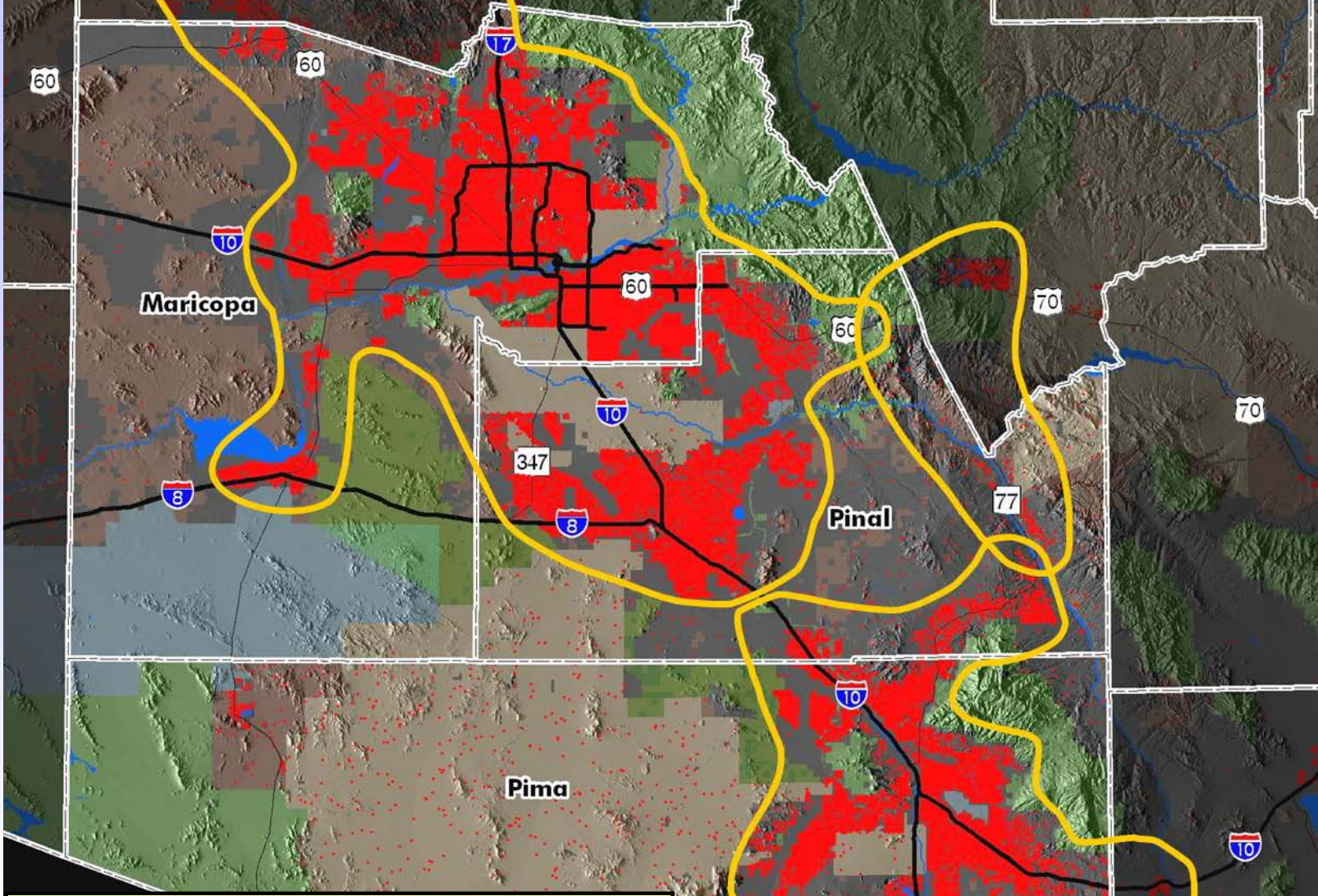
Pinal Projections Study

Joint Planning Advisory Council

March 9, 2010



Six Projections - 2003 thru 2008				
	2010	2020	2030	2040
Low	374	610	852	1,082
High	475	1,161	1,900	2,376
Average	410	881	1,444	1,881
Std. Dev.	51	159	323	446
Std. Dev. %	13%	18%	22%	24%

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Tiered modeling process

Sun Corridor Projections
(Pinal, Pima, Maricopa)
University of Arizona (UofA) &
Arizona State University (ASU)

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Market Area Projections
Applied Economics

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TAZ Projections
MAG
Small Area Model (SAM-IM)

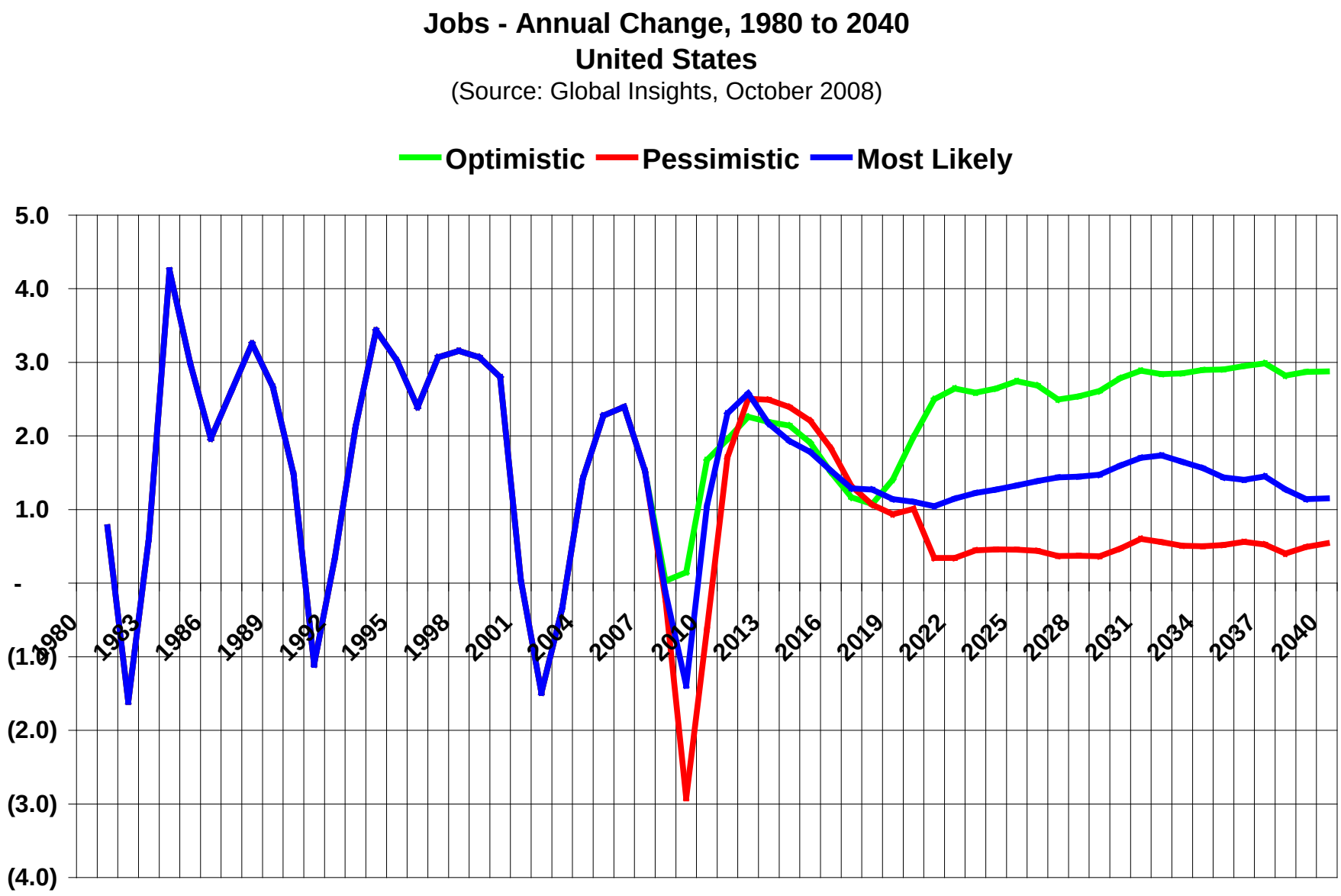
Projections – four years' effort

1. CAAG regional planning databases
2. Sun Corridor projections
   - Expert interviews, data compilation, data estimates
   - Demographics report
   - Economics report
   - One draft, one final set of projection scenarios
   - January 2009 workshop
3. Pinal County/market area projections
   - Expert interviews
   - Real estate assessment, market area definitions
   - Comparable counties white papers – jobs/housing balance & jobs/population growth lag
   - Water resources white paper
   - Transportation timing study
   - Integration of COG planning databases – CAAG, MAG, PAG
   - Creation of historic time series for 46 market areas
   - Model development, regressions for allocations
   - 2 draft projections– approximately 35-50 comments by members, economics/modeling experts, others
   - 2 workshops – May & June, 2009
   - Final projection scenarios
4. Final step: TAZ & MPA projections

Project Challenges

- Complete first generation of Pinal County regional planning databases – matching all MAG's
- 2006 through 2009 - Intense period of land & transportation plans within Pinal – many database changes
- September 2008 financial crisis & worst US-AZ economies since Depression
- Buy-in on CAAG regional planning from members

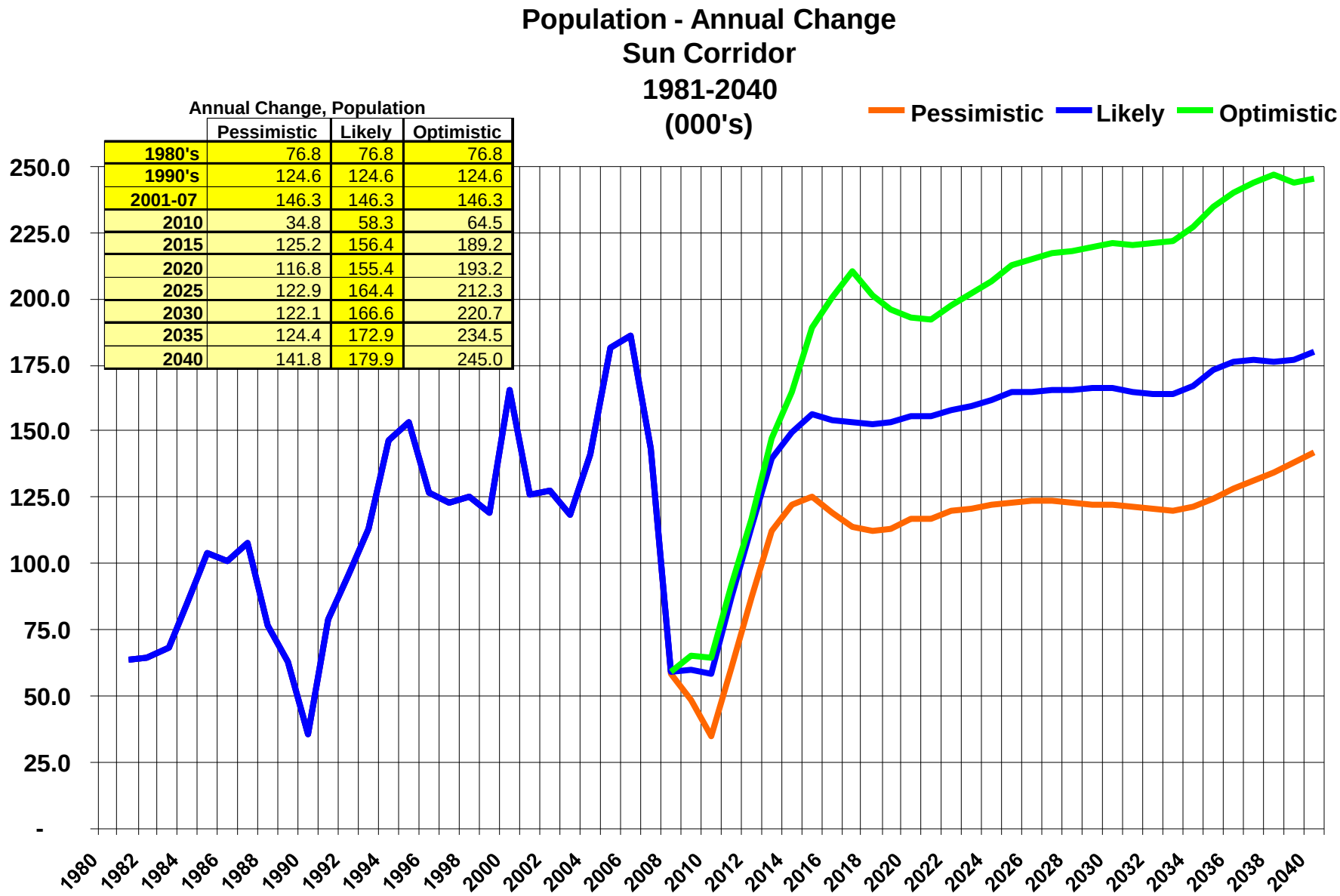
Projected jobs change, USA (October 2008)
Missed depth & length of jobs recession



Sun Corridor projections – population assumptions

- Cohort-survival model
- Hispanic & non-Hispanic modeled separately
- Birth & death rates held constant
- Most population change from net migration, most of which from job growth

Sun Corridor projections – population change



Annual Change, Population

	Pessimistic	Likely	Optimistic
1980's	76.8	76.8	76.8
1990's	124.6	124.6	124.6
2001-07	146.3	146.3	146.3
2010	34.8	58.3	64.5
2015	125.2	156.4	189.2
2020	116.8	155.4	193.2
2025	122.9	164.4	212.3
2030	122.1	166.6	220.7
2035	124.4	172.9	234.5
2040	141.8	179.9	245.0

Sun Corridor projections – jobs growth assumptions

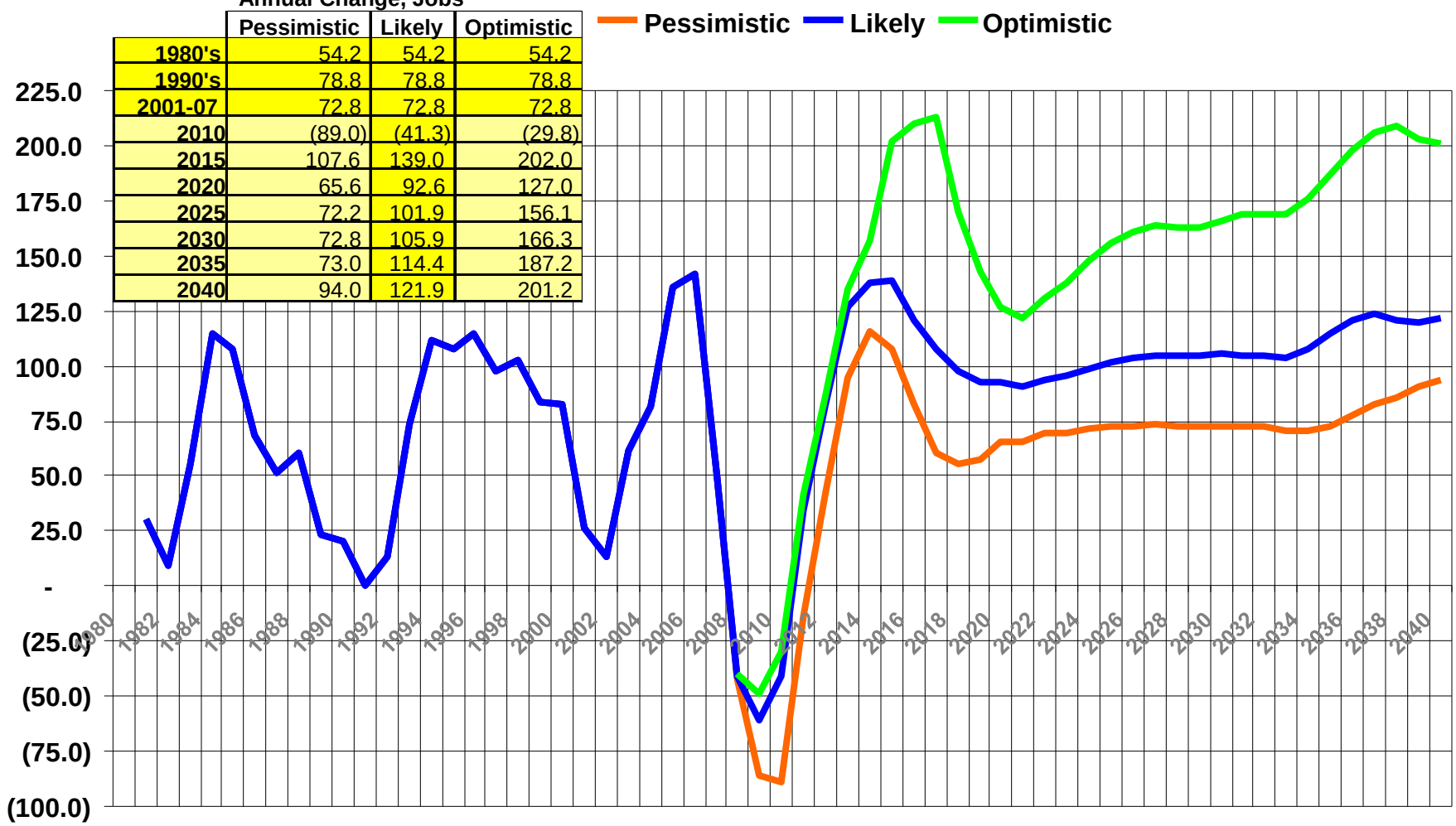
- Econometric model linked to C-S
  - Jobs drive non-retirement migration
- Public investments
  - Education
  - Infrastructure
- Prices
  - Housing prices
  - Gas prices at $4/gal by 2015

Sun Corridor projections – jobs

Jobs - Annual Change
Sun Corridor 1981-2040
(000's)

Annual Change, Jobs

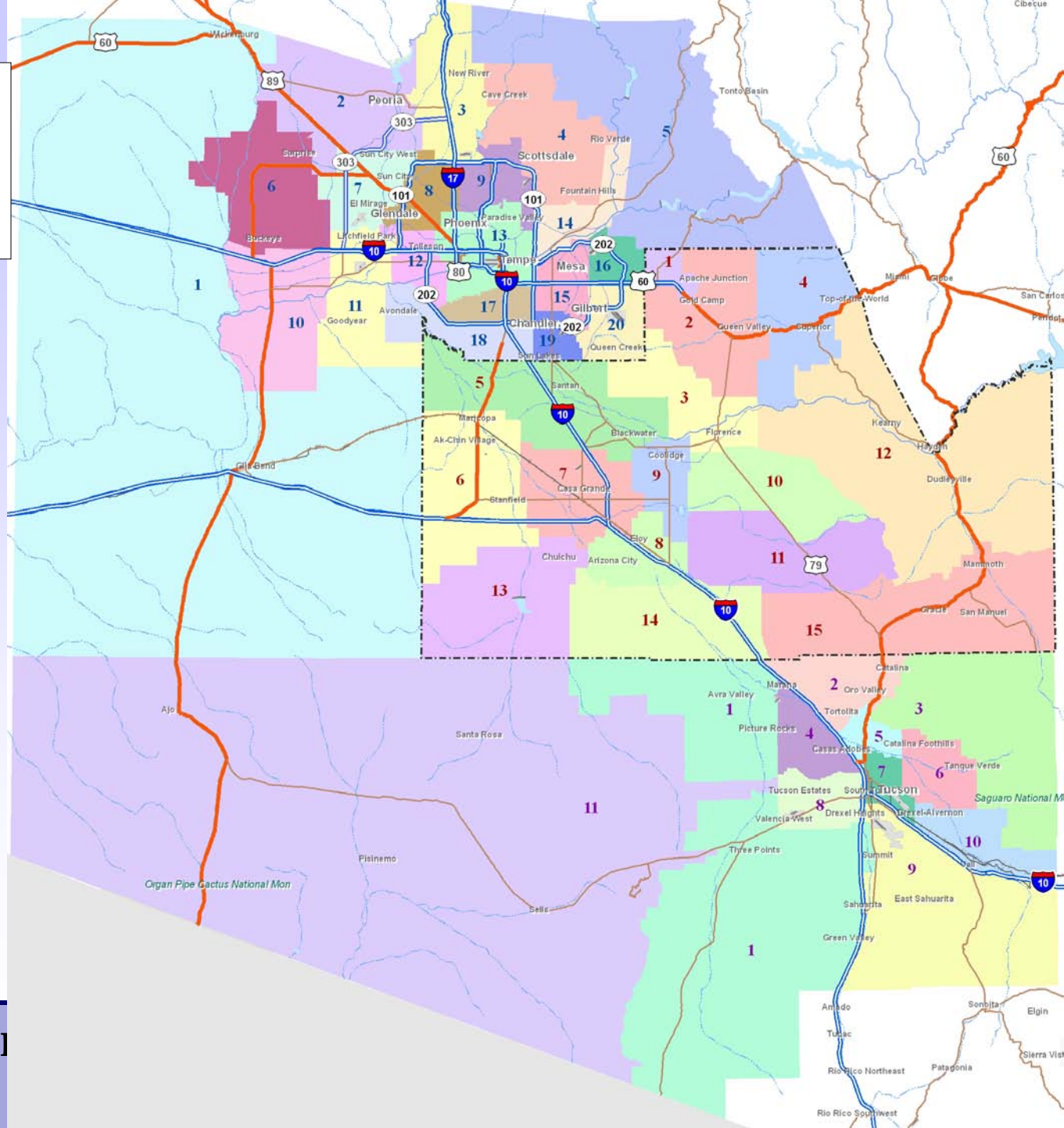
	Pessimistic	Likely	Optimistic
1980's	54.2	54.2	54.2
1990's	78.8	78.8	78.8
2001-07	72.8	72.8	72.8
2010	(89.0)	(41.3)	(29.8)
2015	107.6	139.0	202.0
2020	65.6	92.6	127.0
2025	72.2	101.9	156.1
2030	72.8	105.9	166.3
2035	73.0	114.4	187.2
2040	94.0	121.9	201.2



Sun Corridor
Total Population & Jobs
2000 to 2040

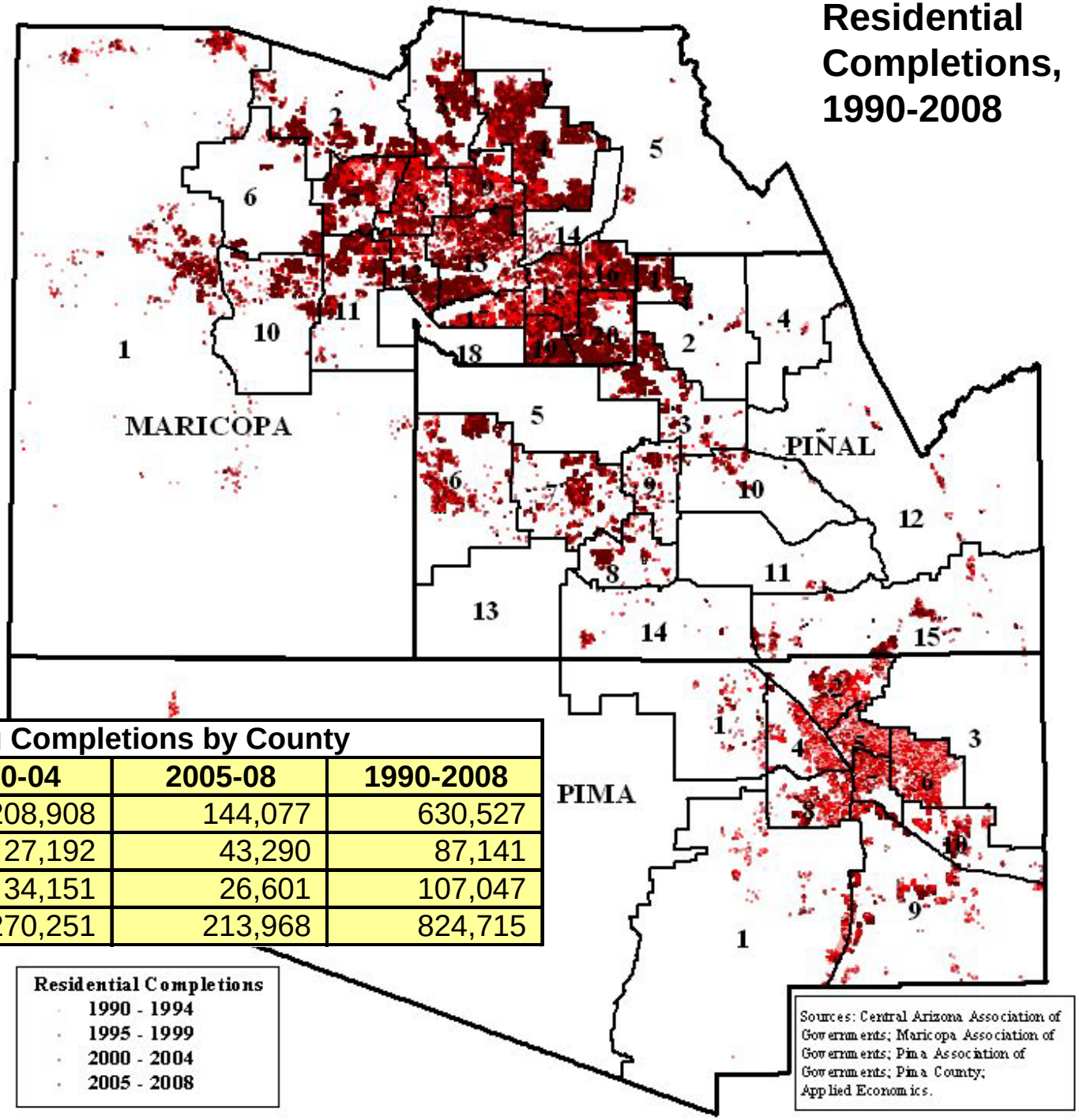
	Jobs			Population		
	Pessimistic	Likely	Optimistic	Pessimistic	Likely	Optimistic
2000	2,386	2,386	2,386	4,122	4,122	4,122
2005	2,704	2,704	2,704	4,817	4,817	4,817
2010	2,680	2,753	2,778	5,288	5,323	5,336
2015	3,026	3,274	3,400	5,796	5,970	6,046
2020	3,348	3,786	4,263	6,372	6,740	7,047
2025	3,696	4,266	4,957	6,974	7,539	8,057
2030	4,060	4,790	5,774	7,588	8,368	9,148
2035	4,419	5,325	6,644	8,196	9,201	10,272
2040	4,849	5,932	7,663	8,870	10,088	11,493

46 Market Areas
Maricopa – 20
Pinal – 15
Pima - 11



CENTRAL A
Serving Gila

Residential Completions, 1990-2008



Housing Completions by County			
	2000-04	2005-08	1990-2008
Maricopa	208,908	144,077	630,527
Pinal	27,192	43,290	87,141
Pima	34,151	26,601	107,047
Sun Corridor	270,251	213,968	824,715

CENTRAL A
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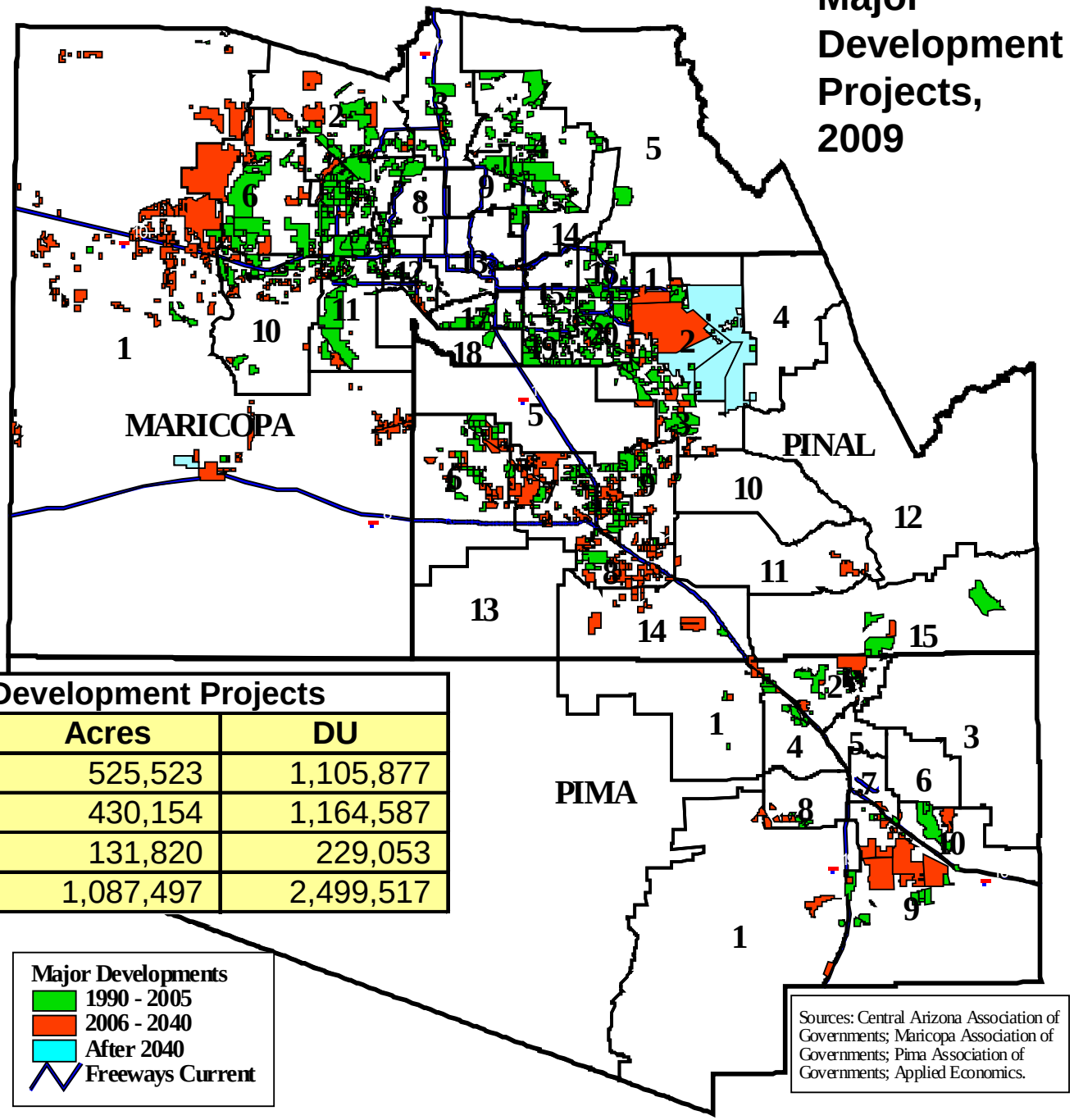
Major Development Projects, 2009



Major Development Projects		
	Acres	DU
Maricopa	525,523	1,105,877
Pinal	430,154	1,164,587
Pima	131,820	229,053
Sun Corridor	1,087,497	2,499,517

CENTRAL A
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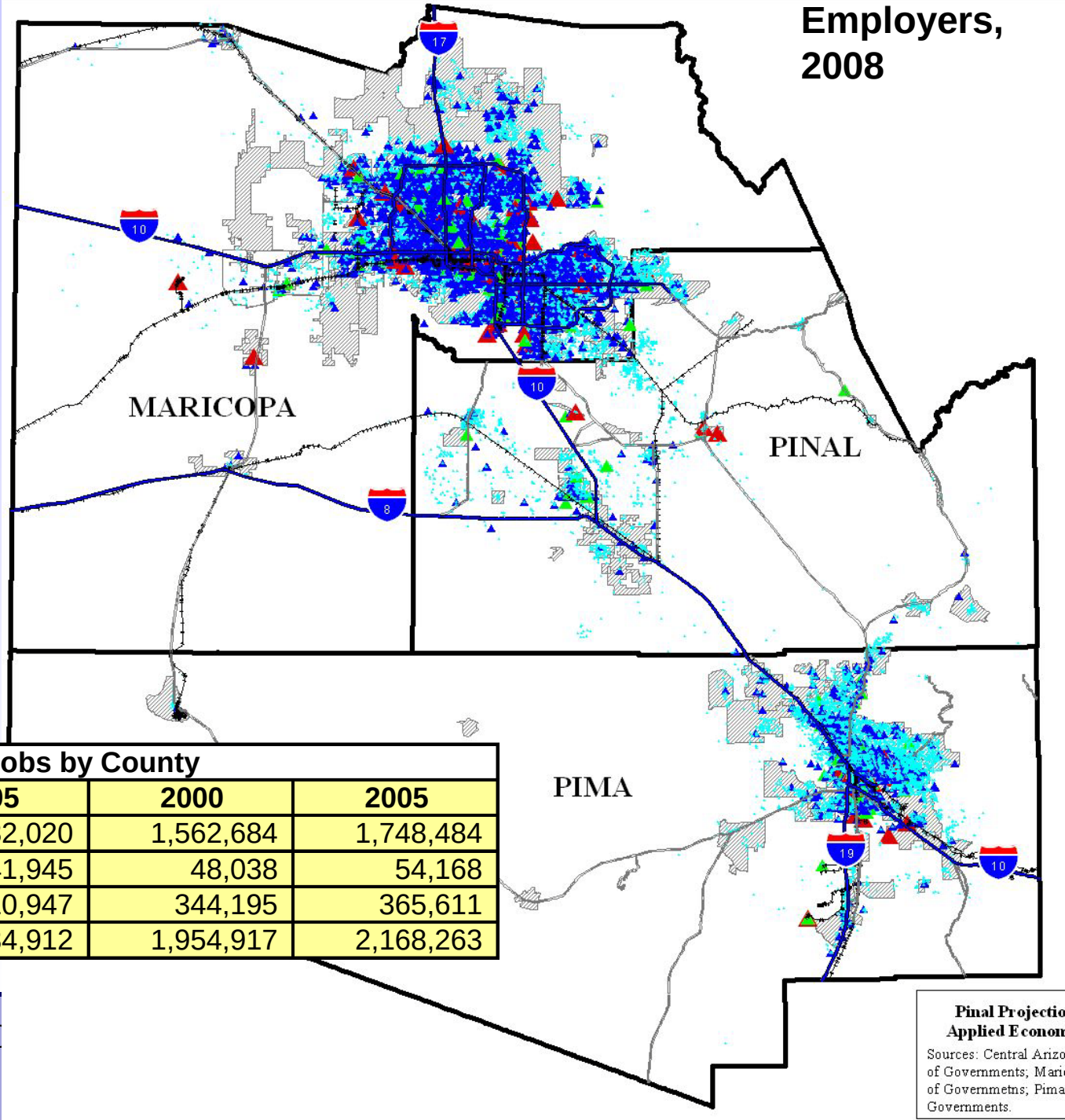
Employers, 2008



Jobs by County			
	1995	2000	2005
Maricopa	1,282,020	1,562,684	1,748,484
Pinal	41,945	48,038	54,168
Pima	310,947	344,195	365,611
Sun Corridor	1,634,912	1,954,917	2,168,263

CENTRAL A
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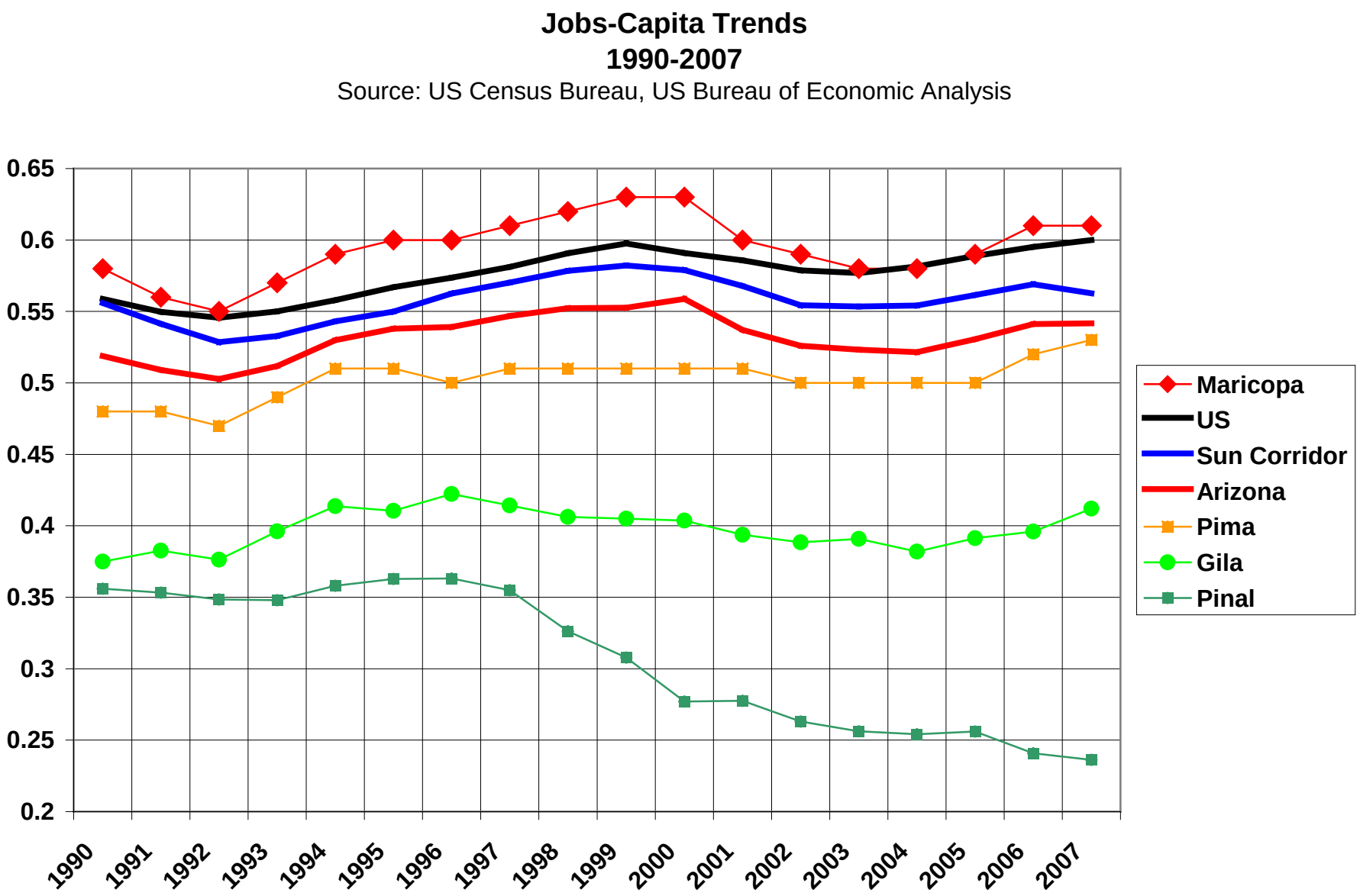
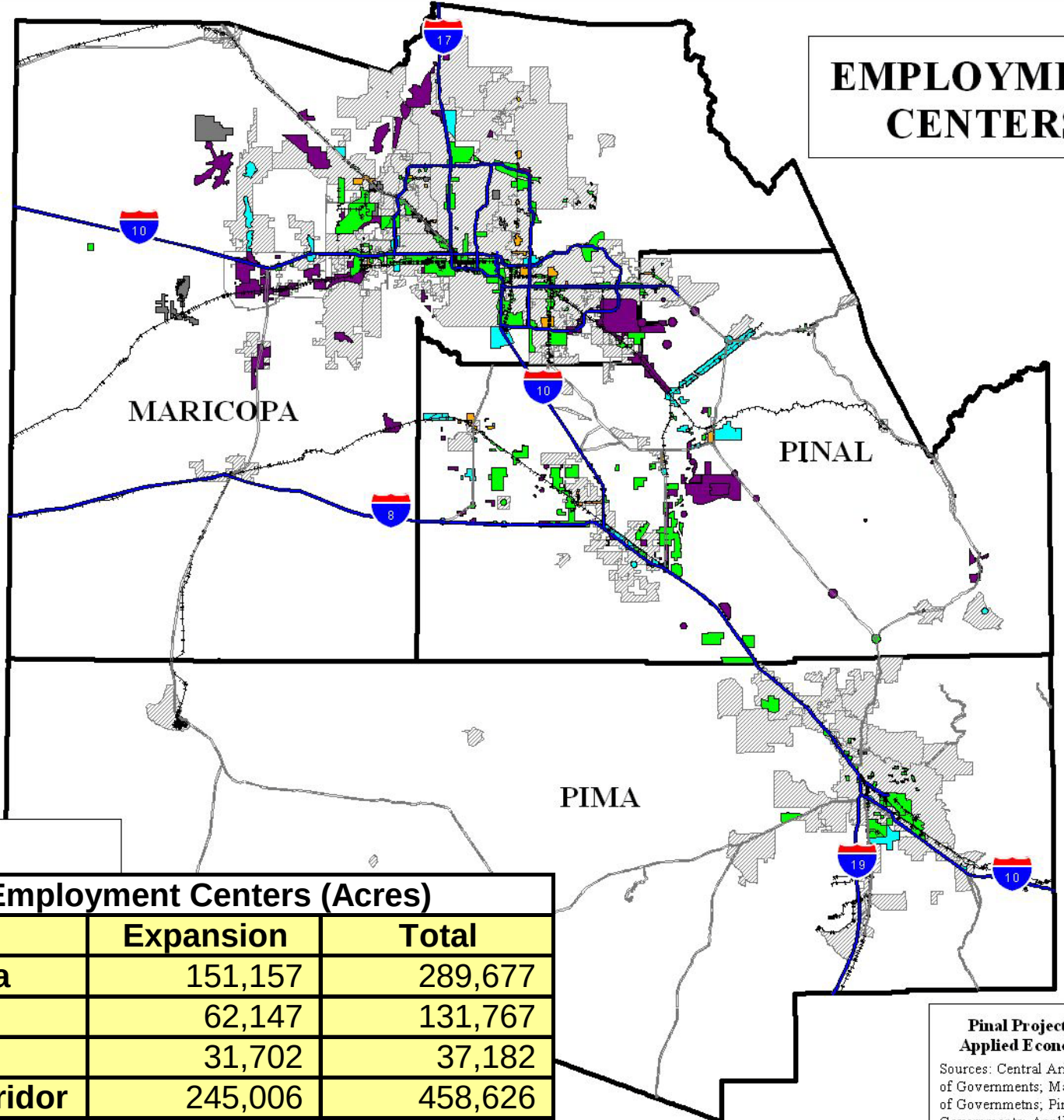
Concentration of jobs in the most urbanized counties



EMPLOYMENT CENTERS

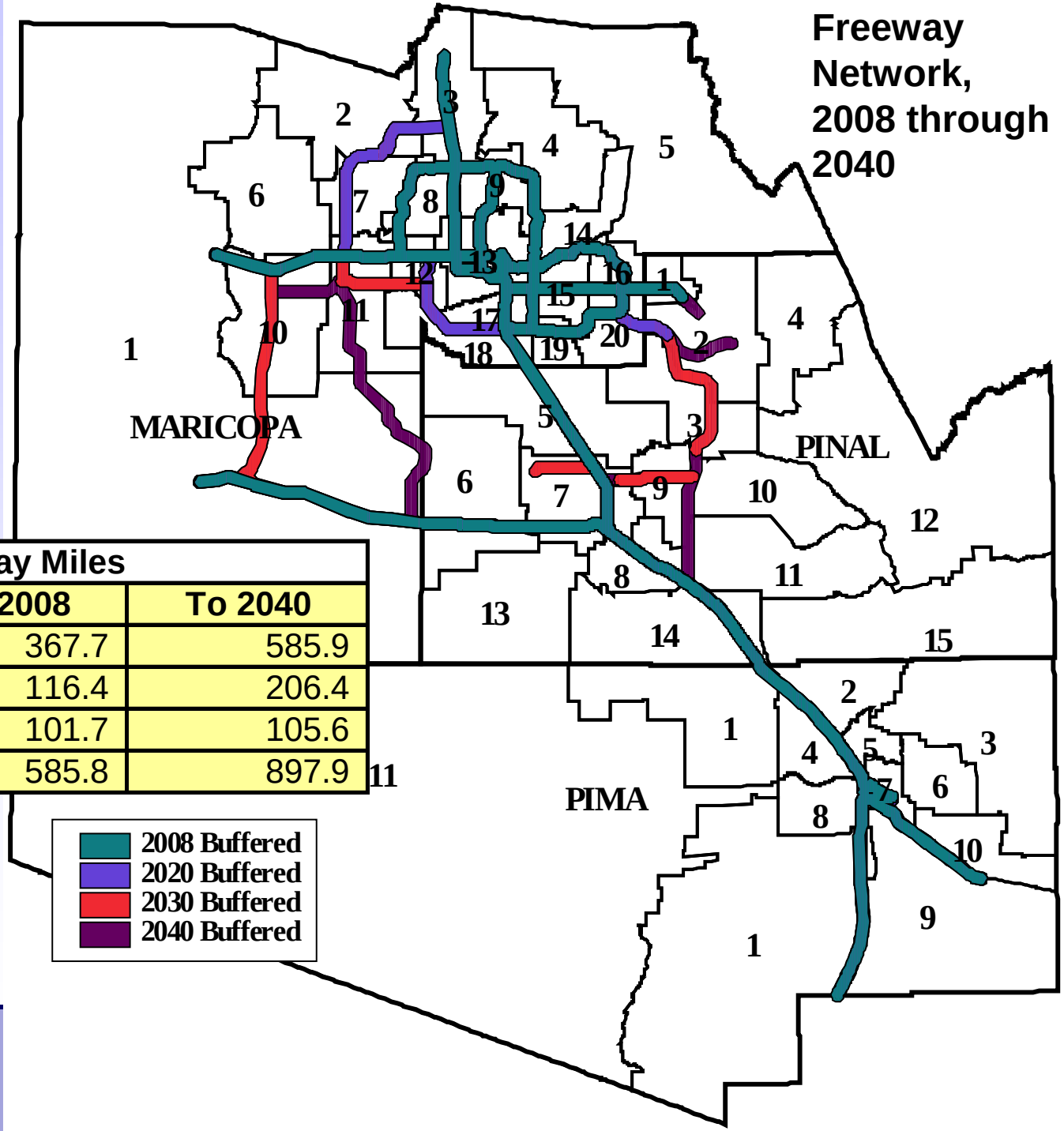


Employment Centers (Acres)		
	Expansion	Total
Maricopa	151,157	289,677
Pinal	62,147	131,767
Pima	31,702	37,182
Sun Corridor	245,006	458,626

Pinal Projection Study
Applied Economics, 2009

Sources: Central Arizona Association of Governments; Maricopa Association of Governmetns; Pima Association of

Freeway Network, 2008 through 2040



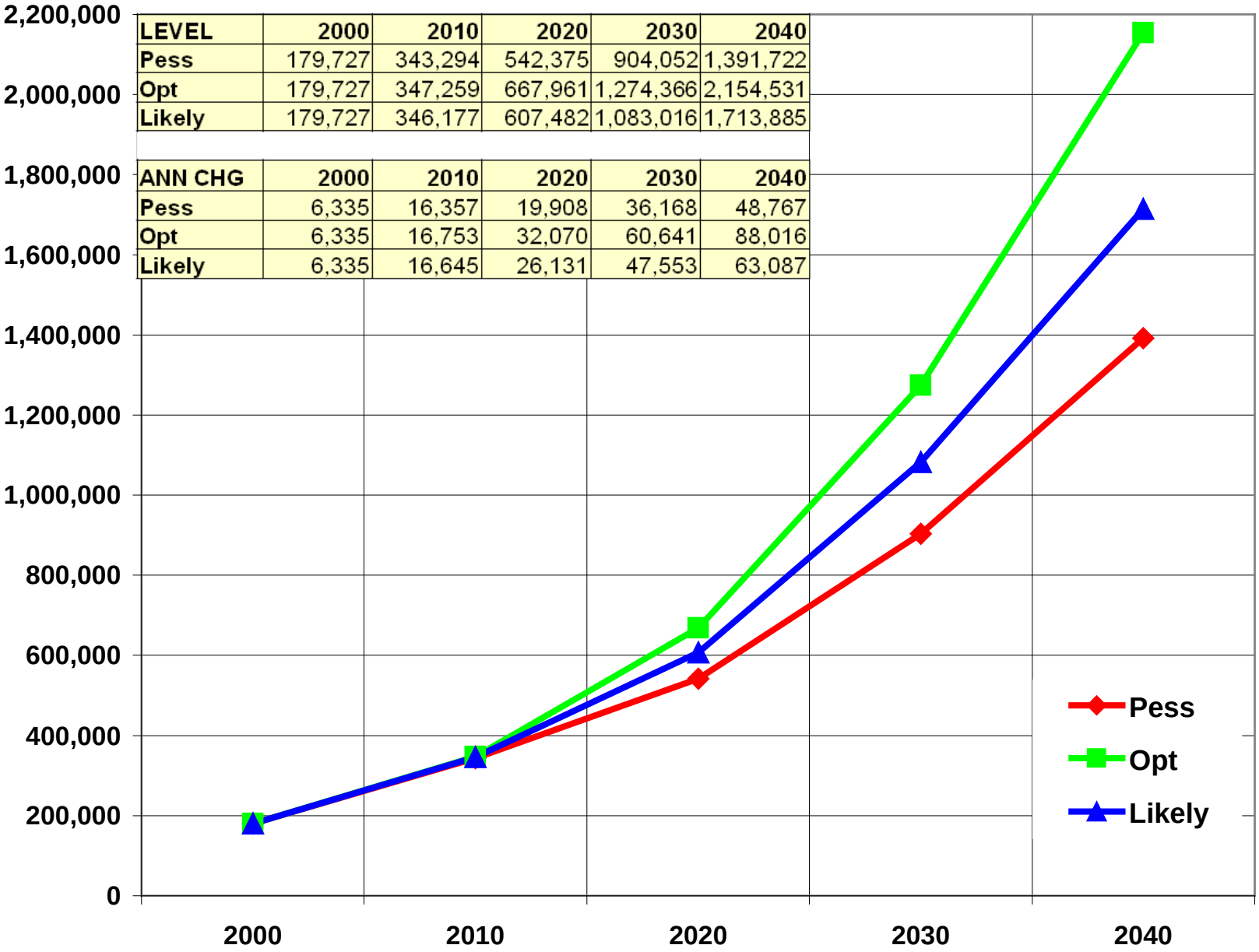
Freeway Miles		
	To 2008	To 2040
Maricopa	367.7	585.9
Pinal	116.4	206.4
Pima	101.7	105.6
Sun Corridor	585.8	897.9

CENTRAL A
Serving Gila

Pinal County population by scenario, 2000-2040

LEVEL	2000	2010	2020	2030	2040
Pess	179,727	343,294	542,375	904,052	1,391,722
Opt	179,727	347,259	667,961	1,274,366	2,154,531
Likely	179,727	346,177	607,482	1,083,016	1,713,885

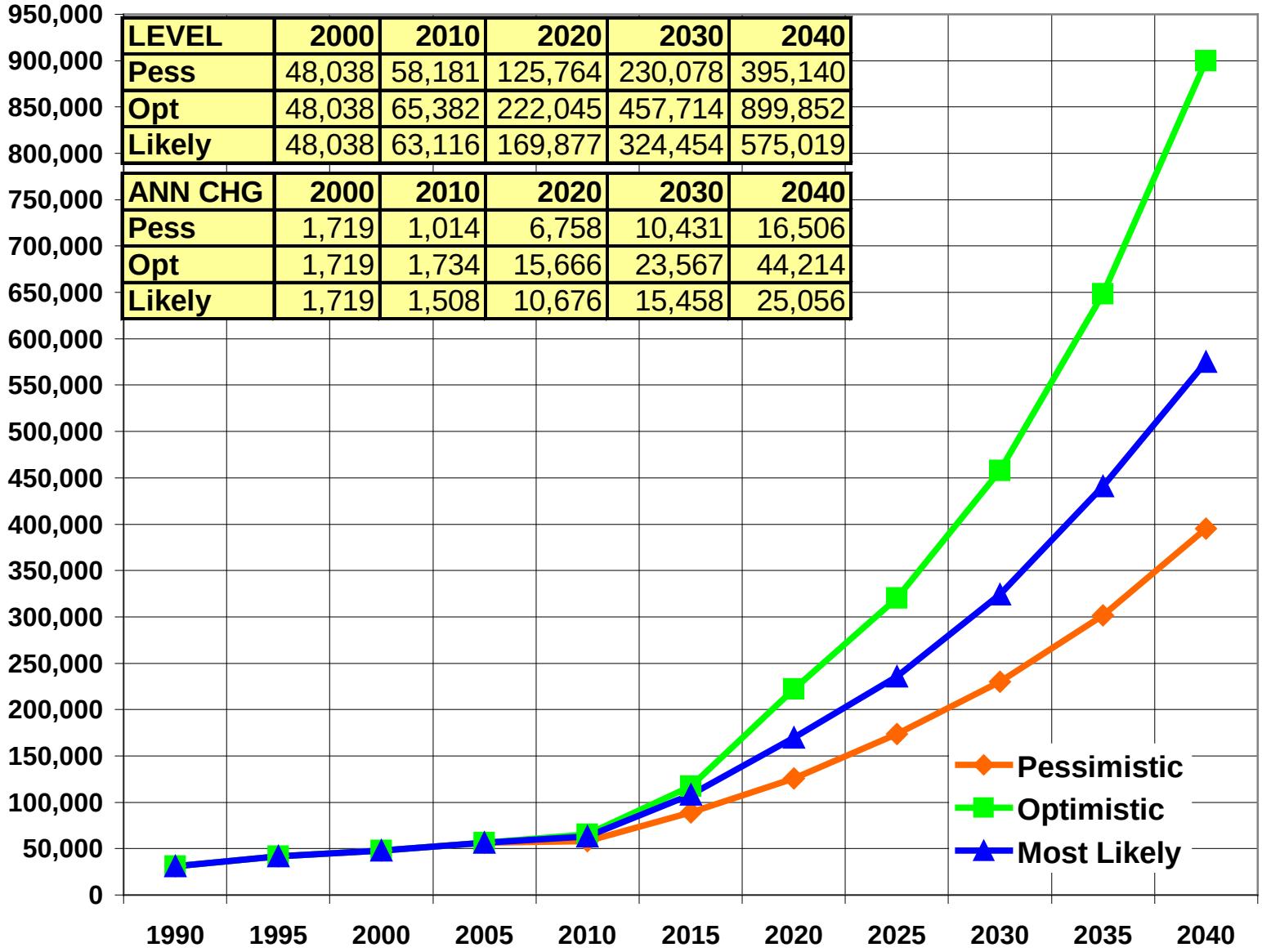
ANN CHG	2000	2010	2020	2030	2040
Pess	6,335	16,357	19,908	36,168	48,767
Opt	6,335	16,753	32,070	60,641	88,016
Likely	6,335	16,645	26,131	47,553	63,087



Pinal County employment projections

LEVEL	2000	2010	2020	2030	2040
Pess	48,038	58,181	125,764	230,078	395,140
Opt	48,038	65,382	222,045	457,714	899,852
Likely	48,038	63,116	169,877	324,454	575,019

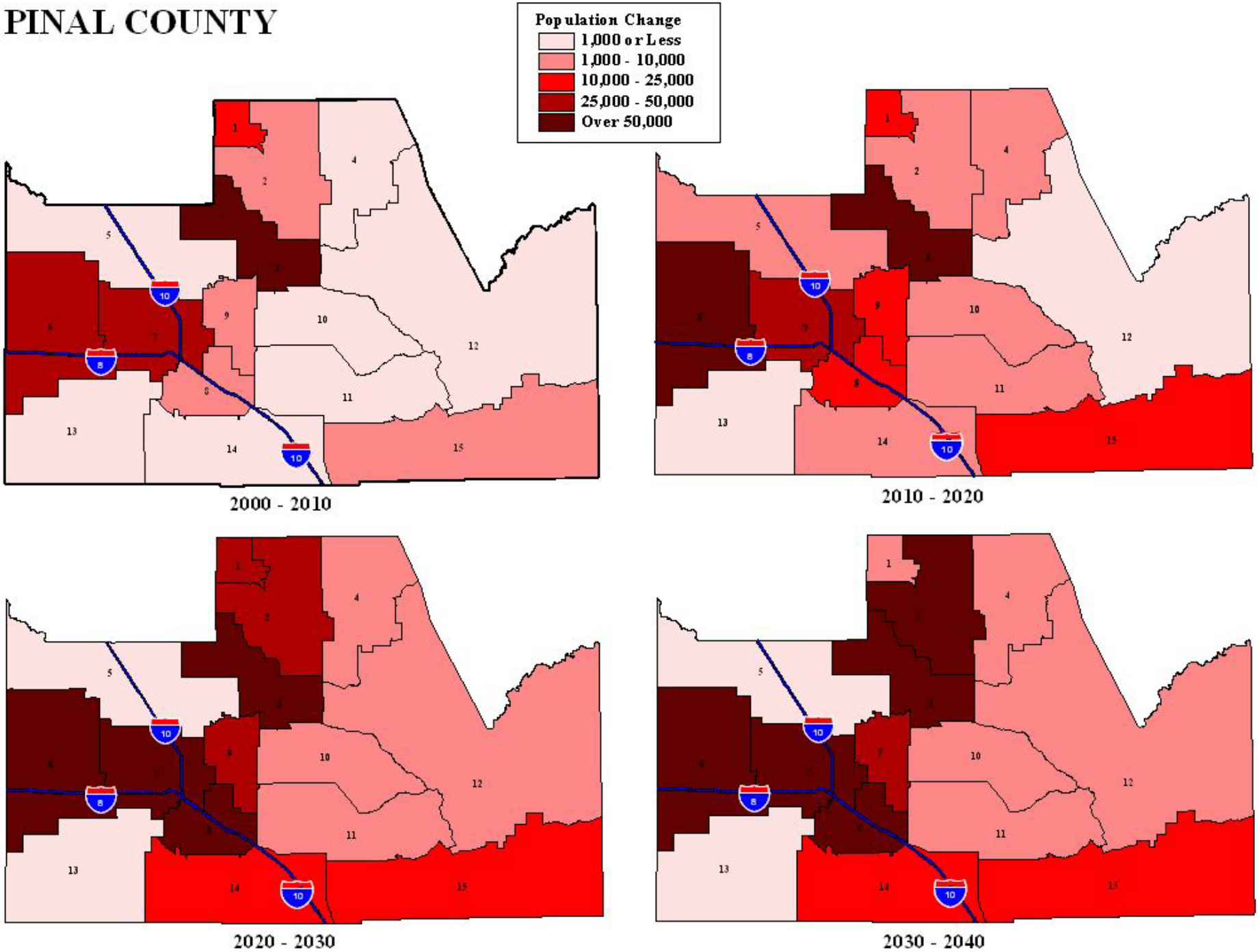
ANN CHG	2000	2010	2020	2030	2040
Pess	1,719	1,014	6,758	10,431	16,506
Opt	1,719	1,734	15,666	23,567	44,214
Likely	1,719	1,508	10,676	15,458	25,056



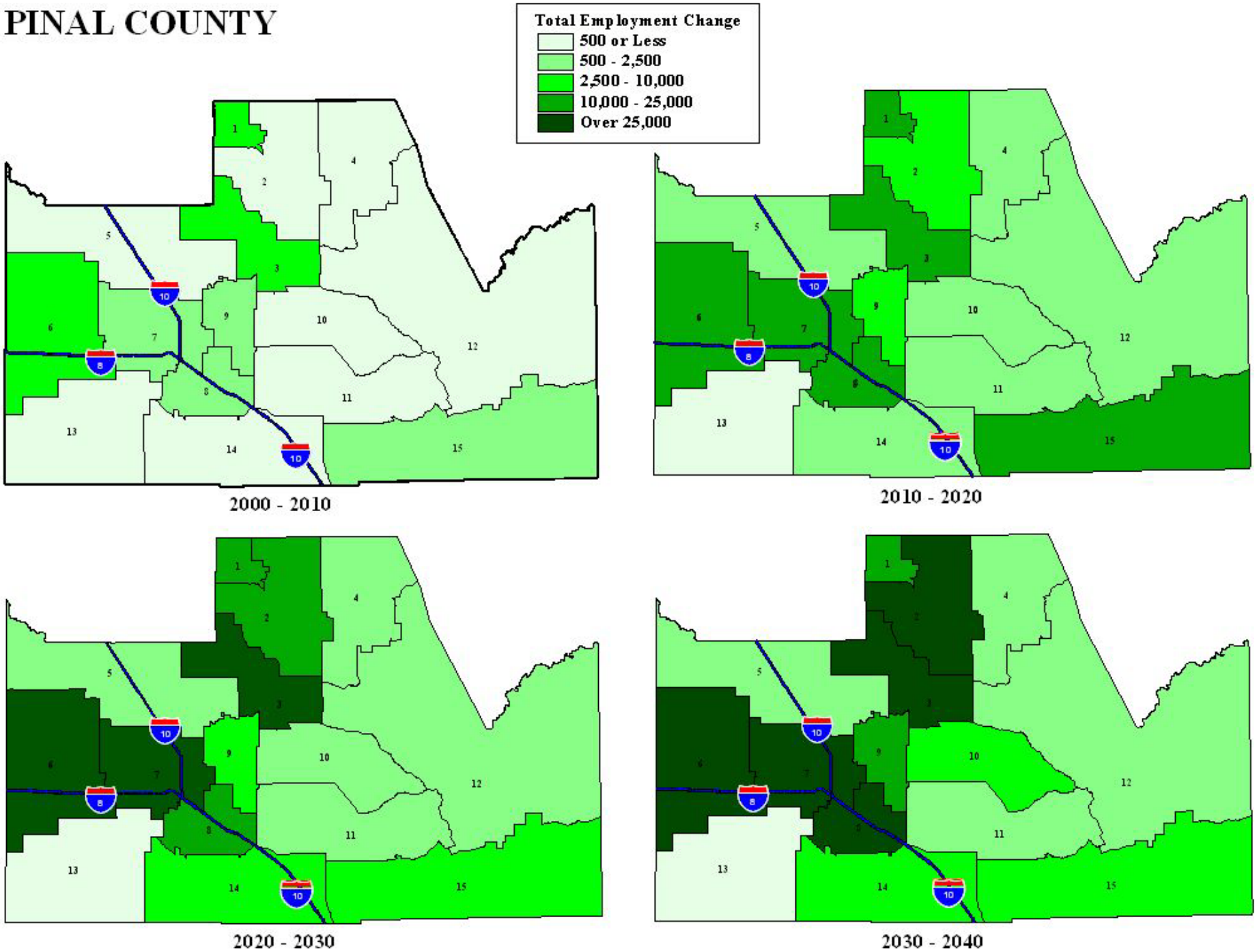
Control projections – Pinal County

Year	Total Population	Total Jobs	Population Change	Jobs Change
1990	*116,379*	*30,850*	*NA*	*NA*
1995	*133,229*	*41,945*	*16,850*	*11,096*
2000	*179,727*	*48,038*	*46,498*	*6,093*
2005	*256,404*	*56,196*	*76,677*	*8,158*
2010	346,177	63,116	89,773	6,920
2015	441,893	108,229	95,716	45,113
2020	607,482	169,877	165,589	61,648
2025	826,187	235,777	218,705	65,900
2030	1,083,016	324,454	256,829	88,677
2035	1,384,820	441,054	301,804	116,600
2040	1,713,885	575,019	329,065	133,965

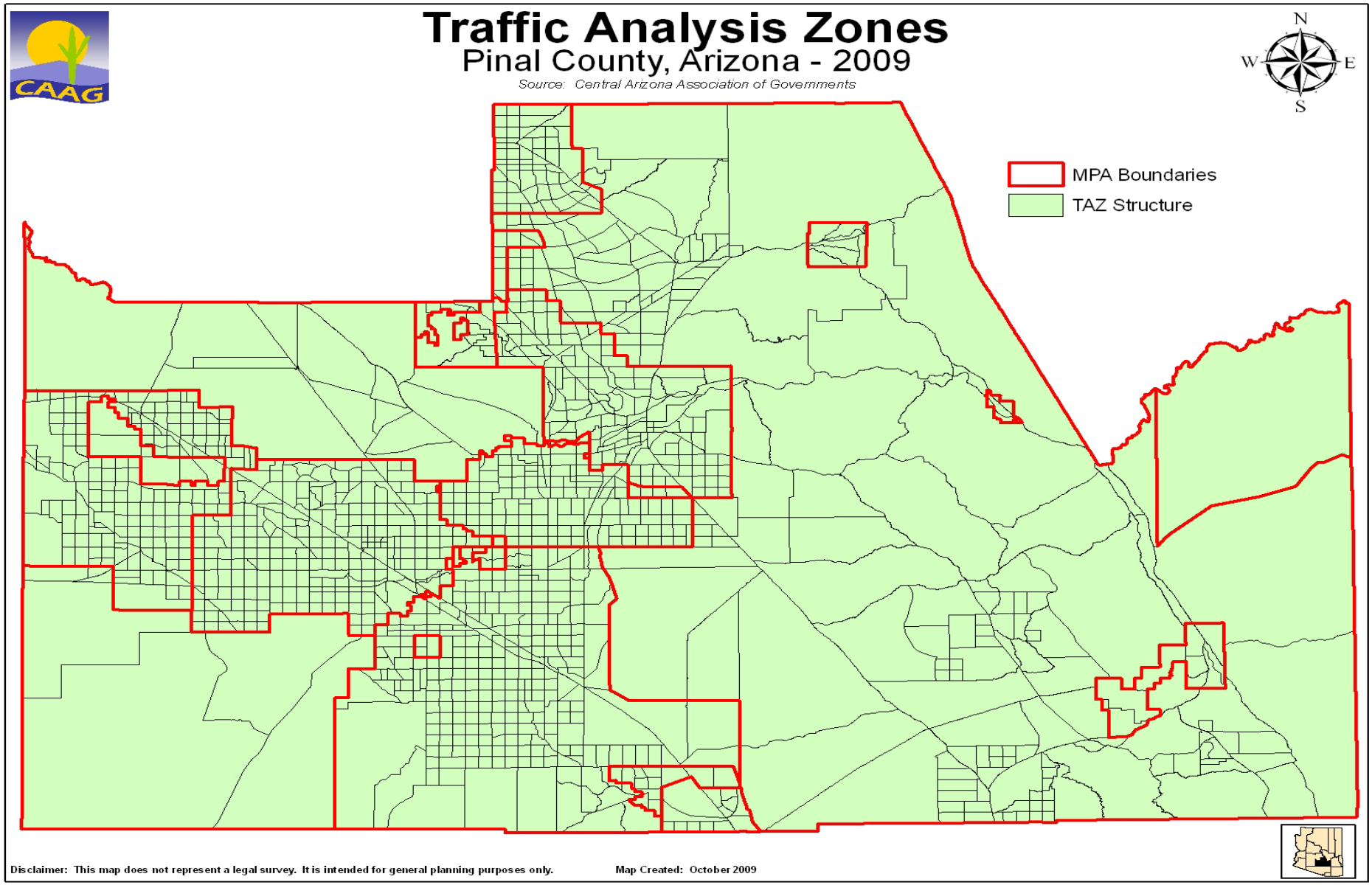
PINAL COUNTY



PINAL COUNTY



Final stage: MPA/TAZ projections, “most likely” scenario



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