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Attorneys for Plaintiffs Felisa Wilson, George Martinez, and Yarrow Silvers

IN THE SUPERIOR COURT FOR THE STATE OF ALASKA
THIRD JUDICIAL DISTRICT AT ANCHORAGE

In the Matter of the	}	Case No. 3AN-21-08869CI
2021 REDISTRICTING PLAN.		

NOTICE OF FILING UNSIGNED AFFIDAVIT

COMES NOW Birch Horton Bittner & Cherot, attorneys of record for East Anchorage Plaintiffs, and hereby gives notice of the filing of an unsigned copy of the Affidavit of Erin C. Barker. The executed original will be filed with this Court immediately upon its receipt.

DATED this 25th day of January, 2022.

BIRCH HORTON BITTNER & CHEROT
Attorneys for Plaintiffs

By: /s/ Holly C. Wells
Holly C. Wells, ABA #0511113
Mara E. Michaletz, ABA #0803007
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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on the 25th day of January, 2022, a true and correct copy of the foregoing document was served electronically on the following:

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By: /s/ Martha K. Marshall
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In the Matter of the)	
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2021 REDISTRICTING PLAN.)	Case No. 3AN-21-08869CI
)	
)	
_____)	

AFFIDAVIT OF ERIN BARKER

STATE OF ALASKA)
) ss:
Third Judicial District)

I, Erin Barker, being first duly sworn on oath, depose and state as follows:

1. I have a BA in politics and film studies from Mount Holyoke College, a Master's Degree in library and information science from Simmons University, and a Graduate Certificate in applied biostatistics from the University of Washington. I am familiar with the use of data in political decision-making. I understand the conventional application of population data in the redistricting process.

2. I believe the Alaska Redistricting Board (“Board”) has produced to the parties and presented to the Court data that was inaccurate.

3. The inaccurate data wrongfully suggested that a South Muldoon and North Muldoon pairing would not be a majority minority district. In fact, the minority voting age population of a senate district composed of North and South Muldoon would be 51.12 percent.

4. I was asked to analyze certain documents relied upon by the Board during proceedings in the above-captioned matter, specifically those referenced in East Anchorage Plaintiff’s Second Motion to Amend their Application.

5. Exhibit 6004, produced to parties by the Board and relied upon by East Anchorage Plaintiff’s expert witness Dr. Chase Hensel, reports incorrect data on the percentage of persons aged 18 years or more (“voting age population” or “VAP”) who are classified as members of a racial/ethnic minority group.

6. Exhibit 1007 was presented by the Board on Friday, January 21, 2022, and provides correct population data that consistently differs from the data provided in Exhibit 6004.

7. The affidavit of Peter Torkelson, dated January 20, 2022, presents data consistent with Exhibit 6004 in Image 6 and Image 7. In Paragraph 35, the affidavit states “pairing Muldoon house districts has the effect of diluting North Muldoon's majority-minority voting population, resulting in a senate district with less than a majority of minority voters.” Below that paragraph, Image 7 shows data that indicates pairing North and South Muldoon house districts would result in a minority voting-age population of 49.31 percent. This is inaccurate.

8. Exhibits 1013 and 1014, which correspond to Images 7 and 6 in the affidavit of Peter Torkelson, report inaccurate data that matches the data in Exhibit 6004.

9. Screenshots and printouts from redistricting applications are not inherently authoritative documents because they do not disclose the underlying calculations behind any data set.

10. For example, Exhibit 1013/Image 7 includes a callout box that reports the percentage of Alaska Native voters in four senate districts under the hypothetical Muldoon pairing. The percentages reported under “Alaskan Native VAP” range from 21.44 percent to 55.70 percent and match the figures under “Minority” in the matrix below. This error is a mislabeling of an important data set and calls into question the credibility of other data produced in the same manner.

Muldoon Pairing Alternative				
Muldoon Pairing Scenario				
District	Alaskan Native VAP			
I	55.70%			
J	49.31%			
K	21.44%			
L	42.35%			
Racial Demographics as a percent of VAP				
Percent Voting Age	White	Black	Hispanic	Minority
74.86%	44.30%	8.21%	10.18%	55.70%
74.60%	50.69%	8.82%	8.22%	49.31%
73.82%	78.56%	2.12%	6.09%	21.44%
80.27%	57.65%	8.41%	10.37%	42.35%

50% minority voting age population.

11. The US Census reports race and ethnicity data at an extremely granular level, accounting for all possible combinations of identity under six racial classifications and two ethnicity classifications, for both all-ages population and voting age population. These are listed over 13 pages in the *2020 Census State Redistricting Data (Public*

Law 94-171) Summary File 2020 Census of Population and Housing Technical Documentation¹, beginning on page 6-25 under the heading “P1. RACE [71].” Including summary values, there are 288 different fields reporting population data.

12. The Census Bureau does not report an aggregated value for all racial/ethnic minority persons. In fact, the word “minority” does not appear in the above technical documentation. In order to quantify a total minority population, users and/or their software must create a calculated field. This can be done by calculating the sum of all non-white groups or by subtracting the number of non-Hispanic “white alone” persons from the population total.

13. There are multiple software products available that integrate Census data with geographic shape files in order to calculate the number of persons in a drawn district overall and by sub-population, such as racial group.

14. AutoBound EDGE is one such system, used by the Board.

15. Maptitude for Redistricting is a similar product, published by Caliper Corporation.

16. Dave’s Redistricting is another system that is freely available online at davesredistricting.org. Dave’s Redistricting has posted the adopted 2022 Alaska State House map at this link: <https://davesredistricting.org/maps#viewmap::1f4ba76c-ea2a-43b9-bf60-dd95eb9abb57>.

¹ https://www.akredistrict.org/discovery/Census%20Data/2020Census_PL94_171_Redistricting_StatesTechDoc_English.pdf (Feb 2021 version). Also, on Census web site (June 2021 version) at https://www2.census.gov/programs-surveys/decennial/2020/technical-documentation/complete-tech-docs/summary-file/2020Census_PL94_171_Redistricting_StatesTechDoc_English.pdf.

17. As described in the *Technical Documentation*, the US Census uses codes to identify each population category, accompanied by a long natural-language description. For example, the number of persons counted as “White; Black or African American; American Indian and Alaska Native” is labeled as “P0040029.”

18. Given this complexity, redistricting software systems may introduce their own codes for each field and/or allow users to create a shorthand label for fields displayed in reports such as AutoBound EDGE’s Active Matrix.

19. This is the case with AutoBound EDGE’s Active Matrix. When users create the Matrix, they manually designate the text that will appear as the header for each field:

20. The population field names and definitions used in Maptitude for Redistricting are published online at <https://www.caliper.com/learning-redistricting/index.php/articles/what-fields-are-included-in-the-2020-data/>.

21. Dave’s Redistricting creates its own minority VAP calculation defined as “all minorities as a % of the relevant voting age population; includes Hispanic.” This statement can be found by loading any map in Dave’s Redistricting, clicking on the “Statistics” button and mousing over “Minority.”

22. With any software system, manual editing and calculations present opportunity for user error and/or subjectivity.

23. Accordingly, I compared data provided by the Board to data from Maptitude for Redistricting and Dave’s Redistricting. By comparing the Board’s data to two unrelated systems, I aimed to triangulate the accurate values.

24. Data provided in each system and in the Board's exhibits varies. The following table indicates whether each data point was reported as a whole number, a percentage, or both.

Data Type for Population Values Reported, by Source			
Source	Total Population	Voting Age Population (VAP)	Non-white/ Minority VAP
Exhibit 6004	Number	Percentage of total population	Percentage of VAP
Exhibit 1007	Number	Number	Number and percentage of VAP
Exhibit 1013	Number	Percentage of total population	Percentage of VAP
Exhibit 1014	Number	Percentage of total population	Percentage of VAP
Maptitude for Redistricting	Number	Number	Number
Dave's Redistricting	Number	Number and percentage of total population	Percentage of VAP

25. Comparing the total population (all ages) reported by each source, all values matched. This indicates all of the data sources consistently integrated the promulgated shape files with the 2020 Census data set.

	Total Persons				
HD	1007	6004	Dave's Redistricting	Maptitude [Population]	Observations
9	18,284	18,284	18,284	18,284	All values match
10	18,523	18,523	18,523	18,523	
11	18,103	18,103	18,103	18,103	
12	18,217	18,217	18,217	18,217	
13	18,185	18,185	18,185	18,185	
14	18,213	18,213	18,213	18,213	
15	18,168	18,168	18,168	18,168	

16	18,182	18,182	18,182	18,182
17	18,203	18,203	18,203	18,203
18	18,243	18,243	18,243	18,243
19	18,239	18,239	18,239	18,239
20	18,285	18,285	18,285	18,285
21	18,414	18,414	18,414	18,414
22	18,205	18,205	18,205	18,205
23	18,023	18,023	18,023	18,023
24	18,032	18,032	18,032	18,032

26. Comparing the voting age population (VAP), all whole numbers reported matched. Because Exhibit 6004 reported VAP as a percentage of total population, I calculated this value by multiplying the % VAP by total population. Differences of 1 person appear in some districts due to rounding but do not invalidate the underlying data. Effectively, data from all sources matched.

Voting Age Population					
HD	1007	6004* % reported, raw # calculated	Dave's Redistricting	Maptitude [18+_Pop]	Observations
9	13,957	76.33%	13,956	13,957	All reported values match and calculated values are within expected ranges
10	13,986	75.51%	13,987	13,986	
11	13,701	75.68%	13,700	13,701	
12	13,822	75.87%	13,821	13,822	
13	14,342	78.87%	14,343	14,342	
14	14,827	81.41%	14,827	14,827	
15	13,704	75.43%	13,704	13,704	

16	14,269	78.48%	14,269	14,269	14,269
17	14,949	82.12%	14,948	14,949	14,949
18	13,076	71.68%	13,077	13,076	13,076
19	14,234	78.04%	14,234	14,234	14,234
20	13,349	73.01%	13,350	13,349	13,349
21	14,029	76.19%	14,030	14,029	14,029
22	13,241	72.73%	13,240	13,241	13,241
23	14,130	78.40%	14,130	14,130	14,130
24	13,509	74.92%	13,510	13,509	13,509
*discrepancies of +/- 1 person are expected in calculated values due to rounding					

27. Comparing the number of non-white—or minority—VAP persons, Exhibit 1007, Dave’s Redistricting, and Maptitude are equal or within 1 person of each other (differences due to rounding), however Exhibit 6004 differs significantly. Exhibit 6004 reported a percentage of non-white VAP, as does Dave’s redistricting; in both cases, I calculated the estimated number of non-white VAP persons by multiplying the reported percentage by the total number of VAP persons from each source. With Maptitude, I calculated the total number of minority VAP persons by subtracting the total number of non-Hispanic “white alone” VAP persons from the total VAP. Exhibit 6004 reflects an average of 261.8 fewer minority VAP persons per Anchorage house district than the other data sources do.

Non-White Voting Age Population						
HD	1007	6004* % reported, raw # calculated	Dave's Redistricting % reported, raw # calculated	Maptitude [18+_Pop - NH18+_Wht]	1007- 6004 Difference	Observations

9	2,687	17.95%	2,505	19.25%	2,687	2,687	-182	Raw numbers reported in 1007 and Maptitude and calculations from Dave's Redistricting match. Calculations from 6004, however, produce an average of 261.8 fewer persons.
10	5,737	39.19%	5,481	41.02%	5,737	5,737	-256	
11	4,622	32.08%	4,395	33.73%	4,621	4,622	-227	
12	6,386	44.60%	6,164	46.20%	6,386	6,386	-222	
13	6,737	45.09%	6,467	46.97%	6,736	6,737	-270	
14	6,935	45.19%	6,700	46.77%	6,935	6,935	-235	
15	5,107	35.76%	4,901	37.27%	5,107	5,107	-206	
16	5,231	35.19%	5,021	36.66%	5,231	5,231	-210	
17	6,593	42.46%	6,347	44.10%	6,593	6,593	-246	
18	8,632	64.03%	8,373	66.01%	8,631	8,632	-259	
19	7,091	48.06%	6,841	49.82%	7,091	7,091	-250	
20	7,872	56.84%	7,588	58.97%	7,872	7,872	-284	
21	6,124	42.14%	5,912	43.65%	6,124	6,124	-212	
22	3,058	21.06%	2,788	23.09%	3,057	3,058	-270	
23	6,589	42.24%	5,969	46.63%	6,589	6,589	-620	
24	3,187	21.81%	2,946	23.59%	3,187	3,187	-241	
*discrepancies of +/- 1 person are expected in calculated values due to rounding								

28. Comparing the percentage of non-white VAP, Exhibit 6004 underreported this figure by an average of -1.88 percent per house district (range of -4.39% to -1.51% in East Anchorage). In the table below, Maptitude data are calculated as the number of minority VAP in the table above divided by the total VAP.

Percent Non-White Voting Age Population						
HD	1007	6004	Dave's Redistricting	Maptitude [calculated from above values]	Observations	Difference
9	19.25%	17.95%	19.25%	19.25%	Values from Exhibit 1007, Dave's Redistricting, and Maptitude match. Exhibit 6004 reports a lower value.	-1.30%
10	41.02%	39.19%	41.02%	41.02%		-1.83%
11	33.73%	32.08%	33.73%	33.73%		-1.65%
12	46.20%	44.60%	46.20%	46.20%		-1.60%
13	46.97%	45.09%	46.97%	46.97%		-1.88%
14	46.77%	45.19%	46.77%	46.77%		-1.58%
15	37.27%	35.76%	37.27%	37.27%		-1.51%
16	36.66%	35.19%	36.66%	36.66%		-1.47%
17	44.10%	42.46%	44.10%	44.10%		-1.64%
18	66.01%	64.03%	66.01%	66.01%		-1.98%
19	49.82%	48.06%	49.82%	49.82%		-1.76%
20	58.97%	56.84%	58.97%	58.97%		-2.13%
21	43.65%	42.14%	43.65%	43.65%		-1.51%
22	23.09%	21.06%	23.09%	23.09%		-2.03%
23	46.63%	42.24%	46.63%	46.63%		-4.39%
24	23.59%	21.81%	23.59%	23.59%		-1.78%

29. In underreporting minority voters, Exhibit 6004 and the data sets aligned with it (including Exhibits 1013 and 1014) mischaracterize Anchorage voters and incorrectly assert that North and South Muldoon could not create a minority-majority senate district.

30. The following table displays the above comparative data for house districts 20 and 21–North and South Muldoon—and calculated totals as if this were one senate district. It shows that while Exhibits 6004, 1013, 1014, and the Affidavit of Peter Torkelson indicate that this district would have only 49.31 percent minority VAP, other data sources confirm that the combined district would in fact have 51.12 percent minority VAP, rendering it a minority-majority district.

Senate Pairing	HD	Exhibit 6004				Other Data (Exhibit 1007, Dave's Redistricting, and/or Maptitude, where Provided)				Difference in Estimated % Non-White VAP (6004-Other Data)
		Total Population	Total VAP (calculated)	Non-White VAP (calculated)	% Non-White VAP	Total Population	Total VAP	Non-White VAP	% Non-White VAP	
Muldoon 20+21	20	18,285	13,350	7,588	56.84%	18,285	13,349	7,872	58.97%	-2.13%
	21	18,414	14,030	5,912	42.14%	18,414	14,029	6,124	43.65%	-1.51%
	Combined	36,699	27,380	13,500	49.31%	36,699	27,378	13,996	51.12%	-1.81%

31. In this review of two external data systems that rely on 2020 Census population data, I have validated the data provided by the Board in Exhibit 1007. These have consistently contradicted the data provided by the Board in Exhibits 6004, 1013, 1014, and the Affidavit of Peter Torkelson.

32. The Court and parties should be informed how the Board generated Exhibits 6004, 1013, and 1014. Specifically, the Board should disclose the configuration of each field included in each Active Matrix or other tabular report presented.

FURTHER YOUR AFFIANT SAYETH NAUGHT.

Erin Barker

SUBSCRIBED AND SWORN TO before me this _____ day of January, 2022.

Notary Public for Alaska

My Commission expires: _____