

TO: Arizona Independent Redistricting Commission

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RE: Racially polarized voting analysis

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Summary of Methods: Racially Polarized Voting and District Performance

Because Arizona is covered by Section 5 of the Voting Rights Act, new legislative and congressional maps must receive preclearance from the Department of Justice. As part of our submission to DOJ we must provide evidence about the voting behavior of different ethnic groups. However, direct evidence is unavailable because of the secret ballot. Thus, methods of *ecological inference* are used to *estimate* (rather than determine) individual voting behavior from available precinct-level aggregated election results and from voting age population from the US Census.

In 1953, two methods of ecological inference were introduced -- the *method of bounds* (Duncan and Davis, 1953) and *ecological regression* (Goodman, 1953). A special case of the method of bounds is known as "homogeneous precinct analysis," which had been used in many court cases: this approach seeks out ethnically homogeneous precincts (100% black, 100% white, or 100% Hispanic) because for those precincts we know for certain the voting behavior of an ethnic group. The assumption behind this method is that the voting behavior observed in homogeneous precincts is identical to that in other areas. The advantage of this method is that it yields completely certain information about some subgroups of voters; the disadvantage is that the relatively few who live in homogeneous precincts may turnout in different numbers and vote for different candidates in starkly different ways than the vast majority of the population who live in at least partially heterogeneous areas.

The second method of ecological inference -- ecological regression -- ignores the information revealed by the method of bounds and its special case of homogeneous precinct analysis. Instead, ecological regression gather hints from statistical information across all precincts. For example, if we find that in areas with more African Americans that more votes are cast for the Democrats, then we may infer that it is the African Americans who are voting for the Democrats. The advantage of this approach is that it uses some information from all precincts. The disadvantage is that the information can be highly misleading: For example, also consistent with the evidence would be that the whites who live in areas with many blacks are the ones who are producing more votes for the Democrats. In fact, as an indication of the substantial problems with this method, ecological regression, unlike the method of bounds, regularly gives impossible answers -- such as the percent of Hispanics voting for the Democrats of 160% or -54%.

The method of bounds (or homogeneous precinct analysis) and ecological regression dominated the academic literature and courtroom expert testimony from 1953 until 1997 when King's (1997) EI approach was introduced. King's approach was the first to combine the deterministic information from the method of bounds with the statistical information from ecological regression into a single set of estimates. Thus, it uses the statistical information from all precincts, the certain information from homogeneous precincts, and other deterministic information known for certain from other precincts. Impossible estimates are never produced by this methodology, and all information from all precincts are used in the analysis. Like any indirect method of revealing information that the secret ballot hides, EI is also uncertain to a degree, but it uses more information than any other approach. Since 1997, a

variety of other methods have been developed in the academic literature by King and others, virtually all of which now follow King's practice of including deterministic and statistical information in the same model. For example, Rosen, Jaing, King, and Tanner (2001) extends King's method to arbitrarily large numbers of ethnic groups and candidates; we use this method in our work as well as King's original method. Some of these other methods have been collected in the edited volume by King, Rosen, and Tanner (2004).

In practice, when we have data we can use to validate the methods, ecological regression and homogeneous precinct analysis tend to be fairly inaccurate most of the time. Studies have shown that uncertainty remains with King's and subsequent methods, but the estimates are normally superior. Differences among the methods that do include both deterministic and statistical information are, in comparison, relatively minor.

In this case, we use these newer methods to give estimates of the proportion of each ethnic group that votes and, among those voting, that votes for each of the candidates. We have run analyses with each candidate separately as well as by grouping together in a pseudo-party all candidates of a particular race. We also use King's "tomography plots" and other diagnostic methods that help us discern when adjustments in the methods need to be made.

And finally, we have used the results from the ecological inference analysis to measure what we call *district performance*, which is the percent of the voting age population which a given ethnic group needs in order to receive 50, 55, etc., percent of the vote. We do this under two alternative assumptions. The first, is that the voters moved into the district in question will have the same voting behavior as the other voters in the same district, and second that the voters moved into the district in question will have the same voting behavior as voters from adjacent districts. Performance tables and the tomographic charts are available separately.

Conveying Information and Uncertainty through "Tomography Plots"

To convey the degree of uncertainty in the estimates of turnout and vote share, we use *tomography plots* to accompany the tables (see King, 1997). These plots give *all* information in the data without making any statistical modeling assumptions, as well as summarizing available the statistical information in the data. One plot is needed for each estimate in the corresponding table. For example, the tomography plot below analyzes the information and uncertainty in the data and our analyses with respect to the percent of Whites (horizontally) and non-Whites (vertically) who vote for the Hispanic candidate in District 7, in each precinct. If this information were known for a precinct, it would appear in the plot as a single dot, and the set of precincts as a set of dots. Because of the secret ballot, we cannot know the exact point with precision; what the plot shows is that the information hidden from us by the secret ballot is directly quantifiable: it turns each precinct's dot into a line. We can think of the dot as being smeared into a line. That smearing represents a loss of information, but much information is retained (and that is uniquely captured by our methods of ecological inference).

For example, consider the bold green line in the plot below. We know, based on the observed data, that the point in this plot (representing where the White and non-White vote share is) for this precinct must be some point on the line, but we do not know exactly where on the line this point falls. For the bold green line, we know that the fraction of Whites that vote for the Hispanic candidate *must* fall somewhere between 0.03 (3 percent) and 0.08 (8 percent). We get these numbers by projecting the line downwards to the horizontal axis. If instead we project the line to the left (vertical) axis, we can see that, for this particular precinct, the range of possible values for the percent of non-Whites voting for the Hispanic candidate could be anywhere from 0% to 100%. That’s better than the method of ecological regression, which often gives answers outside that interval, but still we can see that this precinct is informative with respect only about Whites, not non-Whites. In this way, each line captures exactly what we do and do not know about the voting behavior in each precinct. Our statistical method uses all this available information. Lines that are relatively steep in this particular tomography plot, convey a lot of information about the percent of Whites that vote for the Hispanic candidate. Lines that are relatively flat convey a great deal of information about the percent of non-Whites voting for the Hispanic candidate. Lines that cut off the top right or bottom left corner of the plot are informative about both quantities.

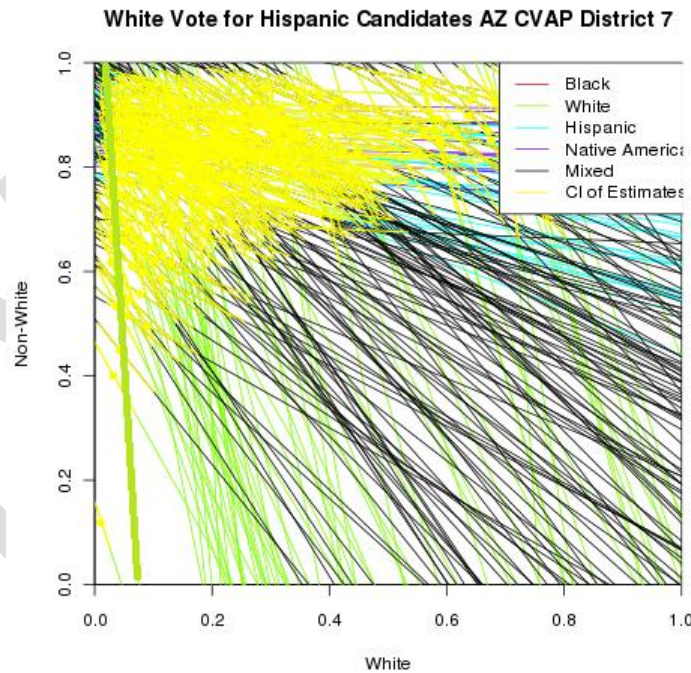


Figure 1: 2010 House of Representatives General Election

The tomography plots we have done as part of our analysis reflect what we know about the racial composition of each precinct. If a precinct contains more than 65% of a particular racial group (which we use as an arbitrary cutoff for graphical clarity), then the line on the tomography plot that

corresponds to that precinct is color coded to represent the majority group (see the legend in the plot). If no groups comprise 65% or more of the precinct, then no color code is assigned.

Finally, the tomography plots also reflect the results of the ecological inference statistical estimation. The point estimate (i.e., the exact point on the line that we estimate as the vote share for each group) as well as the confidence intervals are colored yellow. Taken together, these describe the overall estimate of how racial groups voted in the district as a whole. For example, in the tomography plot for District 7 we estimate that white voters voted for the Hispanic candidate at a substantially lower rate than did their non-white counterparts in the district.

The point of the tomography plots is to convey the overall uncertainty and certainty in the available data, and how our statistical estimator uses that information to produce an estimate. The uncertainty estimates here are far more informative and information rich than sampling based confidence intervals or standard errors.

Technical notes: Population counts

The voting age population by race includes individuals who identify themselves as belonging to multiple racial categories. Individuals who indicate they are White and another race are counted as the other race. These numbers will differ slightly from Census numbers showing only individuals belonging just to the race in question.

Citizen voting age population counts are based on the estimates provided by the Census in the American Community Survey. Hispanic voter registration counts are based on the number of registered voters who are 50% or more likely to be Hispanic based on the Census Bureau's analysis of surnames of respondents to the 2000 Census.

Existing Congressional Districts Analysis

Overview

In its preclearance of the 2001 congressional map, DOJ determined that there were two benchmark effective minority congressional districts, CD 4 in Maricopa County, and CD 7 in Southern AZ.

There are significant differences in voting behavior between the two districts. In CD 4, Hispanic voters turnout at a considerably lower rate than they do in CD 7. However, there is less polarization of the vote in CD 4. Analysis confirms that these remain effective majority Hispanic districts.

The turnout and candidate support estimates were produced by Dr. King using his Ecological Inference technique. Although estimates are shown for all racial categories, estimates for groups making up small portions of the district's population are less reliable and should be viewed with caution.

2010 CD 4

Counties and voting age population from each county:

- Maricopa (469,392)

The district's 2010 Census population is 698,314 with a deviation of -11,930 from the ideal district population of 710,244. Of these, 446,159 are Hispanic (63.9% of the district's total population), 14,671 are non-Hispanic Native American (2.1% of the district's total population), 60,063 are non-Hispanic African-American (8.6% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 548,142 (78.5% of the district's total population).

The district's Voting Age Population is 269,657 Hispanic 57.4% of the district's Voting Age Population), 11,381 non-Hispanic Native American (2.4% of the district's Voting Age Population), 43,308 non-Hispanic African-American (9.2% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 340,531 are minorities (72.5% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 140,053 are Hispanic (42.1% of the district's total Citizen Voting Age Population). Based a Hispanic surname match, 36.5% of the district's registered voters are Hispanic.

Although Hispanic turnout in the 4th CD is significantly lower than non-Hispanic White turnout, the 4th is an effective Hispanic district where Hispanic voters are able to elect their candidate of choice. In both 2008 and 2010, Representative Pastor won with comfortable margins, carrying both the White and the Hispanic vote. Although this may be attributed to Pastor's incumbent status and strong showing overall, the district's performance was similar in the 2010 election for Mine Inspector where the Hispanic candidate won comfortable majorities of both the White and Hispanic vote, despite winning just 43% of the major party vote statewide.

The charts below show the detailed estimates of turnout and candidate support by race and origin based on an ecological inference analysis of the district's population and voting patterns.

US House of Representatives 2008: District 4

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.53	0.68	0.275	0.042	0.274
Hispanic	0.12	0.87	0.087	0.045	0.575
Native American	0.45	0.64	0.149	0.208	0.022
Black	0.33	0.78	0.127	0.095	0.090
Other	0.39	0.35	0.365	0.284	0.039
Total Votes	0.27	0.72	0.212	0.068	NA

US House of Representatives 2010: District 4

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.393	0.61	0.366	0.029	0.274
Hispanic	0.086	0.86	0.097	0.044	0.575
Native American	0.332	0.65	0.167	0.188	0.022
Black	0.212	0.73	0.180	0.087	0.090
Other	0.317	0.36	0.406	0.237	0.039
Total Votes	0.196	0.67	0.275	0.057	NA

Mine Inspector 2010: District 4

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.39	0.58	0.42	0.0016	0.274
Hispanic	0.09	0.89	0.11	0.0034	0.575
Native American	0.28	0.83	0.16	0.0185	0.022
Black	0.17	0.83	0.16	0.0094	0.090
Other	0.24	0.44	0.55	0.0155	0.039
Total Votes	0.19	0.69	0.31	0.0024	NA

2010 CD 7

Counties and voting age population from each county:

- Pima (273,058)
- Yuma (140,566)
- Maricopa (109,392)
- Pinal (41,698)
- Santa Cruz (28,709)
- La Paz (16,786)

The district's 2010 Census population is 855,769 with a deviation of 145,525 from the ideal district population of 710,244. Of these, 479,014 are Hispanic (56.0% of the district's total population), 36,749 are non-Hispanic Native American (4.3% of the district's total population), 31,450 are non-Hispanic African-American (3.7% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 577,107 (67.4% of the district's total population).

The district's Voting Age Population is 306,518 Hispanic (50.2% of the district's Voting Age Population), 26,890 non-Hispanic Native American (4.4% of the district's Voting Age Population), 23,256 non-Hispanic African-American (3.8% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 374,302 are minorities (61.3% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 191,892 are Hispanic (39.9% of the district's total Citizen Voting Age Population). Based a Hispanic surname match, 38.7% of the district's registered voters are Hispanic.

The 7th CD shows racially polarized voting, with Hispanic voters often supporting a different candidate from white voters. Hispanic turnout as a percent of voting age population is lower than the turnout among non-Hispanic White voters, but it is higher than it is in the 4th CD. The 7th CD is an effective Hispanic district where Hispanic voters have the ability to elect their candidate of choice.

The charts below show the detailed estimates of turnout and candidate support by race and origin based on an ecological inference analysis of the district's population and voting patterns.

US House of Representatives 2008: District 7

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.43	0.46	0.520	0.025	0.387
Hispanic	0.24	0.88	0.097	0.022	0.502
Native American	0.28	0.85	0.112	0.039	0.041
Black	0.21	0.50	0.377	0.124	0.036
Other	0.43	0.49	0.188	0.318	0.034
Total Votes	0.32	0.63	0.328	0.040	NA

US House of Representatives 2010: District 7

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.36	0.29	0.67	0.035	0.387
Hispanic	0.19	0.79	0.17	0.037	0.502
Native American	0.18	0.78	0.14	0.086	0.041
Black	0.20	0.52	0.28	0.193	0.036
Other	0.32	0.43	0.20	0.374	0.034
Total Votes	0.26	0.50	0.44	0.056	NA

Mine Inspector 2010 - District 7

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.36	0.36	0.64	0.00077	0.387
Hispanic	0.19	0.90	0.10	0.00120	0.502
Native American	0.17	0.87	0.12	0.00934	0.041
Black	0.14	0.52	0.47	0.01384	0.036
Other	0.18	0.67	0.32	0.01253	0.034
Total Votes	0.25	0.59	0.41	0.00034	NA

Draft Congressional Districts Analysis

Overview

The draft congressional map creates two majority Hispanic districts, the same number as in the existing map. As is the case in the existing CDs, Hispanic turnout is lower in the Maricopa County district, but polarization is less. In the southern district there is more polarization, but Hispanic voters turnout at a higher rate. In both districts, Hispanic voters have the opportunity to elect their candidate of choice.

The turnout and candidate support estimates were produced by Dr. King using his Ecological Inference technique. Although estimates are shown for all racial categories, estimates for groups making up small portions of the district's population are less reliable and should be viewed with caution.

DRAFT

Draft CD 3

Counties and voting age population from each county:

- Pima (221,079)
- Maricopa (156,751)
- Yuma (86,748)
- Santa Cruz (32,860)
- Pinal (343).

The district's 2010 Census population is 710,224 with a deviation of 0 from the ideal district population of 710,244. Of these, 428,046 are Hispanic (60.3% of the district's total population), 22,349 are non-Hispanic Native American (3.1% of the district's total population), 27,272 are non-Hispanic African-American (3.8% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 501,192 (70.6% of the district's total population).

The district's Voting Age Population is 273,046 Hispanic 54.9% of the district's Voting Age Population), 16,679 non-Hispanic Native American (3.4% of the district's Voting Age Population), 20,233 non-Hispanic African-American (4.1% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 324,059 are minorities (65.1% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 170,452 are Hispanic (44.7% of the district's total Citizen Voting Age Population). Based on a Hispanic surname match, 42.1% of the districts registered voters are Hispanic.

Draft CD shows racially polarized voting in the elections for Congress in 2008 and 2010, and in the race for Mine Inspector in 2010, with Hispanic and White voters supporting different candidates. The Hispanic vote was sufficient elect their community's candidate of choice.

The charts below show the detailed estimates of turnout and candidate support by race and origin based on an ecological inference analysis of the district's population and voting patterns.

US House of Representatives 2008: Draft District 3

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.48	0.45	0.527	0.020	0.347
Hispanic	0.23	0.89	0.087	0.022	0.551
Native American	0.35	0.87	0.085	0.042	0.031
Black	0.23	0.51	0.369	0.126	0.038
Other	0.46	0.52	0.186	0.298	0.033
Total Votes	0.33	0.64	0.325	0.037	NA

US House of Representatives 2010: Draft District 3

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.40	0.32	0.64	0.031	0.347
Hispanic	0.18	0.81	0.16	0.031	0.551
Native American	0.25	0.77	0.14	0.092	0.031
Black	0.20	0.49	0.28	0.232	0.038
Other	0.32	0.41	0.23	0.357	0.033
Total Votes	0.26	0.53	0.42	0.052	NA

Mine Inspector 2010: Draft District 3

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.40	0.37	0.629	0.00089	0.347
Hispanic	0.17	0.92	0.079	0.00125	0.551
Native American	0.23	0.90	0.087	0.00966	0.031
Black	0.14	0.58	0.405	0.01822	0.038
Other	0.15	0.63	0.350	0.01864	0.033
Total Votes	0.25	0.60	0.394	0.00071	NA

DRAFT

Draft CD 7

Counties and voting age population from each county:

- Maricopa (474,662)

The district's 2010 Census population is 710,224 with a deviation of 0 from the ideal district population of 710,244. Of these, 453,613 are Hispanic (63.9% of the district's total population), 13,689 are non-Hispanic Native American (1.9% of the district's total population), 60,503 are non-Hispanic African-American (8.5% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 556,660 (78.4% of the district's total population).

The district's Voting Age Population is 273,582 Hispanic 57.6% of the district's Voting Age Population), 10,610 non-Hispanic Native American (2.2% of the district's Voting Age Population), 43,216 non-Hispanic African-American (9.1% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 344,507 are minorities (72.6% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 144,011 are Hispanic (42.3% of the district's total Citizen Voting Age Population). Based a Hispanic surname match, 37.0% of the district's registered voters are Hispanic.

Hispanic and Non-Hispanic White candidates in this district generally support the same candidates, although to differing degrees. The district's Hispanic population has consistently been able to elect their candidate of choice.

The charts below show the detailed estimates of turnout and candidate support by race and origin based on an ecological inference analysis of the district's population and voting patterns.

US House of Representatives 2008: Draft District 7

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.54	0.63	0.337	0.030	0.275
Hispanic	0.12	0.87	0.082	0.045	0.575
Native American	0.43	0.64	0.155	0.208	0.020
Black	0.34	0.80	0.113	0.088	0.089
Other	0.38	0.33	0.360	0.307	0.041
Total Votes	0.27	0.70	0.243	0.062	NA

US House of Representatives 2010: Draft District 7

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.401	0.58	0.39	0.028	0.275
Hispanic	0.091	0.85	0.11	0.047	0.575
Native American	0.379	0.70	0.15	0.156	0.020
Black	0.196	0.71	0.19	0.102	0.089
Other	0.300	0.35	0.41	0.244	0.041
Total Votes	0.199	0.65	0.29	0.057	NA

Mine Inspector 2010: Draft District 7

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.396	0.54	0.46	0.0015	0.275
Hispanic	0.093	0.89	0.11	0.0032	0.575
Native American	0.258	0.84	0.14	0.0232	0.020
Black	0.175	0.85	0.14	0.0089	0.089
Other	0.222	0.50	0.49	0.0149	0.041
Total Votes	0.192	0.67	0.33	0.0023	NA

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Existing Legislative Districts Analysis

Overview

As Bruce Adelson previously advised the Commission, during the preclearance process last decade, DOJ determined that Arizona had 9 benchmark effective majority-minority legislative districts: 2, 13, 14, 15, 16, 23, 25, 27 & 29. An additional district, LD 24 has shown the ability to elect their candidate of choice in some elections. Including 24 in the list of benchmark districts brings the total to 10, which is the number of minority districts that the commission has created in the draft maps. All of these districts will be subject to ongoing additional analysis.

LD 2 is an effective Native-American district. LDs 13, 14, 16, 24, 27 and 29 are majority Hispanic. LDs 12, 15 and 25 are majority minority districts in which Hispanics make up a plurality of the total population. LD 23 is a majority White district with minorities making up 48% of the total population. Of these, district 12 is not a benchmark district because the minority voters in that district have not demonstrated the ability to elect their candidates of choice.

There are varying degrees of racially polarized voting in these districts. LDs 12, 23, 24, 25, and 29 show clearly polarized voting with minority voters supporting different candidates were supported by non-Hispanic White voters. In LDs 2, 13, 14, 15, 16 & 27, non-Hispanic White voters showed a willingness to support the minority voters' candidates of choice, although usually to a lesser degree.

District by district analysis

Shown below are the population details and racially polarized voting analysis for each of these districts. Results for State Senate are shown where there were usable recent races featuring minority and non-minority candidates. The turnout and candidate support estimates were produced by Dr. King using his Ecological Inference technique. Although estimates are shown for all racial categories, estimates for groups making up small portions of the district's population are less reliable and should be viewed with caution.

2010 LD 2

Legislative general election minority candidates 2004 to 2010:

- 10 candidates, 8 elected.

Counties and voting age population from each county:

- Coconino (69,489)
- Apache (35,550)
- Navajo (20,724)
- Mohave (806)
- Yavapai (0)

The district's 2010 Census population is 177,904 with a deviation of -35,163 from the ideal district population of 213,067. Of these, 14,429 are Hispanic (8.1% of the district's total population), 111,899 are non-Hispanic Native American (62.9% of the district's total population), 1,331 are non-Hispanic African-American (0.7% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 132,369 (74.4% of the district's total population).

The district's Voting Age Population is 9,280 Hispanic 7.3% of the district's Voting Age Population), 75,373 non-Hispanic Native American (59.6% of the district's Voting Age Population), 1,273 non-Hispanic African-American (1.0% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 88,063 are minorities (69.6% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 5,733 are Hispanic (4.9% of the district's total Citizen Voting Age Population), 74,762 are non-Hispanic Native-American (64.2% of the district's total CVAP), 973 are non-Hispanic African-American (0.8% of the district's total CVAP), The district's combined citizen minority population (any Citizen Voting Age population other than non-Hispanic White) is 83,494 (71.7% of the district's total CVAP).

Non-Hispanic Native-American voters and Non-Hispanic White voters often support the same candidates, although to differing degrees. Hispanic voters in the district do not necessarily support the same candidates as Native Americans do. Native American votes turn out at close to the same rate as White voters, and are able to elect their candidate of choice.

AZ State Senate Data 2008: District 2 (VAP)

	Turnout	Native American Candidate (D)	Native American Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.49	0.58	0.42	0.00086	0.3048
Hispanic	0.25	0.52	0.47	0.00670	0.0733
Native American	0.47	0.83	0.17	0.00064	0.5893
Black	0.48	0.57	0.42	0.01629	0.0089
Other	0.43	0.47	0.52	0.00976	0.0237
Total Votes	0.46	0.73	0.27	0.00000	NA

Secretary of State 2010: District 2 (VAP)

	Turnout	Native American Candidate (D)	White Candidate (R)	Non-Major Party Candidates	Total VAP
White	0.37	0.55	0.448	0.00114	0.3048
Hispanic	0.14	0.49	0.496	0.01220	0.0733
Native American	0.39	0.92	0.079	0.00076	0.5893
Black	0.22	0.48	0.488	0.03511	0.0089
Other	0.19	0.45	0.530	0.02252	0.0237
Total Votes	0.36	0.79	0.213	0.00000	NA

2010 LD 12

Legislative general election minority candidates 2004 to 2010:

- 3 candidates, 2 elected.

Counties and voting age population from each county:

- Maricopa (259,313)

The district's 2010 Census population is 378,298 with a deviation of 165,230 from the ideal district population of 213,067. Of these, 138,446 are Hispanic (36.6% of the district's total population), 3,475 are non-Hispanic Native American (0.9% of the district's total population), 25,220 are non-Hispanic African-American (6.7% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 189,912 (50.2% of the district's total population).

The district's Voting Age Population is 82,817 Hispanic (31.9% of the district's Voting Age Population), 3,243 non-Hispanic Native American (1.3% of the district's Voting Age Population), 17,980 non-Hispanic African-American (6.9% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 116,526 are minorities (44.9% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 49,697 are Hispanic (25.9% of the district's total Citizen Voting Age Population). Based a Hispanic surname match, 21.0% of the district's registered voters are Hispanic.

The vote in LD 12 is racially polarized, with Hispanics strongly supporting the Hispanic candidate for State Senate in 2008 and for Mine Inspector in 2010, while non-Hispanic White voters supported the White candidate in both races. Because of the significant non-Hispanic White advantage in citizen voting age population, Hispanic voters have not been able to reliably elect their candidates of choice in LD 12.

AZ State Senate Data 2008: District 12

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total CVAP
White	0.38	0.32	0.68	0.0011	0.602
Hispanic	0.43	0.73	0.26	0.0021	0.259
Native American	0.52	0.50	0.48	0.0230	0.011
Black	0.75	0.54	0.45	0.0042	0.071
Other	0.86	0.60	0.39	0.0043	0.056
Total Votes	0.45	0.48	0.51	0.0017	NA

Mine Inspector 2010: District 12

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total CVAP
White	0.29	0.25	0.75	0.0011	0.604
Hispanic	0.29	0.75	0.25	0.0030	0.258
Native American	0.50	0.43	0.54	0.0216	0.011
Black	0.37	0.55	0.44	0.0080	0.071
Other	0.63	0.53	0.47	0.0059	0.056
Total Votes	0.32	0.43	0.57	0.0021	NA

2010 LD 13

Legislative general election minority candidates 2004 to 2010:

- 12 candidates, 12 elected.

Counties and voting age population from each county:

- Maricopa (131,422)

The district's 2010 Census population is 207,107 with a deviation of -5,960 from the ideal district population of 213,067. Of these, 151,705 are Hispanic (73.2% of the district's total population), 2,224 are non-Hispanic Native American (1.1% of the district's total population), 12,279 are non-Hispanic African-American (5.9% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 172,140 (83.1% of the district's total population).

The district's Voting Age Population is 89,723 Hispanic 68.3% of the district's Voting Age Population), 1,772 non-Hispanic Native American (1.3% of the district's Voting Age Population), 8,256 non-Hispanic African-American (6.3% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 103,064 are minorities (78.4% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 44,806 are Hispanic (52.8% of the district's total Citizen Voting Age Population). Based a Hispanic surname match, 47.1% of the district's registered voters are Hispanic.

Although Hispanic Voters in LD 13 turn out at a much lower rate than non-Hispanic White voters, white voters in the district have shown a willingness to support Hispanic candidates. That, combined with the high (68% of VAP) Hispanic population, allow Hispanic voters to elect their candidate of choice.

Mine Inspector 2010 District 13 (VAP)

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.307	0.65	0.34	0.0023	0.216
Hispanic	0.073	0.83	0.16	0.0028	0.683
Native American	0.651	0.47	0.51	0.0150	0.012
Black	0.417	0.62	0.38	0.0052	0.061
Other	0.605	0.52	0.47	0.0070	0.029
Total Votes	0.166	0.68	0.32	0.0022	NA

2010 LD 14

Legislative general election minority candidates 2004 to 2010:

- 4 candidates, 4 elected.

Counties and voting age population from each county:

- Maricopa (104,141)

The district's 2010 Census population is 158,881 with a deviation of -54,186 from the ideal district population of 213,067. Of these, 113,118 are Hispanic (71.2% of the district's total population), 2,927 are non-Hispanic Native American (1.8% of the district's total population), 9,085 are non-Hispanic African-American (5.7% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 130,935 (82.4% of the district's total population).

The district's Voting Age Population is 67,590 Hispanic 64.9% of the district's Voting Age Population), 2,296 non-Hispanic Native American (2.2% of the district's Voting Age Population), 6,538 non-Hispanic African-American (6.3% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 79,911 are minorities (76.7% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 30,977 are Hispanic (46.2% of the district's total Citizen Voting Age Population), 3,096 are non-Hispanic Native-American (4.6% of the district's total CVAP), 4,428 are non-Hispanic African-American (6.6% of the district's total CVAP), The district's combined citizen minority population (any Citizen Voting Age population other than non-Hispanic White) is 40,181 (59.9% of the district's total CVAP).

Based a Hispanic surname match, 41.1% of the district's registered voters are Hispanic.

Although Hispanic Voters in LD14 turn out at a much lower rate than non-Hispanic White voters, white voters in the district have shown a willingness to support Hispanic candidates. That, combined with the high (65% of VAP) Hispanic population, allow Hispanic voters to elect their candidate of choice.

Mine Inspector 2010 District 14 (VAP)

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.247	0.58	0.42	0.0026	0.233
Hispanic	0.083	0.84	0.15	0.0029	0.649
Native American	0.572	0.59	0.40	0.0118	0.020
Black	0.232	0.68	0.31	0.0101	0.061
Other	0.348	0.50	0.49	0.0116	0.038
Total Votes	0.149	0.68	0.32	0.0028	NA

2010 LD 15

Legislative general election minority candidates 2004 to 2010:

- 3 candidates, 3 elected.

Counties and voting age population from each county:

- Maricopa (115,141)

The district's 2010 Census population is 155,897 with a deviation of -57,170 from the ideal district population of 213,067. Of these, 71,403 are Hispanic (45.8% of the district's total population), 5,612 are non-Hispanic Native American (3.6% of the district's total population), 10,682 are non-Hispanic African-American (6.9% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 95,355 (61.2% of the district's total population).

The district's Voting Age Population is 44,287 Hispanic 38.5% of the district's Voting Age Population), 4,445 non-Hispanic Native American (3.9% of the district's Voting Age Population), 8,311 non-Hispanic African-American (7.2% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 61,639 are minorities (53.5% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 24,018 are Hispanic (25.3% of the district's total Citizen Voting Age Population). Based a Hispanic surname match, 19.9% of the district's registered voters are Hispanic.

Hispanic voters in the LD 15 turn out at a lower rate than non-Hispanic White voters. Nevertheless, White voters supported the Hispanic candidate for Mine Commissioner in 2010 at almost the same rate as Hispanic voters (65% among non-Hispanic White Voters, and 67% among Hispanic voters). Thus, Hispanic voters in LD15 are able to elect their candidate of choice.

Mine Inspector 2010: District 15 (CVAP)

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total CVAP
White	0.30	0.65	0.35	0.0016	0.591
Hispanic	0.15	0.67	0.33	0.0076	0.246
Native American	0.31	0.59	0.40	0.0151	0.043
Black	0.34	0.53	0.46	0.0101	0.064
Other	0.56	0.50	0.49	0.0087	0.056
Total Votes	0.28	0.63	0.37	0.0030	NA

2010 LD 16

Legislative general election minority candidates 2004 to 2010:

- 14 candidates, 12 elected.

Counties and voting age population from each county:

- Maricopa (166,105)

The district's 2010 Census population is 247,146 with a deviation of 34,078 from the ideal district population of 213,067. Of these, 152,778 are Hispanic (61.8% of the district's total population), 5,599 are non-Hispanic Native American (2.3% of the district's total population), 33,551 are non-Hispanic African-American (13.6% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 202,907 (82.1% of the district's total population).

The district's Voting Age Population is 94,256 Hispanic 56.7% of the district's Voting Age Population), 4,187 non-Hispanic Native American (2.5% of the district's Voting Age Population), 23,912 non-Hispanic African-American (14.4% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 128,972 are minorities (77.6% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 53,902 are Hispanic (46.1% of the district's total Citizen Voting Age Population). Based a Hispanic surname match, 40.1% of the district's registered voters are Hispanic.

The non-Hispanic White vote in LD 16 is fairly evenly split between Democrats and Republicans, making the White vote essentially a wash in district elections. The African-American candidate for State Senate in 2008 was the Hispanic voters' candidate of choice. Hispanic and African-American voters voted in coalition, both supporting the Hispanic candidate for Mine Commissioner in 2010. Hispanic and African-American voters in LD 16 are able to elect their candidates of choice.

AZ State Senate Data 2008: District 16 (VAP)

	Turnout	Black Candidate (D)	Hispanic Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.40	0.56	0.44	0.0020	0.224
Hispanic	0.15	0.87	0.13	0.0020	0.567
Native American	0.51	0.78	0.21	0.0127	0.023
Black	0.42	0.88	0.11	0.0031	0.141
Other	0.66	0.51	0.48	0.0058	0.045
Total Votes	0.27	0.73	0.27	0H.0022	NA

Mine Inspector 2010 District 16 (VAP)

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.24	0.52	0.47	0.0026	0.224
Hispanic	0.11	0.85	0.15	0.0021	0.567
Native American	0.43	0.87	0.12	0.0119	0.023
Black	0.25	0.83	0.17	0.0037	0.141
Other	0.63	0.64	0.36	0.0045	0.045
Total Votes	0.19	0.73	0.27	0.0020	NA

2010 LD 23

Legislative general election minority candidates 2004 to 2010:

- 9 candidates, 5 elected.

Counties and voting age population from each county:

- Pinal (240,577)
- Maricopa (23,063)
- Gila (774)

The district's 2010 Census population is 370,479 with a deviation of 157,411 from the ideal district population of 213,067. Of these, 120,804 are Hispanic (32.6% of the district's total population), 23,863 are non-Hispanic Native American (6.4% of the district's total population), 17,778 are non-Hispanic African-American (4.8% of the district's total population). The district's combined minority population (any population other than non-Hispanic White) is 177,713 (48.0% of the district's total population).

The district's Voting Age Population is 75,802 Hispanic (28.7% of the district's Voting Age Population), 17,927 non-Hispanic Native American (6.8% of the district's Voting Age Population), 13,075 non-Hispanic African-American (4.9% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 115,090 (43.5% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 48,213 are Hispanic (25.3% of the district's total Citizen Voting Age Population). Based on a Hispanic surname match, 20.0% of the district's registered voters are Hispanic.

Minority voters make up 48% of the district's total population, 43.5% of the district's voting age population, and 38.7% of its citizen voting age population. Minority voters and non-Hispanic White voters generally support different candidates.

In the 2008 State Senate race, both the Democratic and Republican nominees were Hispanic. The Democratic candidate was clearly the candidate of choice among Hispanic and African-American voters. White voters supported the Republican Hispanic candidate by a narrower (55% to 45%) margin. When the White vote is close to evenly split, as was the case in the race for State Senate in 2008, Hispanic and African-American voters are able to elect their candidate of choice. However, minority voters cannot count on consistently electing their candidates of choice. In the race for State Senate in 2010, and for Mine Inspector in 2010, White voters overwhelmingly supported the White Republican candidates, and the preferred candidates of the minority community lost the district.

AZ State Senate Data 2008: District 23

	Turnout	Hispanic Candidate (D)	Hispanic Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.39	0.45	0.55	0.00042	0.565
Hispanic	0.26	0.88	0.12	0.00098	0.287
Native American	0.18	0.86	0.13	0.00557	0.064
Black	0.18	0.49	0.50	0.00668	0.047
Other	0.25	0.48	0.52	0.00620	0.037
Total Votes	0.32	0.57	0.43	0.00014	NA

AZ State Senate Data 2010: District 23

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.298	0.32	0.68	0.00047	0.565
Hispanic	0.194	0.87	0.13	0.00126	0.287
Native American	0.099	0.82	0.17	0.00981	0.064
Black	0.150	0.50	0.49	0.00780	0.047
Other	0.230	0.49	0.50	0.00721	0.037
Total Votes	0.246	0.47	0.53	0.00020	NA

Mine Inspector 2010 District 23 (VAP)

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.288	0.28	0.72	4.3e-04	0.565
Hispanic	0.191	0.84	0.15	1.4e-03	0.287
Native American	0.097	0.83	0.16	9.5e-03	0.064
Black	0.163	0.56	0.43	7.3e-03	0.047
Other	0.235	0.46	0.53	5.7e-03	0.037
Total Votes	0.240	0.44	0.56	6.3e-05	NA

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2010 LD 24

Legislative general election minority candidates 2004 to 2010:

- 4 candidates, 3 elected.

Counties and voting age population from each county:

- Yuma (140,566)
- La Paz (8,997)

The district's 2010 Census population is 207,694 with a deviation of -5,373 from the ideal district population of 213,067. Of these, 121,093 are Hispanic (58.3% of the district's total population), 4,025 are non-Hispanic Native American (1.9% of the district's total population), 3,251 are non-Hispanic African-American (1.6% of the district's total population). The districts combined minority population (any population other than non-Hispanic White) is 133,381 (64.2% of the district's total population).

The district's Voting Age Population is 76,836 Hispanic 51.4% of the district's Voting Age Population), 3,378 non-Hispanic Native American (2.3% of the district's Voting Age Population), 2,722 non-Hispanic African-American (1.8% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 85,599 are minorities (57.2% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 39,794 are Hispanic (36.3% of the district's total Citizen Voting Age Population). Based a Hispanic surname match, 39.4% of the district's registered voters are Hispanic.

Although Hispanic voters represent 58.3% of the district's total population, they make up only 51.4% of the district's voting age population and 39.4% of the citizen voting age population. Non-Hispanic white turnout is roughly twice the Hispanic turnout rate.

The vote in LD 24 is racially polarized, with non-Hispanic White voters and Hispanic voters supporting different candidates by wide margins. Because turnout advantage among non-Hispanic White voters, Hispanics are not able to reliably elect their candidate of choice in LD 24.

State Senate 2010 District 24 (VAP)

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.32	0.20	0.80	0.00053	0.428
Hispanic	0.15	0.83	0.17	0.00088	0.514
Native American	0.37	0.72	0.27	0.00778	0.019
Black	0.54	0.62	0.37	0.00522	0.017
Other	0.58	0.46	0.53	0.00468	0.022
Total Votes	0.24	0.45	0.55	0.00000	NA

Mine Inspector 2010 District 24 (VAP)

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.29	0.16	0.84	0.00058	0.428
Hispanic	0.15	0.85	0.15	0.00099	0.514
Native American	0.35	0.68	0.31	0.00739	0.019
Black	0.47	0.62	0.37	0.00643	0.017
Other	0.61	0.42	0.58	0.00422	0.022
Total Votes	0.23	0.43	0.57	0.00000	NA

2010 LD 25

Legislative general election minority candidates 2004 to 2010:

- 6 candidates, 3 elected.

Counties and voting age population from each county:

- Cochise (64,936)
- Pima (43,868)
- Santa Cruz (28,792)
- Maricopa (11,075)
- Pinal (5,249)

The district's 2010 Census population is 208,220 with a deviation of -4,847 from the ideal district population of 213,067. Of these, 95,825 are Hispanic (46.0% of the district's total population), 10,709 are non-Hispanic Native American (5.1% of the district's total population), 2,970 are non-Hispanic African-American (1.4% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 114,592 (55.0% of the district's total population).

The district's Voting Age Population is 63,065 Hispanic 41.0% of the district's Voting Age Population), 8,143 non-Hispanic Native American (5.3% of the district's Voting Age Population), 2,707 non-Hispanic African-American (1.8% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 76,514 are minorities (49.7% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 41,251 are Hispanic (31.4% of the district's total Citizen Voting Age Population). Based a Hispanic surname match, 29.7% of the district's registered voters are Hispanic.

Non-Hispanic White voters in LD 25 make up just over half of the district's voting age population. The vote is racially polarized with white and Hispanic voters supporting different candidates. Native-American voters vote in coalition with Hispanic voters. The African-American and other minority populations are too small to reliably estimate their voting preferences. In recent elections, Hispanic voters in LD 25 have not been consistently able to elect their candidates of choice.

State Senate 2008 District 25 (VAP)

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.55	0.37	0.63	4.7e-04	0.503
Hispanic	0.26	0.88	0.11	1.3e-03	0.410
Native American	0.34	0.92	0.08	4.5e-03	0.048
Black	0.24	0.47	0.51	2.1e-02	0.016
Other	0.76	0.41	0.59	5.5e-03	0.022
Total Votes	0.42	0.53	0.47	3.1e-05	NA

State Senate 2010 District 25 (VAP)

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.48	0.27	0.727	6.0e-04	0.503
Hispanic	0.19	0.90	0.098	1.8e-03	0.410
Native American	0.22	0.91	0.086	8.7e-03	0.048
Black	0.24	0.41	0.575	1.9e-02	0.016
Other	0.69	0.50	0.493	6.0e-03	0.022
Total Votes	0.35	0.45	0.553	7.4e-05	NA

Mine Inspector 2010 District 25 (VAP)

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.46	0.30	0.702	6.0e-04	0.503
Hispanic	0.19	0.89	0.107	1.6e-03	0.410
Native American	0.22	0.92	0.073	8.1e-03	0.048
Black	0.23	0.38	0.594	2.1e-02	0.016
Other	0.66	0.44	0.551	6.7e-03	0.022
Total Votes	0.34	0.46	0.535	5.8e-05	NA

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2010 LD 27

Legislative general election minority candidates 2004 to 2010:

- 11 candidates, 11 elected.

Counties and voting age population from each county:

- Pima (149,769)

The district's 2010 Census population is 199,340 with a deviation of -13,727 from the ideal district population of 213,067. Of these, 112,258 are Hispanic (56.3% of the district's total population), 7,553 are non-Hispanic Native American (3.8% of the district's total population), 5,570 are non-Hispanic African-American (2.8% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 132,791 (66.6% of the district's total population).

The district's Voting Age Population is 74,724 Hispanic 49.9% of the district's Voting Age Population), 5,581 non-Hispanic Native American (3.7% of the district's Voting Age Population), 4,581 non-Hispanic African-American (3.1% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 89,971 are minorities (60.1% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 54,968 are Hispanic (42.9% of the district's total Citizen Voting Age Population). Based a Hispanic surname match, 41.1% of the district's registered voters are Hispanic.

Hispanic and non-Hispanic White voters in LD 27 have supported the same candidates, although by different margins. Hispanic voters are able to elect their candidates of choice.

State Senate 2008 District 27 (VAP)

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.48	0.52	0.48	0.00048	0.399
Hispanic	0.30	0.87	0.13	0.00065	0.499
Native American	0.38	0.77	0.22	0.00588	0.034
Black	0.44	0.64	0.36	0.00624	0.029
Other	0.38	0.64	0.36	0.00524	0.040
Total Votes	0.38	0.67	0.33	0.00000	NA

Mine Inspector 2010 District 27 (VAP)

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.39	0.53	0.47	0.00058	0.399
Hispanic	0.23	0.85	0.15	0.00074	0.499
Native American	0.27	0.72	0.27	0.00846	0.034
Black	0.33	0.57	0.42	0.00860	0.029
Other	0.17	0.66	0.33	0.01107	0.040
Total Votes	0.30	0.66	0.34	0.00000	NA

2010 LD 29

Legislative general election minority candidates 2004 to 2010:

- 9 candidates, 8 elected.

Counties and voting age population from each county:

- Pima (132,668)

The district's 2010 Census population is 184,459 with a deviation of -28,608 from the ideal district population of 213,067. Of these, 102,098 are Hispanic (55.4% of the district's total population), 3,340 are non-Hispanic Native American (1.8% of the district's total population), 9,675 are non-Hispanic African-American (5.2% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 122,543 (66.4% of the district's total population).

The district's Voting Age Population is 66,084 Hispanic 49.8% of the district's Voting Age Population), 2,706 non-Hispanic Native American (2.0% of the district's Voting Age Population), 7,516 non-Hispanic African-American (5.7% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 80,664 are minorities (60.8% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 41,782 are Hispanic (37.9% of the district's total Citizen Voting Age Population). Based a Hispanic surname match, 36.2% of the district's registered voters are Hispanic.

Hispanic and non-Hispanic White voters supported different candidates in the 2010 race for Mine inspector with 53% of White voters supporting the White Republican while 92% of Hispanic voters supported the Hispanic Democrat. Hispanics much higher support level for the Hispanic candidate, combined with their roughly 10% advantage over White voters in terms of share of the voting age population allow them to elect their candidate of choice in LD29.

Mine Inspector 2010 District 29 (VAP)

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.40	0.46	0.534	0.00058	0.392
Hispanic	0.16	0.92	0.078	0.00128	0.498
Native American	0.46	0.74	0.249	0.00866	0.018
Black	0.21	0.50	0.489	0.00679	0.054
Other	0.34	0.50	0.497	0.00624	0.038
Total Votes	0.27	0.62	0.385	0.00000	NA

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Draft Legislative Districts Analysis

Overview

The legislative draft map creates ten effective majority minority districts. LD 7 is a majority Native American district, LDs 2, 3, 4, 27, 29 & 30 are majority Hispanic, and LDs 24 and 26 are majority minority coalition districts where no one minority group makes up 50% but together minority voters make up a majority of the district's population.

DISTRICT	POLARIZED	EFFECTIVE	MINORITY % OF TOTAL POP	MINORITY % OF VAP	EST. MINORITY % OF CVAP
2	YES	YES	73.2%	68.3%	58.5%
3	NO	YES	67.7%	61.2%	54.9%
4	YES	YES	69.3%	64.4%	53.0%
7	YES	YES	74.7%	71.9%	73.6%
19	YES	YES	77.9%	73.2%	62.1%
24	NO	YES	53.6%	46.2%	33.7%
26	NO	YES	51.3%	44.7%	30.0%
27	NO	YES	81.3%	76.5%	69.4%
29	YES	YES	78.2%	72.9%	57.3%
30	YES	YES	71.3%	64.5%	46.6%

District by district analysis

Sown below are the population details and racially polarized voting analysis for each of these districts. Legislative race results were not used for this analysis as each district is made up of portions of multiple old districts, so the legislative races results would not all feature the same candidates. Instead, we used other statewide races that featured significant racially polarized voting. Most often the 2010 race for Mine Inspector is used as that featured a Hispanic and a non-Hispanic White candidate. In LD 7, the majority Native American district, the 2010 Secretary of State race was used as that featured a Native American candidate running against a non-Hispanic White candidate.

The turnout and candidate support estimates were produced by Dr. King using his Ecological Inference technique. Although estimates are shown for all racial categories, estimates for groups making up small portions of the district's population are less reliable and should be viewed with caution.

Generally, these estimates were calculated using estimated citizen voting age population. The CVAP estimates were not available when work began on the existing legislative districts, therefore those estimates were generally based on voting age population rather than CVAP.

DRAFT LD 2

Counties and voting age population from each county:

- Pima (94,138)
- Santa Cruz (32,860)
- Cochise (21,440)

Draft LD 2 is made up of portions of the following Legislative Districts:

New District	Old District	% of New District VAP	% VA Hisp	2004 to 2010 Legislative General Elections	
				Minority Candidates	Minority Candidates Elected
2	29	44.0%	64.2%	9	8
2	25	36.8%	76.1%	6	3
2	30	19.0%	26.2%	0	0
2	27	0.2%	89.6%	11	11

The district's 2010 Census population is 212,863 with a deviation of -204 from the ideal district population of 213,067. Of these, 141,429 are Hispanic (66.4% of the district's total population), 2,799 are non-Hispanic Native American (1.3% of the district's total population), 6,273 are non-Hispanic African-American (2.9% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 155,720 (73.2% of the district's total population).

The district's Voting Age Population is 91,177 Hispanic 61.4% of the district's Voting Age Population), 2,358 non-Hispanic Native American (1.6% of the district's Voting Age Population), 4,954 non-Hispanic African-American (3.3% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 101,384 are minorities (68.3% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 54,366 are Hispanic (49.7% of the district's total Citizen Voting Age Population). Based a Hispanic surname match, 47.0% of the district's registered voters are Hispanic.

There is racially polarized voting in LD 2, with 92% of Hispanic voters supporting the Hispanic candidate for Mine Inspector in 2010, compared to 56% of non-Hispanic White voters supporting the White candidate. Hispanic voters' roughly 9% advantage in terms of share of the voting age population, combined with their more concentrated support of the Hispanic candidate allow them to elect their candidate of choice.

The chart below shows the detailed estimates of turnout and candidate support by race and origin based on an ecological inference analysis of the district's population and voting patterns.

Mine Inspector 2010 (AZ LD CVAP): District 2

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total CVAP
White	0.48	0.42	0.579	0.0007	0.402
Hispanic	0.28	0.92	0.083	0.0011	0.490
Native American	0.34	0.77	0.225	0.0097	0.026
Black	0.20	0.48	0.507	0.0101	0.039
Other	0.27	0.60	0.395	0.0090	0.042
Total Votes	0.36	0.63	0.372	0.0000	NA

DRAFT

DRAFT LD 3

Counties and voting age population from each county:

- Pima (158,457)

Draft LD 3 is made up of portions of the following Legislative Districts:

New District	Old District	% of New District VAP	% VA Hisp	2004 to 2010 Legislative General Elections	
				Minority Candidates	Minority Candidates Elected
3	27	86.3%	50.9%	11	11
3	29	8.1%	73.9%	9	8
3	28	4.8%	21.1%	0	0
3	26	0.7%	31.5%	0	0
3	25	0.2%	22.4%	6	3

The district's 2010 Census population is 210,016 with a deviation of -3,051 from the ideal district population of 213,067. Of these, 121,117 are Hispanic (57.7% of the district's total population), 7,673 are non-Hispanic Native American (3.7% of the district's total population), 5,668 are non-Hispanic African-American (2.7% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 142,182 (67.7% of the district's total population).

The district's Voting Age Population is 81,063 Hispanic (51.2% of the district's Voting Age Population), 5,636 non-Hispanic Native American (3.6% of the district's Voting Age Population), 4,767 non-Hispanic African-American (3.0% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 96,985 are minorities (61.2% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 59,407 are Hispanic (44.4% of the district's total Citizen Voting Age Population). Based a Hispanic surname match, 42.4% of the district's registered voters are Hispanic.

Hispanic and non-Hispanic White voters make up an almost identical 44% each of draft LD 3's citizen voting age population, although non-Hispanic Whites turn out at a somewhat higher rate. In the 2010 race for Mine Inspector White voters supported the Hispanic candidate although at a lower rate than Hispanics did. The 12% of the district voters who are other, non-Hispanic minorities also supported the Hispanic candidate. This coalition voting, combined with a lack of opposition among non-Hispanic White voters allow minority voters in draft LD 3 to elect their candidate of choice.

The chart below shows the detailed estimates of turnout and candidate support by race and origin based on an ecological inference analysis of the district's population and voting patterns.

Mine Inspector 2010 (AZ LD CVAP): District 3

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total CVAP
White	0.37	0.54	0.46	0.00066	0.439
Hispanic	0.31	0.89	0.11	0.00079	0.437
Native American	0.21	0.67	0.32	0.00829	0.043
Black	0.30	0.61	0.38	0.00894	0.031
Other	0.49	0.55	0.45	0.00408	0.050
Total Votes	0.34	0.69	0.31	0.00000	NA

DRAFT LD 4

Counties and voting age population from each county:

- Yuma (91,124)
- Maricopa (43,288)
- Pima (14,635)
- Pinal (343)

Draft LD 4 is made up of portions of the following Legislative Districts:

New District	Old District	% of New District VAP	% VA Hisp	2004 to 2010 Legislative General Elections	
				Minority Candidates	Minority Candidates Elected
4	24	61.0%	67.6%	4	3
4	12	18.5%	29.7%	3	2
4	25	11.5%	28.4%	6	3
4	4	5.2%	44.1%	1	0
4	27	3.8%	35.5%	11	11
4	23	0.0%	15.4%	9	5
4	30	0.0%		0	0
4	13	0.0%		12	12

The district's 2010 Census population is 214,082 with a deviation of 1,014 from the ideal district population of 213,067. Of these, 125,542 are Hispanic (58.6% of the district's total population), 11,409 are non-Hispanic Native American (5.3% of the district's total population), 5,984 are non-Hispanic African-American (2.8% of the district's total population). The district's combined minority population (any population other than non-Hispanic White) is 148,444 (69.3% of the district's total population).

The district's Voting Age Population is 80,150 Hispanic (53.7% of the district's Voting Age Population), 8,301 non-Hispanic Native American (5.6% of the district's Voting Age Population), 4,780 non-Hispanic African-American (3.2% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 96,147 are minorities (64.4% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 42,230 are Hispanic (40.3% of the district's total Citizen Voting Age Population). Based on a Hispanic surname match, 40.7% of the district's registered voters are Hispanic.

Draft LD 4 showed strong racial polarization in the 2010 race for Mine Inspector with 82% of Hispanic voters supporting the Hispanic candidate, and 79% of non-Hispanic White voters supporting the White candidate. Native American and African-American voters supported the Hispanic candidate, allowing the coalition of Hispanic and other minority votes to elect their candidate of choice in the 2010 election for Mine Inspector.

The chart below shows the detailed estimates of turnout and candidate support by race and origin based on an ecological inference analysis of the district’s population and voting patterns.

Mine Inspector 2010 (AZ LD CVAP): District 4

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total CVAP
White	0.32	0.21	0.79	0.00097	0.456
Hispanic	0.29	0.82	0.18	0.00123	0.394
Native American	0.22	0.92	0.07	0.00575	0.067
Black	0.39	0.61	0.38	0.00907	0.036
Other	0.38	0.68	0.31	0.00769	0.048
Total Votes	0.31	0.52	0.48	0.00070	NA

DRAFT LD 7

Counties and voting age population from each county:

- Apache (48,858)
- Navajo (43,160)
- Coconino (30,339)
- Mohave (6,696)
- Greenlee (5,974)
- Gila (4,401)
- Graham (2,891)
- Yavapai (0)
- Pinal (0)

Draft LD 7 is made up of portions of the following Legislative Districts:

New District	Old District	% of New District VAP	% VA Non-Hispanic Native American	2004 to 2010 Legislative General Elections	
				Minority Candidates	Minority Candidates Elected
7	2	51.8%	94.3%	10	8
7	5	34.4%	32.7%	0	0
7	3	8.8%	14.2%	1	0
7	1	4.9%	10.8%	0	0
7	4	0.0%		1	0

The district's 2010 Census population is 210,314 with a deviation of -2,753 from the ideal district population of 213,067. Of these, 17,909 are Hispanic (8.5% of the district's total population), 134,050 are non-Hispanic Native American (63.7% of the district's total population), 1,014 are non-Hispanic African-American (0.5% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 157,139 (74.7% of the district's total population).

The district's Voting Age Population is 11,151 Hispanic 7.8% of the district's Voting Age Population), 89,014 non-Hispanic Native American (62.5% of the district's Voting Age Population), 906 non-Hispanic African-American (0.6% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 102,337 are minorities (71.9% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 7,745 are Hispanic (5.8% of the district's total Citizen Voting Age Population), 88,924 are non-Hispanic Native-American (66.1% of the district's total CVAP), 742 are non-Hispanic African-American (0.6% of the district's total CVAP), The district's combined citizen minority population (any Citizen Voting Age population other than non-Hispanic White) is 99,086 (73.6% of the district's total CVAP).

Draft LD 7 showed racially polarized voting the 2010 race for Secretary of State with 93% of Native-American voters supporting the Native-American candidate while 78% of White voters supported the White candidate. Other minorities in the district also supported the Native-American candidate. That, combined with Native-Americans’ significant population advantage, allows them to elect their candidate of choice.

The chart below shows the detailed estimates of turnout and candidate support by race and origin based on an ecological inference analysis of the district’s population and voting patterns.

Secretary of State 2010 (AZ LD CVAP): District 7

	Turnout	Native American Candidate (D)	White Candidate (R)	Non-Major Party Candidates	Total VAP
White	0.45	0.22	0.780	0.00093	0.2633
Hispanic	0.38	0.60	0.398	0.00416	0.0568
Native American	0.34	0.93	0.069	0.00071	0.6357
Black	0.41	0.56	0.420	0.01661	0.0053
Other	0.33	0.72	0.268	0.01008	0.0389
Total Votes	0.37	0.68	0.321	0.00000	NA

DRAFT LD 19

Counties and voting age population from each county:

- Maricopa (138,697)

Draft LD 19 is made up of portions of the following Legislative Districts:

New District	Old District	% of New District VAP	% VA Hisp	2004 to 2010 Legislative General Elections	
				Minority Candidates	Minority Candidates Elected
19	13	40.1%	62.7%	12	12
19	16	30.0%	66.7%	14	12
19	12	16.2%	33.6%	3	2
19	23	11.4%	64.5%	9	5
19	14	2.3%	88.7%	4	4
19	25	0.0%		6	3

The district's 2010 Census population is 212,096 with a deviation of -971 from the ideal district population of 213,067. Of these, 137,442 are Hispanic (64.8% of the district's total population), 2,592 are non-Hispanic Native American (1.2% of the district's total population), 16,599 are non-Hispanic African-American (7.8% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 165,246 (77.9% of the district's total population).

The district's Voting Age Population is 83,190 Hispanic 60.0% of the district's Voting Age Population), 2,137 non-Hispanic Native American (1.5% of the district's Voting Age Population), 11,312 non-Hispanic African-American (8.2% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 101,566 are minorities (73.2% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 46,762 are Hispanic (47.9% of the district's total Citizen Voting Age Population). Based a Hispanic surname match, 41.4% of the district's registered voters are Hispanic.

Draft LD 19 showed racially polarized voting in the 2010 race for Mine Inspector with 81% of Hispanic voters supporting the Hispanic candidate while 62% of White voters supported the White candidate. 74% of African-American voters supported the Hispanic candidate. The Hispanic population advantage is sufficient for Hispanics to elect their candidate of choice.

The chart below shows the detailed estimates of turnout and candidate support by race and origin based on an ecological inference analysis of the district's population and voting patterns.

Mine Inspector 2010 (AZ LD CVAP): District 19

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total CVAP
White	0.23	0.37	0.62	0.0022	0.371
Hispanic	0.20	0.81	0.19	0.0019	0.465
Native American	0.34	0.71	0.26	0.0203	0.016
Black	0.36	0.74	0.26	0.0050	0.096
Other	0.51	0.64	0.35	0.0059	0.053
Total Votes	0.24	0.63	0.37	0.0021	NA

DRAFT LD 24

Counties and voting age population from each county:

- Maricopa (164,201)

Draft LD 24 is made up of portions of the following Legislative Districts:

New District	Old District	% of New District VAP	% VA Hisp	2004 to 2010 Legislative General Elections	
				Minority Candidates	Minority Candidates Elected
24	15	52.3%	38.4%	3	3
24	17	17.6%	18.6%	3	1
24	11	16.1%	18.2%	0	0
24	14	8.6%	55.4%	4	4
24	23	3.1%	11.7%	9	5
24	8	2.3%	13.0%	0	0
24	19	0.0%		0	0
24	18	0.0%		0	0

The district's 2010 Census population is 213,582 with a deviation of 514 from the ideal district population of 213,067. Of these, 82,380 are Hispanic (38.6% of the district's total population), 11,175 are non-Hispanic Native American (5.2% of the district's total population), 11,998 are non-Hispanic African-American (5.6% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 114,582 (53.6% of the district's total population).

The district's Voting Age Population is 52,142 Hispanic 31.8% of the district's Voting Age Population), 8,361 non-Hispanic Native American (5.1% of the district's Voting Age Population), 9,791 non-Hispanic African-American (6.0% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 75,811 are minorities (46.2% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 30,063 are Hispanic (21.0% of the district's total Citizen Voting Age Population). Based a Hispanic surname match, 15.9% of the district's registered voters are Hispanic.

Although 53.6% of draft LD 24's total population is non-White, non-Hispanic Whites make up 64.6% of the district's citizen voting age population. However, White voters have shown a willingness to support the Hispanic's candidate of choice, with 54% of non-Hispanic Whites supporting the Hispanic candidate in the 2010 race for Mine Inspector. 79% of Hispanic voters supported the Hispanic candidate as did significant majorities of the remaining minority vote. Coalition voting combined with a lack of cohesive opposition from non-Hispanic White voters allows minority voters in draft LD 24 to elect their candidate of choice.

The chart below shows the detailed estimates of turnout and candidate support by race and origin based on an ecological inference analysis of the district’s population and voting patterns.

Mine Inspector 2010 (AZ LD CVAP): District 24

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total CVAP
White	0.35	0.54	0.46	0.0014	0.646
Hispanic	0.16	0.79	0.21	0.0075	0.208
Native American	0.19	0.65	0.34	0.0175	0.053
Black	0.33	0.70	0.29	0.0147	0.047
Other	0.51	0.64	0.35	0.0115	0.045
Total Votes	0.31	0.59	0.41	0.0027	NA

DRAFT LD 26

Counties and voting age population from each county:

- Maricopa (165,918)

Draft LD 26 is made up of portions of the following Legislative Districts:

New District	Old District	% of New District VAP	% VA Hisp	2004 to 2010 Legislative General Elections	
				Minority Candidates	Minority Candidates Elected
26	17	55.5%	19.5%	3	1
26	18	36.1%	48.1%	0	0
26	21	8.4%	26.5%	0	0
26	16	0.0%		14	12
26	15	0.0%		3	3

The district's 2010 Census population is 213,247 with a deviation of 179 from the ideal district population of 213,067. Of these, 78,522 are Hispanic (36.8% of the district's total population), 6,386 are non-Hispanic Native American (3.0% of the district's total population), 10,740 are non-Hispanic African-American (5.0% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 109,300 (51.3% of the district's total population).

The district's Voting Age Population is 50,461 Hispanic 30.4% of the district's Voting Age Population), 5,190 non-Hispanic Native American (3.1% of the district's Voting Age Population), 8,836 non-Hispanic African-American (5.3% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 74,088 are minorities (44.7% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 23,094 are Hispanic (17.6% of the district's total Citizen Voting Age Population). Based a Hispanic surname match, 15.6% of the district's registered voters are Hispanic.

A narrow majority (51.3%) of draft LD 26's population is non-White, but non-Hispanic Whites make up 68% of the district's citizen voting age population. However, White voters have shown a willingness to support the Hispanic's candidate of choice, with 52% of non-Hispanic Whites supporting the Hispanic candidate in the 2010 race for Mine Inspector. 61% of Hispanic voters supported the Hispanic candidate as did majorities of the remaining minority vote. Coalition voting combined with a lack of cohesive opposition from non-Hispanic White voters allows minority voters in draft LD 26 to elect their candidate of choice.

The chart below shows the detailed estimates of turnout and candidate support by race and origin based on an ecological inference analysis of the district's population and voting patterns.

Mine Inspector 2010 (AZ LD CVAP): District 26

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total CVAP
White	0.27	0.52	0.48	0.0018	0.681
Hispanic	0.19	0.61	0.38	0.0082	0.172
Native American	0.42	0.60	0.39	0.0110	0.041
Black	0.35	0.57	0.41	0.0143	0.043
Other	0.29	0.51	0.47	0.0135	0.063
Total Votes	0.26	0.54	0.46	0.0030	NA

DRAFT

DRAFT LD 27

Counties and voting age population from each county:

- Maricopa (141,120)

Draft LD 27 is made up of portions of the following Legislative Districts:

New District	Old District	% of New District VAP	% VA Hisp	2004 to 2010 Legislative General Elections	
				Minority Candidates	Minority Candidates Elected
27	16	88.2%	53.4%	14	12
27	14	9.1%	63.7%	4	4
27	17	2.0%	35.1%	3	1
27	15	0.6%	15.8%	3	3
27	20	0.1%	16.8%	0	0

The district's 2010 Census population is 208,413 with a deviation of -4,654 from the ideal district population of 213,067. Of these, 122,767 are Hispanic (58.9% of the district's total population), 5,317 are non-Hispanic Native American (2.6% of the district's total population), 31,047 are non-Hispanic African-American (14.9% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 169,337 (81.3% of the district's total population).

The district's Voting Age Population is 75,789 Hispanic 53.7% of the district's Voting Age Population), 3,909 non-Hispanic Native American (2.8% of the district's Voting Age Population), 22,081 non-Hispanic African-American (15.6% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 108,011 are minorities (76.5% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 46,144 are Hispanic (45.0% of the district's total Citizen Voting Age Population). Based a Hispanic surname match, 38.0% of the district's registered voters are Hispanic.

Hispanic and non-Hispanic White voters in draft LD 27 supported the Hispanic candidate for Mine Inspector in 2010 although at different rates. African-American voters also supported the Hispanic candidate. Strong margins among Hispanic voters, support from other minority groups, and absence of cohesive opposition from non-Hispanic White voters allow minority voters to elect their candidate of choice in LD 27.

The chart below shows the detailed estimates of turnout and candidate support by race and origin based on an ecological inference analysis of the district's population and voting patterns.

Mine Inspector 2010 (AZ LD CVAP): District 27

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total CVAP
White	0.28	0.53	0.47	0.0022	0.310
Hispanic	0.21	0.87	0.13	0.0022	0.430
Native American	0.39	0.82	0.17	0.0106	0.031
Black	0.34	0.79	0.20	0.0032	0.171
Other	0.38	0.63	0.37	0.0085	0.057
Total Votes	0.26	0.72	0.28	0.0021	NA

DRAFT

DRAFT LD 29

Counties and voting age population from each county:

- Maricopa (136,123)

Draft LD 29 is made up of portions of the following Legislative Districts:

New District	Old District	% of New District VAP	% VA Hisp	2004 to 2010 Legislative General Elections	
				Minority Candidates	Minority Candidates Elected
29	13	49.3%	74.2%	12	12
29	12	46.3%	46.6%	3	2
29	14	4.5%	81.0%	4	4

The district's 2010 Census population is 212,258 with a deviation of -809 from the ideal district population of 213,067. Of these, 143,288 are Hispanic (67.5% of the district's total population), 2,129 are non-Hispanic Native American (1.0% of the district's total population), 12,626 are non-Hispanic African-American (5.9% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 166,087 (78.2% of the district's total population).

The district's Voting Age Population is 84,040 Hispanic 61.7% of the district's Voting Age Population), 1,781 non-Hispanic Native American (1.3% of the district's Voting Age Population), 8,837 non-Hispanic African-American (6.5% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 99,166 are minorities (72.9% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 43,228 are Hispanic (45.4% of the district's total Citizen Voting Age Population). Based a Hispanic surname match, 39.2% of the district's registered voters are Hispanic.

Hispanic and non-Hispanic White voters turned out at close to the same rate in the 2010 race for Mine Inspector. The voting was racially polarized, with 81% of Hispanic voters supporting the Hispanic candidate, and 57% of White voters supporting the White candidate. African-American and other minority voters also supported the Hispanic candidate. The Hispanic edge in citizen voting age population and greater concentration of support allow Hispanics and other minorities to elect their candidate of choice in draft LD29.

The chart below shows the detailed estimates of turnout and candidate support by race and origin based on an ecological inference analysis of the district's population and voting patterns.

Mine Inspector 2010 (AZ LD CVAP): District 29

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total CVAP
White	0.24	0.43	0.57	0.0022	0.412
Hispanic	0.20	0.81	0.19	0.0028	0.445
Native American	0.59	0.57	0.42	0.0145	0.014
Black	0.35	0.57	0.42	0.0075	0.077
Other	0.61	0.65	0.35	0.0073	0.052
Total Votes	0.26	0.61	0.39	0.0024	NA

DRAFT

DRAFT LD 30

Counties and voting age population from each county:

- Maricopa (141,404)

Draft LD 30 is made up of portions of the following Legislative Districts:

New District	Old District	% of New District VAP	% VA Hisp	2004 to 2010 Legislative General Elections	
				Minority Candidates	Minority Candidates Elected
30	14	48.1%	64.6%	4	4
30	15	20.1%	39.2%	3	3
30	12	13.1%	31.1%	3	2
30	10	12.5%	32.5%	2	1
30	13	6.2%	58.4%	12	12
30	9	0.1%	58.4%	0	0

The district's 2010 Census population is 207,918 with a deviation of -5,149 from the ideal district population of 213,067. Of these, 119,501 are Hispanic (57.5% of the district's total population), 4,673 are non-Hispanic Native American (2.2% of the district's total population), 12,949 are non-Hispanic African-American (6.2% of the district's total population). The districts combined minority population (any population other than non-Hispanic White is 148,293 (71.3% of the district's total population).

The district's Voting Age Population is 71,720 Hispanic 50.7% of the district's Voting Age Population), 3,608 non-Hispanic Native American (2.6% of the district's Voting Age Population), 9,213 non-Hispanic African-American (6.5% of the district's Voting Age Population). The district's combined voting age minority population (any voting age population other than non-Hispanic White) is 91,170 are minorities (64.5% of the district's Voting Age Population).

Of the district's Citizen Voting Age Population 35,582 are Hispanic (32.8% of the district's total Citizen Voting Age Population). Based a Hispanic surname match, 30.0% of the district's registered voters are Hispanic.

Draft LD 30 showed racially polarized voting in the 2010 election for Mine Inspector with 85% of Hispanic voters supporting the Hispanic candidate, and 62% of non-Hispanic White voters supporting the white candidate. Other minorities also supported the Hispanic candidate.

Although Hispanic voters make up 57.5% of the district's total population they represent only 31.1% of the district's citizen voting age population. Nevertheless, support from other candidates, and the higher rate of support from Hispanics for the Hispanic candidate (85%) compared to White support for the White candidate (62%) allow Hispanics to elect their candidate of choice in draft LD 30.

The chart below shows the detailed estimates of turnout and candidate support by race and origin based on an ecological inference analysis of the district's population and voting patterns.

Mine Inspector 2010 (AZ LD CVAP): District 30

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total CVAP
White	0.24	0.38	0.62	0.0020	0.520
Hispanic	0.21	0.85	0.15	0.0033	0.311
Native American	0.22	0.59	0.39	0.0168	0.040
Black	0.22	0.54	0.45	0.0136	0.061
Other	0.41	0.67	0.32	0.0077	0.067
Total Votes	0.24	0.56	0.44	0.0024	NA

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Appendix

Over 1,000 Tomography Plots have been produced as part of the analysis. Below is an example of what is available for each of the above tables included in this report. If there is a desire to see specific plots, they can be made available upon request.

The example below shows reflects the table on the bottom of page 8.

US House of Representatives 2010: District 4

	Turnout	Hispanic Candidate (D)	White Candidate (R)	Non-Major Party White Candidates	Total VAP
White	0.393	0.61	0.366	0.029	0.274
Hispanic	0.086	0.86	0.097	0.044	0.575
Native American	0.332	0.65	0.167	0.188	0.022
Black	0.212	0.73	0.180	0.087	0.090
Other	0.317	0.36	0.406	0.237	0.039
Total Votes	0.196	0.67	0.275	0.057	NA

