ALASKA REDISTRICTING BOARD

Date: November 2, 2021
Time: 9:00am
Place: Anchorage Legislative Information Office, Denali Conference Room, 1st Floor 1500 West Benson Blvd, Anchorage 99503

Anchorage LIO meetings: Live Video/Audio Web Stream: www.akl.tv

Anchorage LIO: Teleconference public testimony dial-in numbers:
Anchorage 563-9085, Juneau 586-9085, Other 844-586-9085

Agenda

1. Call to Order and Establish Quorum

2. Adoption of Agenda

3. Adoption of Minutes

4. Public Testimony – will conclude at 10:30am
   Dial into one of the phone numbers above and indicate to the operator that you wish to testify

5. 10:30am – Executive Session with Legal Counsel

   Presentation by Matt Singer, Schwabe, Legal Counsel to the Board

7. Review of Sept 16 Census Physical Delivery Data

8. Public Hearing Tour Summary

9. Review & Discussion: Tasks Ahead, Key Decisions

10. Mapping Work Session

11. Adopt Final Redistricting Map

12. Adjournment
The 2011 Alaska Redistricting Board created this [table](#) when the Board received the 2010 Census Data. The new 2010 Census Data was compared to 2000 Census Data using the 2002 Alaska House District Map as a template.

The first four 2002 columns in the district table are (1) 2000 Census total population, (2) 2002 district population deviation from the 2000 ideal district size of 15673, (3) the 2002 district % deviation and (4) the % Alaska Native population for each of the forty Alaska House Districts. The second set of four columns repeat this sequence for 2010 Census population using the ideal district size of 17756.

The 2002 deviations from ideal 2000 district population ranged from -4.90% to 5.06%. The 2010 population deviations for this 2002 map exploded to range from -22.02% to 46.29%. Clearly the 2011 Redistricting effort was essential for the rapidly growing state.

Let’s focus on the pattern of 2002 district map deviations after the 2001 litigation. The Supreme Court instructed the 2001 Redistricting Board to reduce 9.5% deviation amongst Anchorage Municipality Districts. The Anchorage Municipality District 17 to 32 deviations range from .88% to 1.11% with two exceptions(1)(2). The Alaska Supreme Court commenting on an appeal of April 25, 2002 Proclamation Map recognized the Board’s spectacular deviation reduction to less than ¼%.

The 2001 Alaska Redistricting Board did much more work after the March 21, 2002 Alaska Supreme Court decision. The representatives of the plaintiffs negotiated with the 2001 Redistricting Board to minimize deviations in Mat-Su Borough and Fairbanks North Star Borough districts. The MSB District 13 to 16 deviations were reduced to a range from 2.75% to 3.56%. This ¾ % span is less than the 2001 map deviations.

The 2001 Redistricting Board reduced the FNSB District 7 to 11 deviations to a range from -1.14% to 2.08%. The average deviation for these 2002 FNSB districts was ONLY 0.39%.

The 2001 Redistricting Board modified Anchorage, MSB and FNSB districts in response to the Alaska Supreme Court instruction to reduce urban district deviations. The 2001 Redistricting Board modified more than twenty-five districts to comply with the Alaska Supreme Court’s March 21, 2002 Order.

The 2021 Redistricting Board v.3 Map shows FNSB District 31 to 35 deviations ranging [FROM 4.26% to 4.42%](#). The AVERAGE deviation for these FNSB districts is 4.34%. The 2021 Redistricting Board v.3 Map restricts FNSB representation to only 5 Alaska House Representatives and 2.52 Alaska State Senators.

The [AFFER 2.7.4.1](#) Matrix shows FNSB District 6 to 10 deviations ranging FROM -0.11% to 0.72%. The average deviation for these FNSB districts is ONLY 0.30%. This AFFER average deviation is 7% of the 2021 Redistricting Board v.3 Map’s huge average 4.34% deviation.

The [AFFER 2.7.4.1 Map](#) provides the FNSB full representation in the Alaska State House with 5.21 districts and in the Alaska State Senate with 2.61 districts.

Furthermore [AFFER 2.7.4.1 Map](#) District 10 is a competitive FNSB district that is immediately north of the four other FNSB districts.
The remaining 3800 FSNB citizens in the more rural northern part of borough become part of AFFER House District 5. These voters, when added to the AFFER District 6 voters provide more than 60% of the voters in AFFER Senate District C, clearly provide FSNB control of a third senate district for the next decade.

I urge the 2021 Alaska Redistricting Board to adopt the AFFER 2.7.4.1 Map for the FNSB.

Notes
(1) Anchorage’s District 18 including a portion of Government Hill, a slice of Muldoon and the Fire Lake precinct in CER as well as both JBER precincts had a -0.22% deviation in both the 2001 map and the 2002 map.
(2) Anchorage’s District 32 was significantly rebuilt to comply with another section of the Alaska Supreme Court’s March 21, 2002 Order. This District 32 alteration significantly altered District 12 as well.
My Comments refer to AFFER Map v2.7.4.1

The Calista Region’s total population in Bethel Census Area and the Kusilvak Census Area is 27,034.

This Calista Region 2020 Census population equals 1.474 Alaska State House Districts in the 2021 map and .737 Alaska Senate Districts.

The Calista Region’s population has been in 2 or 3 districts in recent Alaska State House Maps (District 37, 38 and 39). Two house districts with the largest Calista Region population have been assigned to separate Senate Districts. The Calista senate representation has been diluted for decades. Their 2013 representation has been slightly over 50% in Senate District S and less than 18% in Senate District T.

In 2011, the Alaska Supreme Court in Riley found City of Fairbanks senate representation must not been split into two Senate Districts. Since the Calista Region does not have the legal status of a City, Calista may not reach for similar protection.

The only Calista Region anti-dilution option is to increase its District 37 population which adds directly to the Calista representation in Senate District S. The Southern Villages of the Lower Kuskokwin School District are assigned to the AFFER District 37 to make D 37 more compact.

The combined population of Lake & Peninsula Borough, Bristol Bay Borough, Aleutians East Borough, Aleutians West Census Area and Dillingham Census Area from 2010 Census to 2020 Census decreased 348 people. Therefore, Alaska’s southwestern District must add external population. The 2013 District 37 included eight Doyon villages. More Doyon villages are a likely 2021 answer.

A specific request from Hooper Bay for inclusion in the Bethel District creates this series for positive results:

1) The villages of Hooper Bay, Scammon Bay and Chevak are moved from D 39 to D 38.
2) To reduce this excess population in D 38, the southwestern Calista villages of Kwigillingok, Kongiganak, Quinagak, Goodnews Bay and Platinum are assigned to D 37. Additional Calista Kuskokwin River villages form the northern boundary of D 37.

These five Calista villages push Doyon Yukon River and Upper Kuskokwin River villages out of AFFER District 37. The addition of Calista Villages reduces the D 37 length by more than a hundred twenty miles from the 2013 Proclamation Map. The width of district increases by seventy-five miles. The resulting AFFER D 37 becomes more compact.

The compactness of AFFER D 38 is not measurably changed. The AFFER District 37 deviation is -1.08% and AFFER District 38 deviation is -0.35%.

This Calista Village reassignment ensure that NO Doyon villages are required in AFFER District 37 or District 38. Furthermore, the Kenai Borough breech for Coalition District 37 population disappears.

Since AFFER District 40 does not require any Doyon villages, the 2021 AFFER Map has all the Doyon Villages in AFFER District 5 and AFFER District 39.
Both Calista and Doyon have villages in AFFER District 39. The 2021 AFFER Map is the best compromise available for the 2020 Census Data.

I fully support the AFFER District 5, AFFER District 37, AFFER District 38, AFFER District 39 and AFFER District 40 Maps.

Randy Ruedrich
Alaskans For Fair & Equitable Redistricting
These comments refer to **affer map v2.7.4.1**

The Matanuska-Susitna Borough requests the adoption of the MSB AFFER map. The MSB want a map that works for both the State and the MSB. The MSB has no partisan mapping issues.

MatSu Borough requests six house districts with full representation and three senate districts as shown in the AFFER v2.7.4.1. The MatSu Borough, Wasilla, Palmer and South Knik River community have testified in support of six house districts and three senate districts for the MatSu Borough, the Denali Borough, the Glennallen Precinct, and adjacent Richardson Hwy populations but not including Valdez.

MatSu Borough requests AFFER v2.7.4.1 District 11 for City of Houston, AFFER v2.7.4.1 District 13 for City of Wasilla and AFFER v2.7.4.1 District 15 for City of Palmer.

The Mayor of Wasilla, Glenda Ledford testified in support of a map that includes the greater Wasilla area with historical access that center around Wasilla’s Main Street turning into Wasilla Fishhook to the North and KGB to the south. Wasilla’s western boundary Church Road is the North – South divider between Tanaina north of Wasilla and the Meadow Lakes. The attached 2002 District 14 map incorporated these factors. The AFFER plan v2.7.4.1 maintains this historical layout. While other 2021 Wasilla maps may appear compact and contiguous, travel within those districts requires driving across an adjacent district to reach another part of Wasilla district. Wasilla east to west lies along the Parks Hwy through the business district to Wasilla’s airport and its industrial district.

The South Knik River Community Council has testified that it supports the communities on the east side of the Matanuska River: Knik River, Butte, Lazy Mountain to Sutton and the North being in a district.

Palmer residents and community leaders have voiced strong opposition to splitting the city of Palmer or the “Greater Palmer Area.” Palmer and its connected community councils view their utility district going out past its city boundaries to the west to Trunk Rd, and to the South to the MatSu Regional Hospital as major assets of the “Greater Palmer Area.” The AFFER 2.4.7.1 map incorporates all the above community goals.

MatSu Borough requests the addition of the Denali Borough to AFFER v2.7.4.1 District 11. The Denali Borough provides required additional population the MSB needs for six house seats.
MatSu Borough requests AFFER v2.7.4.1 District 12 for the rapidly growing Big Lake and KGB areas. The Little Susitna River is the western District 12 boundary. Cottonwood Creek is the eastern District 12 boundary.

MatSu Borough requests AFFER v2.7.4.1 District 14 as the fourth MSB core area district separating City of Wasilla from City of Palmer.

MatSu Borough requests AFFER v2.7.4.1 District 16 for the eastern MSB, Glennallen and its neighboring communities for the sixth MSB district. The Glennallen community is socio-economically integrated with the MSB core area via the Glenn Hwy.

MatSu Borough rejects the use of any MSB population in Coalition Map Districts diluting the MSB’s political strength.

Alaskans For Fair & Equitable Redistricting
Steven Colligan & Randy Ruedrich
Final Recommendations to
Alaska Redistricting Board

Submitted November 2, 2021 by

Alaskans for Fair Redistricting
Joelle Hall, Chair

Contact: Robin O'Donoghue - AFFR Coordinator
Email: robin@akpirg.org
Web: https://www.akfairredistricting.org/
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Executive Summary

Alaskans for Fair Redistricting (AFFR) has been an active and attentive participant in the 2021 redistricting process. In addition to putting forward our own constitutional redistricting plan, we have attended the open house meetings across the state to listen to public comment and closely monitored the process carried out by the board. Compiled in this report you will find a summary of the constitutional issues we’ve identified in the six plans put forward by the Redistricting Board and 3rd party organizations, key items of public testimony, and our final recommendations as the board enters the Voting Rights Act review and final mapping phase of the process.

When viewed from any angle, whether constitutionality, Voting Right Act review, or public support, AFFR clearly meets each criteria and most closely fits the vision of Alaskans. As a broad, non-partisan coalition, we believe that we best represent the widest range of communities and will provide the most fair and equal representation for the next decade.

Sincerely,

Joelle Hall
Alaskans For Fair Redistricting, Chair
AFFR staff and coalition members reviewed 1,379 public comments available online as of November 1st to quantify support and opposition to various maps. Many members of the public expressed support and opposition for multiple maps, and some did not specify support for any specific map but rather expressed redistricting preferences for their region. Given this, staff and coalition members tried to note where general opposition (e.g. Nikiski added to Anchorage) existed on specific maps (e.g. AFFER’s map). In addition, some comments were more general in nature, which we added to ‘state-wide’ support. With each comment, we marked all support and opposition for all relevant maps, but only marked a proposed map once. For example, testimony in support of AFFR referring to both our Valdez and Southeast areas was only marked once in support of AFFR.

There were several letters from Tribal Councils and Villages in the Interior supporting the Doyon coalition maps--those we marked as statewide rather than Interior support, as the comments made extended beyond just the Interior.

For ease of reference, we have bolded the numbers and percentages for each region to compare which map received the highest supporting and oppositional testimonies.

**Support**
Overall the AFFR plan received the most supportive public testimony statewide and about 57% support of all total supportive comments. Regionally, the AFFR plan received the highest amount of support from Kenai/Kodiak, Anchorage, Fairbanks, the Interior (including Valdez), as well as general support. AFFR also tied for the most support with other proposed maps in the Mat-su and Northwest Arctic & Arctic Slope boroughs. AFFR received the second highest level of support in the Southeast.

**Opposition**
Overall, V.3 received the most opposition from public testimony statewide. Regionally, V.3 was also the most opposed in testimony from Southeast, Kenai/Kodiak, and Fairbanks. Generally, V.4 and AFFER’s maps received the second highest opposition with the exception of the Mat-Su and Western Alaska & the Aleutians.

Doyon received the most opposition from the Mat-Su as well as Delta Junction.

AFFER received the most opposition from Anchorage and unanimous opposition from the Northwest Arctic Borough and the North Slope Borough.
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</tr>
<tr>
<td>% Oppose</td>
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**Borough Boundary Breakages**

The Alaska Supreme Court has recognized that Borough Boundaries are part of the constitutional requirement of socio-economic integration. This is evident in legal precedents that have given great weight to respecting Borough boundaries such as *Hickel v. Southeast Conference* (1993) where the Alaska Court found that “where possible, all of a municipality’s excess population should go to one other district in order to maximize effective representation of the excess group.” The AFFR plan does the best job of respecting Borough boundaries while following other constitutional criteria. Under the AFFR plan, the only Borough boundary broken more than once is the Kenai Peninsula Borough, which has unique geography and socio-economic regions that make it impossible to create a constitutional map without breaking the borough twice.

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Version 3</th>
<th>Version 4</th>
<th>AFFR</th>
<th>Doyon</th>
<th>AFFER</th>
<th>Senate Minority</th>
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<td>7</td>
<td>6</td>
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*Note: the only reason why Board V.3 has only 6 borough breaks is due to the unconstitutional treatment of the Fairbanks North Star Borough and the overpopulation issue in all five Fairbanks districts. The strict adherence to this rule in only one Borough when Boroughs in the rest of the plan are each broken is questionable.*

It is worth drawing attention to the treatment of the City of Fairbanks Boundary, given court precedent that has ruled the city must be kept in two House Districts and one Senate District. The AFFR plan adheres to this precedent while also managing to respect the City of Northpole’s distinct identity. Board Map V.3 notably breaks the City of Fairbanks twice and is the only map to break the North Pole City Boundary.
Alaskans for Fair Redistricting
Report to the Alaska Redistricting Board and Final Recommendations. November 2, 2021

<table>
<thead>
<tr>
<th>Municipality</th>
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<th>Doyon Breaks</th>
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City Breaks - Fairbanks Northstar Borough

**VRA Compliance**

While AFFR followed the Hickel process which required AFFR to create a map focusing only on constitutional criteria, and we are following the Board’s direction not to provide racial data on districts in our plan, we wanted to highlight several issues the Board should consider when it moves into evaluating its map for compliance with the Voting Rights Act (VRA).

**Alaska Native Majority Districts**
AFFR believes that an analysis of population demographics and voting behavior will show that the VRA requires the creation of 4 majority Alaska Native districts in Arctic and Western Alaska.

**Minority Coalition Districts**
Because of the growing diversity in urban Alaska, especially in the Anchorage Bowl where there are 16 contiguous census tracts with a total population of 66,594 where the majority of people identify as a member of a minority racial group, AFFR commissioned well-respected local attorney Susan Orlansky to research whether the VRA requires the creation on minority coalition districts where multiple minority groups form a majority. AFFR has previously submitted a memo Ms. Orlansky prepared summarizing her research. While there is a divide among circuit courts about this issue, AFFR believes the Board should take the position that the VRA recognizes minority coalitions. If there is any state in which minority coalitions should be considered under the VRA, it is Alaska where unlike other states our diversity presents itself in urban areas primarily through diverse neighborhoods with residents from multiple ethnic and linguistic groups.

**Avoiding Packing Rural Alaska Native Voters into Road System Districts**
Due to the distinct socio-economic character of rural Alaskan communities, and the VRA’s requirement to prevent the voting power of minority groups from being diluted through redistricting, the Board should take care to minimize the number of Alaska Native communities included in districts that are likely to be controlled by non-Native road system communities. Interior Alaska and the Kenai Peninsula Borough are two regions where the population geography puts Alaska Native communities at risk of being placed into districts where they would not have the ability to meaningfully influence the outcome of their elections. While the population mathematics makes it impossible to completely keep rural communities out of road system
controlled communities, during both the constitutional and VRA portions of the mapping process the Board should work to minimize this as much as possible

**Constitutional Issues on Proposed Plans**

**Organized by Region**

**Southeast**

**Board Version 3**

District 1 has a deviation of 627 people (3.42%) below the ideal district size which is an unconstitutionally large deviation given that AFFR has demonstrated that it is possible to draw a compact, contiguous, and socio-economically integrated Southeast map with a significantly lower deviation. The smallest Southeast district in the AFFR map has a deviation of only 389 people (2.12%) below the ideal population.

District 2 includes the Petersburg Borough in a district where the largest population center is Sitka. As discussed elsewhere in this report, there is relatively little socio-economic integration between Petersburg and Sitka and Petersburg has strong socio-economic integration with Juneau.

District 4 puts the Haines Borough, Municipality of Skagway, City of Klukwan, and City of Gustavus in a district with the Auke Bay and Mendenhall Valley communities within the City and Borough of Juneau. While AFFR asserts that these communities are more socio-economically integrated with the other smaller coastal communities than with Juneau, if the board believes they belong in a Juneau district the Downtown/ Douglas Island district would be a more appropriate fit. Most of the testimony suggesting socio-economic integration between these communities has focused on their shared status as cruise ship ports. All of the cruise ship infrastructure is located within Downtown Juneau, so if there is socio-economic integration between these communities it is with Downtown and not the Mendenhall Valley.

**Board Version 4**

District 1 is identical to its counterpart in Version 3 and thus has the same unconstitutionally large deviation.

As with other maps, District 2 includes the Petersburg Borough in a district which has Sitka as the main population center. For the reasons discussed elsewhere, this district is not socio-economically integrated.

District 3 is not compact as it includes the communities of Auke Bay and Tee Harbor in a district with Downtown Juneau and Douglas Island. People who live in the Auke Bay/ Tee Harbor appendage would have to drive across District 4 to reach the population center of their district.
AFFER
The Ketchikan Gateway Borough is unconstitutionally split between Districts 1 and 2. During their presentation to the board, AFFER admitted that Saxman was removed from a district with the City of Ketchikan because of its large Alaska Native population. Because communities within the KGB, and those like Hyder and Metlakatla that have strong ties to Ketchikan, are placed in a district that stretches up to Yakutat, District 2 is neither compact nor socio-economically integrated. Furthermore, the racial motivations for drawing these districts likely violate the state and federal constitutions.

Similarly to Board Version 3, District 4 puts communities outside the City and Borough of Juneau into a district with the Mendenhall Valley. This is problematic for the same reasons discussed above.

Admiralty Island is divided into 3 separate districts. With the portion within the City and Borough of Juneau included in District 3, Angoon included in District 2, and the northwest of the island included in District 4. This is likely unconstitutional, as other maps have shown it is practicable to include all of Admiralty Island outside of the CBJ in a single district.

Doyon Coalition
While it has a smaller deviation than its counterpart in Board Options 3 and 4, District 1 has an unconstitutionally large deviation of 594 people (3.24%) below the ideal district population.

The Petersburg Borough is unconstitutionally split between Districts 1 and 2. The portions of the borough on Mitkof Island, which includes the community of Petersburg and City of Kupreanof are included in District 2 while the portion on the mainland is included in District 1. This appendage from District 1 places 35 Petersburg Borough residents in a separate district from the rest of their borough. Thus District 1 is not compact and Districts 1 and 2 are not socio-economically integrated.

Senate Minority
As with other maps, District 35 includes the Petersburg Borough in a district which has Sitka as the main population center. For the reasons discussed elsewhere, this district is not socio-economically integrated.

Gulf Coast/ Kenai Peninsula
Board Version 3
The deviation range within the three districts entirely within the Kenai Peninsula Borough is likely unconstitutional. The range between the smallest KPB district and the largest is 129 people (0.7%), while AFFR has demonstrated it is practicable to draw compact, contiguous, and socio-economically integrated districts within the KPB with a 71 person (0.38%) deviation range.

District 5 is neither compact nor socio-economically integrated because it includes an appendage placing the Fritz Creek and Fox River areas in the Homer area into a district with the Kodiak Island Borough, Cordova, and other Gulf Coast communities. Voluminous public testimony has clearly established that there is no socio-economic integration between these areas. The justification given on the record for socio-economic integration between the East End Road communities and Kodiak Island is factually inaccurate. While it was stated that the Russian Orthodox Old Believer villages in the Fox River area are historically tied to Kodiak Island through the Russian colonial period, this is not correct and the Old Believers did not settle in Alaska until 1966 and have no historical connection to the original Russian colonists. Placing Fox River in a district with Kodiak separates the Old Believer villages of Kachemak Selo, Razdolna, and Voznecenka from Nikolaevsk which was the first Old Believer village. Further, this appendage includes the Fritz Creek community which is not an Old Believer community, so even if the Fox River villages were socio-economically integrated with Kodiak, there is no justification for including Fritz Creek.

In addition to the Fritz Creek/ Fox River appendage, District 5 also includes the Kachemak Bay communities of Seldovia and Halibut Cove, separating them from Homer. Homer is the hub community for Kachemak Bay and there are strong socio-economic ties between the communities of Kachemak Bay. AFFR has demonstrated that it is practicable to keep the entire Kachemak Bay area in a single district.

District 6 is not socio-economically integrated because it includes Kasilof and Kalifornsky, which are suburbs of Soldotna, as well as other communities along the south Sterling Highway in a district with Homer. Soldotna is the main commercial and economic hub for these communities. AFFR has demonstrated that it is practicable to include these communities in a district with the City of Soldotna.

District 8 is not compact or socio-economically integrated because it includes two distinct socio-economic regions into a single district. The Kenai Spur Highway communities have economies driven by the oil and gas which does not exist in the Seward area at all, while Seward’s economy is centered on fishing and tourism on Resurrection Bay. The City of Kenai is the main commercial hub for the Kenai Spur Highway residents who would have to drive through Kenai to get to the rest of the district. Public testimony was clear that Seward residents felt strong ties to the Homer area because of a shared marine culture but no connection to Nikiski, while Nikiski residents expressed strong connections to the City of Kenai. AFFR has demonstrated it is practicable to include Seward in a district with Homer and Kachemak Bay and the Kenai Spur Highway communities in a district with Kenai.
The Kodiak Island Borough is divided into two districts, with the island portions in District 5 and the mainland portion in District 37.

While the board has not designated Senate pairings for this map, there is no possible way to pair the districts that does not create an absurd scenario where either Kasilof is in a separate Senate district from Soldotna or Nikiski is in a separate district from Kenai. AFFR’s plan puts Kenai, Soldotna, and their surrounding communities all within a single Senate district.

**Board Version 4**

Version 4 is nearly identical to Version 3 in this region and therefore all the issues discussed above apply, except that Version 4 does not divide the Kodiak Island Borough.

**AFFER**

The deviation range within the three districts entirely within the Kenai Peninsula Borough is likely unconstitutional. The range between the smallest KPB district and the largest is 135 people (0.74%), while AFFER has demonstrated it is practicable to draw compact, contiguous, and socio-economically integrated districts within the KPB with a 71 person (0.38%) deviation range.

Districts 35 and 36 are not socio-economically integrated, because the community of Seldovia is divided between Districts 35 and 36 with the City of Seldovia placed in District 36 and the Seldovia Village Census Designated Place put in District 35. Despite being outside the city limits, Seldovia Village is an integral part of the Seldovia community and is connected by road to Seldovia and no other part of Alaska. AFFR has demonstrated that it is practicable to include the entire Kachemak Bay region, including all of Seldovia, in a single district.

District 35 is not compact because it includes an appendage to the northwest of Tustumena Lake that adds the Soldotna suburbs of Kasilof and Kalifornsky to a district with the Homer area. AFFER has demonstrated it is practicable to include Kasilof, Kalifornsky, and other communities along the south Sterling Highway in a district with the City of Soldotna.

As with similar districts in the Board Versions, District 33 is not compact or socio-economically integrated because it includes portions of two distinct socio-economic regions into a single district. The Kenai Spur Highway communities have economies driven by the oil and gas which does not exist in the Seward area at all, while Seward’s economy is centered on fishing and tourism on Resurrection Bay. AFFER goes even further in dividing the Kenai Spur Highway communities by separating Salamatof from Nikiski. The City of Kenai is the main commercial hub for the Kenai Spur Highway residents who would have to drive through Kenai to get to the rest of the district. AFFR has demonstrated it is practicable to include Seward in a district with Homer and Kachemak Bay and the Kenai Spur Highway communities in a district with Kenai.

District 32 is not compact or socio-economically integrated because it includes Nikiski in a district with South Anchorage and the Turnagain Arm communities of the Municipality of Anchorage. While AFFER has submitted an updated version of this district after the AFFER plan was adopted...
for public comment, it still includes Nikiski in a South Anchorage district. While the population
math necessitates placing portions of the Kenai Peninsula Borough in a district with parts of the
Municipality of Anchorage, this district must still be socio-economically integrated. While AFFER
stated that South Anchorage and Nikiski are socio-economically integrated because they both
have a heavy oil and gas industry presence, this is not accurate as there is no oil and gas industry
presence in the MOA portion of this district. While an argument could perhaps be made that
Nikiski would be socio-economically integrated with Downtown or Midtown Anchorage, where
most of Anchorage’s oil and gas industry presence is located, no such argument can be made for
South Anchorage, Girdwood, or Indian. AFFR has demonstrated that it is practicable to form a
socio-economically integrated district that includes portions of South Anchorage, the Turnagain
Arm region, and a portion of the north Kenai Peninsula that is socio-economically integrated with
these communities without including Nikiski in the district.

District 36 is not socio-economically integrated because it includes the City of Valdez in a district
with the Kodiak Island Borough and other Gulf Coast communities. Valdez is very socio-
economically distinct from the rest of the district, as it is on the road system and its economy is
focused on shipping from the Trans-Alaska Pipeline System and the Richardson Highway. With
the exception of Whittier, the rest of the district is completely off the road system and except for
Valdez commercial fishing is the main industry throughout the district. AFFR has demonstrated
that it is practicable to include Valdez in a socio-economically integrated district with communities
along the Richardson Highway and Interior communities that are socio-economically linked to this
corridor. Further, AFFR has demonstrated that it is practicable to create a socio-economically
integrated Gulf Coast district that does not include Valdez.

The problems with how the House districts are drawn result in absurd Senate districts on the
Kenai Peninsula, where the Soldotna suburbs of Kasilof and Kalifornsky are in a different Senate
district from Soldotna and Nikiski is placed in a different Senate district from Kenai.

Doyon Coalition
This plan is unconstitutional within this region, because it breaks the Kenai Peninsula Borough
boundary three times and only has two districts completely within the KPB boundaries. AFFR
has demonstrated that it is practicable to break the borough boundary only twice and to create
three districts entirely within the KPB.

Senate Minority
District 29 is not compact or socio-economically integrated because it includes two distinct socio-
economic regions into a single district. The Kenai Spur Highway communities have economies
driven by the oil and gas which does not exist in the Seward area at all, while Seward’s economy
is centered on fishing and tourism on Resurrection Bay. The City of Kenai is the main commercial
hub for the Kenai Spur Highway residents who would have to drive through Kenai to get to the
rest of the district. Public testimony was clear that Seward residents felt strong ties to the Homer
area because of a shared marine culture but no connection to Nikiski, while Nikiski residents
expressed strong connections to the City of Kenai. AFFR has demonstrated it is practicable to
include Seward in a district with Homer and Kachemak Bay and the Kenai Spur Highway communities in a district with Kenai.

District 32 is not socio-economically integrated because it includes the City of Valdez in a district with the Kodiak Island Borough and other Gulf Coast communities. Valdez is very socio-economically distinct from the rest of the district, as it is on the road system and its economy is focused on shipping from the Trans-Alaska Pipeline System and the Richardson Highway. With the exception of Whitier, the rest of the district is completely off the road system and except for Valdez commercial fishing is the main industry throughout the district. AFFR has demonstrated that it is practicable to include Valdez in a socio-economically integrated district with communities along the Richardson Highway and Interior communities that are socio-economically linked to this corridor. Further, AFFR has demonstrated that it is practicable to create a socio-economically integrated Gulf Coast district that does not include Valdez.

District 31 is not compact because it includes an appendage to the north of Tustumena Lake that adds Kasilof and other Soldotna suburbs to a district within the Homer area. AFFR has demonstrated it is practicable to include Kasilof and other communities along the south Sterling Highway in a district with the City of Soldotna.

The community of Seldovia is placed into a separate district from the rest of Kachemak Bay. AFFR has demonstrated that it is practicable to put the entire Kachemak Bay region into one district.

Because of the issues with the House districts on the Kenai Peninsula, Kasilof and other Soldotna suburbs would be placed in a different Senate district for the City of Soldotna. AFFR has demonstrated that it is practicable to place these communities within a single district.
Municipality of Anchorage

Board Version 3
The 16 MOA districts are unconstitutionally underpopulated and overrepresented. The average deviation within these districts is 115 people (0.62%) below the ideal population. These 16 districts are 40% of the House districts in the entire state, and this proposal systematically underpopulates these districts giving the MOA greater voting strength than its population dictates. AFFR has demonstrated that it is practicable to create compact, contiguous, and socio-economically integrated Anchorage districts with close to zero net deviation. The average deviation in AFFR’s Anchorage districts is 3 people (0.01%) more than ideal.

District 10 is not compact, as it contains an appendage adding a portion of the Chugach Foothills neighborhood in East Anchorage into a district with the Huffman/O’Malley neighborhoods of South Anchorage.

Board Version 4
While the district lines within the MOA are different, the total population of these 16 districts are the same as in Board Version 4 and the MOA districts are unconstitutionally underpopulated as discussed above.

District 9 is not compact because it contains an appendage placing the East Anchorage neighborhood of Stuckagain Heights in a district with the southern parts of the Hillside. This district separates Stuckagain Heights from Basher Road, which is the only access to the neighborhood.

AFFER
As discussed above, District 32 is not socio-economically integrated because it includes Nikiski in a district with South Anchorage.

District 19 is not compact, because it contains an appendage adding portions of the Muldoon neighborhood into a district with portions of Eagle River. This appendage means that the Chugiak/ Eagle River area would be unnecessarily split between two Senate districts.

Doyon Coalition
This plan unconstitutionally breaks the boundaries of the MOA twice, once with District 8 including the Turnagain Arm communities of the MOA in a Kenai Peninsula district and District 24 includes portions of Chugiak/ Eagle River with portions of the Matanuska-Susitna Borough.

Senate Minority
This plan is likely constitutional within the MOA, although AFFR believes our map better represents the established neighborhoods within the MOA.
Matanuska-Susitna Borough

Board Version 3
The 6 MSB districts (Districts 25-30) are unconstitutionally underpopulated and overrepresented. The average deviation within these districts is 135 people (0.74%) less than ideal. AFFR’s MSB districts have an average deviation of only 1.5 people (0.01%) more than ideal. Combined with the 16 underpopulated Municipality of Anchorage districts, this means the majority of the House districts are urban districts in Southcentral Alaska which are systematically overrepresented at the expense of the rest of the state.

District 29 is not socio-economically integrated, because it separates North Nenana from the City of Nenana. North Nenana is an integral part of the Nenana community.

Board Version 4
The 6 MSB districts (Districts 25-30) are unconstitutionally overpopulated and underrepresented. The average deviation within these districts is 479 people (2.61%) more than ideal. AFFR’s MSB districts have an average deviation of only 1.5 people (0.01%) more than ideal.

District 25 is not socio-economically integrated, because it includes the City of Valdez in a district with the outskirts of Palmer and a large portion of rural Mat-Su. Valdez’s economy is a port community whose economy is centered on shipping from the port, the Trans Alaska Pipeline System, and along the Richardson Highway. AFFR has demonstrated it is practicable to draw 6 compact, contiguous, and socio-economic MSB districts without including Valdez.

AFFER
This plan unconstitutionally breaks the MSB borough boundary twice, adding the Denali Borough into District 11 and portions to the west of the MSB into District 16. Since these districts are in different Senate districts, this also breaks the boundary twice at the Senate level. AFFR has demonstrated it is practicable to break the borough boundary only once.

The 6 MSB districts (11-16) have an unconstitutionally large deviation range. The largest district is 174 people (0.95%) more than ideal and the smallest is 260 people (1.42%) less than ideal. AFFR has demonstrated that it is practicable to 6 compact, contiguous, and socio-economically integrated districts with a dramatically smaller deviation range. AFFR’s largest MSB district is 10 people (0.05%) above ideal and its smallest is 9 (0.05%) people less than ideal.

Doyon Coalition
This plan unconstitutionally breaks the MSB borough boundary twice, adding the Denali Borough into District 28 and portions of Chugiak/ Eagle River into District 24. Since these districts are in different Senate districts, this also breaks the boundary twice at the Senate level. AFFR has demonstrated it is practicable to break the borough boundary only once.

Alaskans for Fair Redistricting
Report to the Alaska Redistricting Board and Final Recommendations. November 2, 2021
**Senate Minority**

This plan is likely constitutional within this region, although AFFR believes our map better reflects the community ties within the MSB.

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**Interior & Fairbanks**

**Board Version 3**

This plan systematically overpopulates and underrepresents the Fairbanks North Star Borough by containing the FNSB into only 5 districts (Districts 31-35) although the borough has the population for 5.22 districts. This results in districts that are an average of 796 people (4.43%) larger than ideal. AFFR has demonstrated that it is practicable to draw 5 compact, contiguous, and socio-economically integrated districts within the FNSB with zero net deviation, and one compact, contiguous, and socio-economically integrated district that includes the exact amount of excess FNSB population.

**V.3 Fairbanks Districts Population**

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<th>32</th>
<th>33</th>
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<td>$5=659$</td>
<td>$5=655$</td>
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<td>$/826$</td>
<td>$/888$</td>
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</tr>
</tbody>
</table>

This plan unconstitutionally breaks the boundary of the City of Fairbanks twice, including areas outside the city to both Districts 33 and 34. AFFR has demonstrated it is practicable to draw one district entirely within the city boundaries.

This City of North Pole is unconstitutionally split between districts 32 and 34. Further, because District 32 must pair with District 33 to form a City of Fairbanks Senate district, this divides the City of North Pole into two Senate districts.

This plan completely disregards the neighborhood, cultural, transportation, and economic regions within the FNSB. A large portion of North Pole is placed in District 32 with the City of Fairbanks, District 35 includes Chena Ridge and neighborhoods on the west of the borough with communities
on the far east of the brough that would require residents to drive across three other districts to reach the other side of their district.

District 36 is neither compact nor socio-economically integrated, because it includes a large portion of Western Alaska in the same district as the City of Valdez. Valdez is the only coastal community in this district, and while it is socio-economically integrated with other communities along the Richardson Highway and communities in the eastern Interior that have strong transportation and commercial ties to these communities, Valdez has no socio-economic integration with the western portions of the district. Many of these communities have no transportation links with Fairbanks or any community along the Richardson Highway, and instead Bethel or Anchorage is their major commercial hub. While the Doyon ANCSA region can justify including these villages with other Doyon villages, it cannot justify including Valdez.

**Board Version 4**

This plan unconstitutionally divides the City of Fairbanks into three districts (Districts 31, 32, and 35), although relatively minor adjustments could bring the city into only two districts.

District 36 is not socio-economically integrated because it separates Nenana from the Denali Borough communities along the Nenana River and Parks Highway.

**AFFER**

This plan unconstitutionally divides the City of Fairbanks into three districts (Districts 6-8), although relatively minor adjustments could bring the city into only two districts.

This plan completely disregards the neighborhood, cultural, transportation, and economic regions within the FNSB. A large portion of North Pole is placed in District 8 with the City of Fairbanks. District 6 includes Chena Ridge and neighborhoods on the west of the borough with communities on the far east of the brough that would require residents to drive across three other districts to reach the other side of their district.

Eielson Air Force Base is divided between Districts 6 and 9.

District 6 is not compact because it adds two distinct appendages, one in North Pole and one with Salcha and parts of Eielson AFB, to a district with Chena Ridge and other western Fairbanks neighborhoods.

District 5 is not compact or socio-economically integrated because it places Cordova in a district with Interior highway communities, western portions of the Fairbanks North Star Borough, and many Interior villages. Cordova is a coastal community that is not on the road system whose economy is dominated by commercial fishing. There is no socio-economic integration between Cordova and the rest of the district.
The inclusion of western portions of the FNSB and Nenana also make District 5 not socio-economically integrated. While the eastern portions of the FNSB includes Richardson Highway communities, Nenana and the FNSB portions of District 5 are served by the Parks Highway not the Richardson. Nenana has strong socio-economic ties to the Denali Borough communities along the Nenana River and the Parks Highway.

**Doyon Coalition**
This plan unconstitutionally divides the City of Fairbanks into four different House districts (Districts 31-33, 35). While a minor adjustment could reduce this to three districts, the plan would have to be completely restructured to place the city into the required two districts. Further, this plan includes the city in three different Senate districts.

District 36 unconstitutionally separates Cantwell from the rest of the Denali Borough.

The inclusion of Nenana also makes District 5 not socio-economically integrated. While the eastern portions of the FNSB includes Richardson Highway communities, Nenana is served by the Parks Highway not the Richardson and has strong socio-economic ties to the Denali Borough communities along the Nenana River and the Parks Highway.

Eielson Air Force Base is divided between Districts 34 and 36.

**Senate Minority**
This plan unconstitutionally breaks the boundaries of the City of Fairbanks twice (Districts 1 and 2), although minor adjustments could reduce this to one break.

District 6 is not compact or socio-economically integrated because it places Cordova in a district with Interior highway communities, eastern portions of the Fairbanks North Star Borough, and many Interior villages. Cordova is a coastal community that is not on the road system whose economy is dominated by commercial fishing. There is no socio-economic integration between Cordova and the rest of the district.

Eielson Air Force Base is divided between Districts 5 and 6.
Western/ Arctic Alaska

Board Version 3
Districts 37 and 38 have unconstitutionally large deviations of 836 (4.56%) and 699 (3.81%) people below ideal respectively. While the courts have allowed larger deviations within rural communities when necessary, AFFR has demonstrated that it is practicable to draw compact, contiguous, and socio-economically integrated districts in rural Alaska with no more than a 489 person (2.67%) deviation in any district.

District 39 includes Hooper Bay, Chevak, and surrounding villages in a district (District 39) with the Nome Census Area. Testimony has clearly established that these communities have strong socio-economic ties to Bethel and belong in a district with Bethel. AFFR has demonstrated it is possible to draw compact, contiguous, and socio-economically integrated districts that include these communities in a district with Bethel.

District 37 separates the Alaska Peninsula portions of the Kodiak Island Borough from the rest of the KIB.

Board Version 4
This plan is nearly identical to Version 3, so the issues above apply, except that it does not divide the Kodiak Island Borough.

AFFER
District 39 is not socio-economically integrated as it unconstitutionally separates Buckland and Deering from the Northwest Arctic Borough. Testimony has clearly established that there is no justification for this split.

Doyon Coalition
District 39 includes Hooper Bay, Chevak, and surrounding villages in a district (District 39) with the Nome Census Area. Testimony has clearly established that these communities have strong socio-economic ties to Bethel and belong in a district with Bethel. AFFR has demonstrated it is possible to draw compact, contiguous, and socio-economically integrated districts that include these communities in a district with Bethel.

District 37 is not compact or socio-economically integrated as it includes portions of the Kenai Peninsula in a district that stretches to the Aleutians.

Senate Minority
Districts 37-40 are likely constitutional, although AFFR believes our plan better reflects the cultural and economic regions of Western Alaska.
Modifications to AFFR Plan

Technical Corrections
In two places, unpopulated blocks were accidentally included in the wrong district in the map AFFR submitted to the board. AFFR have previously brought these issues to the attention of board members and staff. These technical corrections will not have any effect on the populations of any district.

Technical Correction 1
The unpopulated portion of the City and Borough of Yakutat east of the Canadian border was inadvertently placed in District 5. AFFR’s written report and presentation to the Board made it clear that the intent was for all of the CBY to be included in District 2. AFFR respectfully requests the board make this technical correction.

Technical Correction 2
Unpopulated census block along the road bed of Elmore Road was inadvertently placed in District 14 instead of District 17. AFFR’s clear intent was for this portion of Elmore Road to be in District 17, and we respectfully request the board make this correction.
**Amendments In Response to Public Input**

AFFR has monitored the public comment both submitted in writing and through testimony at in person events across the state. While we believe the record of testimony clearly shows that the AFFR plan, with the technical corrections identified above, is constitutional and provides fair representation for the Alaska diverse cultural and socio-economic regions, we have identified two potential amendments which we are submitting for the Board’s consideration.

**Amendment 1: Nunam Iqua**
This amendment is to move the City of Nunam Iqua from District 38 to District 39. AFFR included Nunam Iqua in District 38 in order to include as many villages in the Calista region in District 38 and Senate District S as possible. AFFR used the Yukon River as the northern boundary of District 38 which places Nunam Iqua into District 38. During the informal portion of the Bethel public hearing, Chair Binkley shared his knowledge that residents of Nunam Iqua have closer cultural and family ties to the nearby villages of Alakanuk and Emmonak on the other side of the river. In light of this, AFFR believes it would be reasonable for the board to consider moving Nunam Iqua into District 39.

AFFR District 38 population currently: 18,507 (0.94% deviation)
AFFR District 38 population with amendment: 18,289 (0.25% deviation)

AFFR District 39 population currently: 17,948 (-2.11% deviation)
AFFR District 39 population with amendment: 18,166 (0.92%%)

**Amendment 2: Admiralty Island/ North Prince of Wales Island**
This amendment is to move the portions of Prince of Wales Island that are currently in District 4 into District 2, and to move the portions of Admiralty Island currently in District 2 into District 4. This would place all of Admiralty Island in District 4, and all of Prince of Wales Island into District 2 with the exception of Thorne Bay which would remain in District 1. Testimony from Southeast indicated that Angoon and the rest of Admiralty Island is socio-economically integrated with Juneau. This amendment would create more compact Southeast districts, but would slightly increase the deviation within these districts. AFFR believes it is reasonable for the Board to consider whether improving the compactness of these districts is more important than minimizing deviation.

AFFR District 2 population currently: 17,946 (-2.12% deviation)
AFFR District 2 population with amendment: 18,102 (-1.27% deviation)

AFFR District 4 population currently: 18,071 (-1.44% deviation)
AFFR District 4 population with amendment: 17,915 (-2.29% deviation)
Notable Public Testimony

Fairbanks North Star Borough Assembly
On October 28th the Fairbanks North Star borough Assembly passed Resolution NO. 2021 – 36 “A RESOLUTION PROVIDING COMMENTS TO THE ALASKA REDISTRICTING BOARD REGARDING THE REAPPORTIONMENT OF LEGISLATIVE DISTRICTS IN THE FAIRBANKS NORTH STAR BOROUGH.” The resolution explicitly states opposition to the overpopulation of Fairbanks Districts as under Board Map V.3 and notably recommends that excess Fairbanks population be placed into only one additional district.

The City of Valdez
On October 14th, the City of Valdez passed a Resolution No. 21-41 “A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF VALDEZ, ALASKA REQUESTING THE REDISTRICTING BOARD ADOPT A REDISTRICTING PLAN THAT INCLUDES VALDEZ IN A SOCIOECONOMICALLY INTEGRATED DISTRICT INCLUDING RICHARDSON HIGHWAY COMMUNITIES.” The resolution urges the Alaska Redistricting Board to “adopt a Redistricting Plan that does not force the City of Valdez into a district with Mat-Su Borough Communities or... Kodiak, the Kenai Peninsula, the Municipality of Anchorage, or Southeast Alaska.” The Resolution additionally notes opposition to the plans put forward by the Doyon Coalition, AFFER, and the Senate Minority for “failure to satisfy the constitutional requirements” and for including Valdez into proposed districts that “are not socioeconomically integrated.” Lastly the resolution supports the concept of placing Valdez into a district that is socio-economically integrated along the Richardson Highway, a concept included in the AFFR map.

The City of Hooper Bay, Hooper Bay Native Village and Sea Lion Corporation
On August 13th 2021 the City of Hooper Bay, Hooper Bay Native Village and Sea Lion Corporation submitted a joint letter Requesting to be placed into a district with Bethel citing close socioeconomic ties. The letter asserts that Bethel serves as a hub community for Hooper Bay. Additional follow up oral testimony and subsequent meetings affirmed this request several times. Board V.3, Board V.4, and the Doyon Coalition plan all fail to attend to this request. The AFFR plan, AFFER and Senate Minority plans all include Hooper Bay into a house district with Bethel.

Mat-Su Assembly
On September 14th the Mat-Su Borough Manager on behalf of the Mat-Su Borough Assembly presented a plan on six proposed Mat-Su districts. The resolution stated “residents within the MSB should not be joined into a district which is principally within Anchorage” citing little evidence of close socio-economic ties between the Knik River area and the Chugach/Eagle River Area. The testimony additionally recommended that if determined necessary the board extend a Mat-Su district east towards Glen Allen opposed to down into Anchorage. The AFFR plan follows this advice and additionally does not group part of Mat-Su with Valdez like Board V.4.
Calista
On September 21st Calista Corporation testified before the board in support of including the villages of Hooper Bay, Scammon Bay and Chevak into a Bethel District due to close socio-economic relation. The AFFR and AFFER plans are the only plans that accommodate this request.

City of Kotzebue
On October 6th 2021 the City of Kotzebue submitted a letter to the Alaska Redistricting Board stating that the AFFER plan “violates section 6 of article VI of the Alaska Constitution,” and the “dictates of the Hickel " proces citing numerous socio-economic, historical, and cultural factors. Additionally the letter explicitly states that Buckland and Deering belong in a district that includes the Northwest Arctic Borough and the City of Kotzebue. The AFFER plan is the only plan that isolates Deering and Buckland in this manner.

NAACP of Fairbanks
On October 28th, 2021 the NAACP of Fairbanks submitted a letter opposing Board Map V.3 and supporting Board Map V.4. Additionally, the letter stated that Fairbanks and North Pole are distinct communities and that portions of Fairbanks and North Pole should not be lumped together. The AFFR plan recognizes the distinction between these communities and creates a greater North Pole district.

First Alaskans Institute / Native American Rights Fund
The First Alaskans Institute and Native American Rights Fund submitted a joint letter on October 21st that included two requests to the board. First, the letter requested that the Board “provide a telephonic or virtual attendance option for all public hearings,” critiquing the board’s open house meeting style for being inaccessible due to COVID-19 concerns and other factors. Second, the letter urged the board to “complete its Voting Rights Act analysis and publish proposed Senate districts as soon as is practicable” in order for the public to have adequate time to comment on these aspects of the process.

NAACP of Anchorage
On October 4, 2021 Kevin Mcgee, Anchorage NAACP president spoke in favor of the AFFR map for balancing the constitutional criteria and having “substantially lower” deviations than board options V.3 and V.4 - particularly within the Municipality of Anchorage. The testimony additionally supported the Senate Minorities' proposal for Southeast Alaska.

League of Women Voters Tanana Valley
On October 14th the Tanana Valley League of Women Voters submitted written testimony to the board opposing the overpopulation of Fairbanks districts under V.3 and specifying that “no other districts and certainly no other local government unit in Version 3 come close to this degree of overpopulation.”
CIRI Inc.
On October 29th 2021 Cook Inlet Regional Inc. (CIRI) wrote to urge the board to be cautious of the “displacement of minority votes, particularly in urban areas like Anchorage.” The letter additionally expressed concern for the “high deviations evident in Fairbanks in the Board version 3.” Lastly while CIRI expressed support for the Doyon Coalition’s “proposed interior rural house seat,” and the coalition’s proposed Southeast map which includes an “all island house district,” CIRI expressed concern over the Doyon Coalition’s “Anchorage Bowl Area.”

The Butte Community Council
On October 26th a representative from the Butte Community Council testified on the desire for Butte residents to stay connected to “South Knik River Road” due to strong socio-economic ties. Additionally, the Butte Community Council expressed desire to be paired with a Mat-Su and not with the Municipality of Anchorage.

J-BER Testimony
On October 26th 2021 Major Felisa Wilson, USAF, MC (Retired) and LTC Patricia Wilson-Cone, USA, CH (Retired) submitted written testimony that opposed Board Maps 3 & 4 citing that both plans fail to “take into account the complexity of the JBER diaspora” and the socioeconomic integration between base neighborhoods and areas outside of base surrounding base access points. Both testimonies noted that the AFFR plan is the only plan to accurately reflect the distinct neighborhoods in east Anchorage and the differences in on-base housing.
November 1, 2021

Alaska Redistricting Board
P.O. Box 240147
Anchorage, Alaska 99524

Dear Chair Binkley and Members of the Redistricting Board:

I write today to express my concern with both the proposed plans and the process associated with your important work. Successful redistricting calls for an open, transparent, and public process because “the use of any secretive procedures suggest an illegitimate purpose.” At least with respect to the plans proposed, the information readily available on the website does not reflect an open and transparent process for understanding and reviewing those plans. While I am concerned about the process and the resources available to the public—particularly on the website, I applaud the Board for hosting numerous meetings around the state.

The goal for a redistricting plan is to adopt one that does not lead to a lawsuit. While some might suggest that such a goal is not attainable, I suggest those cynics are wrong. A plan that satisfies all four Alaska constitutional requirements—especially keeping population deviation at approximately 1%—has real potential to receive broad-based support. High population deviation, especially in the most populous boroughs and municipalities, is more likely to result in lawsuits.

I. Transparency of Process and Access to Resources

The Board has published information about 6 proposed plans on its website, akredistrict.org, including interactive maps, but it’s difficult to find any information about the process used to create each plan. Why did the Board reject Board Versions 1 and 2? Why did the Board choose the other 4 plans for publication? The Senate Minority identifies itself and the Doyon Coalition identifies its members (Doyon Limited, Tanana Chiefs Conference, Fairbanks Native Association, Sealaska, and Ahtna), but there appears to be nothing more on the Board website about AFFER and AFFR other than their full name. Why should the public need to search other sources to identify these participants in our public redistricting process?

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The website should include a readily available narrative of how it created its various plans and how the others created their plans. The website should also include information on why the Board chose the 6 published plans.

The “Governing Law” page on the website includes Article VI of the Alaska Constitution and governing statutes, but it does not identify or provide links to the multiple Alaska Supreme Court cases that have addressed redistricting over the years. The “Draw Districts” page includes a pop-up reference to the four map-drawing criteria (“compactness, contiguity, socio-economic integration and equality of population”), but it does not provide any description of the court-required Hickel process for making a plan. And after accepting the four-criteria pop-up, which then disappears, I could not find another reference to the four criteria. The absence of this important information is unfortunate because members of the public who want to participate had little or no guidance from the Board on how to do so. Further, the public is left to guess why the drafters of each plan believe their plan is not gerrymandering and meets the constitutional requirements.

II. Hickel v Southeast Conference Redistricting Process

The Alaska Supreme Court has established the Hickel process, a 2-step process for the Redistricting Board to conduct its work. First, the Restricting Board must “design a reapportionment plan based on the requirements of the Alaska Constitution.” Second, the Redistricting Board must test the reapportionment plan against the federal Voting Rights Act, which protects minority representation. If the plan does not meet the Alaska Constitutional requirements, the second analysis under the Voting Rights Act is unnecessary. If the plan raises voting rights concerns, it may require modification of some—but not all—of the plan.

A. Alaska Constitutional Requirements

The redistricting process set forth in the Alaska Constitution is designed to prevent gerrymandering—where one party or another party attempts to draw election districts in an unnatural way to favor some and disadvantage others. Article VI, Section 6 of the Alaska Constitution establishes constitutional standards to prevent gerrymandering. The second sentence states: “Each house district shall be formed of continuous and compact territory containing as nearly as practicable a relatively integrated socio-economic area.” The Alaska Supreme Court describes these requirements in the second sentence as “contiguity, compactness, and relative socioeconomic integration.” The third sentence of Article VI, Section 6 speaks to equality of representation: “Each shall contain a population as near as practicable to the quotient obtained by dividing the population of the state by forty.”

The Alaska Supreme Court has sometimes focused more on the second sentence of Article VI, Section 6 (contiguity, compactness, and relative socioeconomic integration) and focused less on

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2 In re 2011 Redistricting Cases (II), 294 P.3d 1032, 1034 (Alaska 2012).
3 In re 2011 Redistricting Cases (II), 294 P.3d at 1034 (quoting Hickel v. Southeast Conference, 846 P.2d 38, 51 n. 22 (Alaska 1992)).
4 Hickel, 846 P.2d at 45.
5 In re 2011 Redistricting Cases (II), 294 P.3d at 1035 (quoting Hickel, 846 P.2d at 51 n. 22).
the third sentence of Article VI, Section 6 (equality of representation). Under the constitution at statehood, the governor approved a redistricting plan with advice from a reapportionment board, which the governor appointed.

In 1998, Alaska voters approved a constitutional amendment that established the current Redistricting Board. The amendment also changed some of the other provisions. The 1998 amendment made minor grammatical changes to the second sentence of Section 6, but did not change the three factors in that sentence. The amendment made a significant change to the third sentence of Section 6, deleting “at least equal” and replacing it with “as near as practicable.” The amendment also added a fourth sentence about establishing senate districts: “Each senate district shall be composed as near as practicable of two contiguous house districts.”

Even though the federal courts have approved apportionment plans with a population deviation under 10%, in the first case after the 1998 amendment to Article VI, Section 6, the Alaska Supreme Court found a deviation of 9.5% for Anchorage districts was unconstitutional and required the Board to further reduce the deviations. The Board then reduced the maximum deviation in Anchorage to 1.35%, which the court approved. This history shows that in the most populous municipalities and boroughs—Anchorage, Fairbanks North Star, Juneau, Kenai, and Mat-Su—the Board should be able to reduce the maximum deviation to approximately 1%, which requires no more than 0.5% for a particular district. Greater deviations in the absence of a stated reason for the deviation raises the likelihood of gerrymandering.

With the court’s confirmation that it applies stricter equal protection analysis under the Alaska Constitution and its recent decisions approving a maximum variance for Anchorage of 1.35%, the third sentence of Art. VI, Sec. 6 effectively incorporates Alaska’s equal protection analysis. Thus, the first step in the Hickel process must involve all four factors identified in Article VI, Section 6: equality of representation, contiguity, compactness, and relative socioeconomic integration.

1. Equality of Representation

“[T]he interest asserted is the right to an equally powerful and geographically effective vote in the state legislature. In this connection we note that it is implicit in our constitutional structure that similarly situated communities be treated in a similar manner.” The Kenai Peninsula Borough case was the first time the court considered an Alaska equal protection challenge. Explaining that under the governor’s plan Anchorage would either “remain underrepresented by

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6 SCS for CS for HJR 44 (JUD) (1998), Section 5.
7 Id., Section 5. The amendment also removed “total civilian” from the population base language, which appears to address the question of whether to exclude non-resident military personnel that the court addressed in Hickel, 846 P.2d at 54-56.
8 Hickel, 846 P.2d at 48.
10 In re 2001 Redistricting Cases II, 47 P.3d 1089, 1090 & n. 4 (Alaska 2002).
2.6% or become overrepresented by 2.4%" in the senate, the court held that the senate district was unconstitutional under the state constitution.\textsuperscript{13}

In the more populous boroughs and municipalities, the burden is on the Board show that it successfully minimized deviations from one district to the next. As discussed above, maximum deviation in urban areas of approximately 1% means each district should not differ from the target number by more than 0.5%. Review of the deviation spreadsheets for the six published plans show that four of the plans exceed this acceptable deviation in multiple districts and are likely unconstitutional on that basis alone: Board v.3, Board v.4, AFFER, and Doyon. In contrast, the AFFER and Senate Minority maps show that it is “practicable” to establish districts in the most populous boroughs and municipalities with a small variance.

The table below reflects the number of districts in the five largest municipalities and boroughs without adjustment and the adjustment needed to meet the Article VI, Section 6 population target:

<table>
<thead>
<tr>
<th>Location</th>
<th>Total Population</th>
<th>District Population</th>
<th>Districts</th>
<th>Adjustment to 18,335</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statewide</td>
<td>733,391</td>
<td>18,335</td>
<td>40</td>
<td>0</td>
</tr>
<tr>
<td>Anchorage</td>
<td>291,247</td>
<td>18,335</td>
<td>15.88</td>
<td>+2,200</td>
</tr>
<tr>
<td>Fairbanks North Star</td>
<td>95,655</td>
<td>18,335</td>
<td>5.22</td>
<td>-4,034</td>
</tr>
<tr>
<td>Juneau</td>
<td>32,255</td>
<td>18,335</td>
<td>1.76</td>
<td>+4,400</td>
</tr>
<tr>
<td>Kenai Peninsula</td>
<td>58,799</td>
<td>18,335</td>
<td>3.20</td>
<td>-3,667</td>
</tr>
<tr>
<td>Matanuska-Susitna</td>
<td>107,081</td>
<td>18,335</td>
<td>5.84</td>
<td>+2,934</td>
</tr>
</tbody>
</table>

"[W]here possible, all of a municipality’s excess population should go to one other district in order to maximize effective representation of the excess group. This result is compelled not only by the Article VI, Section 6 requirements, but also by the state equal protection clause that guarantees the right to proportional geographic representation."\textsuperscript{14} Applying the same analysis to a municipality that needs population added to a district, the additional population should also go into only one district.

Applying the constitutional principle established in \textit{Hickel}, the excess population from Fairbanks and Kenai should go into a single district and the additional population needed for Anchorage, Juneau, and Mat-Su should go into a single district. The first Juneau district should remain within the borough. Similar to the current district map in Southeast Alaska, there is sufficient population in Haines (2,080), Skagway (1,240), and communities in the Hoohah-Angoon Census Area (2,365) to bring Juneau within the target for the second district.

Because Anchorage and the Mat-Su both need additional population in a single district to meet the target, however, it would violate the principle established in \textit{Hickel} to add population from Anchorage into the Mat-Su (thereby improperly diluting Anchorage voters’ rights) or from the Mat-Su into Anchorage (thereby improperly diluting Mat-Su voters’ rights). Moving a

\textsuperscript{13} \textit{Kenai Peninsula Borough}, 743 P.2d at 1373.

\textsuperscript{14} \textit{Hickel}, 846 P.2d at 52.
population of approximately 2,200 from north Kenai Peninsula into a single district in south Anchorage would bring the 16th Anchorage district within the target. And moving a population of approximately 2,200 from the Kenai Peninsula makes it possible with additional minor adjustments similar to the current districts to bring the three Kenai districts within the target. Similarly, moving a population of approximately 2,934 from the interior region north (including the Denali Borough) or east of the Mat-Su into a single Mat-Su district would bring the 6th Mat-Su district within the target. These population adjustments are also consistent with the Article VI, Section 6 requirement to consider local government boundaries.

2. **Contiguity**

“Contiguous territory is territory that is bordering or touching,” recognizing that a continuous district may include open sea.\(^{15}\) One should be able to reach “every part of the district ... from every other part without crossing the district boundary.”\(^{16}\)

3. **Compactness**

Compact means “having a small perimeter in relation to the area encompassed” without creating odd-shaped districts or adding appendages to an otherwise compact district.\(^{17}\)

4. **Socioeconomic Integration**

“[T]he requirement that districts be composed of relatively integrated socio-economic areas helps to ensure that a voter is not denied his or her right to an equally powerful vote.”\(^{18}\) The delegates to the Alaska Constitutional Convention explained that “[w]here people live together and work together and earn their living together, ... they should be logically grouped that way.”\(^{19}\) Boroughs and municipalities are considered socio-economically integrated.\(^{20}\)

In 1983, the court found it error to include Cordova in a Southeast Alaska district because there is no significant “social and economic interaction between Cordova” and the remaining communities in northern Southeast Alaska, including Haines and Skagway.\(^{21}\) With declining population in Southeast Alaska and other socio-economic changes, however, this analysis may not bind the Board. With a shared interest in maintaining ferry service in coastal communities—one of the most controversial socioeconomic issues in Alaska today—and its common socioeconomic interest with other commercial fishing communities, Cordova (population 2,609) may have as much shared socioeconomic interest with Juneau and Sitka as it has with Kodiak. All 6 proposed plans show Southeast Alaska under-represented: all the Southeast Census areas total 72,286, which is approximately 98.56% of four districts with the population target. Adding Cordova to a Southeast district would make Southeast Alaska over-represented with a total

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\(^{15}\) Hicken, 846 P.2d at 45.

\(^{16}\) Hicken, 846 P.2d at 45.

\(^{17}\) Hicken, 846 P.2d at 45-46.

\(^{18}\) Hicken, 846 P.2d at 46.

\(^{19}\) Hicken, 846 P.2d at 46, quoting 3PACC 1836 (Jan. 11, 1956).

\(^{20}\) In re 2001 Redistricting Cases I, 44 P.3d at 146.

population of 74,895, which is 102.12% of the population target. Adding Cordova to a Southeast district is an option the Board may consider.

5. Local Government Boundaries and Geographic Features

Many Anchorage constituents have asked why many of the redistricting plans seem to largely ignore the current districts even though the courts have approved the current districts as satisfying the constitutional requirements. Substantial changes to election districts can further limit the public’s relationship with legislators and knowledge of the political issues in a given district. While the Alaska Constitution does not require the Board to consider the current districts, the Board should consider current election districts in adopting a new redistricting plan.

With respect to Anchorage districts in particular, the last two sentences of Article VI, Section 6 are important factors in drawing districts: “Consideration may be given to local government boundaries. Drainage and other geographic features shall be used in describing boundaries whenever possible.” The 1998 constitutional amendment of Section 6 did not change these last two sentences. The “local government boundaries” factor supports consideration of community council boundaries within Anchorage. For example, the Spenard Community Council district is currently splintered into at least four house districts and three senate districts. While the community council boundaries are generally larger than house districts, the community council districts tend to be very reflective of socio-economic integration.

When including geographic features, past redistricting boards have tended to focus more on natural geographic features and less on man-made geographic features. It is a given that geographic features impact communities and influence socioeconomic relationships. Nenana’s location on the Tanana River is related to the natural geography, just as the City of Kodiak’s location is related to the natural geography. In Anchorage, however, many of the man-made geographic features have a greater impact on socioeconomic integration than the natural features. Road locations have a significant impact on neighborhoods and socio-economic groupings. For example, Minnesota Boulevard divides neighborhoods more than Fish Creek, and the businesses along the road further separate residential neighborhoods on either side of the road corridor. The same geographic phenomenon appears along the Seward Highway, the Northern Lights-Benson corridor, Tudor Road, and Dimond Boulevard. The Chester Creek drainage is sometimes close to the Northern Lights-Benson corridor and the Campbell Creek drainage is sometimes close to Dimond Boulevard. In the current districts, the use of Fish Creek in some places and Minnesota Blvd. in other places to define district boundaries between Districts 18, 21, and 23 has had the effect of dividing portions of the Anchorage community that are socioeconomically integrated and creating less compact districts. Similarly, current District 26 includes a sliver of homes west of the Seward Highway that are separated from the remainder of the district on the east side of the Seward Highway. Using the Seward Highway as the district boundary is more reasonable, as shown by the boundary between current Districts 23 and 25. The Board should make a greater effort to incorporate both man-made and natural geographic features, as these features reinforce contiguity, compactness, and socioeconomic integration.
B. Federal Voting Rights Act

Voting Rights Act violations districts “create an inequality in the opportunities enjoyed by voters to elect their preferred representatives.”

In *Hickel*, the court reviewed Southeast Alaska and found that the Sitka district violated the Voting Rights Act. It further found error in combining the North Slope with a primarily Inupiaq population with a broad range of Interior Alaska with a primarily Athabaskan population. And it found error to divide the Aleutian Islands into two separate districts. Finally, the court ruled that “[d]ivisions of Ketchikan and Sitka are not permissible unless the resulting districts evidence a pattern of relative socioeconomic integration.”

III. Review of Proposed Redistricting Plans

First, in looking at the six plans, it appears that some of the drafters started with the outer limits of what prior decisions have allowed for equality of population and then drew a plan to meet that target—apparently on the theory that they need only do the absolute minimum in terms of equality of population. This approach fails to meet the constitutional requirement in Article VI, Section 6 that the plan must have equality of population “as near as practicable.” The 1998 constitutional amendment reflects the fact that the primary reason for redistricting is to address population changes and correct population variances. Setting the standard at 10% is like “filling” a gas tank to only 90%. Using a 10% deviation target also reflects a cynicism about redistricting that violates the letter and spirit of our constitution.

Second, it is apparent from the public meetings and comments of Board members at the public meetings that the Board will not be adopting any of the six published plans. Instead, the Board is likely to adopt a plan that reflects public concerns and addresses some of the criticism of the proposed plans. The first test for any plan is equality of population.

Third, it is my understanding that some of the groups have already updated their proposed plans, but the website does not include those updates. My comments are directed at the plans published on the website because, without access to any updated plans, I have no basis to comment. It is unfortunate that the updated plans are not available on the website.

A. Board Plan v. 3

- 27 of the 32 districts in the most populous boroughs and municipalities (Anchorage, Mat-Su, Fairbanks, Kenai, and Juneau) have a deviation from the statewide population target (18,335 people) of more than the preferred 0.5% deviation and do not meet the one-person, one-vote requirements.

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22 *Hickel*, 846 P.2d at 50.
23 *Hickel*, 846 P.2d at 52.
24 *Hickel*, 846 P.2d at 53-54.
25 *Hickel*, 846 P.2d at 54.
26 *Hickel*, 846 P.2d at 51.
• Eagle River Districts 23 and 24 unnecessarily create a large “donut” district that surrounds a small “hole” district in the middle of the donut and are not contiguous or compact.

• Anchorage District 15 would require a person to cross District 14 to get from neighborhoods in the east part of District 15 to neighborhoods in the southwest corner of District 15 and is not contiguous or compact.

• The Fairbanks districts are all above the population target by more than 750 voters with deviations of over 4%. These deviations show that the plan is unconstitutional.

• Fairbanks District 35 would require a person on Eielson AFB base in the east side of the district to cross three districts (32, 34, and 33) to get to the Chena Ridge neighborhood in the west part of the district and is not contiguous or compact.

B. **Board Plan v. 4**

• 26 of the 34 districts in the most populous boroughs and municipalities have a deviation from the population target of more than the preferred 0.5% deviation and do not meet the one-person, one-vote requirements.

• Juneau Districts 3 and District 4 unnecessarily create a large “donut” district and a small “hole” district in the middle and are not contiguous or compact. In addition, the plan would require a person to cross District 4 (Mendenhall Valley and Lemon Creek) to get from the northwest part of District 3 (Auke Bay) to the southern part of District 3 (downtown Juneau and Douglas Island) and is not contiguous or compact.

• Downtown Anchorage Districts 20 and 21 improperly divide Downtown Anchorage and the associated community council in violation of the constitutional obligation to consider government boundaries and geographic features.

• By putting Eagle River into three different districts when the actual population of Eagle River supports two districts, the plan ignores the obligation to consider local government boundaries and geographic features.

• Fairbanks District 35 has an appendage jutting in between District 31 and 34, making District 35 not contiguous or compact.

• District 5 has an appendage extending north of Kachemak Bay to Fritz Creek that makes the district not contiguous or compact. Either the Kodiak District should include both Homer and Fritz Creek or it should exclude both.

C. **AFFER Plan**

• 18 of the 33 districts in the most populous boroughs and municipalities have a deviation from the population target of more than the preferred 0.5% deviation and do not meet the one-person, one-vote requirements.
• Southeast Districts 1 and 2 are drawn to split Ketchikan into two districts even though its population is (13,948) is approximately 76% of the 18,335 population target, showing that the resulting districts are not socioeconomically integrated.

• District 5 puts Cordova—a coastal community with ferry service and substantial commercial fishing opportunities—in the same district as numerous interior villages that are not on the ocean. Further, it separates Cordova from several similar coast communities. Thus, the district is not socioeconomically integrated.

• District 32 is not contiguous or compact because it requires a person to cross District 33 to get to the beach on the shore of Cook Inlet. Turnagain Arm also divides the district and is not consistent with the provisions requiring consideration of drainages and other geographic features.

• Eagle River District 18 has an appendage that juts been District 17 and District 19, making District 18 not contiguous and compact.

• By putting Eagle River into three different districts (17, 18, and 19) when the actual population of Eagle River supports two districts, the plan ignores the obligation to consider local government boundaries and geographic features.

• Anchorage District 26 contains an appendage that juts into District 32, making both Districts 26 and 32 no contiguous or compact.

• Fairbanks District 6 is not contiguous or compact. It would require a person on the east side of the district on Johnson Road to cross District 9, return to District 6, and then cross Districts 8 and 7 in order to get to China Ridge Road on the west side of the district. It also has an improper appendage that juts between Districts 8 and 9.

D. AFFR Plan

• Only 6 of the 33 districts in the most populous boroughs and municipalities have a deviation from the population target of more than the preferred 0.5% deviation, showing that it is practicable to satisfy the one-person, one-vote requirements.

• Anchorage District 19 has an appendage the juts into District 20 and both districts are not contiguous or compact.

• Anchorage District 15 has an appendage that juts into District 13 and both districts are not contiguous or compact.

• Anchorage District 14 has an appendage into District 10, and District 10 has an appendage into District 9 (there seems to be a ripple effect from the District 14 appendage) and all three districts are not contiguous and compact.

• Fairbanks District 33 has a long appendage to the east along the Tanana River and is not contiguous or compact.
E. Doyon Coalition Plan

- 15 of the 33 districts in the most populous boroughs and municipalities have a deviation from the target population of more than the preferred 0.5% deviation and do not meet the one-person, one-vote requirements.

- By putting Eagle River into three different districts (22, 23, and 24) when the actual population of Eagle River supports two districts, the plan ignores the obligation to consider local government boundaries and geographic features.

- Anchorage District 12 effectively has appendages in the north part of the district around Lake Hood and is not consistent with the provisions requiring consideration of drainages and other geographic features.

- Interior District 6 creates a “donut” that surrounds all of the Fairbanks districts and is not contiguous or compact.

- Mat-Su District 25 has an appendage that juts between Districts 28 and 29 that makes the district not contiguous or compact.

- In the Anchorage senate districts, the plan joins House Districts 15 and 16 in Senate District H and joins House Districts 19 and 20 into Senate District J. These senate districts violate the express terms of Art. VI, Sec. 6 requiring that senate districts contain two contiguous house districts.

- Southwest District 37 (Dillingham, Lake and Peninsula Borough, and Aleutian Islands) includes Seldovia on the Kenai Peninsula and is not contiguous or compact. Getting by land from Tyonek to Seldovia would cross multiple districts in Anchorage and the Kenai Peninsula.

F. Senate Minority Caucus Plan

- Only 5 of 33 districts in the most populous boroughs and municipalities have a deviation from the target population of more than the preferred 0.5% deviation, showing that it is practicable to satisfy the one-person, one-vote requirements.

- Anchorage District 16 has an appendage that juts between Districts 15 and 28 that makes the district not contiguous or compact.

- Anchorage District 26 has an appendage that juts between Districts 17 and 28 that makes the district not contiguous or compact.

- Fairbanks District 3 has an appendage that juts between Districts 2 and 5. It would also require a person in the east side of the district on Orion Drive to cross Districts 2 in order to get to the west side of the district on China Ridge Road.
IV. Conclusion

Thank you for the opportunity to comment on the 6 proposed plans. I am optimistic that the Board will adopt a modified plan—none of the 6 proposed plans published on the website—that does not constitute gerrymandering because the plan satisfies each and every constitutional requirement.

Sincerely,

Matt Claman
Alaska Racially Polarized Voting Analysis for 2021 Redistricting

Executive Summary

In redistricting, compliance with the Voting Rights Act of 1965 (VRA) is one of the non-negotiable tasks for the Alaska Redistricting Board (ARB). To enable and inform such compliance, the ARB tasked its Voting Rights consultants to analyze Alaska election results to determine if voting in the State is racially polarized, as the VRA and federal courts require. The ARB’s consultants produced a report entitled, “Alaska Racially Polarized Voting Analysis for 2021 Redistricting.”

The U.S. Supreme Court, in its key decision of Thornburg v. Gingles, 478 U.S. 30 (1986), decided that one of the most important factors in a VRA analysis of redistricting plans is “the extent to which voting in the elections of the state or political subdivision is racially polarized.” Such polarization is what the ARB’s consultants determined is present in Alaska elections.

In their report, the ARB’s consultants conclude that numerous election results analyzed reveal evidence of statistically significant racially polarized voting, particularly in statewide races. In the analyzed elections, an estimated majority of Alaska Natives voted for one candidate, typically the one identifying as Alaskan Native, while a majority of non-Alaska Natives voted for another candidate. Therefore, consultants concluded that there is racially polarized voting in Alaska elections.

In their report, the consultants used Ecological Inference analysis of contested elections where there was at least one candidate who identifies as Alaska Native on the ballot. Ecological Inference or EI infers voting behavior by estimating how groups of voters, say Alaska Natives and Others (i.e., non-Alaska Natives), voted in a given election by observing precinct level election returns and the demographic makeup of voting precincts. EI is recognized and approved by federal courts and the U.S. Department of Justice as a statistically sound method of VRA and racially polarized voting analysis for redistricting.

Among the elections analyzed are the 2014 election for Senate District C between Dorothy J. Shockley and Click Bishop, the 2016 House District 6 election between Jason Land and David Talerico, and the 2014 and 2018 gubernatorial elections, all of which revealed racially polarized voting.

What do the consultants’ finding mean for Alaska redistricting?

Section 2 of the Voting Rights Act of 1965 prohibits, among other things, any electoral practice or procedure that minimizes or cancels out the voting strength of members of racial or language minority groups in the voting population. This phenomenon is known as vote dilution. Redistricting plans cannot crack, or pack a geographically concentrated minority community across districts or within a district in a manner that dilutes their voting strength.
In *Thornburg v. Gingles*, 478 U.S. 30 (1986), the Supreme Court set out the framework for challenges to such practices or procedures. In *Brnovich v. Democratic National Committee*, 141 S. Ct. 2321, 2337 (2021), the Supreme Court described *Gingles* as “our seminal § 2 vote dilution case” and recognized that “[o]ur many subsequent vote dilution cases have largely followed the path that *Gingles* charted.”

Analysis begins by considering whether three *Gingles* preconditions exist. First, the minority group must be sufficiently large and geographically compact to constitute a majority of the voting age population in a single-member district. Second, the minority group must be politically cohesive. Third, the majority must vote sufficiently as a bloc to enable it usually to defeat the minority group’s preferred candidate.

The consultants’ conclusion that racially polarized or racial bloc voting exists in Alaska elections and that such racial polarization has prevented Alaska Natives from electing their candidates of choice in given elections is legally significant.

Pursuant to Section 2 of the Voting Rights Act of 1965, districts must be created to provide Alaska Natives with the opportunity to elect candidates of choice to overcome cohesive racial bloc voting by white voters that prevents them from doing so.

A racial bloc voting analysis, such as the consultants conducted, is used to determine whether minority voters are politically cohesive, voting together to support minority community preferred candidates and if white voters bloc vote to usually defeat minority preferred candidates. The ARB’s racial bloc voting (RBV) analysis determined that voting is racially polarized, and candidates preferred by a politically cohesive minority group are usually defeated by non-minority voters not supporting these candidates, a district(s) that offers minority voters an opportunity to elect their candidates of choice must be drawn. If such districts already exist, and minority-preferred candidates are winning only because these districts exist, then these districts must be maintained in a manner that continues to provide minority voters with an opportunity to elect their preferred candidates.
1 Introduction

This report presents results of a racially polarized voting analysis of elections in Alaska. The analysis focuses on elections for the State House and Senate that must be redrawn because of the release of the 2020 Federal Census. We analysed all contested elections between 2014 and 2018 for either office where at least one candidate on the ballot was identified as Alaska Native. Given the large number of absentee ballots in 2020 because of the pandemic, it was not possible to analyze any of these elections. Further, given data limitations, we also analyzed the statewide elections for Governor/Lt.Governor in 2018 and 2014 that featured a ticket that included at least one Alaska Native candidate.

Several of the studied election show evidence of statistically significant racially polarized voting, particularly in the statewide races. That is, an estimated majority of Alaska Natives voted for one candidate, typically the one identifying as Alaska Native, whereas a majority of non-Alaska Natives voted for another candidate. Therefore, we conclude that there is racially polarized voting in elections in the state.

The next section reviews the methods for estimating voting behavior from aggregate data. This is referred to as ecological inference in the statistics and social science literature. The next section then discusses the results of the analysis of the Alaska election data. The final section discusses the implications of this analysis for redistricting in Alaska.

2 Methods for Ecological Inference

The problem of inferring voting behavior from aggregate information is known as ecological inference. We are interested in estimating how groups of voters, say Alaska Natives and Others (i.e., non-Alaska Natives), voted in a given election when all we observe are the precinct-level returns and the demographic make-up of the precincts.
2.1 Homogenous Precincts and the Method of Bounds

A common starting point is to consider only homogeneous precincts. That is, we could examine the election results from precincts that are closest to racially/ethnically homogeneous in character. For example, if a precinct were completely homogeneous, say with a population that was 100% Alaska Native, then we know what fraction of Alaska Natives that voted for a given candidate in the precinct: it is just the share the given candidate got in the precinct. While this might be a useful starting point, as a statistical procedure it is problematic since it throws out most of the data unless most of the precincts are homogeneous.

However, we can use the intuition from the homogeneous precincts to place bounds on the level of support each group gives a candidate. Consider the following equation, which is true by definition, that relates the vote share of a given candidate to the voting behavior of Alaska Natives and Others (i.e., non-Alaska Natives):

\[ V_i = \lambda_i A X_i + \lambda_i O (1 - X_i), \]

where \( V_i \) is the share of the vote a given candidate received in precinct \( i \), \( X_i \) is the fraction of Alaska Natives in the precinct and therefore \( 1 - X_i \) is the fraction of Other voters, assuming for the moment that there are only two groups in the electorate. \( \lambda_i A \) is the fraction of Alaska Natives voting for the given candidate and similarly \( \lambda_i O \) is the fraction of Others voting for the given candidate. In other words, the equation states the fact that the total vote share for a candidate must equal the proportion of Alaska Native voters who support them multiplied by the proportion of the electorate that is Alaska Native plus the proportion of the Other voters who support the candidate multiplied by the proportion of the electorate which is Other.

In the case of only two groups — e.g., Alaska Native and Others — and only two candidates, then racially polarized voting occurs when \( \lambda_i A \) and \( \lambda_i O \) are on opposite sides of 0.5 — e.g., \( \lambda_i A > 0.5 \) and \( \lambda_i O < 0.5 \). That is, a majority of one group voting for one candidate and the majority of the other group voting for the opposite candidate. If this holds, then the larger the difference between support levels, the greater the level of polarization. Of course, since we are dealing with statistical estimates, this difference must be greater than the statistical uncertainty in the estimates.

Now consider homogeneous Alaska Native precincts again. In these precincts, \( X_i = 1 \), so that the equation simplifies to \( V_i = \lambda_i A \) as we stated above. However, from these precincts we can not say anything about the voting behavior of Others because any proportion of Others voting for a given candidate is consistent with the observed vote shares in these precincts. We can generalize this idea using Equation 1. Consider, for example, a precinct where \( X_i = 0.6 \), that is sixty percent of voters are Alaska Native (and, therefore, 40% are Other), and the candidates vote share, \( V_i \), is 0.5.

Since 60% of the voters are Alaska Native and the given candidate got 50% of the vote, then at most \( \frac{5}{6} \)ths of the Alaska Native voters could have voted for the candidate. If it were higher than this bound then the vote share in the precinct would have to be higher. On the other hand, even if all of the Others voted for the candidate then at least \( \frac{1}{6} \)th of the Alaska Natives would have had to vote for the candidate as well, otherwise the vote share would have been less than 0.5. Thus, we know that proportion of Alaska Natives voting for the candidate, \( \lambda_i A \), must be greater than \( \frac{1}{6} \) and less than \( \frac{5}{6} \) and \( \lambda_i O \) can take on any value between zero and one. We actually know more than this: we know that the feasible values for this district must lie on the line segment, called a constraint
line, defined by the bounds \((\frac{1}{6}, 1)\) and \((\frac{5}{6}, 0)\). Using standard algebra by plugging in \(X_i = 0.6\) and \(V_i = 0.5\), we find that \(\lambda_i^{OW} = -\frac{3}{2} \lambda_i^A + \frac{5}{4}\).

Duncan and Davis (1953) fully developed the method of bounds outlined above to analyze ecological data. Unfortunately, with a large number of precincts, it is difficult to make much direct use of these bounds since we need a way to combine them to understand typical behavior in the district. These bounds do, however, provide useful information as we will see below.

### 2.2 Ecological or Goodman’s Regression

An alternative approach that examines all precincts simultaneously was developed by Goodman (1959) and is perhaps the most commonly used procedure. It is referred to in the literature as ecological regression or Goodman’s regression. Like the method of bounds, it is based on the identity in Equation 1. Suppose that the fraction of support for a given candidate for both Others and Alaska Natives was the same across all precincts in the district. A bit more formally, suppose that \(\lambda_i^A = \lambda^A\) and \(\lambda_i^O = \lambda^O\) for every precinct \(i\). Then we could estimate these fractions by choosing the best fitting line to the precinct-level data. This is just a standard linear regression, the most commonly used statistical procedure in the social sciences. From these estimates we could then compare the voting behavior between groups.

It is important to note that ecological regression can produce widely inaccurate estimates of group voting behavior (King 1997). First, the assumption that the fraction of group support is constant across every precinct is highly implausible. Second, ecological regression does not use the bounds information either at the precinct level (discussed above) nor even the overall bounds that the average fraction of a group’s support for a given candidate must be between zero and one. For example, ecological regression analysis can produce negative estimates for the fraction of a group supporting a particular candidate or values greater than 100%.

### 2.3 Ecological Inference/EI

King (1997) has developed an alternative approach called Ecological Inference or EI. While the technical details are complex, its advantage is that it uses all available information to generate more accurate estimates of voting behavior from aggregate data. EI is basically a way to combine the regression approach of Goodman (1959) with the bounds from Duncan and Davis (1953). Further, it allows the estimates to vary (systematically) across precincts. The idea is we calculate the constraint lines for every precinct. We then choose as our estimate for a given precinct a point on its constraint line near the center of the intersection of all of the other lines. The actual point chosen is based on a standard statistical model. We can then use these precinct estimates to calculate quantities of interest such as the average support level across the district.

It is important to note that since King’s method relies heavily on the bounds information, it works best when at least some of these bounds are informative — i.e., narrower than the entire range from 0 to 1. This will happen when more precincts have large proportions of each of the groups who’s voting behavior we want to estimate. In other words, we will need some precincts that are relatively homogeneous for each ethnic group we want to study.
2.4 More than Two Groups or Two Candidates

The above discussion on the development of methods for ecological inference assumed that we only had two groups and two candidates (or vote choices). Accommodating more than two groups is rather straightforward, although notation and intuition become more complicated, especially for the constraint lines. All that is required is adding the additional group fractions to Equation 1.

Allowing for more than two candidates or vote choices, however, is a bit more complicated. In the special case of only two choices, we only need to model the vote share going to one of them since we then automatically know the fraction going to the other candidate: this is just one minus the first vote share. If, for example, we add a third choice, then we need to model the vote share going to any two of the options and then we get third by subtraction the sum of the other two shares from one. Formally, we need to add an additional equation for each vote choice greater than two. Typically, there will always be more than two vote choices even when there are only two candidates because some individuals will choose not to vote in the election. We need to account for this abstention in order to make proper inferences. However, since what we care about is the share of voters supporting each of the candidates, we need to condition out these non-voters. This is not straightforward, but can be done once we estimate the full set of options: don’t vote or vote for one of the candidates on the ballot.

In the general case of more than two groups and more than two vote choices, racially polarized voting is also a more complicated concept. If we only have two choices, then we get voting cohesion among each group automatically since one of the choices must receive a majority of support from the members (ignoring the unlikely event of an exact tie in the election). However, when we have more than two choices, it is possible that no choice receives majority support of the group. In fact, given the estimation uncertainty, it may not be possible to infer which candidate is preferred by the members of the group. Even if we find that the groups both have a strictly preferred candidates (i.e., they are cohesive), we still need to see if the distribution between the groups is statistically different to find racially polarized voting.

I finally note that adding additional groups and vote choices to King’s (1997) EI is not straightforward. The generalization was first developed by King, Rosen, and Tanner (1999). Unfortunately, their approach was computationally inefficient and was later refined by Rosen, Jiang, King and Tanner (2001). I use the Rosen et al. (2001) approach in my analysis here.

3 Results of the Analysis of Elections in Alaska

The results of the EI analysis of the contested elections between 2014 and 2018 that had at least one candidate who identifies as Alaska Native are presented in the tables at the end of this report. As previously noted, the non-voters are conditioned out, so the estimates are only for voters.

To read the tables, consider the results for the first election in the set, the 2014 election for Senate

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1Formally, we can not rule out the null hypothesis that the group equally split their votes across two or more choices.

2Formally, we need to reject the null hypothesis that the distribution of vote shares across groups is identical.

3All the computations discussed in this report were done in R (R Core Team 2012), a statistical computing language, using the eiPack (version 0.2–1) developed by Olivia Lau, Ryan T. Moore, and Michael Kellerman.
District C. The two candidates are Dorothy J. Shockley, who is identified as Alaska Native (which is denoted by the “*” after her name) and Click Bishop. The table shows that an estimated fraction of Alaska Natives voting for Shockley is 71.1% and the parenthetical values underneath that give the 95% confidence interval of the estimate is (58.4%, 82.0%). These measure our statistical uncertainty; and we can not rule out that true percent is in this interval with high probability. Similarly, it is estimated that 23.5% of Other (non-Alaska Natives) voted for Shockley with a confidence interval of (19.3%, 27.4%). Similarly it is estimated that 28.9% of Alaska Natives voted for Bishop with a confidence interval of (18.0%, 41.6%) and 76.5% of Other voters with a confidence interval of (72.6%, 80.7%). As we can see from the results from the 2014 election in Senate District C, there is a large amount of statistical uncertainty around all of the estimated vote shares, particularly for Alaska Natives. This is caused in large part because of the small number of precincts in Alaska legislative districts. However, we can confidently say that the majority preferred candidate of Alaska Natives is Shockley because the confidence interval is completely above 50%. Similarly, we see that Bishop was the majority preferred candidate of non-Alaska Natives. Given the strong voting patterns by groups, this election show statistically significant evidence of racial polarized voting.

This pattern of large amounts of statistical uncertainty holds for almost all Alaska House and Senate elections that we examined for this study. Unlike the 2014 Senate District C election, in most of these elections there is no statistically significant evidence of racially polarized voting given the large amounts of estimation uncertainty. The only exceptions are the 2014 and 2016 elections in House District 6, and the aforementioned 2014 election for Senate District C. In all three of these elections, we see strong evidence for racially polarized voting.

In the 2016 House District 6 election, for example, the estimates clearly show that Alaska Natives strongly preferred Jason Land with an estimated 65.1% voting for him with a confidence interval of (54.2%, 75.3%), whereas David Talerico was the preferred candidate of Other voters with an estimate of 79.2% support with a confidence interval of (74.8%, 82.2%). Given the two groups cohesive and opposing voting patterns, there is statistically significant evidence of racially polarized voting in this election. A similar pattern is found in the 2014 election in the same district between Wilson Justin, the preferred candidate of Alaska Natives, and David Talerico.

Given the small number of precincts in the House and Senate elections, we also examined the election for Governor/Lt. Governor in 2018 and 2014. These are the only statewide, partisan elections that featured at least one candidate on the ticket who identified as Alaska Native. Given these elections are statewide, they have much larger number of precincts that can reduce estimation uncertainty.

The 2018 election saw strong evidence for racially polarized voting. The preferred ticket of Alaska Native voters was Begich/Call with an estimate of 66.2% voting for it with a confidence interval of (64.2%, 68.1%), whereas a majority of 61.9% of non-Alaska Natives are estimated to have voted for the Dunleavy/Meyer ticket with a confidence interval of (61.1%, 62.6%). The 2014 Gubernatorial election, also showed statistically significant racially polarized voting. However, the amount of polarization was not as large as in the 2018 one, nor as substantively important. Approximate 52.5% of Alaska Natives voted for the Walker/Mallot ticket with a confidence interval of (50.4%, 54.6%), whereas the majority preferred candidate of Other voters was Parnell/Sullivan with 51.3% of their vote with a confidence interval of (50.7%, 52.0%). However, we also see that approximately 45.8% of Other voters chose Walker/Mallot with a confidence interval of (45.2%, 46.5%). In fact,
this cross-over voting of Other voters allowed Walker/Mallot to ultimately win the election.

4 Implications for Redistricting in Alaska

Given that we find evidence of racially polarized voting in Alaska elections, we consider its implications for the redistricting process. Section 2 of the Voting Rights Act of 1965 prohibits, among other things, any electoral practice or procedure that minimizes or cancels out the voting strength of members of racial or language minority groups in the voting population. This phenomenon is known as vote dilution. Redistricting plans cannot crack or pack a geographically concentrated minority community across districts or within a district in a manner that dilutes their voting strength.

In *Thornburg v. Gingles*, 478 U.S. 30 (1986), the Supreme Court set out the framework for challenges to such practices or procedures. In *Brnovich v. Democratic National Committee*, 141 S. Ct. 2321, 2337 (2021), the Supreme Court described *Gingles* as “our seminal § 2 vote-dilution case” and recognized that “[o]ur many subsequent vote-dilution cases have largely followed the path that Gingles charted.” Analysis begins by considering whether three *Gingles* preconditions exist. First, the minority group must be sufficiently large and geographically compact to constitute a majority of the voting-age population in a single-member district. Second, the minority group must be politically cohesive. Third, the majority must vote sufficiently as a bloc to enable it—in the absence of special circumstances, such as the minority candidate running unopposed—usually to defeat the minority group’s preferred candidate. Our finding that racially polarized or racial bloc voting exists in Alaska elections and that such racial polarization has prevented Alaska Natives from electing their candidates of choice in given elections is legally significant. Pursuant to Section 2 of the Voting Rights Act of 1965, districts must be created to provide Alaska Natives with the opportunity to elect candidates of choice to overcome cohesive racial bloc voting by white voters that prevents them from doing so. A racial bloc voting analysis, such as presented here, is used to ascertain whether minority voters are politically cohesive and if white voters bloc vote to usually defeat minority-preferred candidates.

If, based on the racial bloc voting (RBV) analysis, it is determined voting is racially polarized, and candidates preferred by a politically cohesive minority group are usually defeated by white voters not supporting these candidates, a district(s) that offers minority voters an opportunity to elect their candidates of choice must be drawn. If such districts already exist, and minority-preferred candidates are winning only because these districts exist, then these minority districts must be maintained in a manner that continues to provide minority voters with an opportunity to elect their preferred candidates.

The question, then, is what is a reasonable share of a district’s population that is necessary to ensure that Alaska Natives have a reasonable opportunity to elect their candidates of choice? This can be determined from equation 1. If we have estimates of the vote share of the groups, we can solve for, $X$, the share of Alaska Natives, needed such as their preferred candidate is likely to get greater than half the votes. Given that the estimates of voting behavior are relatively uncertain in the Alaskan data, we will want to consider a range. Looking at the racially polarized elections, districts would need to be somewhere around 45% to 50% Alaska Native to give them an opportunity to elect candidates of choice.
5 References


## EI Results for Senate District C in 2014

<table>
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<td>Bishop</td>
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## EI Results for Senate District P in 2014

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<tr>
<td>Stevens</td>
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## EI Results for House District 1 in 2014

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</thead>
<tbody>
<tr>
<td>Kawasaki</td>
<td>52.4</td>
</tr>
<tr>
<td></td>
<td>(21.6, 82.4)</td>
</tr>
<tr>
<td>Bringhurst*</td>
<td>47.6</td>
</tr>
<tr>
<td></td>
<td>(17.6, 78.4)</td>
</tr>
</tbody>
</table>

## EI Results for House District 6 in 2014

<table>
<thead>
<tr>
<th>Native</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Justin*</td>
<td>85.2</td>
</tr>
<tr>
<td></td>
<td>(76.0, 92.7)</td>
</tr>
<tr>
<td>Talerico</td>
<td>14.8</td>
</tr>
<tr>
<td></td>
<td>(7.3, 24.0)</td>
</tr>
</tbody>
</table>

## EI Results for House District 33 in 2014

<table>
<thead>
<tr>
<th>Native</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kito*</td>
<td>64.2</td>
</tr>
<tr>
<td></td>
<td>(36.5, 87.9)</td>
</tr>
<tr>
<td>Dukowitz</td>
<td>35.8</td>
</tr>
<tr>
<td></td>
<td>(12.1, 63.5)</td>
</tr>
</tbody>
</table>
### EI Results for Governor/Lt. Governor in 2014

<table>
<thead>
<tr>
<th></th>
<th>Native</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clift/Lee</td>
<td>7.7</td>
<td>1.9</td>
</tr>
<tr>
<td></td>
<td>(6.6, 8.8)</td>
<td>(1.6, 2.3)</td>
</tr>
<tr>
<td>Myers/Rensel</td>
<td>9.3</td>
<td>0.8</td>
</tr>
<tr>
<td></td>
<td>(8.6, 9.9)</td>
<td>(0.7, 1.0)</td>
</tr>
<tr>
<td>Parnell/Sullivan</td>
<td>30.6</td>
<td>51.4</td>
</tr>
<tr>
<td></td>
<td>(28.6, 32.6)</td>
<td>(50.8, 51.9)</td>
</tr>
<tr>
<td>Walker/Mallott*</td>
<td>52.5</td>
<td>45.9</td>
</tr>
<tr>
<td></td>
<td>(50.4, 54.5)</td>
<td>(45.2, 46.5)</td>
</tr>
</tbody>
</table>

### 2016

#### EI Results for House District 2 in 2016

<table>
<thead>
<tr>
<th></th>
<th>Native</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holdaway*</td>
<td>53.2</td>
<td>12.3</td>
</tr>
<tr>
<td></td>
<td>(15.7, 85.0)</td>
<td>(1.2, 26.7)</td>
</tr>
<tr>
<td>Thompson</td>
<td>46.8</td>
<td>87.7</td>
</tr>
<tr>
<td></td>
<td>(15.0, 84.3)</td>
<td>(73.3, 98.8)</td>
</tr>
</tbody>
</table>

#### EI Results for House District 6 in 2016

<table>
<thead>
<tr>
<th></th>
<th>Native</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land*</td>
<td>65.1</td>
<td>20.8</td>
</tr>
<tr>
<td></td>
<td>(54.2, 75.1)</td>
<td>(17.7, 24.0)</td>
</tr>
<tr>
<td>Talerico</td>
<td>34.9</td>
<td>79.2</td>
</tr>
<tr>
<td></td>
<td>(24.9, 45.8)</td>
<td>(76.0, 82.3)</td>
</tr>
</tbody>
</table>

#### EI Results for House District 36 in 2016

<table>
<thead>
<tr>
<th></th>
<th>Native</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sivertsen*</td>
<td>23.0</td>
<td>50.0</td>
</tr>
<tr>
<td></td>
<td>(7.8, 41.8)</td>
<td>(42.0, 58.3)</td>
</tr>
<tr>
<td>Shaw</td>
<td>10.1</td>
<td>3.7</td>
</tr>
<tr>
<td></td>
<td>(3.5, 17.7)</td>
<td>(1.2, 6.5)</td>
</tr>
<tr>
<td>Ortiz</td>
<td>67.0</td>
<td>46.3</td>
</tr>
<tr>
<td></td>
<td>(48.2, 83.1)</td>
<td>(37.4, 54.4)</td>
</tr>
</tbody>
</table>
EI Results for House District 37 in 2016

<table>
<thead>
<tr>
<th></th>
<th>Native</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edgmon*</td>
<td>62.4</td>
<td>53.5</td>
</tr>
<tr>
<td></td>
<td>(54.5, 70.6)</td>
<td>(38.7, 68.3)</td>
</tr>
<tr>
<td>Weatherby</td>
<td>37.6</td>
<td>46.5</td>
</tr>
<tr>
<td></td>
<td>(29.4, 45.5)</td>
<td>(31.7, 61.3)</td>
</tr>
</tbody>
</table>

EI Results for House District 18 in 2018

<table>
<thead>
<tr>
<th></th>
<th>Native</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drummond</td>
<td>52.4</td>
<td>67.1</td>
</tr>
<tr>
<td></td>
<td>(22.0, 80.6)</td>
<td>(53.8, 80.5)</td>
</tr>
<tr>
<td>Lekanoff*</td>
<td>47.6</td>
<td>32.9</td>
</tr>
<tr>
<td></td>
<td>(19.4, 78.0)</td>
<td>(19.5, 46.2)</td>
</tr>
</tbody>
</table>

EI Results for House District 32 in 2018

<table>
<thead>
<tr>
<th></th>
<th>Native</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harris</td>
<td>30.6</td>
<td>34.1</td>
</tr>
<tr>
<td></td>
<td>(10.5, 56.3)</td>
<td>(26.6, 40.2)</td>
</tr>
<tr>
<td>Stutes</td>
<td>38.1</td>
<td>57.7</td>
</tr>
<tr>
<td></td>
<td>(15.5, 63.4)</td>
<td>(50.7, 64.8)</td>
</tr>
<tr>
<td>Katelnikoff-Lester*</td>
<td>31.3</td>
<td>8.2</td>
</tr>
<tr>
<td></td>
<td>(12.5, 52.3)</td>
<td>(2.7, 13.3)</td>
</tr>
</tbody>
</table>

EI Results for House District 37 in 2018

<table>
<thead>
<tr>
<th></th>
<th>Native</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edgmon*</td>
<td>67.9</td>
<td>55.1</td>
</tr>
<tr>
<td></td>
<td>(61.2, 74.8)</td>
<td>(40.3, 70.7)</td>
</tr>
<tr>
<td>Weatherby</td>
<td>32.1</td>
<td>44.9</td>
</tr>
<tr>
<td></td>
<td>(25.2, 38.8)</td>
<td>(29.3, 59.7)</td>
</tr>
</tbody>
</table>

EI Results for House District 38 in 2018

<table>
<thead>
<tr>
<th></th>
<th>Native</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zulkosky*</td>
<td>55.9</td>
<td>51.9</td>
</tr>
<tr>
<td></td>
<td>(49.9, 61.9)</td>
<td>(17.4, 82.6)</td>
</tr>
<tr>
<td>Deacon*</td>
<td>44.1</td>
<td>48.1</td>
</tr>
<tr>
<td></td>
<td>(38.1, 50.1)</td>
<td>(17.4, 82.6)</td>
</tr>
</tbody>
</table>
## EI Results for House District 40 in 2018

<table>
<thead>
<tr>
<th></th>
<th>Native</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lincoln*</td>
<td>64.7</td>
<td>36.2</td>
</tr>
<tr>
<td></td>
<td>(57.3, 71.5)</td>
<td>(8.4, 68.3)</td>
</tr>
<tr>
<td>Mack*</td>
<td>11.2</td>
<td>47.9</td>
</tr>
<tr>
<td></td>
<td>(4.7, 18.4)</td>
<td>(17.0, 76.6)</td>
</tr>
<tr>
<td>Savok*</td>
<td>24.1</td>
<td>15.9</td>
</tr>
<tr>
<td></td>
<td>(19.8, 28.9)</td>
<td>(3.5, 35.9)</td>
</tr>
</tbody>
</table>

## EI Results for Governor/Lt. Governor in 2018

<table>
<thead>
<tr>
<th></th>
<th>Native</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Begich/Call*</td>
<td>66.0</td>
<td>36.6</td>
</tr>
<tr>
<td></td>
<td>(64.2, 67.7)</td>
<td>(36.0, 37.3)</td>
</tr>
<tr>
<td>Dunleavy/Meyer</td>
<td>21.8</td>
<td>61.8</td>
</tr>
<tr>
<td></td>
<td>(20.1, 23.5)</td>
<td>(61.1, 62.4)</td>
</tr>
<tr>
<td>Toien/Clift</td>
<td>6.2</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>(5.6, 6.9)</td>
<td>(0.9, 1.2)</td>
</tr>
<tr>
<td>Walker/Mallott*</td>
<td>5.9</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>(5.5, 6.4)</td>
<td>(0.4, 0.6)</td>
</tr>
</tbody>
</table>
Supplemental Alaska Racially Polarized Voting Analysis for 2021 Redistricting

Bruce Adelson, Esq. and Jonathan N. Katz, Ph.D.

November 1, 2021

After completing our racially polarized voting analysis of elections in Alaska presented in our earlier report, we were asked to further quantitatively examine voting patterns of Alaska Native, non-Alaska Native Minorities, and Other (non-Minority and non-Alaska Native) individuals in the Anchorage area. In particular, we examined legislative districts 15, 16, 17, 18, 19, 20, 23, and 25. Unfortunately, this analysis is not possible and no reliable inferences can be made of voter behavior in this area. Ecological inference requires at least some almost homogeneous precincts in order to generate reliable estimates of a group’s voting behavior. In this area, there are no precincts that are anywhere close to homogeneous. For example, the largest fraction of non-Alaska Native minority population in any precinct is 77.4% and only 30.0% for Alaska Natives. This problem was confirmed by the failed diagnostics of the estimated models attempted on the data from this area.
Census Data Delivery
Census Physical Media Data Receipt & Validation
Census Posts Data

- Census posts the data on Thursday, August 12
- Data posted to an HTTP page at 9am: file downloaded at 9:01am
  https://www2.census.gov/programs-surveys/decennial/2020/data/01-Redistricting_File–PL_94-171/Alaska/
Physical Delivery

- Census indicated they would provide a physical delivery of the data before September 30.
- Package included a DVD and thumb drive copies of the data.
Looking at the Media

• Thumb drive contained these files, including a zip file which was named the same as the downloaded file.

<table>
<thead>
<tr>
<th>Name</th>
<th>Date Modified</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020PL94-171.exe</td>
<td>Aug 5, 2021 at 8:49 AM</td>
<td>129 KB</td>
</tr>
<tr>
<td>application Files</td>
<td>Aug 2, 2021 at 11:11 AM</td>
<td>--</td>
</tr>
<tr>
<td>AutoPlay</td>
<td>Aug 2, 2021 at 11:11 AM</td>
<td>--</td>
</tr>
<tr>
<td>Autorun.exe</td>
<td>Jul 26, 2021 at 1:31 PM</td>
<td>6.4 MB</td>
</tr>
<tr>
<td>autorun.inf</td>
<td>Aug 2, 2021 at 1:26 PM</td>
<td>31 bytes</td>
</tr>
<tr>
<td>data</td>
<td>Aug 2, 2021 at 11:11 AM</td>
<td>--</td>
</tr>
<tr>
<td>AK00001.TXT</td>
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<td>59.4 MB</td>
</tr>
<tr>
<td>AK00002.TXT</td>
<td>Jul 31, 2021 at 10:34 AM</td>
<td>60.6 MB</td>
</tr>
<tr>
<td>AK00003.TXT</td>
<td>Jul 31, 2021 at 10:34 AM</td>
<td>5 MB</td>
</tr>
<tr>
<td>AKGEO.TXT</td>
<td>Jul 31, 2021 at 10:35 AM</td>
<td>32.6 MB</td>
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<tr>
<td>images</td>
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<td>--</td>
</tr>
<tr>
<td>ref</td>
<td>Aug 2, 2021 at 11:11 AM</td>
<td>--</td>
</tr>
<tr>
<td>zipfile</td>
<td>Aug 2, 2021 at 11:11 AM</td>
<td>--</td>
</tr>
<tr>
<td>ak2020.pl.zip</td>
<td>Jul 30, 2021 at 1:03 PM</td>
<td>4.7 MB</td>
</tr>
<tr>
<td>How to Use This Product.pdf</td>
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<td>882 KB</td>
</tr>
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<td>lua5.1.dll</td>
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<td>335 KB</td>
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<tr>
<td>lua51.dll</td>
<td>Mar 8, 2016 at 2:26 PM</td>
<td>23 KB</td>
</tr>
<tr>
<td>PLstate.txt</td>
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<tr>
<td>README.txt</td>
<td>Jul 29, 2021 at 9:16 AM</td>
<td>8 KB</td>
</tr>
<tr>
<td>state.txt</td>
<td>Jul 31, 2021 at 10:34 AM</td>
<td>27 bytes</td>
</tr>
<tr>
<td>TechDoc</td>
<td>Aug 2, 2021 at 11:11 AM</td>
<td>--</td>
</tr>
<tr>
<td>2020Census_PL9...hDoc_English.pdf</td>
<td>Jul 22, 2021 at 12:48 PM</td>
<td>1.8 MB</td>
</tr>
</tbody>
</table>
The files look the same...

- Now we have .zip two files that are named the same from the census. They both uncompress to contain these files:

- We must be able to document that the downloaded data which was loaded into our redistricting software in August is EXACTLY the same as the data the Census physical
Comparing Files

• “Digital Fingerprinting” is the process of comparing electronic messages to see if they are the precisely the same.
• This process called “hashing” is used in many areas of cryptography and is mature and reliable.
• The current standard published by the Dept. of Commerce is:

FIPS PUB 180-4

FEDERAL INFORMATION PROCESSING STANDARDS PUBLICATION

Secure Hash Standard (SHS)

CATEGORY: COMPUTER SECURITY    SUBCATEGORY: CRYPTOGRAPHY

Information Technology Laboratory
National Institute of Standards and Technology
Gaithersburg, MD  20899-8900

This publication is available free of charge from:
http://dx.doi.org/10.6028/NIST.FIPS.180-4

August 2015
Comparing Files

- We will use the SHA-512/224 Function found in section 4.1.3

4.1.3 SHA-384, SHA-512, SHA-512/224 and SHA-512/256 Functions

SHA-384, SHA-512, SHA-512/224 and SHA-512/256 use six logical functions, where each function operates on 64-bit words, which are represented as $x$, $y$, and $z$. The result of each function is a new 64-bit word.

\[ Ch(x, y, z) = (x \land y) \oplus (\neg x \land z) \]  \hspace{1cm} (4.8)
\[ Maj(x, y, z) = (x \land y) \oplus (x \land z) \oplus (y \land z) \]  \hspace{1cm} (4.9)

\[ \sum_{0}^{512} (x) = ROTR^{28}(x) \oplus ROTR^{34}(x) \oplus ROTR^{39}(x) \]  \hspace{1cm} (4.10)
\[ \sum_{1}^{512} (x) = ROTR^{14}(x) \oplus ROTR^{18}(x) \oplus ROTR^{41}(x) \]  \hspace{1cm} (4.11)
\[ \sigma_{0}^{512} (x) = ROTR^{1}(x) \oplus ROTR^{8}(x) \oplus SHR^{7}(x) \]  \hspace{1cm} (4.12)
\[ \sigma_{1}^{512} (x) = ROTR^{19}(x) \oplus ROTR^{61}(x) \oplus SHR^{6}(x) \]  \hspace{1cm} (4.13)
A Human Example

• The point of a “fingerprint” is to be able to detect change, even the slightest alteration results in a completely different “fingerprint”

• Here’s how it works in practice:
  • Message: You owe me $100!
    • Fingerprint:
      e64ed366ee70848af8158c82b2ee134ccc2b93217ad47b575291fac
    • Message: You owe me $1.00!
      • Fingerprint:
        b8e93990be91a0af5da1454d3acde3aa9938ae7b75869b2b877439b0

• Adding a single “.” completely changes the fingerprint
Comparing Files

• First we compare the ZIP archive files:

```
sh-3.2# shasum -a 512224 /ftp/ak2020.pl.zip
b1ff9b4f67f38768fd58dba39ed167eea9f7d6ebf8895f92dc247d31
sh-3.2# shasum -a 512224 /thumbdrive/ak2020.pl.zip
b1ff9b4f67f38768fd58dba39ed167eea9f7d6ebf8895f92dc247d31
```

• Are the two fingerprints the same? It appears from this output that the fingerprint for both files is:

```
b1ff9b4f67f38768fd58dba39ed167eea9f7d6ebf8895f92dc247d31
```
Comparing Files

• Then we compare all 8 files they contain and get the following results:

• Source: FTP, file name – fingerprint
  ak000012020.pl – 73017f7f9e0b192c9001a66b472b56c0811efeef1593deae34feb86e
  ak000022020.pl – 242336e4196b5ca6f5fab2e8f6c5c714e2e91f27c6f2129432195499
  ak000032020.pl – 3aa044d0c173836c3298a87da5310cf1ad0380e0dc706ec20e73a0d1
  akgeo2020.pl – bc94edc2d8625c3065dfe5fe359b70e19e59cb80e377a2dc7391c94a

• Source: Thumb drive, file name – fingerprint
  ak000012020.pl – 73017f7f9e0b192c9001a66b472b56c0811efeef1593deae34feb86e
  ak000022020.pl – 242336e4196b5ca6f5fab2e8f6c5c714e2e91f27c6f2129432195499
  ak000032020.pl – 3aa044d0c173836c3298a87da5310cf1ad0380e0dc706ec20e73a0d1
  akgeo2020.pl – bc94edc2d8625c3065dfe5fe359b70e19e59cb80e377a2dc7391c94a

• The hashes are identical.
Let’s do a Test

- A single character change: King Cove population from 759 to 758
### Fingerprint Radically Changes

<table>
<thead>
<tr>
<th>Original &quot;759&quot; version:</th>
<th>Altered &quot;758&quot; version:</th>
</tr>
</thead>
<tbody>
<tr>
<td>bc94edc2d8625c3065dfe5f6e359b70e19e59cb80e377a2dc7391c94a</td>
<td>a35d069e71219b6bce3f6f360a7a62e0d7b22013d92e702192f0f4ef</td>
</tr>
</tbody>
</table>

- **Original "759" version:**
  - bc94edc2d8625c3065dfe5f6e359b70e19e59cb80e377a2dc7391c94a

- **Altered "758" version:**
  - a35d069e71219b6bce3f6f360a7a62e0d7b22013d92e702192f0f4ef
The Avalanche Effect
The digital fingerprints of the physically delivered media precisely match the fingerprints of the data downloaded on August 12.

The Census data downloaded August 12, 2021 was *NOT* compromised or altered in any way. It is in fact identical to the delivered file.

Therefore we have confidence that the Board is mapping with Alaska population numbers the Census published for Alaska.

Source: FTP, file name – fingerprint
ak000012020.pl – 73017f7f9e0b192c9001a66b472b56c0811e0f1593deae34feb86e
ak000022020.pl – 242336e4196b5ca6f5fab2e8f6c5c714e2e91f27c6f2129432195499
ak000032020.pl – 3aa044d0c173836c3298a87da5310cf1ad0380e0dc706ec20e73a0d1
akgeo2020.pl – bc94edc2d8625c3065dfe5fe359b70e19e59cb80e377a2dc7391c94a

Source: Thumb drive, file name – fingerprint
ak000012020.pl – 73017f7f9e0b192c9001a66b472b56c0811e0f1593deae34feb86e
ak000022020.pl – 242336e4196b5ca6f5fab2e8f6c5c714e2e91f27c6f2129432195499
ak000032020.pl – 3aa044d0c173836c3298a87da5310cf1ad0380e0dc706ec20e73a0d1
akgeo2020.pl – bc94edc2d8625c3065dfe5fe359b70e19e59cb80e377a2dc7391c94a
Public Hearing Tour
Hearing from Alaskans from Near and Far
Article VI ~ § 10. Redistricting Plan and Proclamation –

(a) Within thirty days after the official reporting of the decennial census of the United States or thirty days after being duly appointed, whichever occurs last, the board shall adopt one or more proposed redistricting plans. The board shall hold public hearings on the proposed plan, or, if no single proposed plan is agreed on, on all plans proposed by the board. No later than ninety days after the board has been appointed and the official reporting of the decennial census of the United States, the board shall adopt a final redistricting plan and issue a proclamation of redistricting. The final plan shall set out boundaries of house and senate districts and shall be effective for the election of members of the legislature until after the official reporting of the next decennial census of the United States.
Statewide Tour
Week 1 Itinerary

- Juneau  September 27  5:30pm – 7:30pm
- Haines  September 28  2:30pm – 4:00pm
- Sitka  September 29  3:30pm – 5:30pm
- Valdez  September 30  4:30pm – 6:30pm
- Meet the Maps Virtual October 1  12:30pm – 1:30pm
Week 2 Itinerary

- Anchorage October 4 4:30pm – 6:30pm
- Kotzebue October 5 3:00pm – 5:00pm
- Ketchikan October 6 4:30pm – 6:30pm
- Petersburg October 7 12:30pm – 2:00pm
- Wrangell October 7 4:30pm – 6:30pm
**Week 3 Itinerary**

<table>
<thead>
<tr>
<th>Location</th>
<th>Date</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nome</td>
<td>October 11</td>
<td>12:30pm – 2:30pm</td>
</tr>
<tr>
<td>Seward</td>
<td>October 12</td>
<td>4:00pm – 6:00pm</td>
</tr>
<tr>
<td>Homer</td>
<td>October 13</td>
<td>5:00pm – 7:00pm</td>
</tr>
<tr>
<td>Kenai</td>
<td>October 14</td>
<td>5:30pm – 7:30pm</td>
</tr>
<tr>
<td>Kodiak</td>
<td>October 15</td>
<td>12:00pm – 2:00pm</td>
</tr>
<tr>
<td>Meet the Maps Virtual</td>
<td>October 15</td>
<td>6:00pm – 7:00pm</td>
</tr>
</tbody>
</table>
**Week 4 Itinerary**

- **Delta Junction**  
  October 18  
  12:00pm – 2:00pm

- **Fairbanks**  
  October 18  
  5:30pm – 7:30pm

- **Bethel**  
  October 19  
  4:00pm – 6:00pm

- **Statewide Call In**  
  October 20  
  10:00am – 4:00pm

- **Dillingham**  
  October 21  
  12:00pm– 2:00pm

- **Dutch Harbor**  
  October 22  
  Canceled due to Weather

[Images of people discussing maps at meetings]

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**Week 5 Itinerary**

- **Palmer**
  - October 25
  - 6:00pm – 8:00pm

- **Wasilla**
  - October 26
  - 6:00pm – 8:00pm

- **Anchorage**
  - October 27
  - 5:00pm – 7:00pm

- **Utqiagvik**
  - October 28
  - 4:30pm – 6:30pm

- **Statewide Call In**
  - October 30 (Sat)
  - 10:00am – 4:00pm
Week 6 Itinerary

- Cordova  November 1  4:00pm – 6:00pm
- Anchorage Meeting  November 2  9:00am
Quick Stats

- 63 hours of public testimony
- 1,788 pages of written testimony
- 1.7 hours waiting for local taxies
- 14 minutes standing in driving rain waiting for Granville Ferry
- 1 hurricane avoided (Dutch Harbor)
- 0.3 partially eaten napkin (dark van, no mayo)
- 100’s of truly generous Alaskans offering food, rides, encouragement