

IN THE UNITED STATES DISTRICT COURT FOR THE  
EASTERN DISTRICT OF WASHINGTON

ROGELIO MONTES and MATEO ARTEAGA, PLAINTIFFS

v. CIVIL ACTION NO. 12-cv-3108-TOR

CITY OF YAKIMA, WASHINGTON, *et al.* DEFENDANTS

**FIFTH SUPPLEMENTAL DECLARATION OF WILLIAM S. COOPER**

WILLIAM S. COOPER, acting in accordance with 28 U.S.C. §1746 and Rules 702 and 703 of the Federal Rules of Evidence, does hereby declare and say:

1. My name is William S. Cooper. I serve as a demographic and redistricting expert for the Plaintiffs. I submitted a Declaration in this case on February 1, 2013 and Supplemental Declarations on April 19, 2013, April 25, 2014, October 1, 2014, and October 23, 2014.

2. I have prepared this supplemental declaration to respond to certain statements made by Dr. Morrison in his October 23, 2014 declaration. I also make observations on a 4-district, 3 at-large limited voting proposal made by FairVote in an *amicus curae* brief filed on October 20, which is discussed by Dr. Morrison in his declaration.

**District-Level LCVAP Projections and Dr. Morrison’s Flawed Methodology**

3. In his October 3, 2014 declaration, Dr. Morrison refers to a cohort succession model that he used to conduct district-level citizenship projections in Yakima under the proposed remedial plans submitted by the Plaintiffs and the Defendants. Dr. Morrison did not provide any of the details regarding this analysis, including its methodology. It is now clear from Dr. Morrison’s October 23 declaration that his projections are based on block group-level citizenship rates rather than citywide citizenship rates. But as I explain below, his district LCVAP projections based on block groups employ a flawed methodology.

4. Dr. Morrison uses whole census block groups to approximate citizenship totals by district for 2010, which is the base year midpoint of the 2008-12 American Community Survey (ACS). Dr. Morrison then projects this 2010 approximation out to 2027.

5. The critical flaw in Dr. Morrison’s model is that the district-level aggregate CVAP and citizen population by block group approximations do not match the block-level citizen estimates of the districts in the remedial plans submitted by the Plaintiffs and the Defendants. All of the districts in the proposed remedial plans split census block groups, so every district is “overbounded” to include citizen population that is actually in another district. As explained below, this double counting of citizen population makes it probable that the model will yield unreliable projections.

6. **Figure 1** below reproduces the disaggregated 2008-12 ACS CVAP estimate as compared to Dr. Morrison's whole block group approximation subtotals for Districts 1 and 5 under the Defendants' Plan, as contained in his Table 2. I have added the CVAP district estimates, which Dr. Morrison did not include.

**Figure 1 Overbounding in Defendants' Districts 1 and 5**

Defendants' Plan	2008-12 ACS CVAP District Estimate (Method 2)	Block Group 2008-12 ACS CVAP Approximation (Overbounding)	% CVAP Double Counting ((Approximation-Estimate)/Estimate)
1	7,305	7,390	1.2%
5	9,061	13,385	47.7%

7. **Figure 2** below reproduces the disaggregated 2008-12 ACS CVAP estimate as compared to Dr. Morrison's whole block group approximation subtotals for Plaintiffs' Districts 3 through 7, as contained in his Table 3.

**Figure 2 Overbounding in Plaintiffs' Districts 3 Through 7**

Plaintiffs' Plan	2008-12 ACS CVAP District Estimate (Method 2)	Block Group 2008-12 ACS CVAP Approximation (Overbounding)	% CVAP Double Counting ((Approximation-Estimate)/Estimate)
3	8,653	13,440	55.3%
4	7,676	13,745	79.1%
5	8,702	12,560	44.3%
6	9,625	13,110	36.2%
7	9,823	17,630	79.5%
<b>Subtotal</b>	44,479	70,485	58.5%
<b>Citywide</b>	55,395	NA	>21.41%

8. As shown in **Figures 1 and 2**, for all but one district – Defendants’ District 1– the CVAP double counting is extremely large. In Defendants’ District 5, the aggregate CVAP (used as the basis for Dr. Morrison’s projections) is 48% more than the estimated CVAP (used as the basis for the parties’ proposed plans). In Plaintiffs’ Districts 3 through 7, the CVAP double counting is also significant – ranging from 36% in District 6 to 79% in Districts 4 and 7.

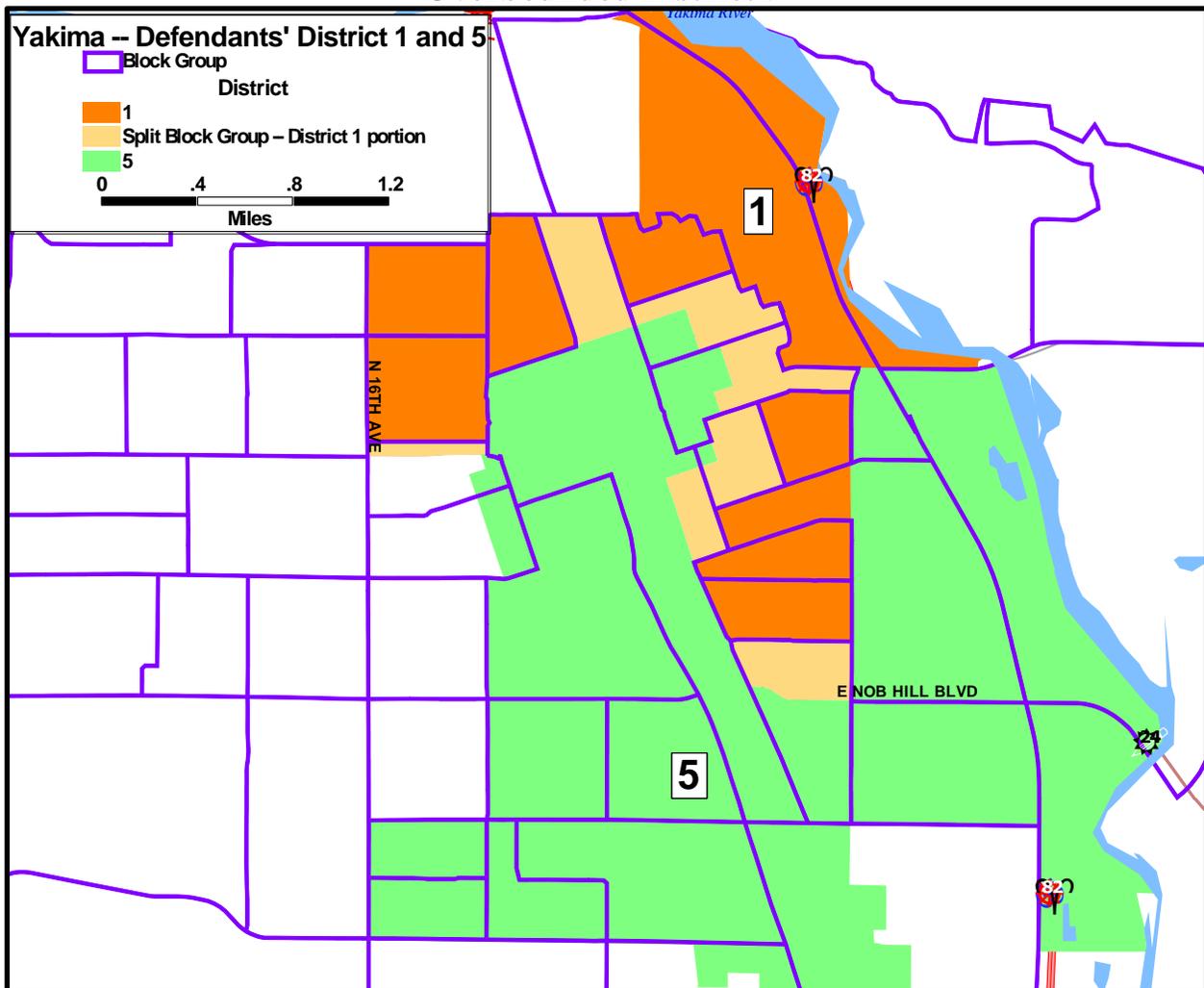
9. Dr. Morrison does not report the district-level block group approximations for Plaintiffs’ Districts 1 and 2 and Defendants’ Districts 2, 3, and 4. Nonetheless, the magnitude of the double-counting problem becomes evident when one tallies the block group approximation CVAP for Plaintiffs’ Districts 3 through 7. As shown in **Figure 2** above, the block group approximation CVAP subtotal in Dr. Morrison’s model for the five districts in the Plaintiffs’ Plan is 70,485. This partial five-district CVAP subtotal exceeds the citywide CVAP of 55,395 by 15,090, or 21.41%, before even taking into account Plaintiffs’ Districts 1 and 2.

10. In Footnote 2 of his declaration, Dr. Morrison states that he has “adopted the conservative approach of using whole census blocks.” There is nothing conservative about double counting. Dr. Morrison further states in this footnote that his “use of whole block group approximations here has the effect of slightly overbounding each district.” Overbounding districts in the range of 36% to 79% is hardly slight.

11. Dr. Morrison goes on to claim in Footnote 2 that overbounding has the effect of “diluting’ Latinos’ actual concentration.” This is not correct. For every district where Latinos’ actual concentration is diluted, there will likely be another one where Latinos’ actual concentration is overstated.

12. For example, as shown in the map in **Figure 3**, Defendants’ District 5 splits block groups that are also in Defendants’ District 1.

**Figure 3 – Double-Counted Areas in Defendants’ District 1 That Are Also in Overbounded District 5**



13. The light beige areas on the map are portions of split block groups that are in District 1, but counted again in Dr. Morrison's aggregate block group calculations for overbounded District 5.

14. The District 1 portion of overbounded District 5 has a population of 4,952, of whom 3,621 are Latino. The 2008-12 ACS LCVAP in the District 1 portion of the split block groups is 44.8% (Method 1), with 3,468 citizens (all ages), of whom 64.1% are Latino. Therefore, inclusion of these seven split block groups in LCVAP projections for District 5 is not dilutive because Defendants' District 5 has an LCVAP of 34.84% (Method 1) and 49.15% Latino citizens (all ages). Thus, in this partial analysis, the whole block group aggregation method introduces an upside bias to Dr. Morrison's LCVAP projections for District 5.<sup>1</sup> An upside bias in the District 5 LCVAP projections means that Dr. Morrison has overestimated future LCVAP because the base year should have a lower Latino citizenship rate than the rate calculated using the overbounded method.

15. Furthermore, Dr. Morrison has provided no evidence that his block group model has been backtested with Census 2000 citizenship data, so we do not

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<sup>1</sup> In this instance, the upside bias in LCVAP is ultimately netted out because overbounded District 5 also includes two LCVAP-dilutive block groups (0014001 and 0013002) along the southern border of District 5 that are split between Yakima and Union Gap. By my calculations, overbounded District 5 is 34.7% LCVAP (Method 1), which is about the same as the 34.84% estimate for District 5 under the Defendants' Plan. But, by my calculations, the overall Latino citizenship rate in overbounded District 5 is 54.3%, which is about 4 percentage points higher than District 5 (49.15%) under the Defendants' Plan. In the final analysis, a significant upside bias remains, because the under18 Latino citizen population is the linchpin of Dr. Morrison's cohort succession model.

know if the model is accurate at the district level in Yakima from an historical 2000 to 2010 perspective.<sup>2</sup> If the model is not predictive at the block group level for 2000 to 2010 citizenship projections, it is unlikely to be useful for 2010 to 2027.

16. Dr. Morrison's projections also fail to take into account likely demographic change over time. The ethnic composition of municipal neighborhoods and districts will change over time through in-migration and out-migration – a demographic factor not considered in Dr. Morrison's cohort succession model. Therefore, the projected LCVAP may not fit a trend line established from a single point in time, as employed in Dr. Morrison's model.

17. Nonetheless, assuming that Dr. Morrison's prediction for the LCVAP in Defendant's District 5 is accurate, by 2027 Latinos would still not constitute a citizen voting age majority in District 5. According to Table 2 in Dr. Morrison's declaration, the 2027 LCVAP in District 5 is projected to reach 49.8%. And, assuming that the Latino voter registration rate in District 5 (32.98% in March 2014) increases in lockstep with LCVAP, District 5 would not contain a majority of Latino registered voters in 2027.

18. Plaintiffs' Districts 1, 2, and 4 roughly correspond to the east Yakima area encompassed by Defendants' Districts 1 and 5. Assuming three districts that contain the ideal population size under a future decennial Census redistricting, 42%

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<sup>2</sup> In Appendix A of his declaration, Dr. Morrison presents in Table A-1 data that is backtested for the 2000-2010 citywide LCVAP, but there is no indication that he has backtested discrete block group level projections for Yakima.

of Yakima's population would reside in three districts under the Plaintiffs' Plan compared to 40% in two districts under the Defendants' Plan. Thus, when it becomes possible to draw a second Latino opportunity district under the Defendants' Plan, it will almost certainly be possible to draw a third Latino opportunity district under Plaintiffs' 7 single-member district plan.<sup>3</sup> Indeed, if the east-west divide in Yakima persists, at some point Plaintiffs' District 3 could become a fourth Latino opportunity district. Plaintiffs' District 3 has a 24.8% LCVAP (Method 1) and is adjacent to Districts 2 and 4.

19. Given the likelihood that Plaintiffs' District 4 can be drawn as a third Latino opportunity district whenever it becomes possible to create a second Latino district under the Defendants' Plan, Dr. Morrison's suggestion that the Plaintiffs' Plan "would gradually disenfranchise a majority of the City's eligible Latino voters" fails to recognize that Plaintiffs' District 4 will not remain static over future redistricting cycles.

#### **Hybrid District/Limited Voting Plan – Potential Pitfalls**

20. According to the 3-year 2011-13 ACS estimate released by the Census Bureau on October 23, 2014, the citywide LCVAP is 25.39% – up from 24.17%

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<sup>3</sup> As of March 2014, Latino voters in Plaintiffs' Districts 1, 2, and 3 represent 44.76% of all registered voters in the combined area. By comparison, the March 2014 Latino registered voter rate is slightly lower in combined Defendants' Districts 1 and 5 (42.36%).

under the 2010-12 ACS, but lower than the 1-year 2013 LCVAP estimate of 26.54%, which has a wider margin of error.<sup>4</sup>

21. With a citywide LCVAP of just over 25%, in theory, Latinos could win one at-large seat under a hybrid 4-district, 3 at-large limited voting plan such as that proposed by FairVote because the threshold of exclusion for 3 at-large seats is 25%.<sup>5</sup> But the citywide Latino registered voter rate is just 19.56%, so an at-large Latino seat is probably unattainable for several years.

22. There are at least two factors which militate against at-large limited voting as a viable and fair remedy in this lawsuit. First, there is no guarantee that dilutive annexations will not occur in the future, putting downward pressure on the citywide LCVAP and Latino registered voter percentage. As explained in my February 1, 2013 Declaration, *see* ECF No. 66, Ex. 4, ¶¶16-21, the boundaries of Yakima have grown over time, particularly as the City has expanded significantly to the west. In particular, annexations since 2000 have had a significant dilutive impact on Latino voting strength in Yakima, because the annexed territory was

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<sup>4</sup> The 2011-2013 ACS Yakima citizenship data can be retrieved from the Census Bureau's American FactFinder website via the links below:

All persons:

[http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/13\\_3YR/B05003/1600000US5380010](http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/13_3YR/B05003/1600000US5380010)

Latinos:

[http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/13\\_3YR/B05003I/1600000US5380010](http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/13_3YR/B05003I/1600000US5380010)

<sup>5</sup> The FairVote proposal is referenced in a favorable light by Dr. Morrison in Paragraph 16 of his declaration.

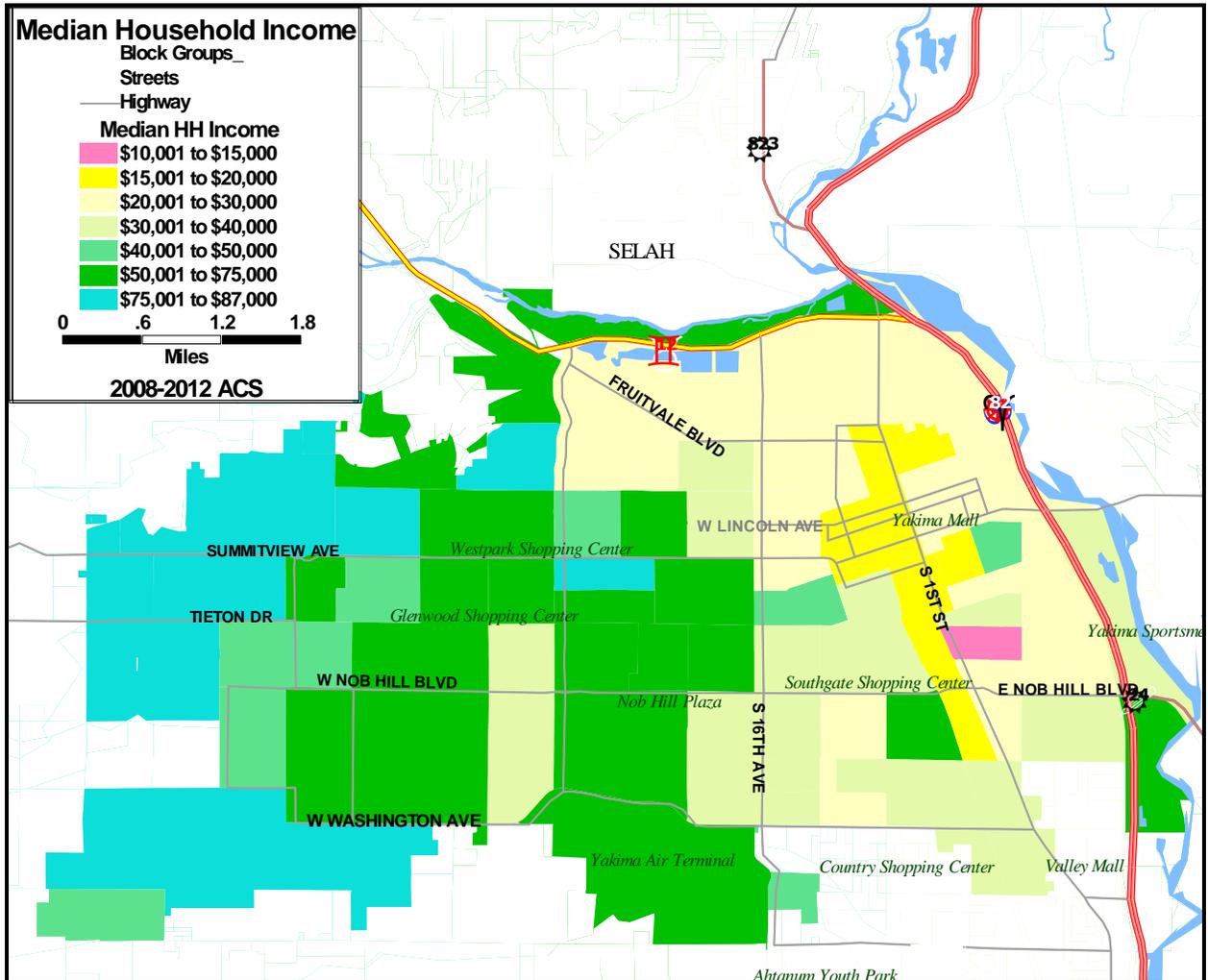
much more heavily non-Hispanic white than the existing City. Annexations in the 2000s added 15,338 persons to the City's 2010 population – 2,724 were Hispanic (17.76%) and 11,446 (74.63%) were non-Hispanic white.<sup>6</sup>

23. Second, there is a sharp socio-economic divide between east and west Yakima. The map in **Figure 4** below displays median household income (for all ethnicities) by census block group (2008-12 ACS).

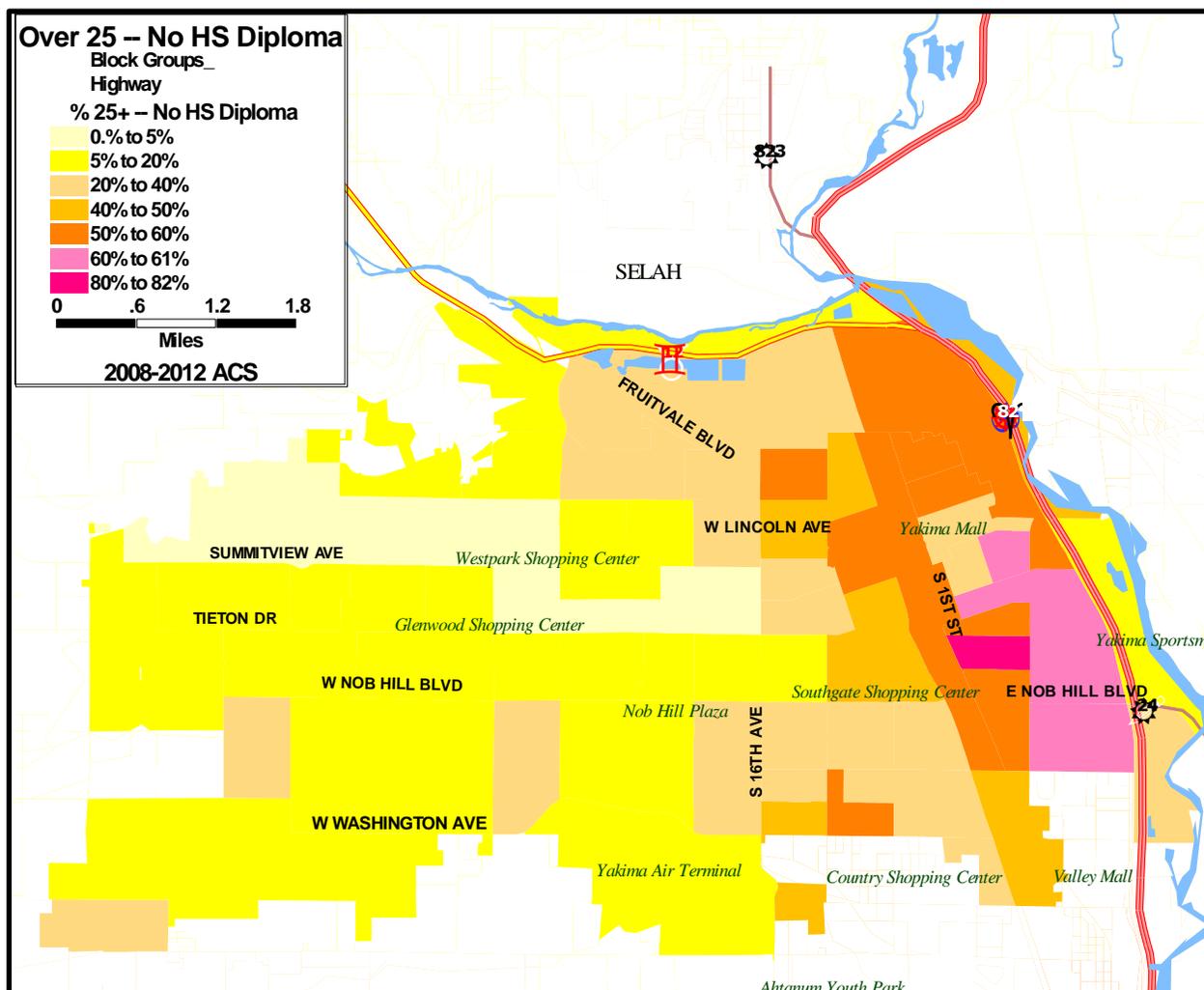
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<sup>6</sup> A 2011 annexation of predominantly non-Hispanic whites has added 141 persons to the City's population, based on the 2010 Census.

**Figure 4 Median Household Income**



24. The block group map in **Figure 5** below shows a similar east-west divide for the percentage of the population 25 and over without a high school diploma.

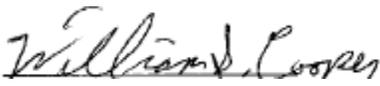
**Figure 5 Population 25 and Over Without a High School Diploma**

25. The east-west socio-economic divide illustrated in **Figures 4 and 5** would be likely to complicate campaign funding and get-out-the vote efforts for Latinos in at-large elections. (See also Exhibit C attached to my April 25, 2014 Supplemental Declaration, ECF No. 66, Ex. 5 at 145-208, containing charts and tables that compare Latinos and non-Hispanic whites across a range of socio-economic indicators from the 3-year 2010-12 ACS.)

**Conclusion**

26. The Plaintiffs' Plan is not a "static cure" as Dr. Morrison opines in Paragraph 12 of his declaration. Following future decennial census redistricting cycles, the Plaintiffs' Plan is positioned to evolve into an election plan with three Latino opportunity districts and perhaps a fourth should the Latino population in the City continue to grow at its recent pace. The Plaintiffs' Plan is therefore superior to both the Defendants' Plan and FairVote's hybrid 4-district, 3-at large proposal.

Executed on: October **30**, 2014

  
WILLIAM S. COOPER