

# Exhibit J

MGGG, January 2020

## Analysis of county commission elections in Yakima County, WA



### Introduction

At first glance, Yakima County seems to already be districted to facilitate minority opportunity to elect candidates of choice. There are three districts; District 1 is mostly White, but District 2 has a slight POC majority, including about 40% Hispanic VAP and an additional 8% Native VAP, while District 3 is 55% Hispanic by VAP.

This is undercut by an unusual—and very problematic—system of electing County Commissioners. Each district is represented by a Commissioner. The primary election is conducted by a *district-wide* "jungle primary," in which any number of candidates may run and the top two vote-getters advance to the general election without regard to party affiliation. (In fact, candidates with the "prefers Republican" label predominate over all others in Yakima, and this is even true for Hispanic candidates.) But the *entire county*, and not just the district, then votes to choose a winner between the two finalists. This indicates that the system itself negates any advantage of districting, nullifying the minorities' opportunity to elect.

This is a report by the MGGG Redistricting Lab, based at Tisch College of Civic Life within Tufts University. Below, we give racial polarization findings using King's ecological inference in the County Commission races (i.e., with endogenous data) as well as selected legislative and statewide (exogenous) races.<sup>1</sup> We find that Yakima has a clear pattern of racial polarization, with strong Gingles 2 and 3 findings. In particular, we find strong cohesion between Hispanic and Native voters in their support of Hispanic candidates, while White voters block these candidates of choice for the minority coalition from ever reaching office.

MGGG has developed a tool called Districtr to allow members of the public to draw and study districting plans, focusing attention on the possibilities facing redistricters. We have built a customized Districtr module to allow you to experiment with district design in Yakima. You can access it at [this link](#).

Finally, we consider below several possible remedies for the exclusion of candidates of choice for minority voters in Yakima's county commission, including several ways to draw majority-minority districts in a 3-district system. We find that **ranked choice voting**, rather than the use of majority-minority districts, is likely to provide the most effective and long-lasting opportunity for Hispanic and Native voters to elect their candidates of choice.

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<sup>1</sup> For instance, the State Supreme Court primary in 2012, had a highly qualified Hispanic candidate (Gonzalez) against a non-Hispanic White candidate widely considered to be unqualified (Danielson).

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## Yakima County RPV

These data come from the 2010 decennial Census and the 2013-17 American Community Survey (ACS).

### BASIC STATS

Total population 243,231 with a VAP of 169,193 (Census) and CVAP of 143,265 (ACS)

District 1: 80,920, District 2: 80,275, District 3: 82,036

Hispanic pct of pop. - County: 45%, District 1: 25.6%, District 2: 46.4, District 3: 62.8%

Hispanic pct of VAP - County: 37.5%, District 1: 19.9%, District 2: 39.5%, District 3: 55.1%

Hispanic pct CVAP - County: 29.6%, District 1: 15.1%, District 2: 31.4%, District 3: 46.1%

Native pct of pop. - County: 3.7%, District 1: 1.0%, District 2: 9.1%, District 3: 1.2%

Native pct of VAP - County: 3.6%, District 1: 1.0%, District 2: 8.2%, District 3: 1.3%

Native pct of CVAP - County: 4.3%, District 1: 1.2%, District 2: 10%, District 3: 2.1%

Note that Hispanic means Hispanic of any race, and Native means non-Hispanic American Indian/Native American. This means you can add our Hispanic and Native counts to get a correct total for residents who identified as Hispanic and/or Native.

Most of the other residents are White (below, this means non-Hispanic White).

### ELECTIONS INVESTIGATED (17)

County Commission District 1 primary - 2016 (12,456 votes)

County Commission District 2 primary - 2016 (7093 votes) \*Debra Manjarrez

County Commission District 3 primary - 2018 (9583 votes) \*Susan Soto Palmer, Jose Trevino

County Commission District 1 general - 2016 (67,197 votes)

County Commission District 2 general - 2016 (67,283 votes) \*Debra Manjarrez

County Commission District 3 general - 2018 (67,927 votes) \*Susan Soto Palmer

State Supreme Court Seat 8 primary - 2012 (25,627 votes) \*Steve Gonzalez

State House District 15-2 primary - 2012 (14,308 votes) \*Pablo Gonzalez

State Senate District 15 primary - 2018 (18,051 votes) \*Bengie Aguilar

State House District 14-1 primary - 2016 (14,776 votes) \*Susan Soto Palmer

State House District 15-2 general - 2012 (35,966 votes) \*Pablo Gonzalez

State Senate District 15 general - 2018 (33,536 votes) \*Bengie Aguilar

State House District 14-1 general - 2016 (36,764 votes) \*Susan Soto Palmer

Lieutenant Governor primary - 2016 (27,716 votes) \*Javier Figueroa

Lieutenant Governor general - 2016 (75,950 votes)

U.S. Senate general 2016 - (78,461 votes)

Governor general 2016 - (78,212 votes)

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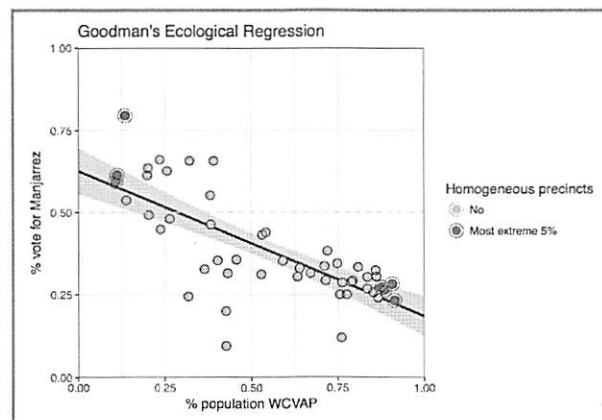
## FINDINGS WITH RESPECT TO CITIZEN VOTING AGE POPULATION

election	Hispanic candidate	est. NH White support	est. Hispanic support	est. Native support	outcome
CCD2 primary 2016	D.Manjarrez (4 cand)	19.3%	60.9%	85.5%	Advance
CCD2 general 2016	D.Manjarrez (2 cand)	37.1%	69%	84.5%	Loss
CCD3 primary 2018	S.Soto Palmer (7 cand)	11.4%	44.8%	0%	Advance
CCD3 general 2018	S.Soto Palmer (2 cand)	24%	73.3%	95.9%	Loss
SSC8 primary 2012	S.Gonzalez (2 cand)	26.8%	60%	29%	Loss in county, Win statewide
SH15-2 primary 2012	P.Gonzalez (2 cand)	18.8%	50.5%	24%	Advance
SH15-2 general 2012	P.Gonzalez (2 cand)	18.4%	66.1%	95.9%	Loss
SS15 primary 2018	B.Aguilar (2 cand)	20%	57.1%	32%	Advance
SS15 general 2018	B.Aguilar (2 cand)	21.7%	68.2%	90.5%	Loss
SH14-1 primary 2016	S.Soto Palmer (2 cand)	18.5%	78.1%	21.3%	Advance
SH14-1 general 2016	S.Soto Palmer (2 cand)	17.3%	82.7%	75%	Loss

Table 2: EI 2x2 runs for Yakima County. White support is computed via named candidate vs all other candidates / White vs non-White voter. (Similar for Hispanic and Native.) Important note: general election calculations are county-wide.

Green: 95% confidence intervals are not disjoint, but ecological regression indicates support for result. See regression plot below, showing that higher minority share of citizen voting age population correlates clearly with share of Manjarrez support by precinct.

Gray: 95% confidence intervals are not disjoint, and ecological regression does not corroborate the result, so this result should not be used. Sample size was too small.





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## Possible Remedies - Districts

Using randomized algorithms called Markov chains ([github.com/mggg/GerryChain](https://github.com/mggg/GerryChain)) that generate tens of thousands of legally compliant districting plans out of census blocks, we proposed several demonstration plans to consider. Below, we will write HVAP for Hispanic share of Voting Age Population, NVAP for Native VAP, and WVAP for White VAP. Likewise, HCVAP stands for Hispanic share of CVAP, and NCVAP and WCVAP are similar.

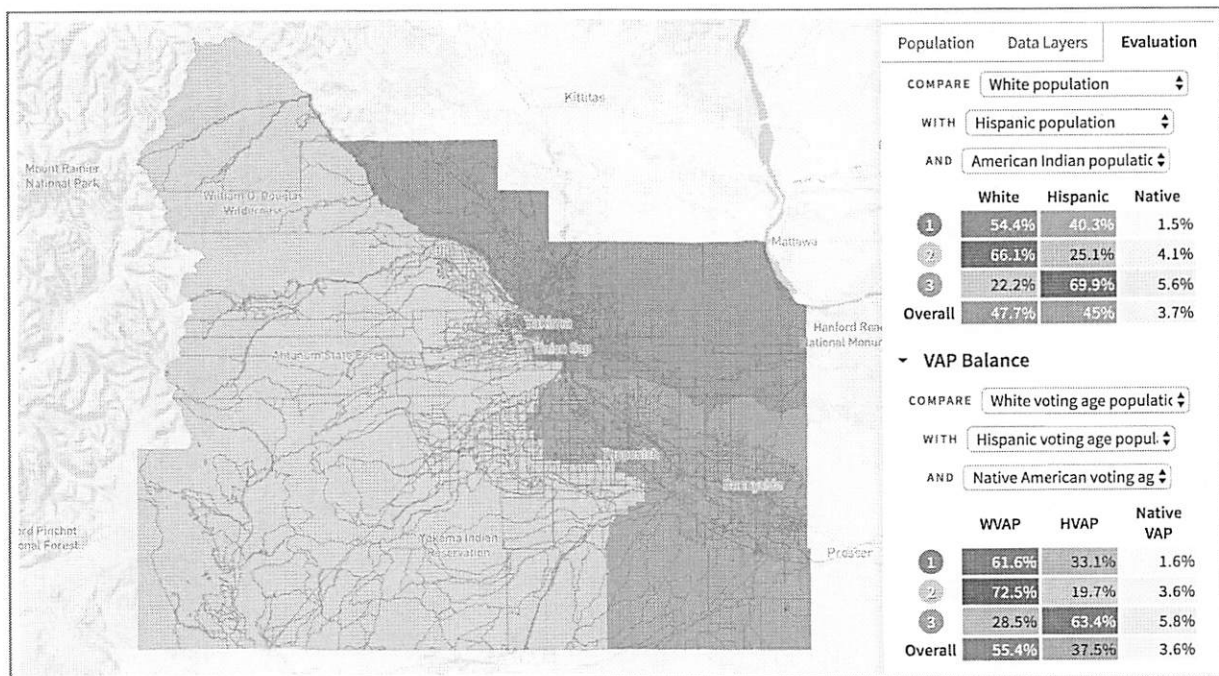
Current majority-minority district: 55.1% HVAP, 1.3% NVAP / 46.1% HCVAP, 2.1% NCVAP

Plan A majority-minority district: 63.4% HVAP, 5.8% NVAP / 53.6% HCVAP, 7.5% NCVAP

Plan B majority-minority district: 62.8% HVAP, 6.2% NVAP / 53.2% HCVAP, 8.1% NCVAP

Plan C majority-minority district: 60.2% HVAP, 4.0% NVAP / 50.9% HCVAP, 4.9% NCVAP

All three plans have top-to-bottom (Census) population deviation under 2% of ideal, which is better than the current enacted plan (2.17%). Plan C has a second district with reasonably high minority share. These three demonstration plans are also more compact than the current plan, as measured by cut edges. Plan A is shown below.



Plan A. District 3 has 53.6% HCVAP and 7.5% NCVAP.

We have thousands of demonstration plans available on request for 3 districts, or for larger commission sizes.

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## Possible Remedies - Ranked Choice

To assess the outcomes under a possible move to ranked choice voting, we built a stochastic model and devised eight different scenarios of voter behavior. In all cases, we assume that for a  $k$ -seat commission, there will be  $k$  Hispanic and  $k$  White candidates running. We then vary voter behavior as follows. (Illustrated for  $k=3$  but easily generalized to other magnitudes.)

Model runs: 100 runs of 10,000 voters using one of the standard Single Transferable Vote mechanisms (weighted Gregory method), coded in python. Average outcomes reported below.

Voting Scenario	3 seat commission	5 seat commission	7 seat commission	9 seat commission
total polarization, unanimous order	1 out of 3	2 out of 5	3 out of 7	3 out of 9
total polarization, non-white vary order of non-white	1 out of 3	2 out of 5	3 out of 7	3 out of 9
total polarization, all vary order	1 out of 3	2 out of 5	3 out of 7	3 out of 9
total polarization, white vary order	1 out of 3	2 out of 5	3 out of 7	3 out of 9
crossover, unanimous order	1 out of 3	2 out of 5	3 out of 7	4 out of 9
crossover, non-white vary order of non-white	1 out of 3	2 out of 5	3 out of 7	4 out of 9
crossover, all vary order	1 out of 3	1.81 out of 5	2 out of 7	3 out of 9
crossover, white vary order	1 out of 3	1 out of 5	2 out of 7	2.93 out of 9

*Total polarization:* all White voters vote WWWHHH and non-White voters vote HHHWWW.

*Crossover:* EI estimates from general elections (see above) are used to estimate rate of crossover voting: White voters vote 80% W and 20% crossover; Hispanic voters vote 70% H and 30% crossover; Native voters vote 80% H and 20% crossover; Other voters vote 70% H and 30% crossover. A crossover ballot alternates HWHWHW or WHWHWH.

*Unanimous order:* White candidates always ranked W1W2W3, Hispanic H1H2H3. This simulates community agreement or coordination about which are the preferred candidates.

*Vary order of non-white:* H1H2H3 equally likely to H2H1H3, H1H3H2, etc. Each voter orders the candidates randomly. This simulates vote-splitting among Hispanic candidates by non-White voters.

*Vary order:* same random order for White candidates.

Recall that about one-third of Yakima County CVAP is Hispanic and/or Native. We find that all ranked choice voting setups tend to do a good job securing minority representation at rates close to, and sometimes exceeding, that share of CVAP.

For model details and code, please visit our [github repo](#).

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## Comparison of Remedy Options

**3x1 plurality** - The traditional remedy would be to draw three districts, giving one of them a high share of Hispanic and Native voters. But even the most favorable plan (such as Plan A above) will produce a Hispanic and/or Native majority district that is not certain to be sufficient to elect a candidate of choice with current polarization patterns. (For instance, the projected vote margin for a generic Hispanic-preferred vs White-preferred candidate roughly 52-48. This is very close.)

**1x3 STV** - An alternative would be to move to a system of ranked choice voting, where each voter would be able to give their preference ranking for all of the candidates for county commission. Under every scenario we considered and in every one of thousands of model runs, 1 out of 3 commissioners would be a candidate of choice for Hispanic and Native voters.

**1xM STV** - If the commission size were enlarged to  $M$  seats (with  $M=5,7$ , or  $9$ ), results were more variable, but most outcomes were at or above one-third representation on the commission for minority candidates of choice.

On balance, we find strong evidence that **county-wide ranked choice voting** by a standard system such as single transferable vote (STV) is the most likely to provide minority opportunity to elect candidates of choice. In addition, it requires no line-drawing, and it is stable to population shifts over time.

*We welcome questions to [contact@mggg.org](mailto:contact@mggg.org) about the methods or findings in this report.*