ENVIRONMENT OR ECONOMY

Duh. You can't have one without destroying the other.

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Shaping the Future of the West

Evironment “or” Economy

Prioritizing Environmental Protection vs. Economic Growth, 1984-2014

With which one of these statements about the environment and the economy do you most agree -- [ROTATED: protection of the environment should be given priority, even at the risk of curbing economic growth (or) economic growth should be given priority, even if the environment suffers to some extent]?

GALLUP

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ENVIRONMENT OR ECONOMY

For decades, Arizona's Sun Corridor has exploded in population and industry. In the next fifty years, economic growth will occur in unpredictable ways and will leverage the infrastructure that we provide and the resources that we preserve to support it.

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ENVIRONMENT AND ECONOMY

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#LosetheOR

Arizona's environment has been one of the greatest drivers of its economic growth to date. Our success rests in a careful balance of sustainable economic growth AND preservation of our heritage.

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Shaping the Future of the West

Sonoran Institute

- The Sonoran Institute inspires and enables community decisions and public policies that respect the land and people of western North America. Facing rapid change, communities in the West value their natural and cultural resources, which support resilient environmental and economic systems.
- Founded in 1990, the Sonoran Institute helps communities conserve and restore those resources and manage growth and change through collaboration, civil dialogue, sound information, practical solutions and big-picture thinking.
- Our passion is to help shape the future of the West with:
  - **Healthy landscapes** that support native plants and wildlife, diverse habitat, open spaces, clean energy and water, and fresh air.
  - **Livable communities** where people embrace conservation to protect quality of life today and in the future.
  - **Vibrant economies** that support prosperous communities, diverse opportunities for residents, productive working landscapes and stewardship of the natural world.

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ARIZONA'S GREATEST ASSET

Climate. Of the 5 "Cs" this one remains the largest driver of our economy today.

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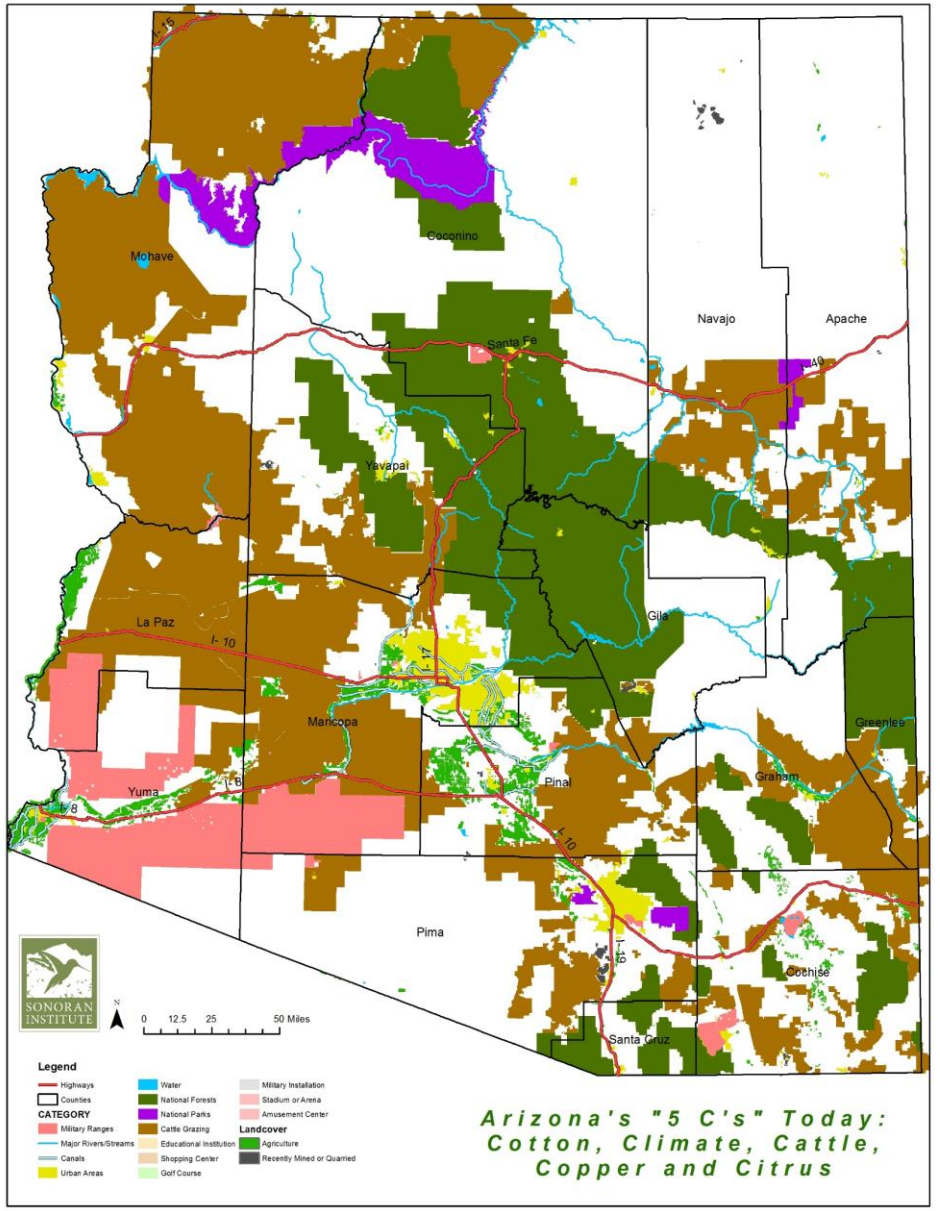
"Climate"

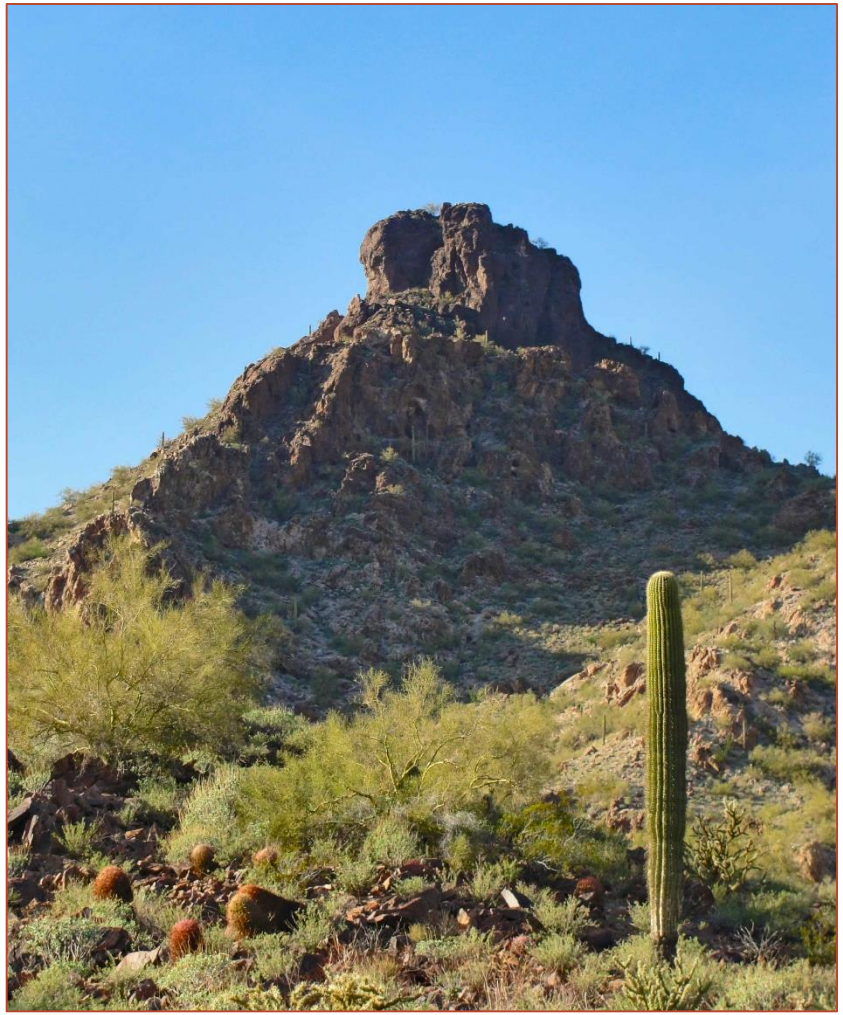
- While we think of climate as our mild winter weather, it includes much more than that:
  - Natural scenery
  - Availability of outdoor recreation
  - Diversity of ecology
  - Preservation of Arizona's heritage
- Climate empowers important sectors of our economy:
  - Housing
  - Renewable energy
  - Military training
  - Outdoor recreation
  - Tourism



#loseTheOR

Economic Value of Climate

- Contributes annually $10 billion in economic impact through the outdoor recreation industry (Outdoor Industry Association, 2013)
- Supports Arizona's home building economy which brings an estimated:
  - $4.5 billion annually in wages and
  - $900 million annually in taxes and other government fees (Homebuilder's Association estimated impact per 100 homes constructed. Assumes annual rate of 15,000 homes/year)
- Enables Arizona's $9 billion economic impact from military operations (Maguire, 2008)



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Economic Value of Climate (2)

- Supports Arizona's tourism economy
  (Arizona Office of Tourism, 2013)
  - 39 million overnight visitors
  - $19.8 billion in direct travel expenditures
- Supports Arizona's emerging solar energy industry:
  - $624 million invested in 2014 on installation of solar
  - 9,200 employees at 694 companies
  - 2,014 MW of capacity (2nd in nation)
    (Solar Energy Industries Association 2014))

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ARIZONA'S NEXT-GENERATION ECONOMY

By losing the "or" we can focus on an economic engine that will be resilient to uncertainty.

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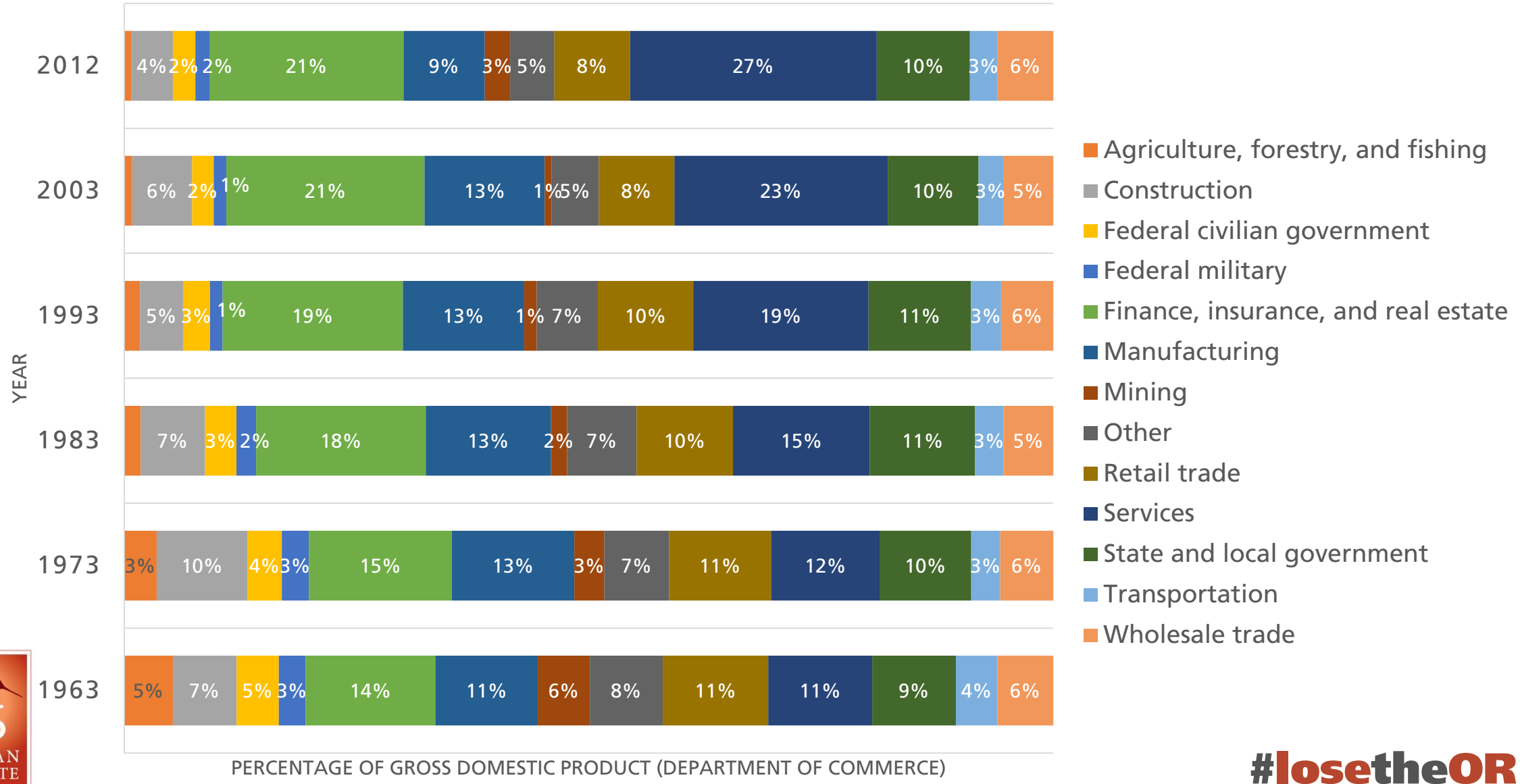
ARIZONA'S INDUSTRY OVER 5 DECADES



PERCENTAGE OF GROSS DOMESTIC PRODUCT (DEPARTMENT OF COMMERCE)

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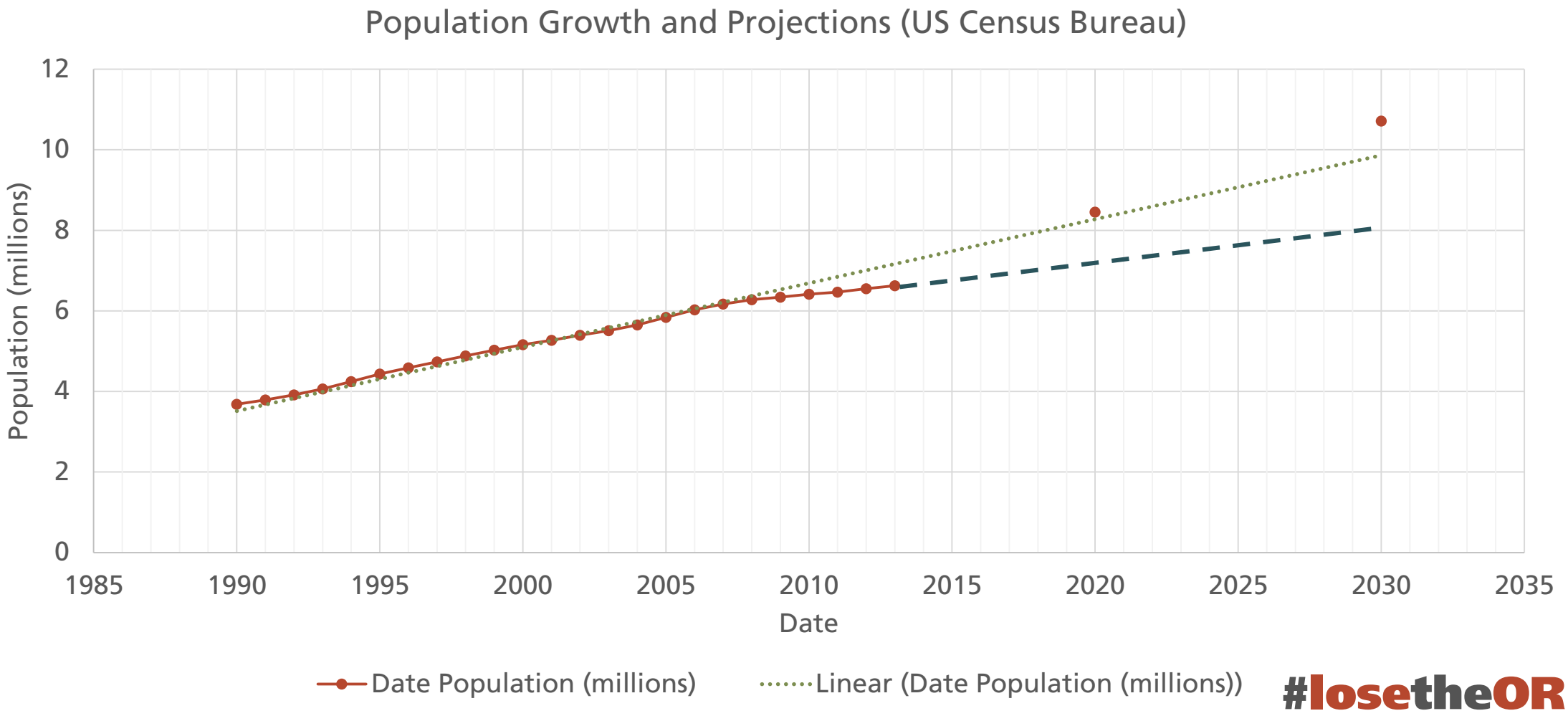
Growth



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SOLAR ENERGY

Take advantage of our climate.

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Renewable Energy in AZ

- Western Solar Plan (2011):
  - Created the framework for energy generation on public lands
  - Identified 2 Solar Energy Zones (SEZs) in Arizona on BLM lands
  - Created a process through which solar applications can be approved outside of zones
- Restoration Design Energy Project (2012):
  - Evaluated all lands in Arizona for renewable energy generation
  - Screened out lands with high environmental value and conflict potential
  - Resulted in Renewable Energy Development Areas
    - 192,000 acres of BLM land statewide
    - 1.6 million acres of other land ownership
- One more SEZ

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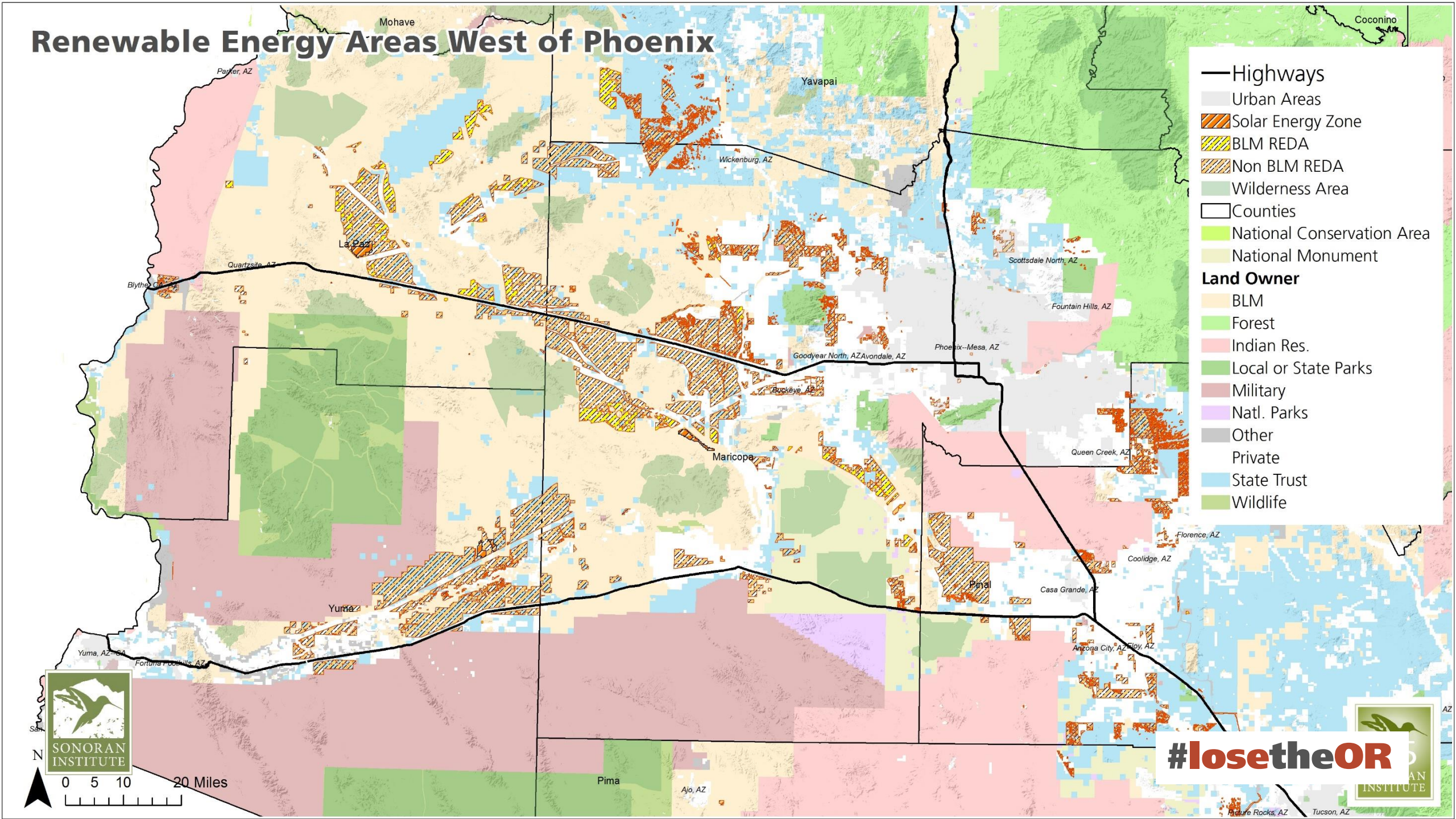
Renewable Energy Areas West of Phoenix



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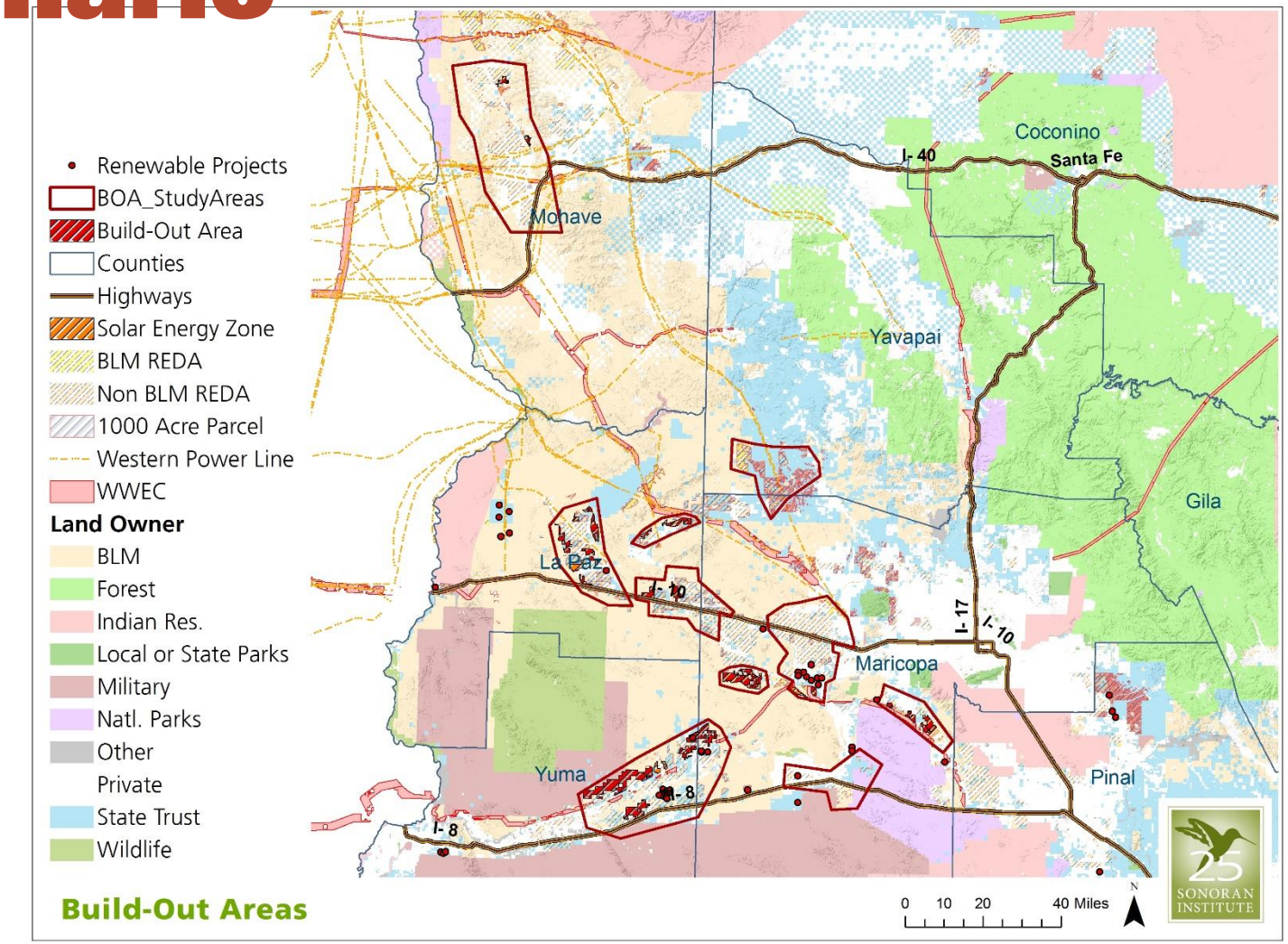
Sonoran Institute Build-Out Scenario

- 15 “utility scale” projects in some stage of permitting
  - Could provide 2,032 MW of new solar energy
  - Must have a Power Purchase Agreement to move foreword
- 8 individual “build-out areas” west of Phoenix could provide
  - 2,280 MW of new solar energy
  - Must have transmission to move energy to markets



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INTERSTATE 11

I-11 and the Intermountain West Trade Corridor could be a catalyst to diversify Arizona's economic portfolio.

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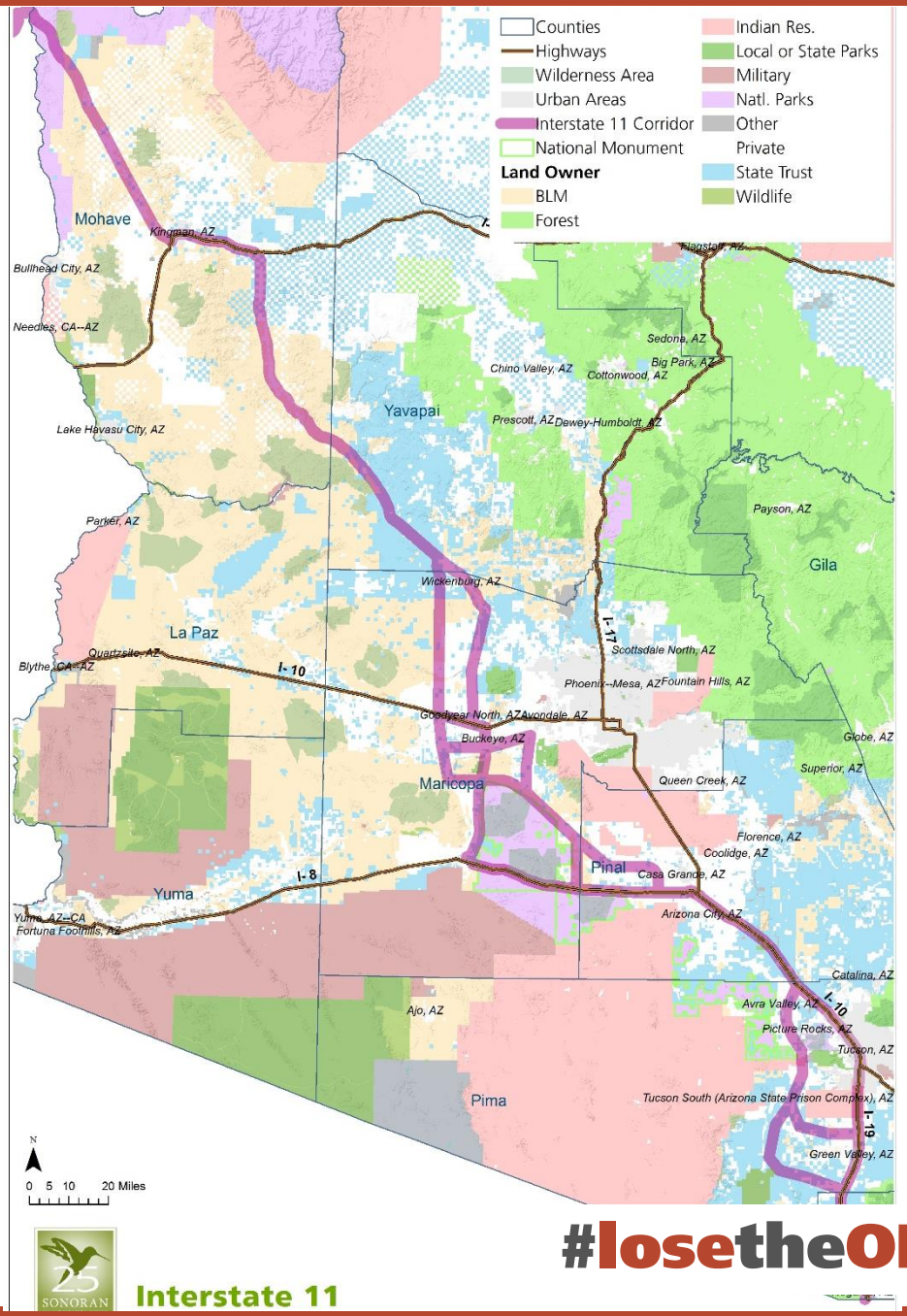
Interstate 11

- Part of the long-discussed CANAMEX highway
- Long term vision:
  - Connect Mexico to Canada
- Interim Condition:
  - Connect Nogales to Las Vegas
- Key components:
  - Multi-modal corridor
  - Freight corridor
  - Energy and data
  - International trade



Interstate 11 and Energy

- Interstate 11 is likely to bring additional growth to the West Valley
- It may also be a good catalyst for increased renewable energy development
- The vision for the project is for a smart, multi-modal corridor that lowers environmental impact
- The BLM is considering establishing a West-Wide Energy Corridor near the I-11

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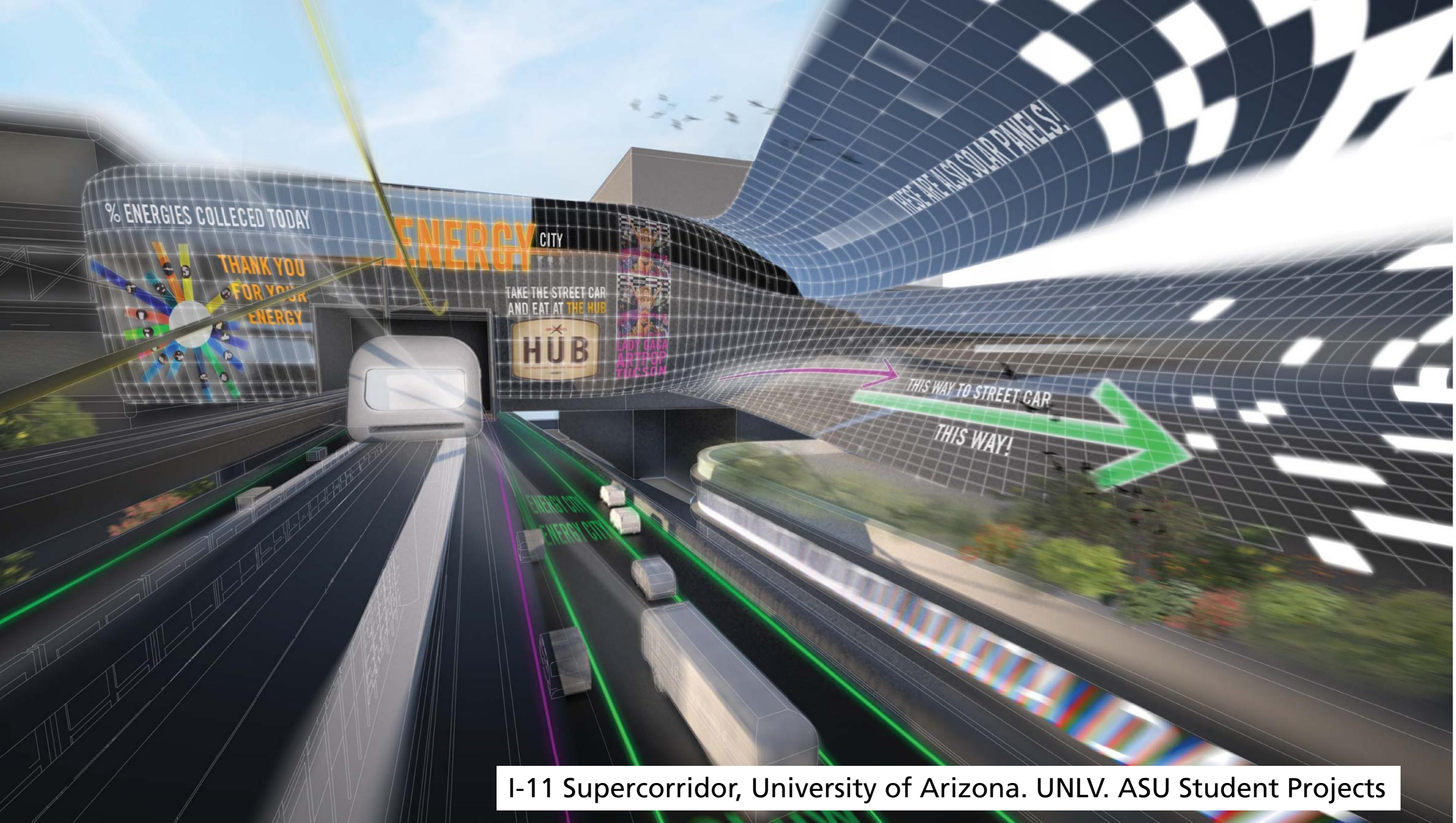
Renewable Energy Development Area Lands

Within 10 Miles of I-11	Acres	Energy Potential[1] (MW)	Homes Powered[2]
Non-BLM Nominated Sites	1,307	139	115,601
BLM Nominated Sites	1,606	170	142,046
Non-BLM REDA Lands	379,857	40,317	33,597,324
BLM REDA Lands	68,452	7,265	6,054,394
Solar Energy Zone	2,618	278	231,555
Total Energy Development Lands	453,840	48,169	40,140,920
Within 20 Miles of I-11	**Acres**	**Energy Potential[1] (MW)**	**Homes Powered[2]**
Non-BLM Nominated Sites	9,847	1,045	870,941
BLM Nominated Sites	4,616	490	408,273
Non-BLM REDA Lands	581,444	61,713	51,427,149
BLM REDA Lands	106,232	11,275	9,395,933
Solar Energy Zone	2,618	278	231,555
Total Energy Development Lands	704,757	74,801	62,333,850

[1]Energy potential assumes the development will achieve a realized .1061 MW/Acre which is the mean planned production of approved BLM Solar applications as of 6/2013

[2]Assumes estimated energy demand of 12MW/10,000 homes

[3]Assumes 33,000 tons/MW photovoltaic panels



I-11 Supercorridor, University of Arizona. UNLV. ASU Student Projects

PROPOSED:
NEXT GENERATION CORRIDOR

Interstate 11 as the inter-mountain west corridor of the future will solidify the southwest triangle and prosper from the CANAMEX trade route. With each phase unveiling the latest in transportation technology it will establish itself as the prototype and model for building and retrofitting future corridors. Transit times will be reduced dramatically, increasing productivity. Renewable energy will power the corridor and be distributed throughout the southwest region. I-11 will revolutionize transportation and only promises the southwest region sucess.

INDUCTIVE CHARGING

Coils in road vibrate with same resonance frequency as coil below car, allowing energy to flow between each other.

DRIVERLESS VEHICLES

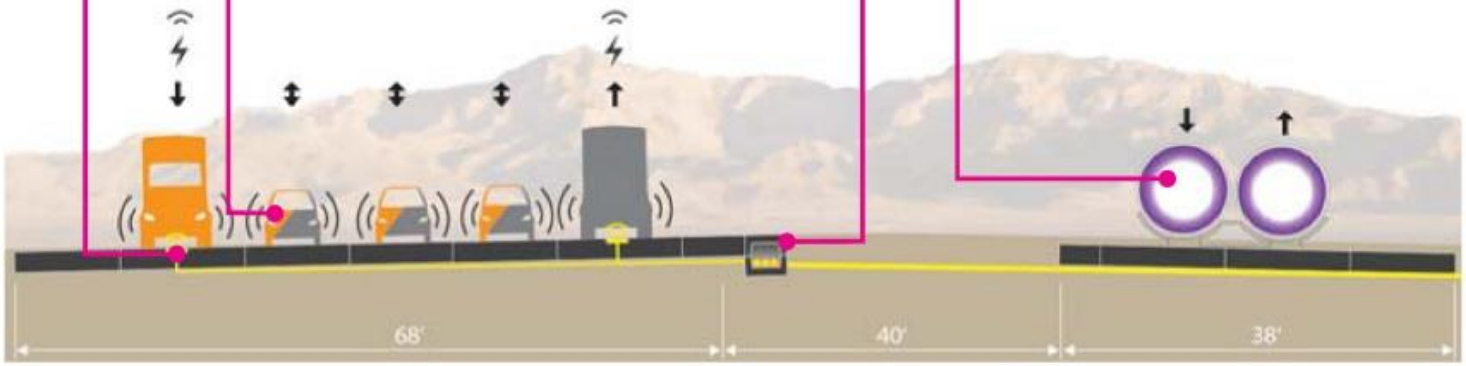
Sense surrounding environment and navigate without human input or error.

SUPERCONDUCTIVE TRANSMISSION

Underground superconductive cables will be safer, nearly 100 percent efficient and reduce imact to the environment.

MASS TRANSIT - HYPERLOOP

Capsules traveling within low pressure tubes may provide fast and inexpensive transportation for people and goods.



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I-11 Supercorridor, University of Arizona. UNLV. ASU Student Projects

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Gotta lose the "or"

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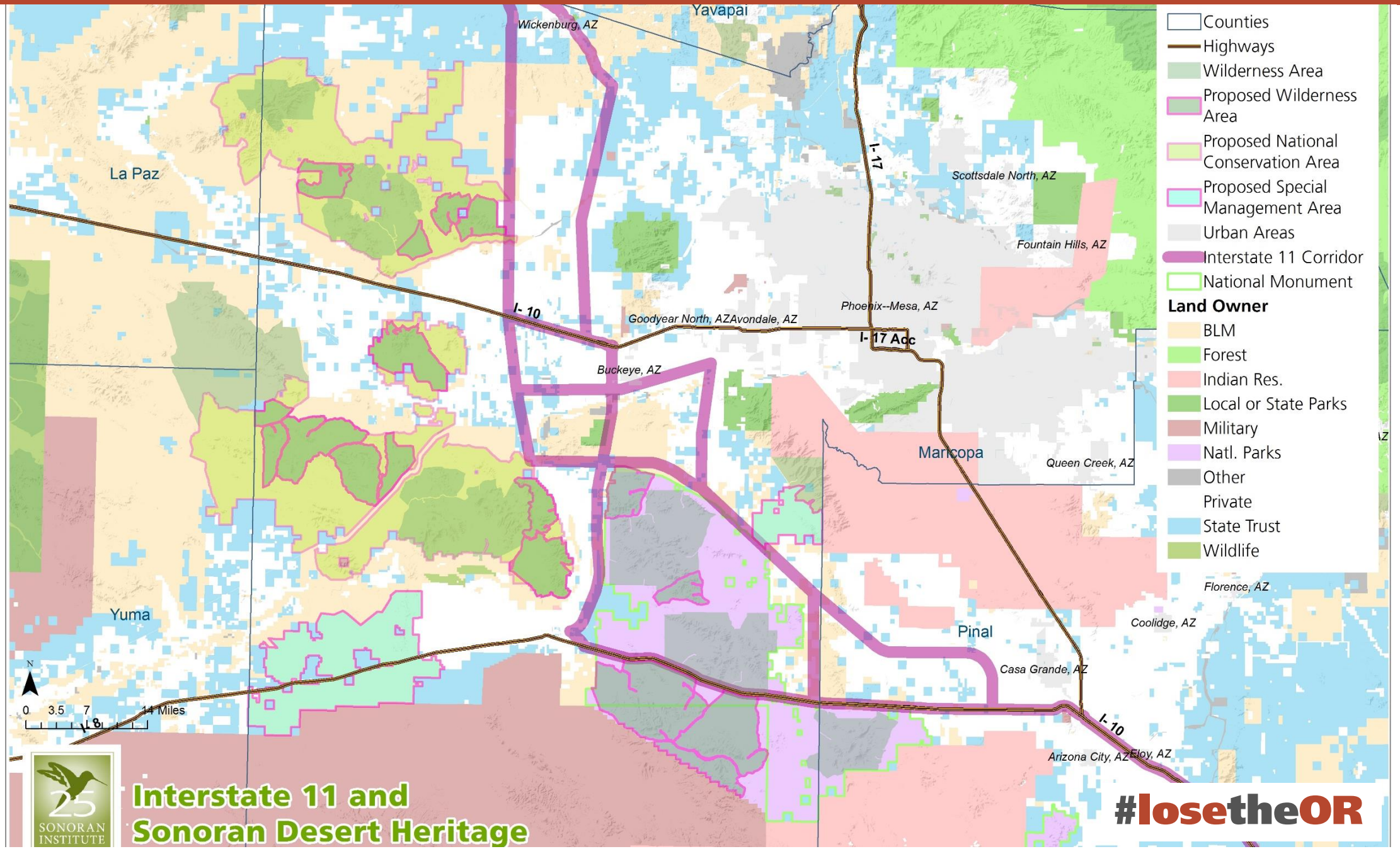

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Interstate 11 and Sonoran Desert Heritage

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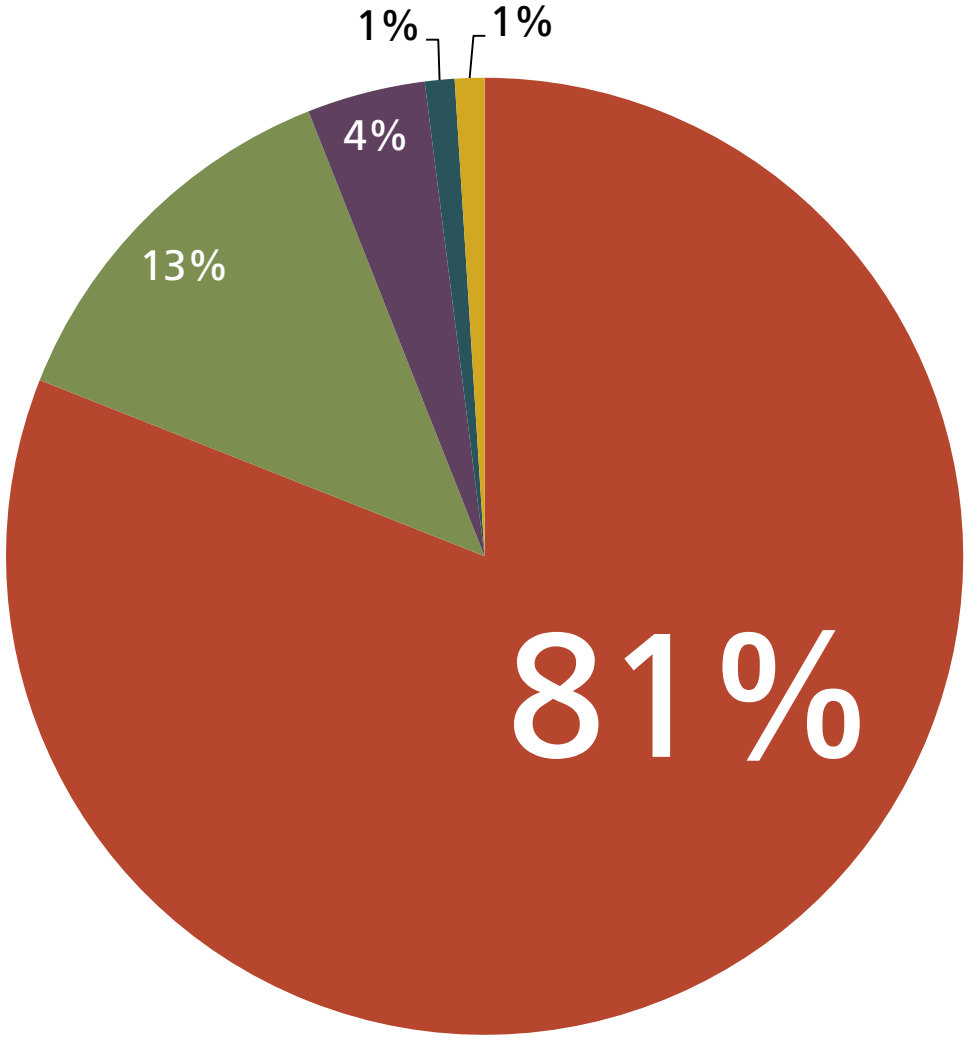
Poll: I'm going to read you a pair of statements, and please tell me which one comes closest to your own views, even if neither of the statements matches your views exactly. (2010, N=400)



- We can protect public lands and natural areas and have a strong state economy with good jobs for Arizonans at the same time, without having to choose one over the other.
- Conservation of public lands and natural areas AND a strong state economy are in conflict and we must choose one over the other.

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