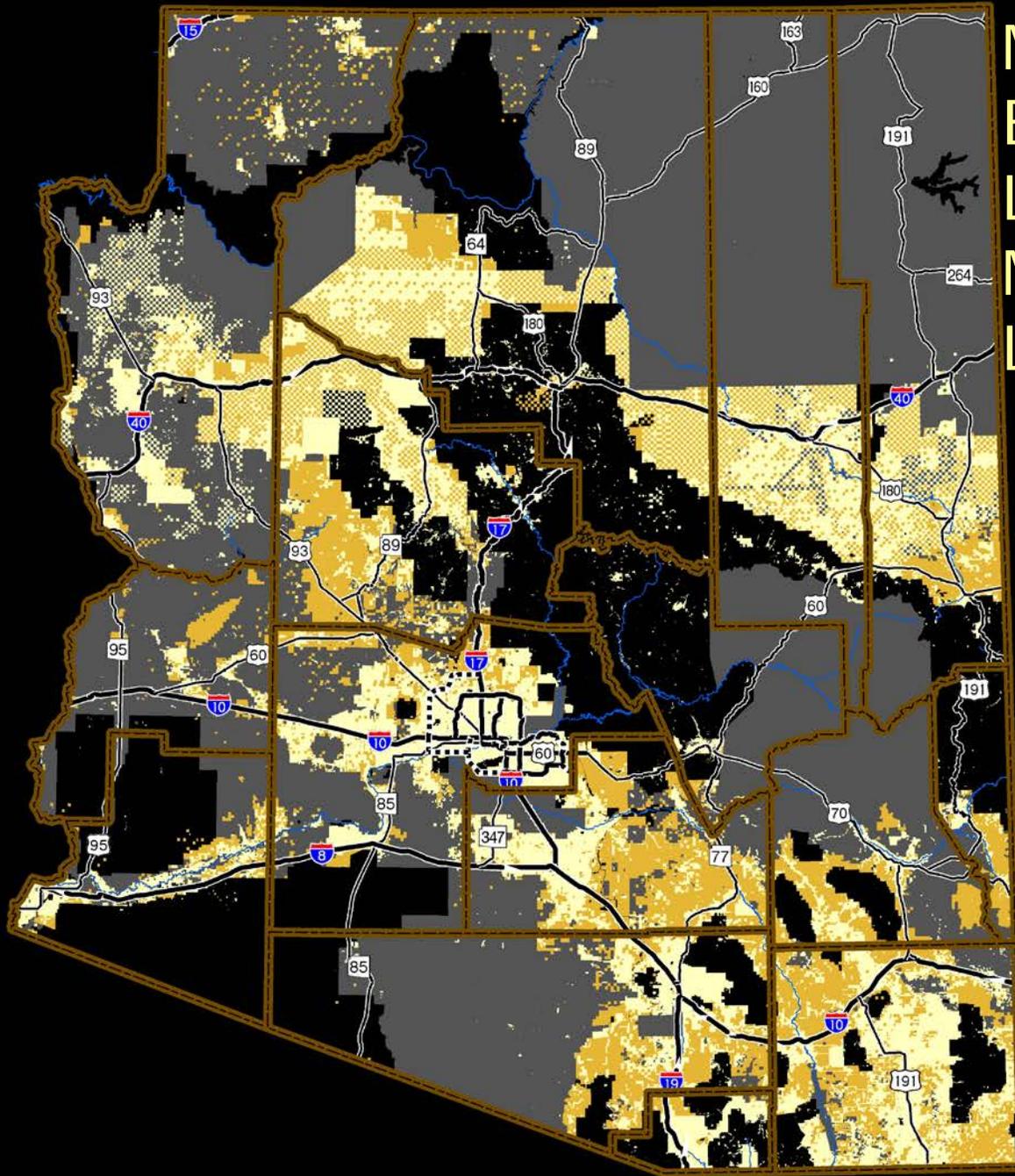
Minus Military





Minus
Native
American
Lands





Minus
Bureau of
Land
Management
Lands



Factors and Scoring

Factor	Scoring	Density (du/acres) or Factor (*)
Land ownership		
Private	100	*1
State Trust	60	*1
BLM	20	*0.5
Indian Community	10	*0.01
Military	0	0
Forest/Parks/Monuments	0	0
Urban/Rural status		
City	100	5 du/ac
Town	80	4 du/ac
CDP	60	3 du/ac
County	40	2 du/ac

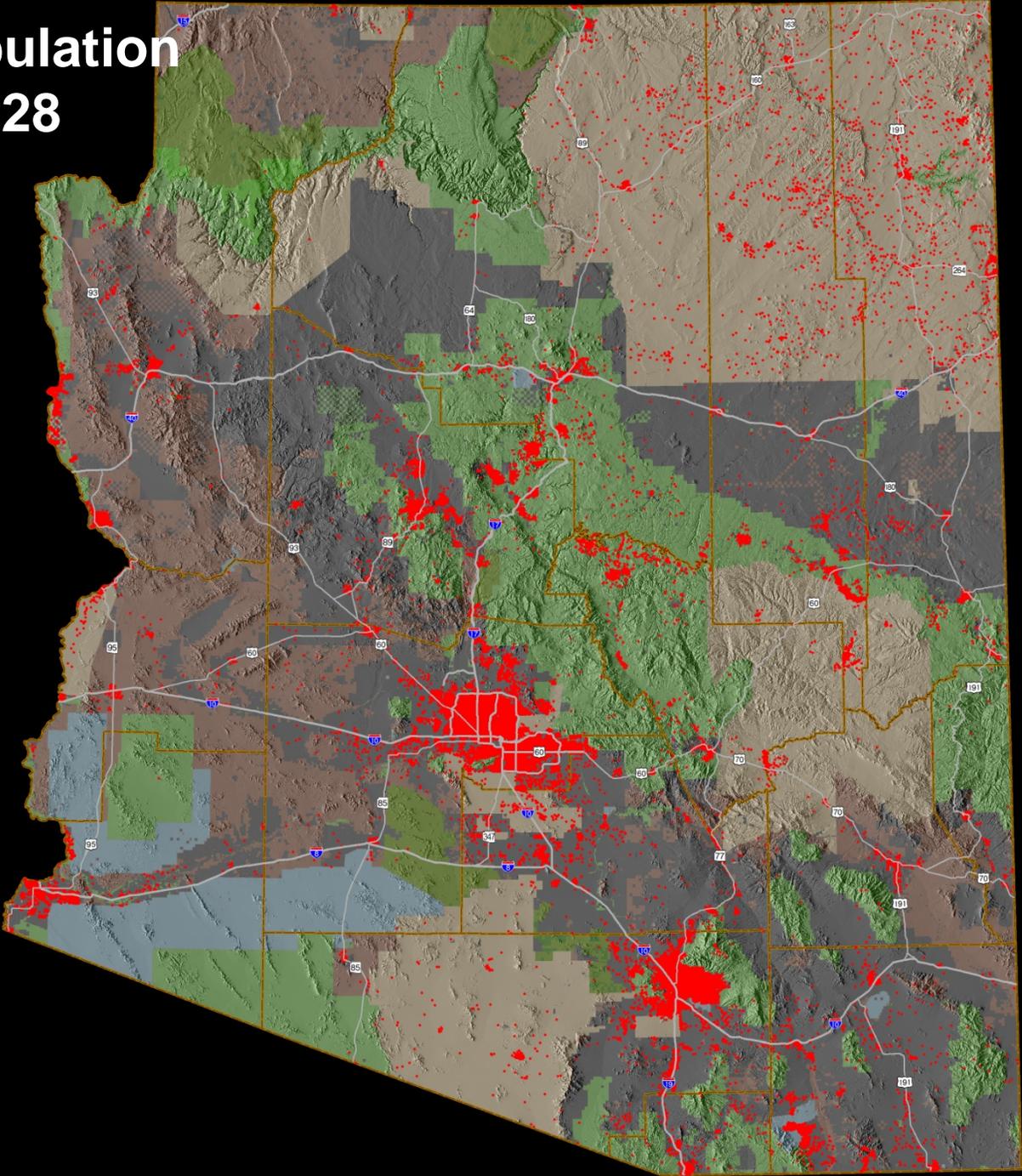
Factors and Scoring

Factor	Scoring	Density (du/acres) or Factor (*)
Developed areas (distance from built areas)		
5 miles of city/town/CDP	100	1.2
10 miles of city/town/CDP	70	1.1
20 miles of city/town/CDP	40	1
> 20 miles of city/town/CDP	0	0.8
Freeways/Highways		
5 miles of freeway/highway	100	
10 miles of freeway/highway	70	
20 miles of freeway/highway	40	
> 20 miles of freeway/highway	0	
Forests/Parks/Monuments		
0.2 miles of forests	-100	0.01

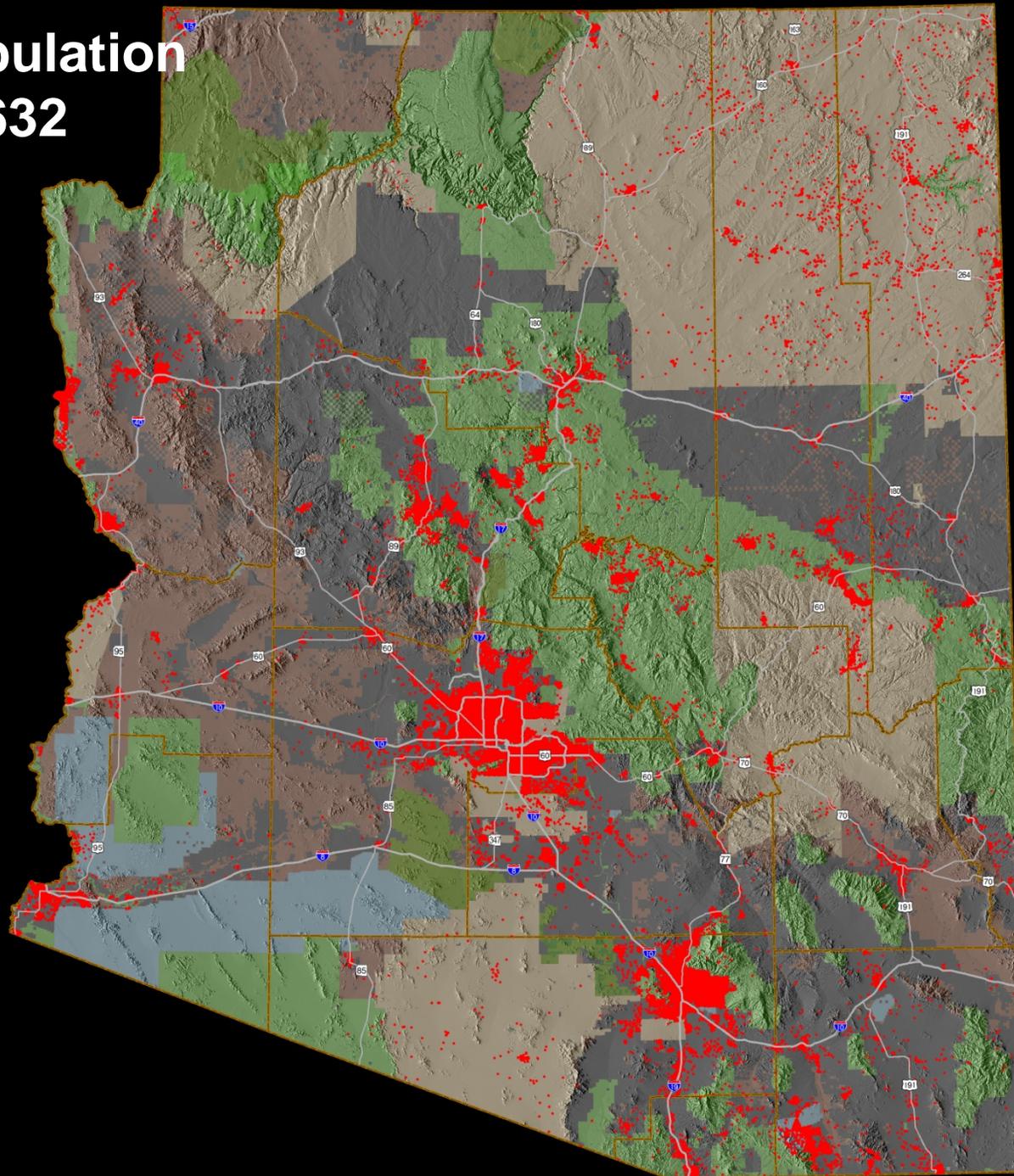
Factors and Scoring

Factor	Scoring	Density (du/acres) or Factor (*)
Flood plains (distance from river 1&2)		
0.25 miles	-100	0.01
0.5 miles	-50	0.1
1 mile	-20	0.5
> 1 mile	100	1
Slope		
0-5%	100	*1
5-10%	80	*0.8
10-15%	50	*0.5
15-20%	-20	*0.2
>20%	-50	*0.01

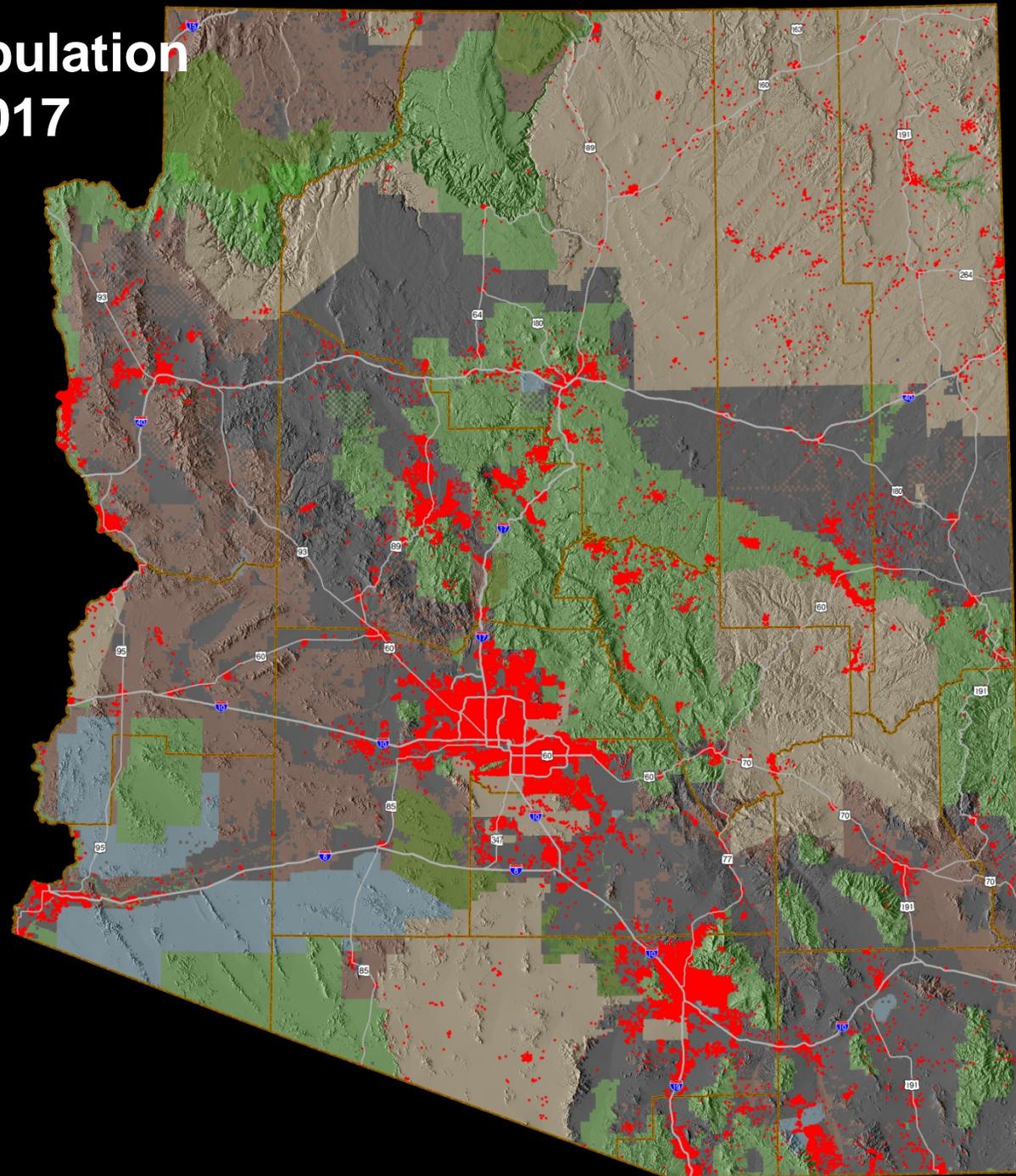
**1990 – Population
3,665,228**



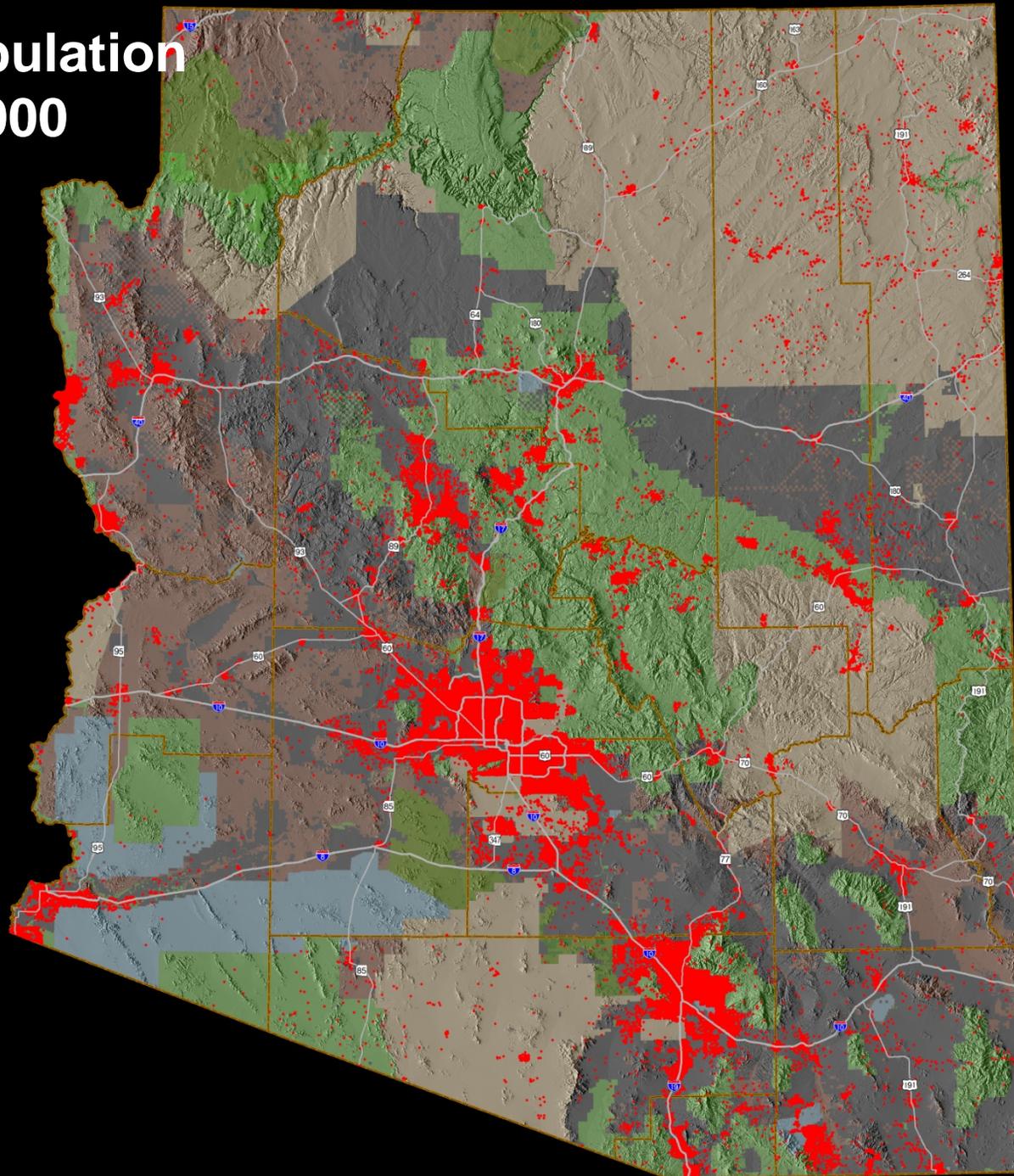
2000 – Population
5,130,632



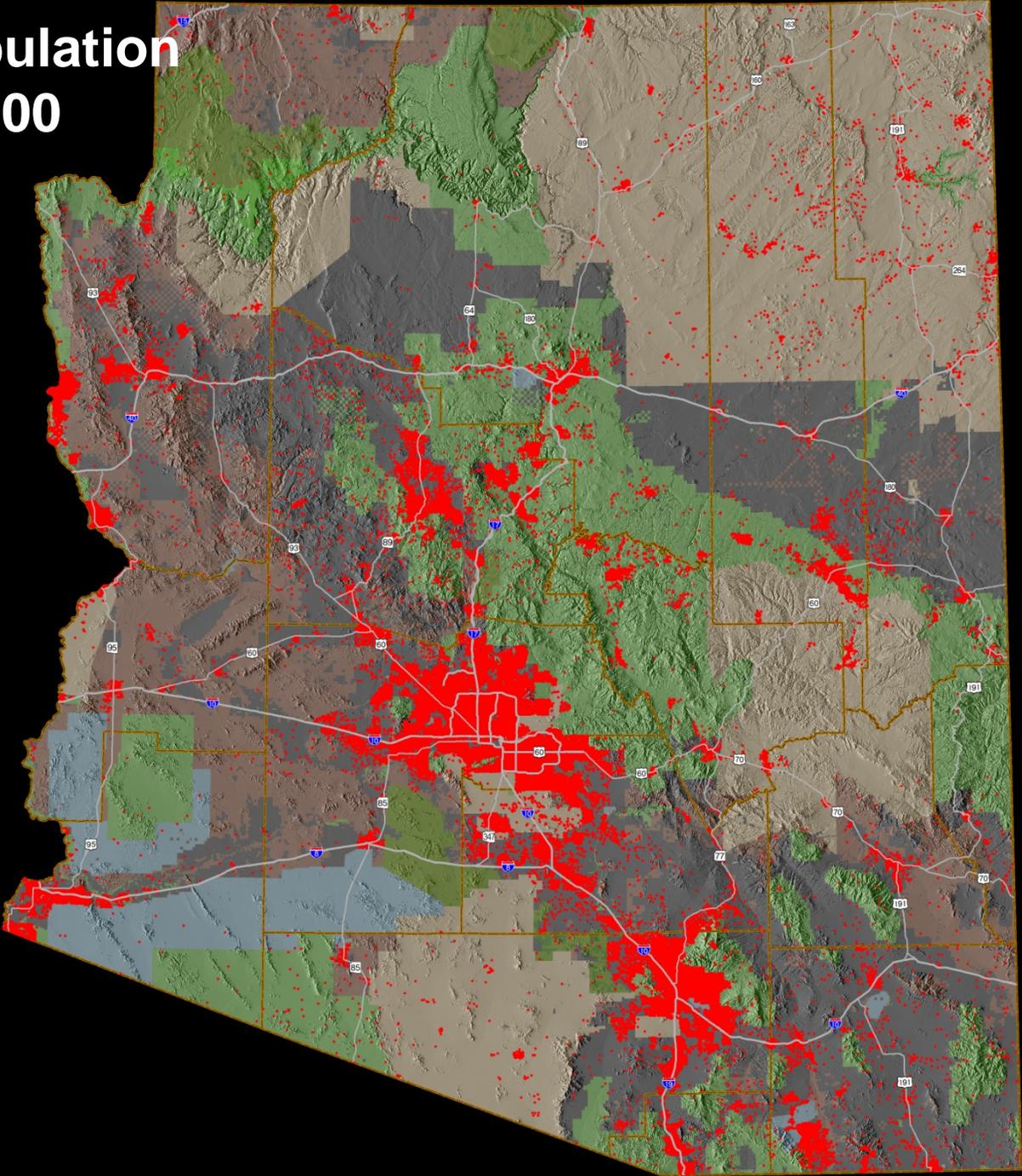
**2010 – Population
6,392,017**



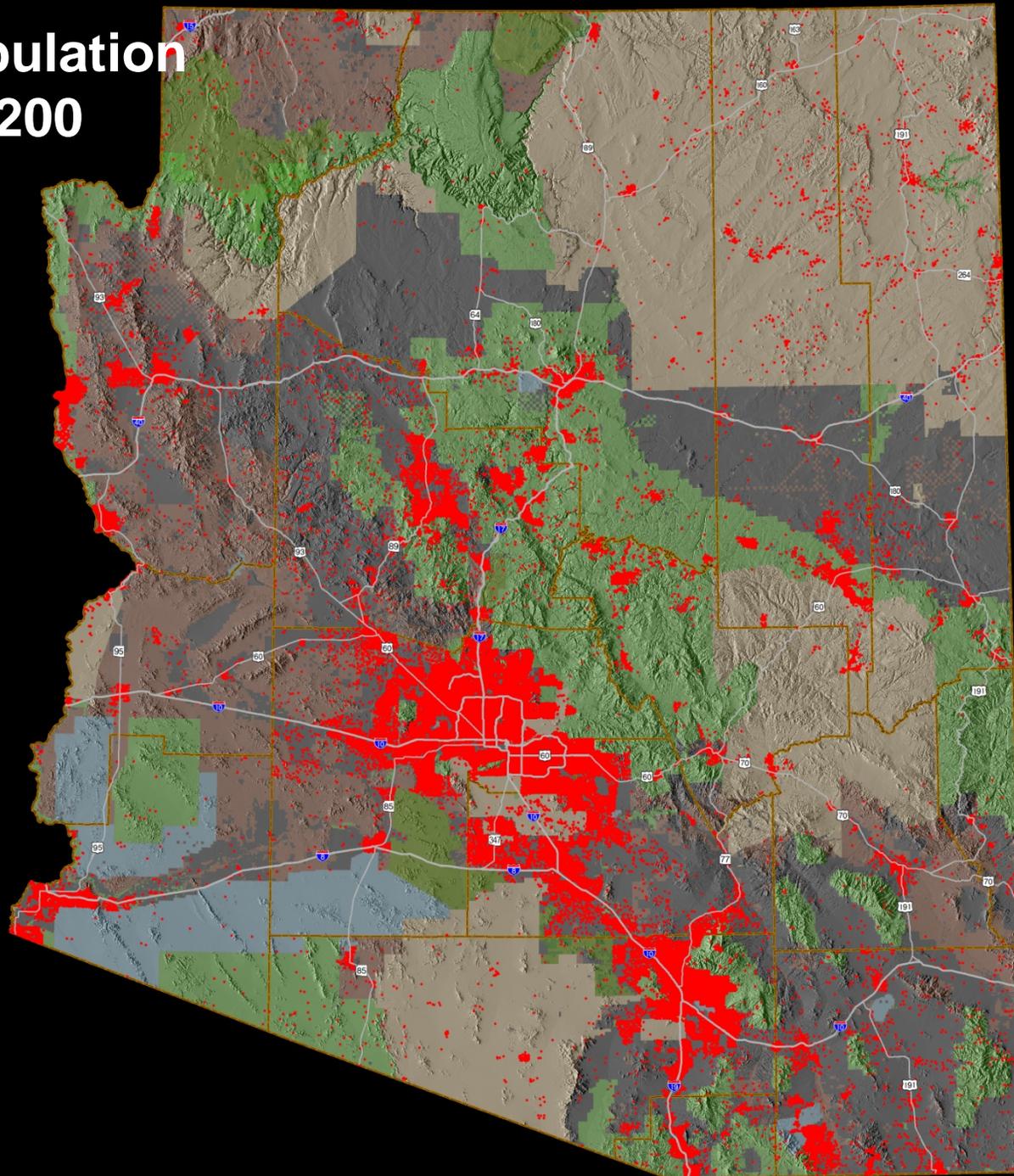
**2020 – Population
7,485,000**



**2030 – Population
8,852,800**



**2040 – Population
10,218,200**



Can something similar be done for IMW?

Intermountain West – Land Datasets

Subject	Categories	Sub-category	Risk Score (0: Low - 5:High)	Developability (0:Low - 5:High)
Land ownership	Federal	BLM	3	3
		Forest/protected	5	0
		Military	5	1
	Native American		3	3
	State Trust Lands		3	4
	Public/Private Conservation		5	0
	Private		1	5
Topography	0-15%		1	5
	15% - 20%		2	3
	20% +		3	2
Land Cover	Developed	All	4	2
	Forest	All	3	4
	Barren/Scrub/Grassland		1	5
	Pasture/Crops		0	5
	Water/Wetlands	All	5	1
Future Land Use	Open Space/Undevelopable		4	1
	Remaining Uses	All	0	5
Water	Lakes/Rivers/Streams		5	1
ACEC	ACEC		5	0
Critical Habitat	Critical Habitat		5	0
Superfund Sites	Superfund Sites		3	4
National & State Parks	National & State Parks	All	5	1
Herd Management	Herd Management		2	4

Utilizing available data and tools

Current available projections

Buffer and Weight based on:

US Census Places – Allow development to expand the geographic footprint of places

Current Development – Proximity to current build area increases chance of development

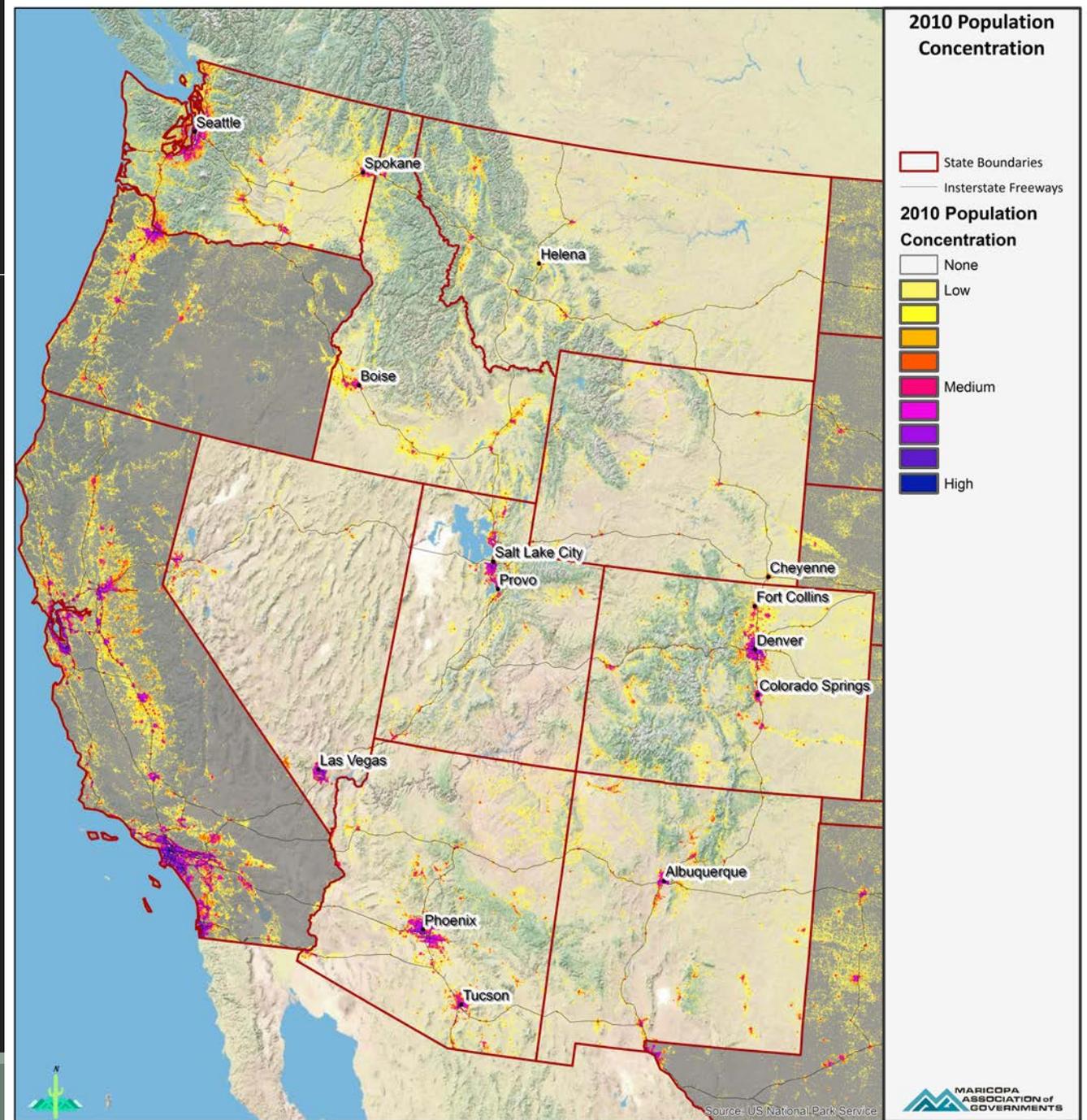
Roads – Proximity to existing roads increases chance of development

Water, Rivers, Floodplains – Proximity increases or decreases chance of development

Slope – Higher slopes are more expensive and difficult to develop

2010 Population Concentration

Step 0: Current population (Census)
Utilize 2010 or ACS

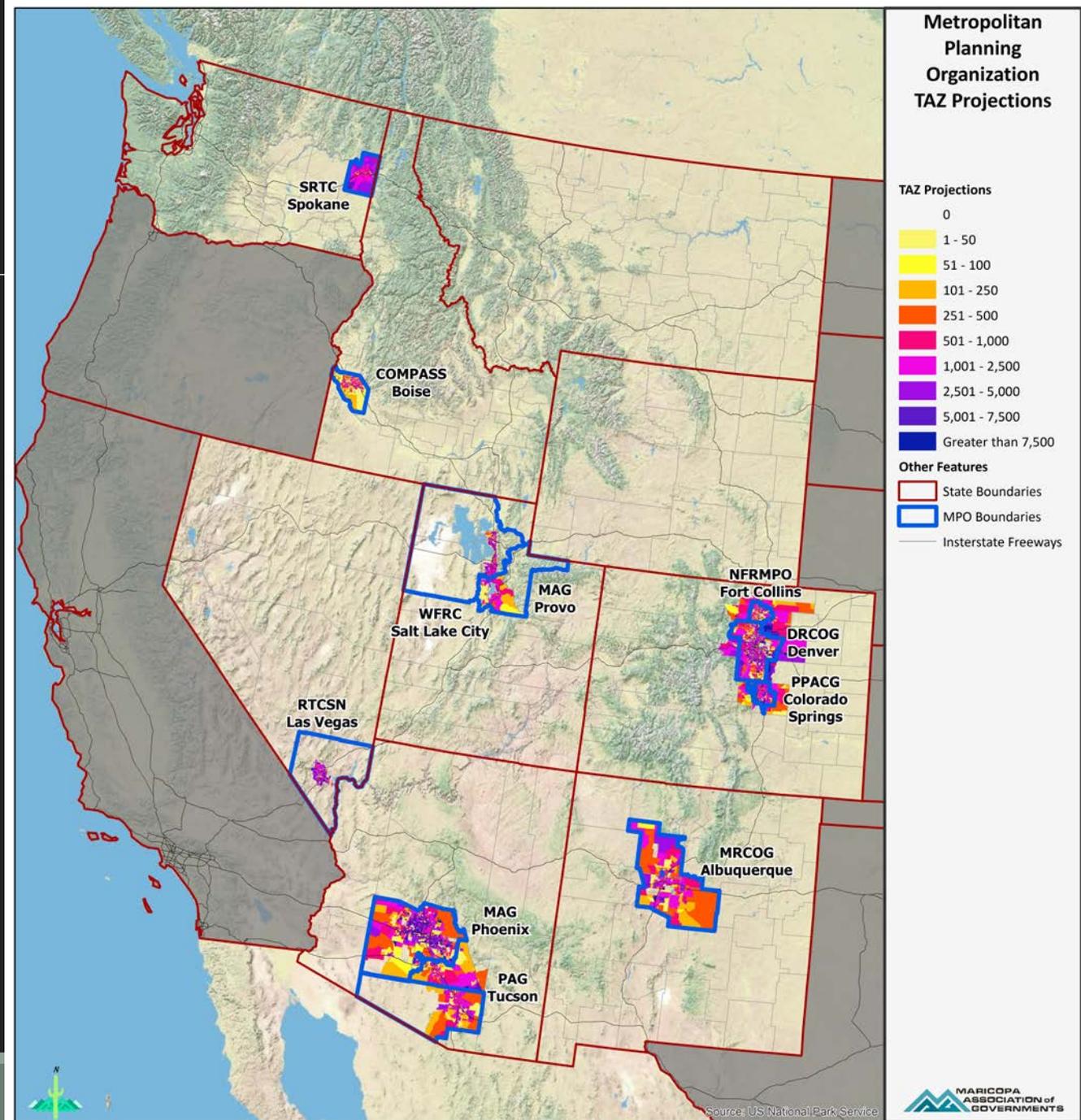


TAZ Projections

Step 0.5:

- Collected TAZ level projections from MPOs/COGs/TMA
- Create composite horizon year
- Update with current projections as needed

Q: Missing agencies/areas with projections?



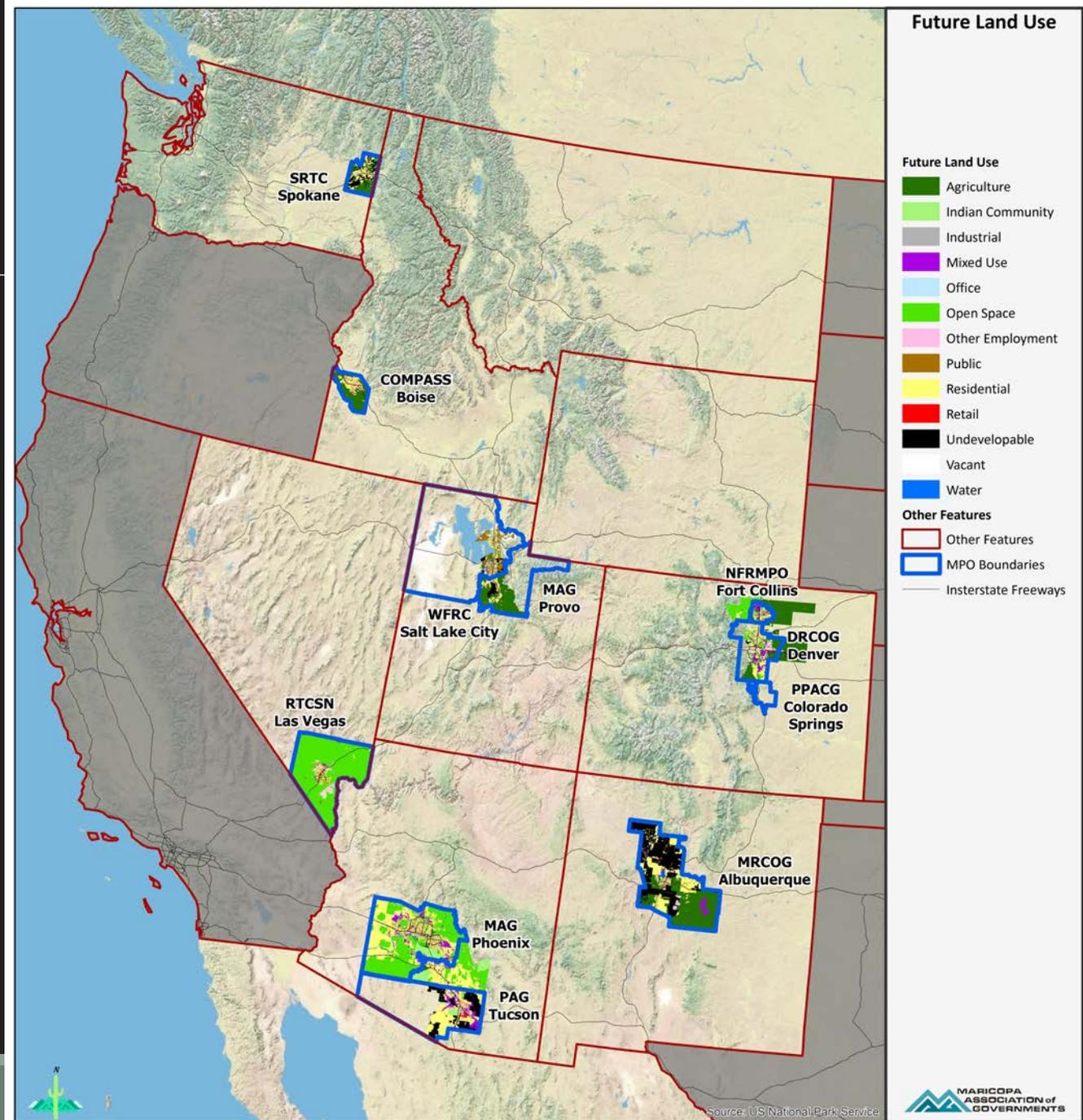
Future Land Use

Step 0.6:

- Collected planned/future land use data from MPOs/COGs/TMA
- Created combined land use codes and look-up tables
- Utilize the land use data to allocate growth within TAZ

Q: Are more detailed projections available ? Can these be shared for this project?

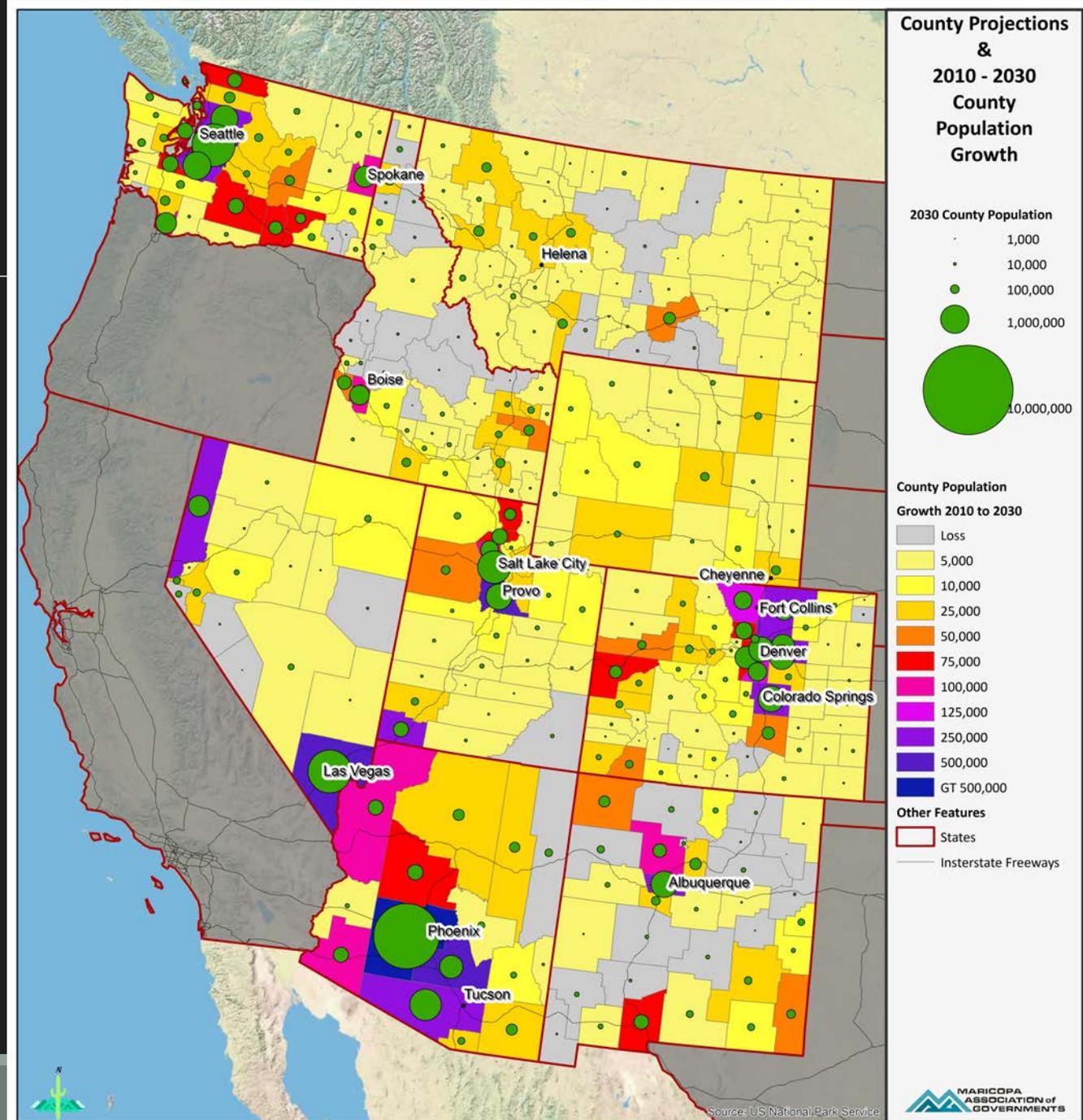
Q: Missing agencies/areas with regional land use data?



County Projections & Population Growth

Step 0.7:

- Utilize growth patterns from State/County projections for areas outside MPO/COG/TMS projections
- Create a combined horizon year

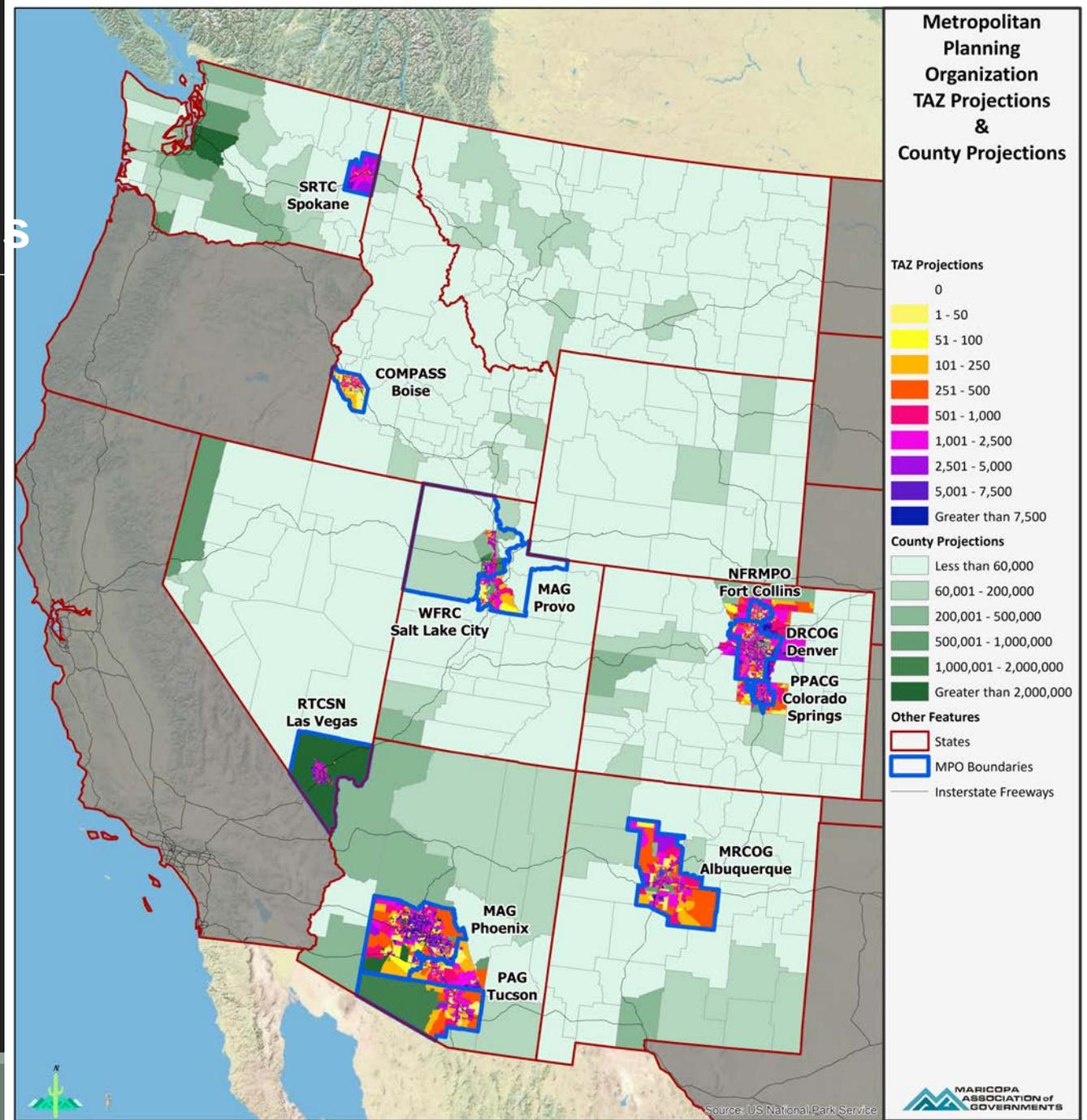


TAZ Projections & County Projections

Step 1:

- Combined control totals

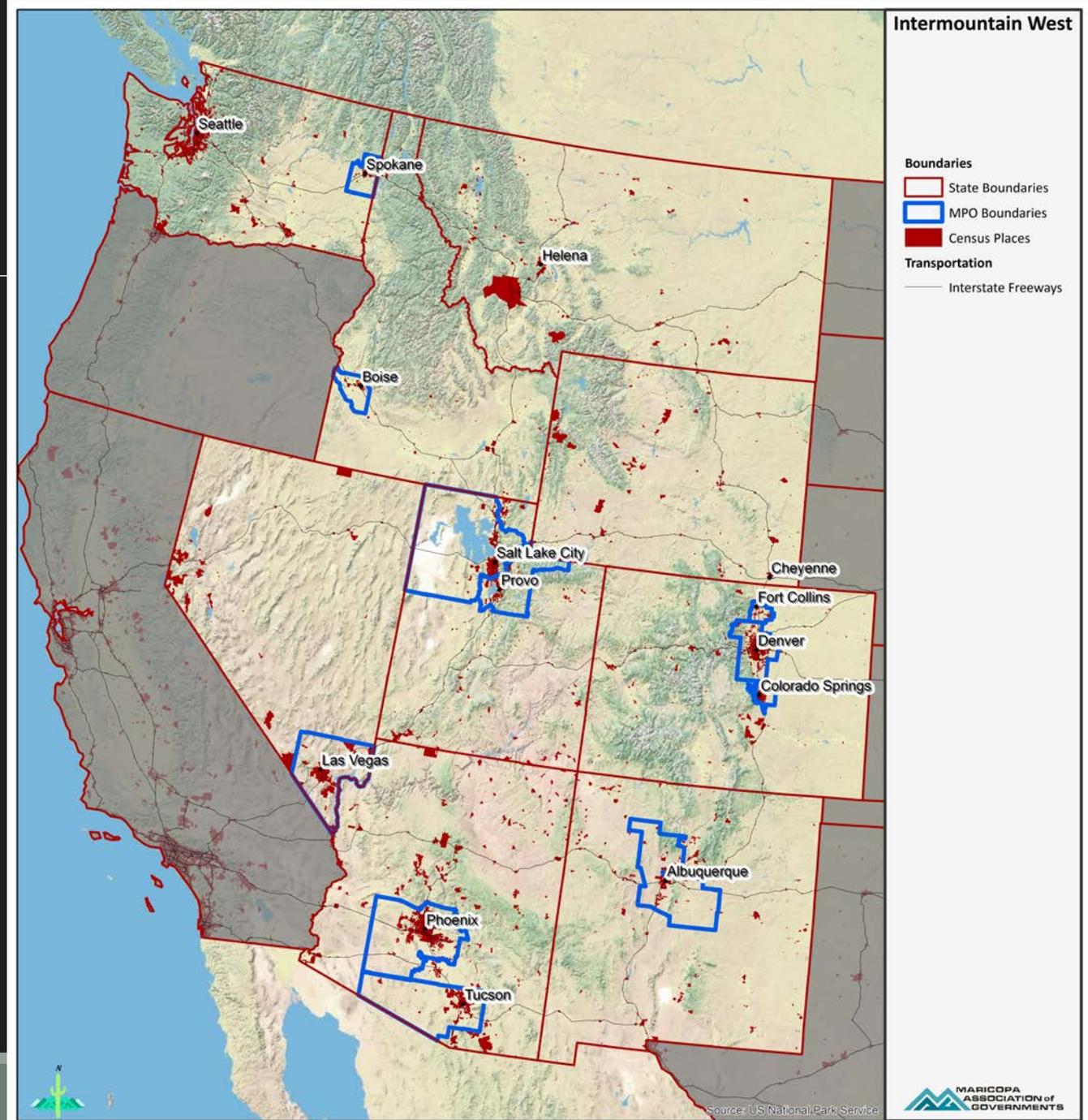
Q: Are there any resources for employment projections



Intermountain West Census Places

Step 1.1:

- Utilize current Census geographies for allocation of growth
- Evaluate % of current population in incorporated places/CDPs etc. vs. unincorporated County
- Buffer existing geographies

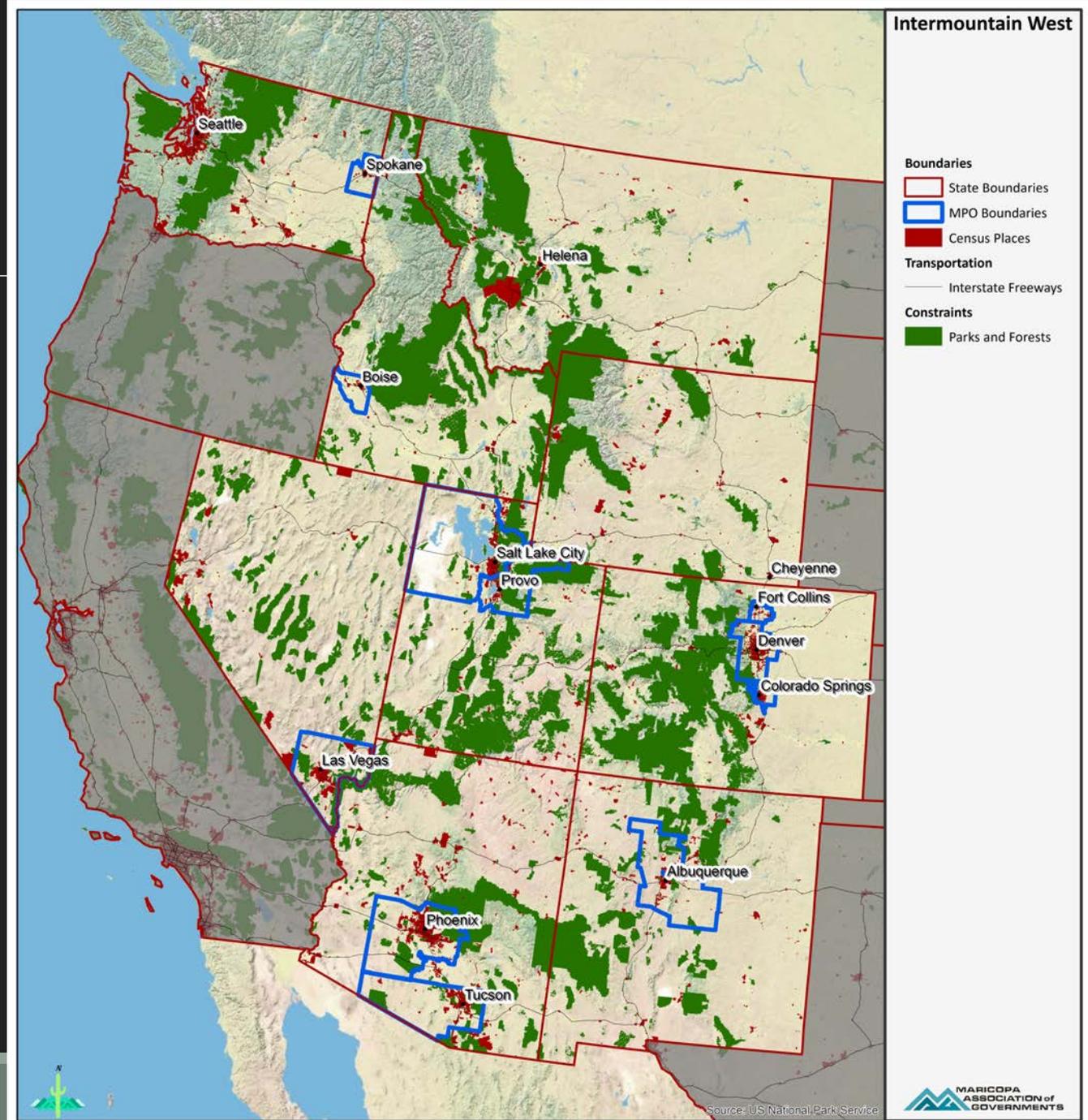


Constraint: Open Space

Step 2:

- Not going to build on protected open space

Q: Are there any local/regional datasets that can enhance this?

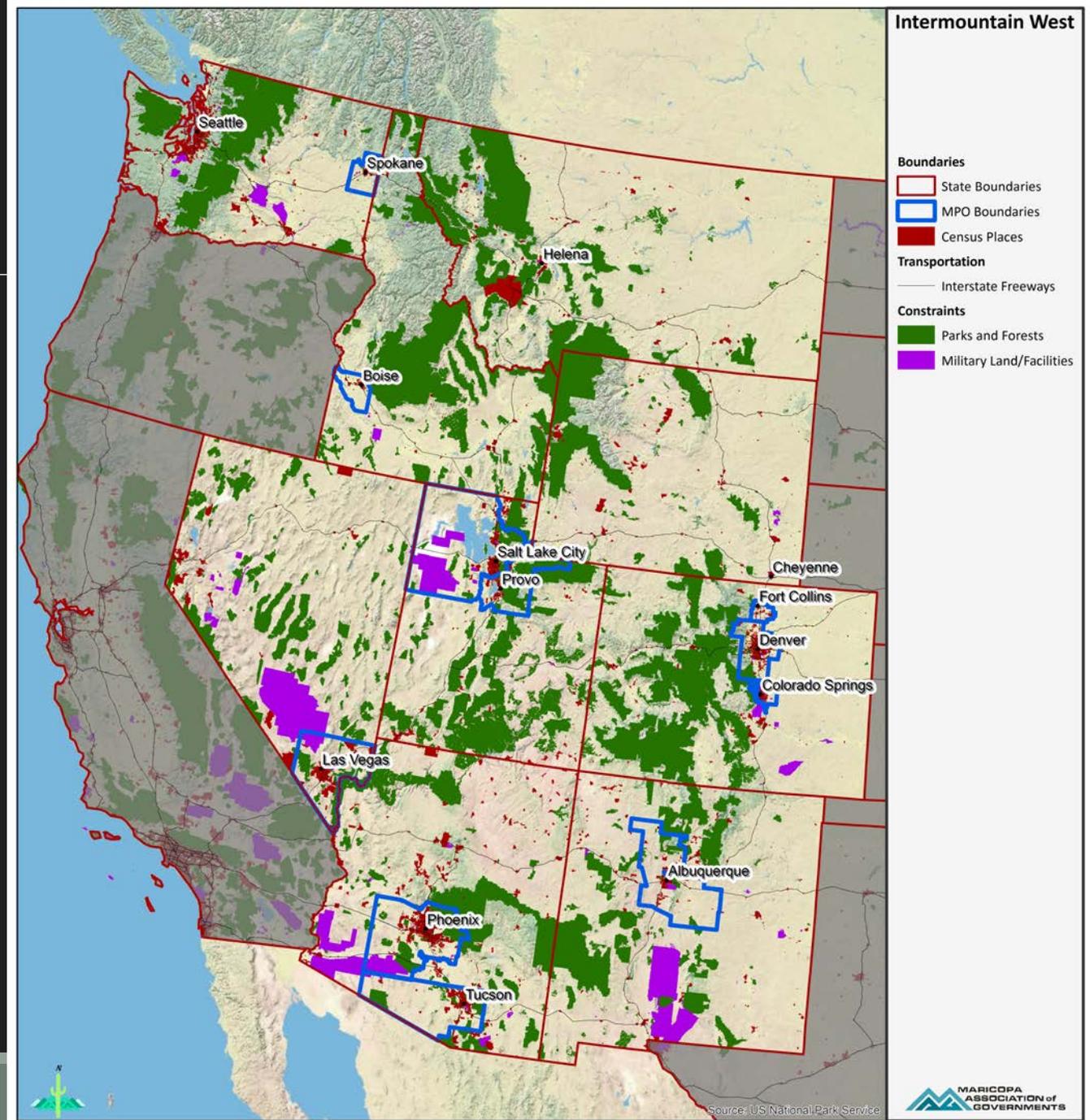


Constraint: Military

Step 2:

- Not going to build on Military bases

Q: Are there any local/regional datasets that can enhance this?

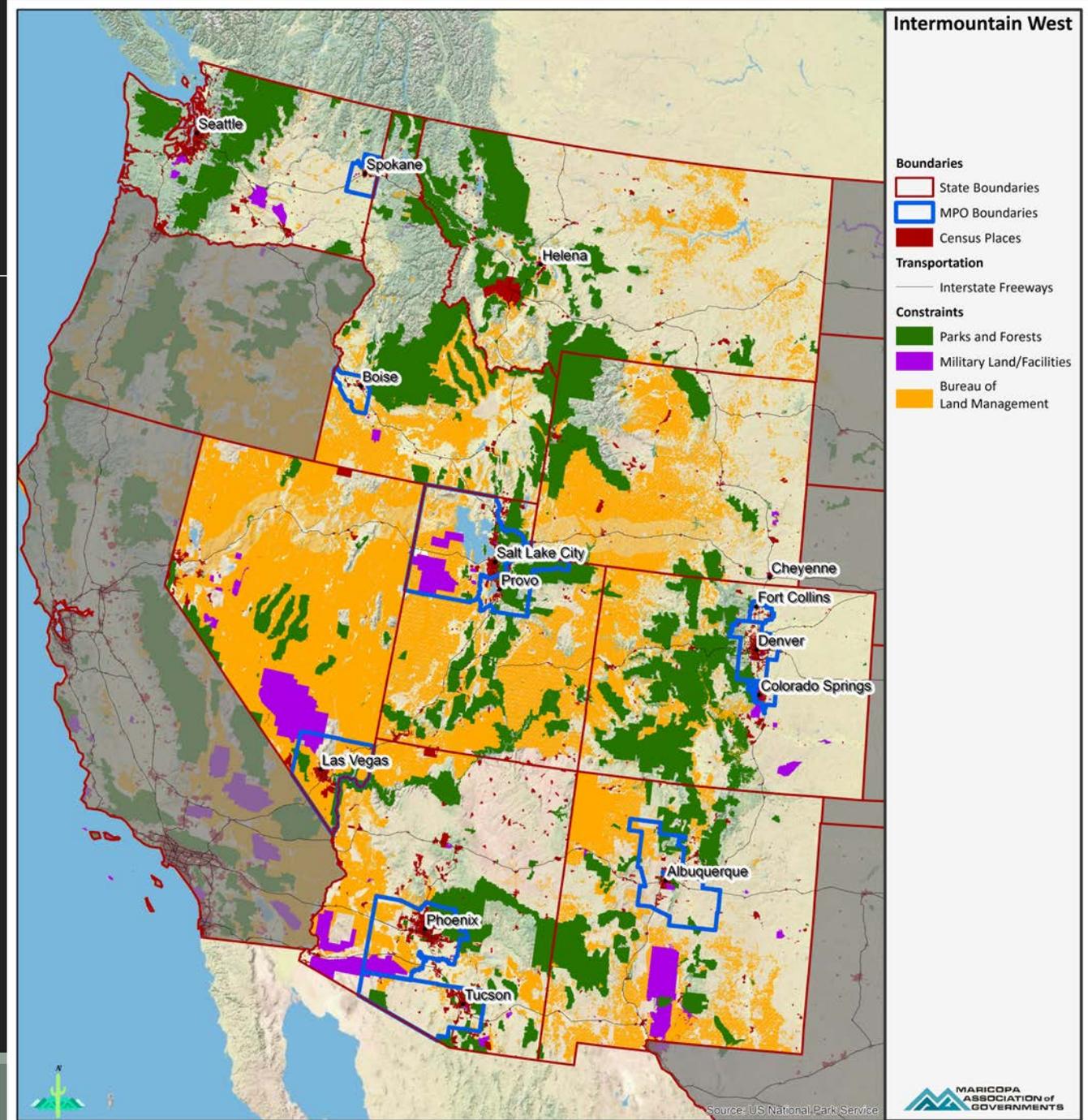


Constraint: BLM

Step 2:

- Generally not going to develop BLM lands

Q: Need to collect BLM area plans for disposition/exchange?

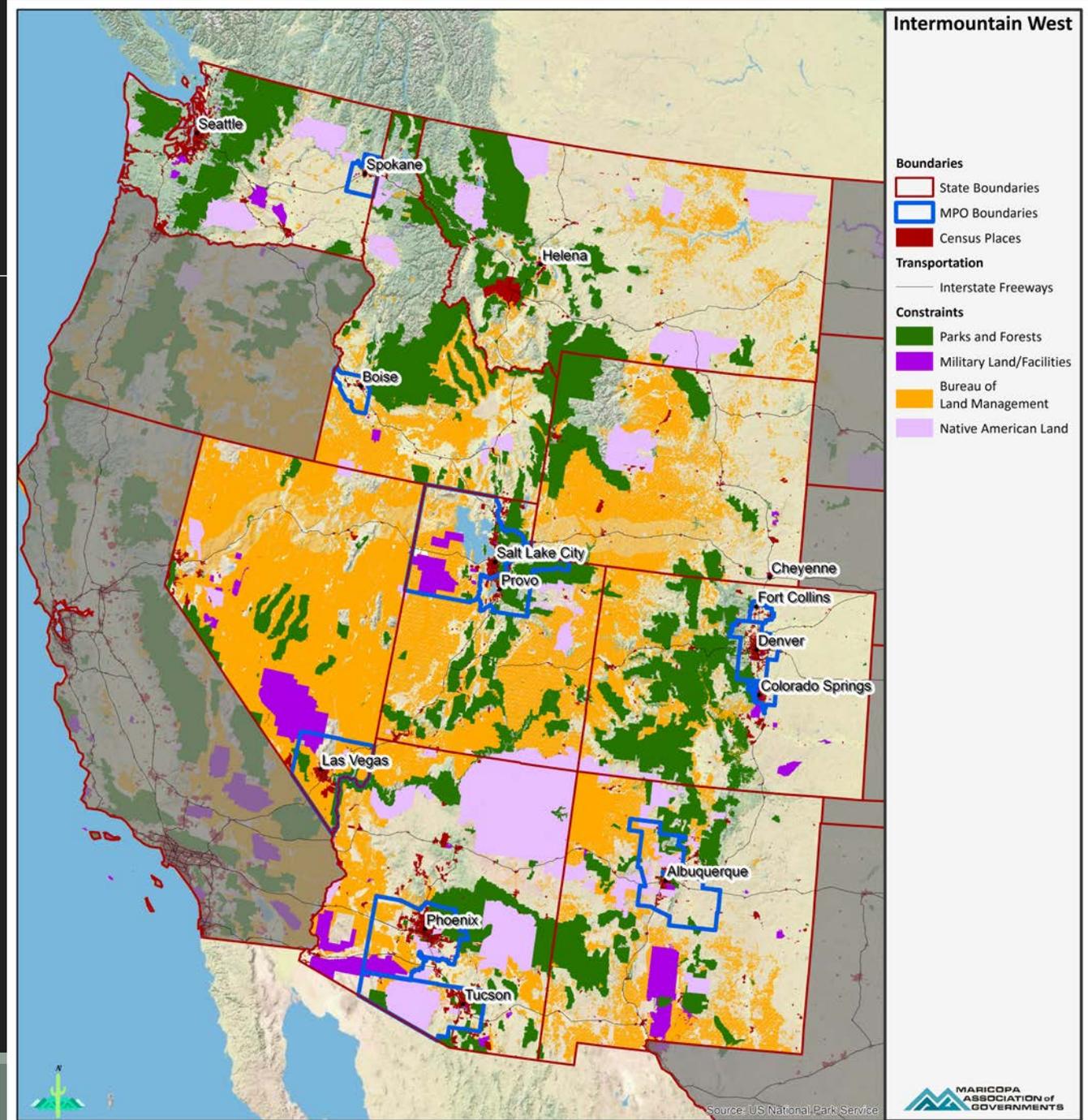


Constraint: Indian Communities

Step 2:

- Restricted residential development (members only) on Native American lands

Q: Any known development plans?

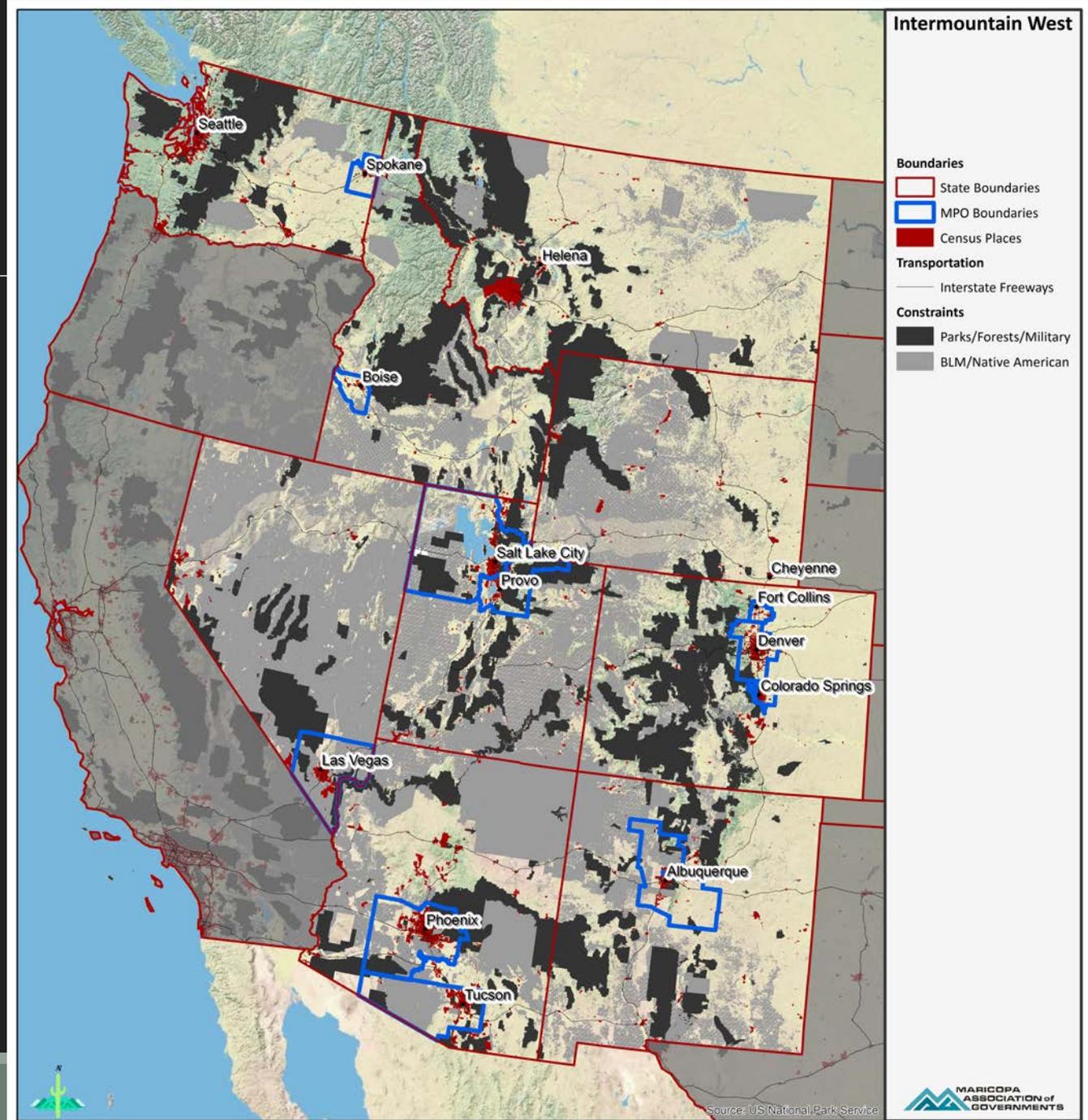


Combined Constraints

Step 3:

- No development :
 - Restricted open space

Q: Any known development plans?



Discussion

what did we miss?

Additional data sources? Methods?

Short-term vs. long-term

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