

IN THE SUPERIOR COURT FOR THE STATE OF ALASKA
FOURTH JUDICIAL DISTRICT

IN RE 2011 REDISTRICTING
CASES

Case No. 4FA-11-02209 CI.

**RILEY ET. AL. PLAINTIFFS' REPLY MEMORANDUM
IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT**

The Alaska Redistricting Board opposes the motion by Riley et. al. for partial summary judgment on compactness (HD 3,5,9,12, and 32); the unnecessary splits in the Mat-Su and Kenai Districts; the avoidable deviation variation in SD 5 and 6; and the Alaska Equal Protection claims related to the non-compact nature of SD B and the splitting of the University of Alaska (UAF) campus.

I. THE BOARD MISCHARACTERIZES THE PLAINTIFFS

COMPLAINTS. The Board's opposition mistakes the Riley Plaintiffs complaints as merely amounting to an argument that "the Board erred... because the Board should have adopted the plans submitted by the Riley Plaintiffs."¹ The Board simply misses the point. Riley et. al. never submitted a plan in the first two years of this litigation, except for a "demonstrative" plan during

1 ARB Op. Riley's SJ Motion, at 2

trial to demonstrate options overlooked by the Board.² At the July 1, 2013 Board hearing, the undersigned attorney stated in regard to the G&W plan, "we're not particularly wedded to the adoption of this plan. It is really designed to demonstrate three things."³ The undersigned went on to list those three things: i.e. 1) show how it is possible, using the *Hickel* process, to base a plan on borough boundaries,⁴ 2) Ester/Goldstream is socioeconomically integrated with Fairbanks,⁵ and 3) it is possible to make adjustments in Anchorage based upon population changes, rather than wholesale changes unrelated to population change.⁶ The Board's asseveration that the Riley plaintiffs were demanding the adoption of their demonstration plans is not supported by the record.

II. OPEN MEETING ACTS CONCERNS.

The Riley Plaintiffs have not brought a claim for violation of Opening Meetings Act by the Board. However, the most disturbing revelation contained in the Board's Opposition is the admission that, "The Board's counsel routinely communicates directly with the Board chairman,

² See Trial Exhibits J3 & J4

³ ARB 00017047 (Tr. 5:1-3)

⁴ ARB 00017047-8 (Tr. 5:1 to 8:4)

⁵ ARB 00017048-9 (Tr. 8:5-14:3)

⁶ ARB 00017049-50 (Tr. 14:4-16:13)

who in turn passes the information along to the rest of the Board."⁷ The Board asserts that there is nothing improper about such daisy-chain communication between members of a public board subject to the Open Meeting's Act.⁸ It appears from the Riley settlement offer exchange, that the daisy-chain process was used for substantive decision-making. The Board's assertion that this process was permissible is legally incorrect and once again disregards the Court's holding in *Hickel*.

The following excerpt from *Hickel II* clarifies the law in this area:

The superior court also held that the Board violated the Open Meetings Act by "meeting outside of noticed meetings to do the business of reapportionment." In *Brookwood Area Homeowners Association v. Anchorage*, 702 P.2d 1317 (Alaska 1985), we held that "a 'meeting' includes every step of the deliberative and decision-making process when a governmental unit meets to transact public business." *Id.* at 1323. We noted that "the question is not whether a quorum of a governmental unit was present at a private meeting. Rather, the question is whether activities of public officials have the effect of circumventing the OMA." *Id.* at 1323 n. 6.

The superior court found that Board members had one-on-one conversations with each other, in which they discussed reapportionment affairs and districting preferences, and solicited each other's advice. It also found that the "dearth of [substantive] discussion on the record, combined with the manner of some Board members at trial, as well as other evidence presented at trial, convinces this court

⁷ ARB Op. Riley Sum. Jud., at 48 n 203

⁸ *Id.*

that important decision making and substantive discussion took place outside the public eye." Our review of the record indicates support for the factual finding that the Board conducted some of its reapportionment business outside scheduled public meetings. Based on this finding, we agree with the superior court that the Board violated the Open Meetings Act.⁹

Clearly, a Redistricting Board's decision making using daisy-chained communication between individual Board members is a violation of the Open Meetings Act.¹⁰ The Board's acknowledgement that it was routinely using this process to circumvent the Open Meetings Act undermines any claim that that the Board was engaged in reasoned decision making on the record. It further suggests and infers that decisions that cannot be explained by reference to the record were the result of the routine daisy-chained meetings of the Board.

Of course, there is a clear preference to resolve redistricting issues based upon the constitutional merits.¹¹ However, from an evidentiary standard, the Court should not defer to the Board's actions and decisions where the reasons for the decisions are not clearly established in the record.

⁹ *Hickel v Southeast Conference*, 868 P.2d 919, 929-930 (Alaska, 1994)

¹⁰ *Hickel v Southeast Conference*, 846 P.2d at, 56-57

¹¹ *Id.*

III. COMPACTNESS

a) **Priority And The Board Record.** The Board asserts several common defenses to Riley et. al.'s compactness challenges to HD 3, 5, 9, 12, and 32. These defenses rest upon a common misunderstanding respecting the priority of compactness, and once again, ignores the lessons of *Hickel*.¹²

In that case, the Court dealt with similar arguments respecting the Mat-Su districts that are presented in the present plan.¹³ Also in that case, the Board argued that compactness problems were justified by a desire to lower populations deviations between districts. The court in *Hickel* rejected the argument holding that lower deviations may not have a priority over the constitutional priority accorded compactness.¹⁴ As the Court held in *Hickel*, "The Board's failure to create a compact district is not justified by rigid adherence to mathematical equality."¹⁵ Many of the Board's arguments in defense of the compactness challenges suffer from a clear misunderstanding of this directive.

¹² *Hickel v Southeast Conference*, 846 P.2d 38 (Alaska, 1992)

¹³ See discussion re HD 9 and 12 *infra*.

¹⁴ *Hickel*, at 53.

¹⁵ *Id.*

The holding in *In re 2001 Redistricting Cases*,¹⁶ and the Constitutional amendment following *Hickel*, does not change the order of priority vis-a-vis compactness and the obligation of the Board to take a hard look at deviations. In that case, the Court clearly held that the priority of compactness over the obligation to take a hard look at lower deviations was the same as articulated in *Hickel*.¹⁷ Additionally, in striking down Anchorage districts in the 2001 redistricting cycle, the Board made it clear that it was addressing the technological advances in redistricting software in **urban** areas like Anchorage.¹⁸ To some extent the Board is attempting to argue that similar considerations should be made in more rural districts like HD 9 and 32

In stark contrast to the process and record of the Board, the Court's have provided clear guidance as to the primacy of compactness considerations relative to other standards as follows:

The requirements of article VI, section 6 shall receive priority *inter se* in the following order: (1) contiguousness and compactness, (2) relative socioeconomic integration, (3) consideration of local government boundaries, (4) use of drainage and other geographic features in describing boundaries.¹⁹

¹⁶ 44 P.3d 141 (Alaska, 2002),

¹⁷ *Id.*, at 161 n 16

¹⁸ *Id.*, at 146

¹⁹ *In re 2001 Redistricting Cases*, 44 P.3d 141, 143 n.2 (Alaska, 2002), quoting *Hickel v Southeast Conference*, 846 P.2d at, 62

The Board's arguments consistently diminish the importance of compactness in relationship to other factors. To the extent that the Board seeks to subvert compactness concerns to other concerns, the Board is simply wrong as a matter of law.

It should be noted that process has been --- and remains --- a predominate issue in this redistricting cycle. "The Court must examine not policy but process and must ask whether the agency has not really taken a 'hard look' at the salient problems or has not generally engaged in reasoned decision making."²⁰ The elimination of VRA pre-clearance considerations is not a license for random and arbitrary process.

In reviewing the process, the Board often presents arguments and justifications that are not borne out by the record or at odds with the record of the Board's proceedings. The Court must judge the Board's actions based upon "substantial evidence **in the record** that supports the findings that are disputed." (emphasis added)²¹ As discussed below, the Board offers a number of

²⁰ *City of Nome v Catholic Bishop of Northern Alaska*, 707 P.2d 870, 875 n. 2&3, and 876 (Alaska, 1985)

²¹ *Id.*

arguments that are either simply untrue or are post-hoc justifications for the Board's actions which were made for other reasons. The Court's review of the record is to determine whether the Board actions reflect a "reasoned decision-making" process.²² To the extent that the Board's decisions are not supported by the record, the Board's actions are not the result of "reasoned decision-making."

b) **HD 3.** The Board does not deny that the Board's draft Plan D contains a more compact district in North Pole than the Final Plan.²³ Rather, the Board argues that the most compact district does not necessarily trump a relatively compact district, citing this Court's order denying Petersburg's motion for compactness.²⁴ However, this Court denied Petersburg's motion based on the fact that compactness in that case was trumped by the Voting Rights Act.²⁵ There is no question that the VRA trumps compactness, however, the VRA is not asserted as a justification for HD 3's relative lack of compactness.

Rather, the Board argues that Plan D was rejected

²² *Memorandum Decision and Order Re: 2011 Proclamation Plan* (Feb. 1, 2012), at 46.

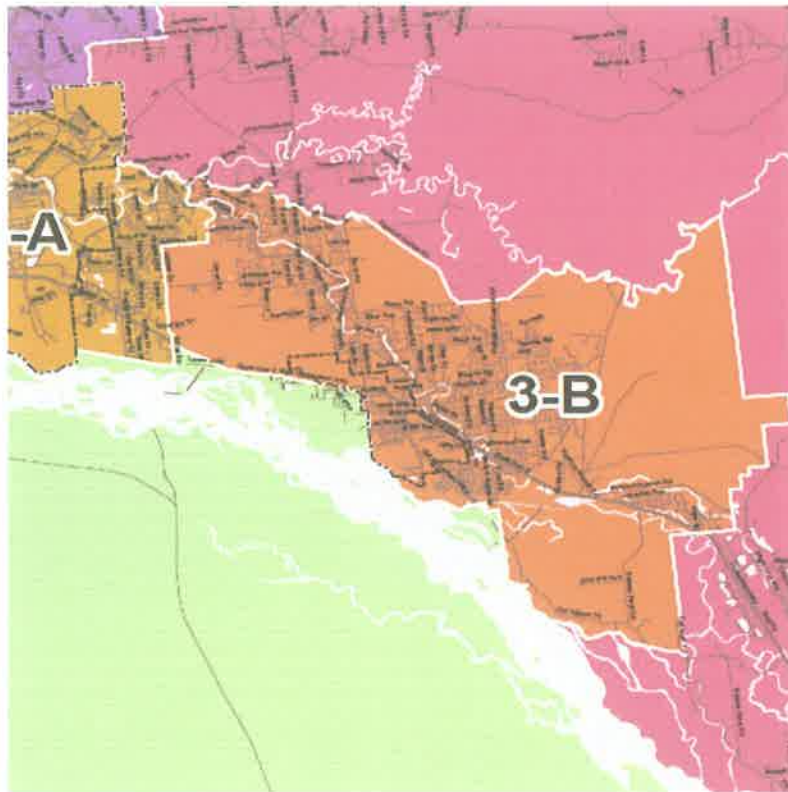
²³ ARB Op., Riley Sum Jud., at 8

²⁴ *Id.*, at 9 n 31

²⁵ Order Denying Petersburg's Motion for Summary Judgment and Granting the Board's Cross Motion for Summary Judgment, at pg. 9 (Dec. 12, 2011)

because Doyon/Tanana Chiefs preferred the rural configurations over Draft Plan D.²⁶ The argument is simply untrue because the Board did not adopt the Calista Plan, relative to North Pole, as demonstrated below.

Calista Option 4 Revised (Snapshot)²⁷

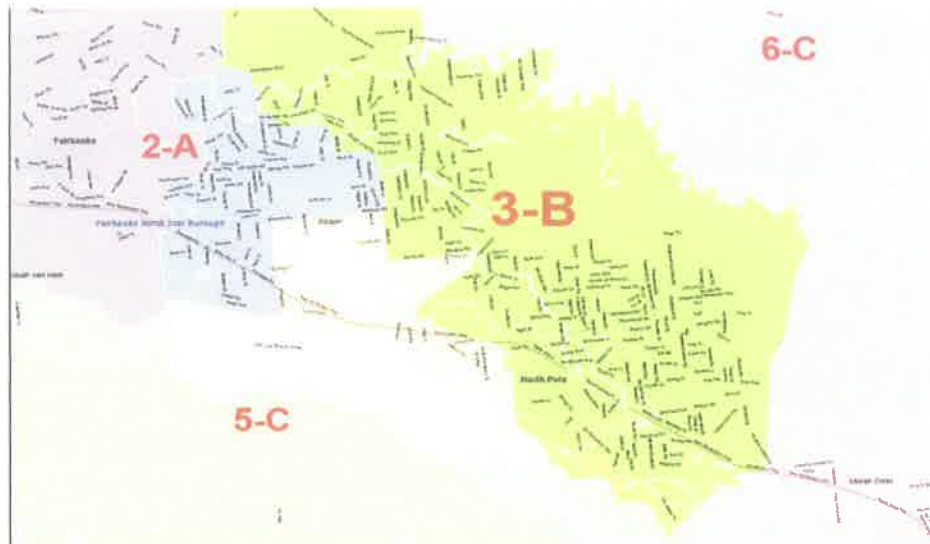


the Calista Plan actually had the North Pole district further south wholly below the Chena River. Final Plan HD 2 extends north of the Chena River to Chena Hotsprings Road. Additionally, the Calista Plan did not have the Ester/Goldstream District sharing a boundary with North Pole. Finally, it is also very obvious that the North Pole House district in the Calista Plan was more compact

²⁶ ARB Op Riley Sum Jud., at 9

²⁷ ARB 00017286-17294

HD 3 & 5 Final Plan (Snapshot)²⁸



than HD 3. It is also very obvious that Final Plan HD 3 was not a proposal contained in the Calista plan and its lack of compactness was totally unrelated to any requirement within the Calista plan.

The Board also argues that the lack of compactness results from reuniting Badger Road and North Pole, over which the Court expressed concern in the original plan.²⁹ This argument is simply not true. As the Court can plainly see from the above snapshot, the Final Plan chops up Badger Road area between HD 2 and 3, and 5. The first part of Badger Road (i.e. western Badger Road) is wholly within HD 2. Further along, Badger Road is divided

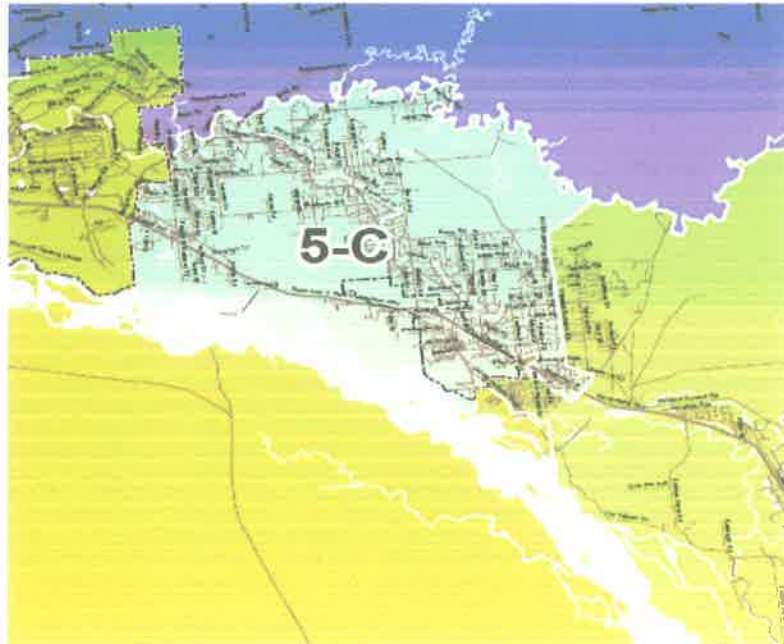
28 ARB 00017436

29 ARB Op Riley Sum Jud., at 8

between Badger Road between Joy Dr. and Jeep Trail (north in HD 3, south in HD 2). Between Joy and Birch Street, Badger Road is wholly within HD 3, but resumes to serve as a border between HD 2& 3 between Birch Street Benn Lane. After Benn Lane, Badger is wholly within HD 3, except for a small point at the intersection of Poppy Dr., where Badger Road serves as a border between HD 2 and 5. The suggestion that the Final Plan unites Badger Road and North Pole is simply not true.

Draft Plan D actually includes much more of Badger Road in its North Pole District, including all of Badger

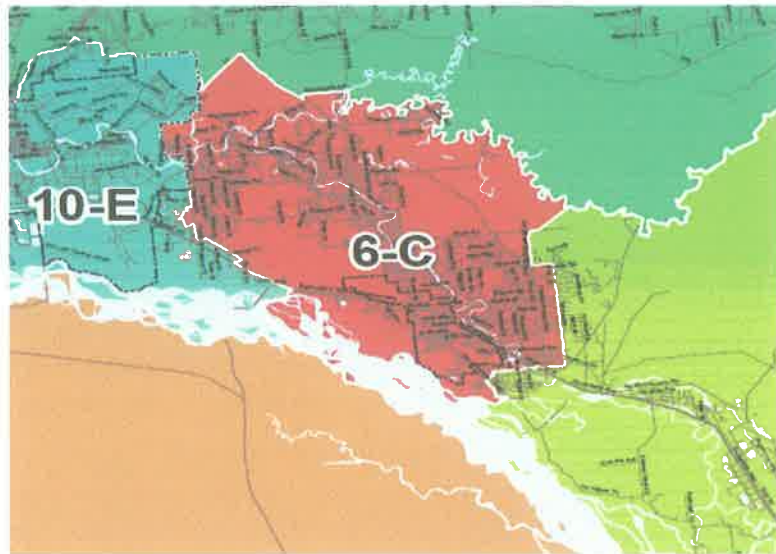
Board Draft Plan D (Snapshot)



Road between Dennis Road and North Pole, leaving only that portion of Badger Road that is within the City

limits in the eastern Fairbanks City house district. Moreover, the G&W Plan does a better job of uniting Badger Road/North Pole than Final Plan HD 3. The G&W plan has more of Badger Road in its North Pole district than Final Plan HD 3, but has slightly more of Badger Road in its eastern Fairbanks City District than Draft Plan D. It is very clear, however, that the G&W plan

Gazewood & Weiner Draft Plan (Snapshot)



actually reunites more of Badger Road/North Pole than Final HD 3.

In response to the ADP's suggestions that a more compact HD 3 would be achieved by moving the 811 people in the HD 5 "anvil", the Board argues that it would under-populate HD 5. The argument is disingenuous because it merely means that an effort to make HD 3 more

compact would have a ripple effect on other districts. As this Court has previously noted it is both expected and acceptable that changes to address compactness issues in one district will necessarily change other districts, even if those other districts are compact.³⁰

Finally, the Board presents new evidence in the form of mathematical compactness measurements that were not considered by the Board.³¹ Nonetheless, the measurements relative to HD 3 actually support the view that HD 3 is not relatively compact. As the Board asserted, "House District 3 scores 20% on the circularity ratio test or Polsby-Popper test..."³² That score is roughly equal to HD 2 in the First Redistricting Final Plan, which was had an 18% score on the Polsby-Popper test,³³ and was struck down by this Court for lacking compactness. Thus, under this measure, HD 3 is equally less compact to former (2011) HD 2, which was non-compact.³⁴

c) **HD 5.** The Board asserts two argument in support of HD 5's compactness: 1) the new HD 5 is

³⁰ *Memorandum Decision and Order Re: 2011 Proclamation Plan* (Feb. 1, 2012), at 120

³¹ See Exhibits attached to ARB Op Riley Sum Jud.

³² ARB Op Riley Sum Jud., at 7

³³ Expert Rpt. Of L. Lawson, Exhibit 1, attached to Riley Memo in Support of Partial Summary Jud., December 5, 2011. (attached)

³⁴ Interestingly, the HD 3 scored better under the Roeck test: 35%, which was the lowest compactness score amount the Fairbanks districts.

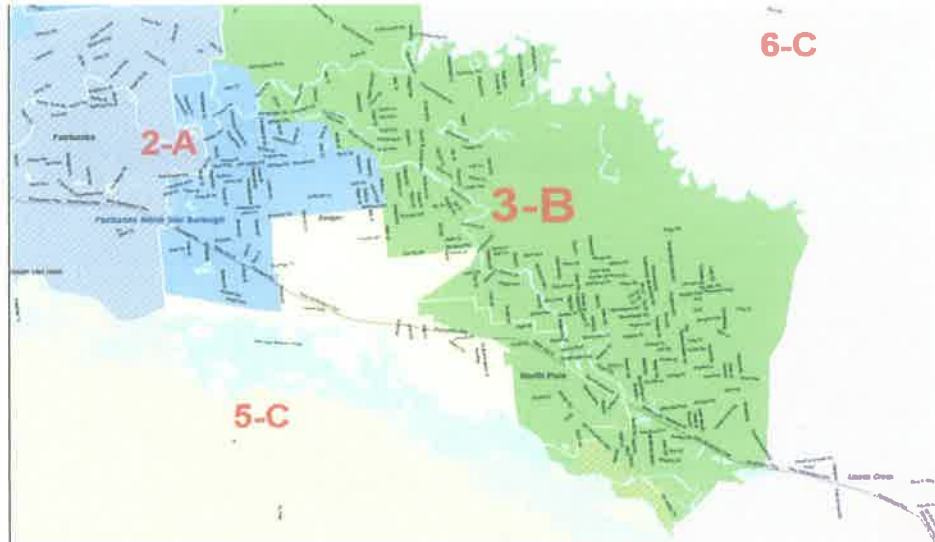
identical to HD 5 in the Board's First Final Plan, which the Court determined to be compact, and 2) that the purpose of the irregular shape was a ripple effect caused by respect for the North Pole City Boundaries and a desire to achieve low deviations. Neither factual assertion is true.

HD 5 in the Third Final Plan is not the same as HD 5 in the First Final plan. The most critical difference is that HD 5 in the present plan contains "The Anvil," a fact that the Board conveniently omits from its initial description of the district.³⁵ At trial, the challenge to HD 5 in the First Final Plan related to the inclusion of the unpopulated Tanana Flats artillery range with Chena Ridge, Chena Pump and areas west and south of the City of Fairbanks. This Court accepted the Board's argument that the large unpopulated area needed to go somewhere.³⁶ Comparing the New HD 5 and the 2011 HD 5 (below) confirms that the original proclamation did not include "The Anvil".

³⁵ ARB Op Riley Sum Jud., at 11-12

³⁶ *Memorandum Decision and Order Re: 2011 Proclamation Plan* (Feb. 1, 2012), at 119-120

The Anvil³⁷



HD 5 (First Final Plan) (Snapshot)³⁸



“The Anvil” was a descriptor used by the Board eleven (11) times during the July 7, 2013 meeting.³⁹

“The Anvil” is a north-east appendage of HD 5 containing 811 people north of the Tanana River, which is wedged

37 ARB 00017436

38 ARB 00006105

39 ARB 00016799-16853 (Tr. 12:10, 13; 15:5; 17:4; 56:9;57:3; 58:23; 59:1, 13,22; 61:24; 62:25)

between HD 2 & 3.⁴⁰ (See yellow non-hash mark area in first snapshot above.) The Anvil was not part of HD 5 in the original (2011) proclamation plan. The appendage is striking as Mr. Holm acknowledged when he stated, "It's that whole anvil that jumps out at you".⁴¹ The Board's claim that HD 5 is identical in the First Final Plan and the Third Final Plan is simply untrue.

The Board's second argument is, "The configuration of House District 5 is the result of the ripple effect from creating House Districts 1 and 2 with population from the City of Fairbanks, maintaining the integrity and boundaries of the City of North Pole, and the irregular geography of the Tanana River and the Tanana Flats, which had to be placed somewhere".⁴² This assertion is not supported by any citation to the record, and actually conflicts with the Board record. Rather, Board members clearly established on the record a very different reason for the anvil-shaped appendage.

The Anvil was developed in order to keep the people in district 4 together.⁴³ As Jim Holm's explained, if

40 Exhibit 1 (Aff't of L. Lawson)

41 Id. (Tr. 59: 22-23)

42 ARB Op Riley Sum Jud., at 15

43 Id. (Tr. 56:19-22)

you moved the population from HD 5 and added the anvil to HD 3 (i.e. the nearest adjacent population) it resulted in an overpopulation of HD 3 and required a ripple effect rotating from the east to the west north of the City of Fairbanks, which would "goof everything up again."⁴⁴ Of course, the "everything" that is goofed up is keeping the population of HD 4 together. Chairman Torgerson and Mr. Brodie also acknowledged this purpose, the fact that it was avoidable, and that the target of the proposal was Ester/Goldstream.

Mr. Torgerson: It is kind of the anvil piece, but I don't know what else to do about it, unless you ... take that population and just chase it around Fairbanks...

Mr. Brodie" You can do it, but like we said, you just have to rotate everything. 5 goes up to 4, and 4 goes over into 3, so its not impossible.

Mr. Torgerson: I wouldn't think its impossible, but with the perimeters that I hear Mr. Holm saying not dividing wherever Ester/Goldstream piece was and having some anomalies up there, this was the better choice.⁴⁵

Of course, in the Original Trial, Ester/Goldstream was a target because they voted democratic and the Board wanted to place Democrats in a Native district.⁴⁶ In the latest round, the Board expressly stated that they wanted to keep Ester/Goldstream voters together, which is another way of saying that they intended to "pack"

44 Id.

45 Id. (Tr. 61:24-62:10)

46 See generally, ARB 00013329-13474

Ester/Goldstream voters.⁴⁷ Notably, Mr. Holmes "perimeters" was not explained on the record, and Mr. Torgeson is obviously talking referencing part of the daisy-chained discussion between board members.

Of course, the Court might give the Board the benefit of the doubt and liberally infer that the decision was to respect a "community of interest". The first problem with this view would be that the Board never adopted a "community of interest" standard in its Guidelines.⁴⁸ Secondly, the Board didn't apply such a standard consistently, and its desire to maintain the Ester/Goldstream community of interest appears to be the only instance in the 2010 redistricting cycle that the Board actually considered community of interest.

To the contrary, the anvil actually was part of a configuration that separated and fractured the North Pole/Badger Road area into different districts. The anvil area is clearly more associated with the adjacent North Pole area but was added to the Chena Ridge/Pump

⁴⁷Packing is a vote dilution technique that occurs when potential voters with similar expected voting behavior are deliberately concentrated into fewer districts. Packing of more than a majority of any such group into a district creates "wasted votes," as it takes 50% plus one vote to elect a preferred candidate in the American system of single member, winner -take-all elections. Crocker, *Congressional Redistricting: An Overview*, Congressional Research Center (Nov. 21, 2012) available at <http://www.fas.org/sgp/crs/misc/R42831.pdf>

⁴⁸See Exhibit 3, attached to Riley Memo Sum. Judg.

district. And the Board fractured other communities of interest in Fairbanks.⁴⁹ In other words, if the Board was trying to keep Ester/Goldstream together to maintain a community of interest, it was wholly inconsistent in applying this goal and it did so by sacrificing the Badger Road/North Pole community of interest, which it split into three different districts by the very structure that was suppose to protect the community of interest of Ester/Goldstream. The argument is irrational.

Of course, the division of a community of interest is not a redistricting standard *per se*, but is evidence from which a party may infer discriminatory treatment under Justice Powell's neutral factors test adopted by the Alaska Court in *Kenai Peninsula Borough*.⁵⁰ However, under the neutral factors test articulated in that decision, the selective protection of one community of interest at the cost of others gives rise to an inference of discrimination.⁵¹ Thus, if the Board was selectively "protecting" a community of interest, the while knowingly sacrificing compactness of other communities of

49 E.g. the Board divided Fort Wainwright between HD 2 and 5 by separating the artillery range from the rest of the Fort; the Board divided the UAF campus.

50 *Kenai Peninsula Borough v State*, 743 P.2d 1352, 1372 (Alaska, 1987)

51 *Id.*

interest, the inference is that it was done for a discriminatory purpose. Thus, if the Board is attempting to justify the anvil-shaped appendage in HD 5 by claiming that it was protecting the Ester/Goldstream community of interest, it did so by giving priority to the extra-constitutional community of interest standard over the first priority standard of compactness, and giving rise to an inference of discrimination.

d) HD 9. The Board asserts two arguments in opposition to the challenge to HD 9: 1) the new HD 9 is near identical to HD 6 in the Board's First Final Plan, and the challenge is untimely, and 2) that the purpose of the irregular shape was a ripple effect caused by respect for the North Pole City Boundaries and a desire to achieve low deviations. Neither factual assertion is true.

The Riley Plaintiffs are not foreclosed from challenging HD 9 because 1) it is not "near-identical" to HD 6 in the original plan, 2) HD 6 was challenged as part of the unnecessary split of the Fairbanks borough boundary, 3) HD 6 was justified by a need to accommodate pre-clearance under the VRA, which is no longer applicable, and 4) the district was part of a plan that

was rejected in its entirety because the Board failed to follow the *Hickel* Process in attempting to comply with the VRA.

HD 9 does not contain any Fairbanks populations. The former HD 6 contained portions of Fairbanks borough population. The distinction is important because HD 6 was challenged as part of the Borough's claim, later asserted by *Riley et. al.*, that the Borough boundary was unnecessarily breached twice.⁵² Of course, the Board sought to justify the HD 6 configuration as necessary to comply with VRA, which this Court ruled in favor of the Board.⁵³ That ruling, however, was overturned by the Alaska Supreme Court which held that the process used by the Board to comply with the preclearance requirements of the VRA was invalid.⁵⁴ Of course, now the VRA justification for HD 6 in the original proclamation and HD 9 in the Third Final Plan is no longer applicable.⁵⁵ In the words of Justice Matthews, the last order of the Supreme Court "sends the redistricting process mandated as a result of the 2010 census back to ground zero."⁵⁶

⁵² *Memorandum Decision and Order Re: 2011 Proclamation Plan* (Feb. 1, 2012), at 108-110

⁵³ *Id.*

⁵⁴ Supreme Court Order No. 77

⁵⁵ *Shelby County v Holder*, --- US ---, 186 L.Ed 2d 651 (2013)

⁵⁶ Alaska Supreme Court Op No. 6741

The Riley Plaintiffs challenge to HD 9 is not untimely.⁵⁷

The Board argues that the configuration of HD 9 is justified by its drive to reduce deviations among districts. The Alaska Supreme Court rejected a similar argument relating to a similar effort to fracture the Mat-Su into five (5) house districts in *Hickel*.⁵⁸ That effort combined Mat-Su population with the unorganized borough population similar to HD 9.⁵⁹ In *Hickel*, the Court found that a Mat-Su district was not compact, when it stretched "to the Canadian border, (and) comprises interior Ahtna areas and parts of the Gulkana and Copper River valleys... Glennallen, Tok and Delta Junction."⁶⁰

In *Hickel*, the Governor argued that the district similar to HD 9 was configured to achieve a low deviation. The Court rejected that argument holding, "The Board's failure to create a compact district is not justified by rigid adherence to mathematical equality."⁶¹

⁵⁷ The Board also argues that HD 9 is identical to HD 12 in the 2002 Plan, which the Court held to be reasonable and constitutional in all respects, citing *In re 2001 Redistricting Cases*, 47 P.3d, 1089, 1090, 1095 (Alaska, 2002). A review of the cited case, however, does not reveal that District 12 was actually challenged and approved by the Court. Indeed, Dist. 12 was challenged and reversed and remanded in the first round of the 2001 cycle on grounds other than compactness. See *In re 2001 Redistricting Cases*, 44 P.3d 141, 144 (Alaska, 2002)

⁵⁸ *Hickel*, at 52 et. seq.

⁵⁹ *Id.*

⁶⁰ *Hickel*, at 53

⁶¹ *Hickel*, at 53.

Prior precedent clearly makes compactness a priority over the obligation of the Board to take a hard look to lower deviations, and lower deviations may not have a priority over the constitutional priority accorded compactness.

The Board does not address HD 9's "two quarter-curl" horn-like appendages emanating from Mat-Su: one to the north to Delta Junction; the second to the south to Valdez. They are clearly appendages, with no justification offered other than a need to deal with the excess population of Anchorage and the Board's desire to have low deviations, both of which have a lower priority than compactness.

The Board dismisses the comparisons of more compact Mat-Su districts contained in the RIGHT'S Coalition plan and the G&W plans. In the first case, the Board claims that the RIGHTS plan from 2011 should not be considered because it did not use the *Hickel* process. The assertion is nonsense, because 1) the *Hickel* process for dealing with the preclearance requirements of the VRA is not applicable to the present planning process,⁶² 2) the *Hickel* process is irrelevant regarding a visual compactness comparison between the suggested

⁶² *Shelby County, supra.*

configurations. The Board simply offers no explanation as to why the RIGHTS 2011 plan does not offer a more compact Mat-Su district configuration rendering HD 9 relatively non-compact, leaving nothing upon which the Plaintiffs may reply.

The Board argues that the G&W Mat-Su district configurations are the wrong comparison for comparing the Mat-Su portion of HD 9. The argument fails to address a fundamental aspect of Riley's claim; i.e. the cumulative compactness problem created by the fact that both HD 9 and 12 breach the Mat-Su boundaries. As a result, the Mat-Su districts are spread over a larger geographical area, which renders the Mat-Su districts non-compact.⁶³

e) HD 12. The Board denial of the the HD 12 compactness challenges is a conclusory statement with little analysis. Generally, the Board repeats it's argument that the Mat-Su configurations are justified because of the Board's desire to deal with the Anchorage excess population and the drive for extremely low deviations. As with HD 9, however, the Board does not address the other options to deal with Anchorage surplus population,

⁶³The Board does acknowledge this argument, but declines to address the issue

discussed in detail in Riley's motion.

Prior precedent clearly makes compactness a priority over the obligation of the Board to take a hard look to lower deviations, and lower deviations may not have a priority over the constitutional priority accorded to compactness.⁶⁴ As the Court held in *Hickel*, "The Board's failure to create a compact district is not justified by rigid adherence to mathematical equality."⁶⁵

f) **HD 32.** The Board repeats a number of its arguments in defense of HD 32: i.e. that it is identical to a district previously unchallenged, and that a more compact district would result in greater deviations.

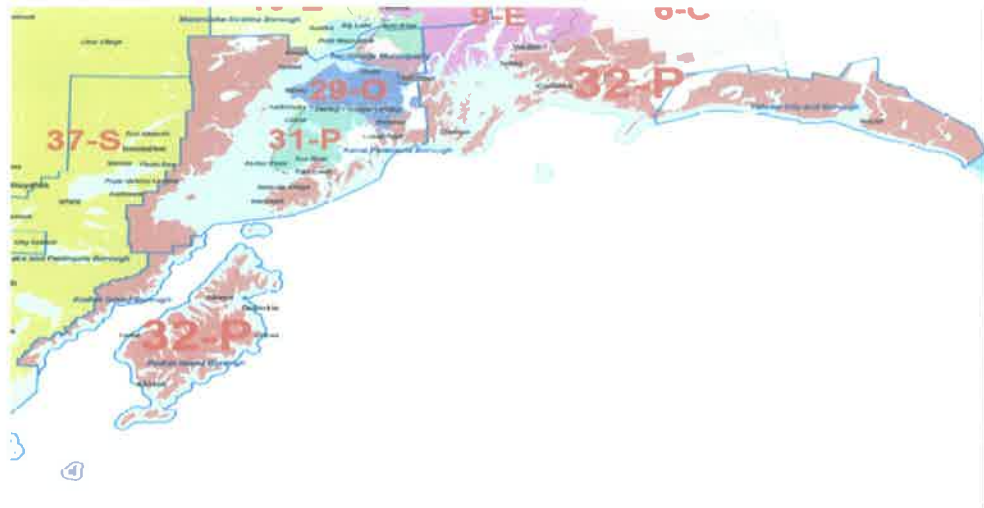
HD 32 is not identical to HD 35 in the Board's First Final (2011) Plan as can be seen in the following snapshots. In particular, HD 32 includes a major appendage that juts to the north taking in Tyonek/Beluga that was not in HD 35. Additionally, the north coast of Prince William Sound (from Whittier to the outskirts of Valdez) is not in the new HD 32, but was in the former HD 35. These are major differences that clearly make the

⁶⁴ *Id.*

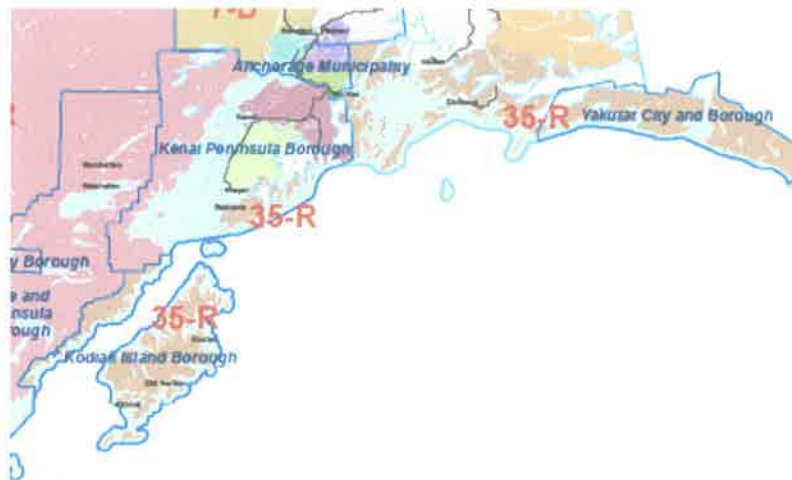
⁶⁵ *Hickel*, at 53.

new HD 32 less compact than the former HD 35.

HD 32 Final Plan (Snapshot)⁶⁶



HD 35 First Final Plan (6/13/11) (Snapshot)



The Board argues that the a more compact district would result in greater deviations. However, the argument expresses a consistent misunderstanding by the Board of the relationship between the obligation to have compact districts and the Board's desire to have low

⁶⁶ ARB 00017436

deviations. Lower deviations may not have a priority over the constitutional priority accorded to compactness.⁶⁷ As the Court held in *Hickel*, "The Board's failure to create a compact district is not justified by rigid adherence to mathematical equality."⁶⁸

III. UNNECESSARY SPLITTING IN THE MAT-SU AND KENAI DISTRICTS.

The Board argues that the multiple splits in Mat-Su and Kenai borough boundaries does not violate the equal protection requirements of the Alaska and federal constitution.⁶⁹ The fact that the Board split the Mat-Su borough borders twice when the borough had no surplus population is not contested. Equally, there is no question that the Kenai surplus population was small and could not otherwise "control" a district.

As previously noted, the Board findings offered five (5) alternatives to Mat-Su splits⁷⁰ and no alternatives to the Kenai splits.⁷¹ The Board does not contest that it was clearly possible to configure districts that retain the borough populations within the boundaries of their respective districts. Equally, the Board does not counter

⁶⁷ *Hickel*, at 53.

⁶⁸ *Id.*

⁶⁹ ARB Op to Riley Sum. Judg., at 39- 46

⁷⁰ Riley Memo re Sum. Jud., at 21- 28

⁷¹ *Id.*, at 28 et. seq.

the Riley et. al. assertion that such multiple splits infer "discriminatory intent."⁷² Equally the Board does not attempt to argue that such inference "may be negated by a demonstration that the challenged aspects of a plan resulted from legitimate non-discriminatory policies such as the Article VI, section 6 requirements of compactness, contiguity and socio-economic integration."⁷³ The Board does not dispute that the it adopted Guidelines that set an ordered priority in line with *Hickel* and *In re 2001 Redistricting Cases*.⁷⁴ And finally, the Board doesn't challenge the legal principle cited in those cases that compactness is the first priority among Art. VI, Sec. 6 standards and that compactness has a priority over the obligation of the Board to take a hard look at reducing deviations.⁷⁵ The Board has simply not presented any evidence to carry its burden of proof created by the inference of discrimination flowing from the multiple splits.

The Board incorrectly argues that the Mat-Su and Kenai borough voters are not discriminated against because they have proportional representation. This, of

⁷² *Memorandum Decision and Order Re: 2011 Proclamation Plan* (Feb. 1, 2012), at 107-108

⁷³ *Id.*, at 108 n 159

⁷⁴ *In re 2001 Redistricting Cases*, 44 P.3d 141, 143 n.2 (Alaska, 2002), quoting *Hickel v Southeast Conference*, 846 P.2d at, 62

⁷⁵ *Supra*.

course, ignores the holding in *Hickel*. In both the Mat-Su and Kenai splits, population within an organized borough is placed in a district with population from the unorganized borough. In striking down similar configurations in the 1990 redistricting cycle, the Court observed

District 6 merges Palmer with the Prince William Sound communities. Palmer is the governmental center of the Mat-Su Borough, an established agricultural area. In contrast, the Prince William Sound communities are oriented toward commercial fishing and maritime activities. The record does not establish any significant interaction or interconnectedness between these areas. Further, Palmer is part of an organized borough whereas Prince William Sound is not. Because of this factor, the interests of Palmer residents may be adverse to those of the residents of an unorganized borough on issues such as property taxes and state funding of programs such as education.⁷⁶

In discussing a second Mat-Su district in that plan, the Court noted,

District 28 also does not contain relatively socio-economically integrated areas. As above, the record simply does not establish significant social or economic interaction between the connected areas. In addition, District 28 combines a region of Mat-Su with an unorganized borough, and includes part of the primarily rural Denali Borough. District 28 also fails for its lack of compactness.⁷⁷

As with HD 9 in the final plan, the second district included the "outskirts" of Palmer,⁷⁸ thereby separating

⁷⁶ *Hickel v Southeast Conference*, 846 P.2d at, 52-53

⁷⁷ *Id.*, at 53

⁷⁸ *Id.*, at 52

Palmer from its "outskirts". The same is done in the Third Final Plan under review in this case.⁷⁹ The mish-mash of organized and unorganized borough populations is the same today as in *Hickel*, and to the extent that the splits in the Mat-Su had a "discriminatory effect" in *Hickel* the same can be said of the current plan under review by this Court. In reality, it is very difficult to determine which group --- or whether both groups --- are being discriminated against. What is clear, however, is that the mish-mash requires justification, and that the Board failed to meet its burden of proof in this regard.

The Board does argue that it split the Mat-Su and the Kenai borders at the request of Mat-Su elected officials. Of course, the split in Kenai was done as a "ripple" effect of the split in the Mat-Su, and there is no showing of support in the record for the Kenai officials. But as noted previously, local political support was not a factor in the Board's list of guidelines nor a recognized factor to justify anything in prior judicial precedence. At best, such local political support is an "extra-constitutional" standard; at worst it is evidence from which an inference may be made that

⁷⁹Palmer is located in HD 11 in the present plan. The "Palmer's outskirts" (i.e. part of Fishhook and Farm Loop) are located in HD 9. See Plt. Riley Memo Sum. Jud., Exhibit 4.

"non-local political interests" are being jeopardized.

IV. SENATE DEVIATIONS. The Board previously acknowledged that it has a duty to reduce deviations between Senate Districts citing *Kenai Peninsula Borough v State*.⁸⁰ However, the Board has changed its story about the facts. Previously, Mr. Brodie stated on the record, "Never, in my recollections, did we make changes to senate pairings for the purposes of reducing deviation."⁸¹ Additionally, the Board previously confirmed in its Motion for Summary Judgment that the Board never took a hard look at reducing deviations between Senate Districts in "Anchorage or elsewhere" in the plan.⁸²

In its opposition, the Board argues the misleading assertion that "Obviously, the Board took a "hard look" at Senate deviations insofar as it had created House districts with populations as close as practicable to an ideal district."⁸³

In essence, the Board argues that it did pretty good at achieving low deviations despite the fact that it

80 743 P.2d 1352, 1358 (Alaska, 1987) cited at ARB's Memo Sen. Deviations Sum. Jud., at 5 n.15. The Board's opposition does not exactly address this issue. See also, ARB Op to Riley Sum. Jud., at 46 et. seq.

81 ARB Op. Riley Sum. Jud., at 49, citing ARB 00017775, at 7:19-24

82 ARB's Memo Sen. Deviations Sum. Jud., at 9

83 ARB Op. Riley Sum. Jud., at 49,

didn't look at the issue in the process.⁸⁴ But once again, the Board misses the point that process is important. There is nothing in the record to which the Board may point that would show deviations achieved are the lowest possible deviations respecting districts that otherwise meet constitutional standards, because the Board didn't look at the issue. Additionally, in its opposition, the Board does not claim that it looked at the issue even up to this time.

At best, low Senate deviations in the plan, are the result of happenstance and/or coincidence,⁸⁵ which is clearly at odds with the the "reasoned decision-making process" this Court must demand of the Board. The bottom line is that well established law requires the Board to take a hard look at deviations between Senate districts, and the Board record and admissions clearly establish that it didn't. More to the point, the Riley et. al. settlement offer exposed on the open record that truth which otherwise might have been concealed: i.e. when clearly presented with an opportunity to consider Senate deviations in Fairbanks, the Board refused to consider

⁸⁴ARB Op. Riley Sum. Jud., at 49-50. As an aside, not even Annie Oakley attempted to shoot blindfolded.

⁸⁵According to the wisdom of Ian Fleming, "The 1st time is happenstance; 2nd time is coincidence; 3rd time is enemy action" from Goldfinger.

the matter.⁸⁶

V. TRUNCATION.

With one exception, the Board's Opposition on Truncation offers nothing new that is not addressed in the briefing on the issue in the Board's cross motion, and the Riley Plaintiffs incorporate by reference the opposition to the Board's cross motion.

The one exception is the Board's attempt to explain that Mr. Ruedrich was not 'educating' the Board on truncation," when they went off the record for the express purpose of being educated. Of course, the characterization that the Board members were being "educated" by Mr. Ruedrick is the characterization used by the Board members and Mr. Ruedrick on the record.⁸⁷

Without any citation to the record, nor supporting affidavit, the Board disputes its own record to suggest that Mr. Ruedrich was "explaining the lettering system he applied to the AFFER proposal."⁸⁸ This might be believable if the Board members came back on the record

⁸⁶ The Board criticizes the undersigned for falsely accusing the Board of doing that which the Board acknowledges it should have been doing: i.e. to look at Anchorage Senate deviations. ARB Op. Riley Sum. Jud., at 48. The undersigned apologizes for the mistake.

⁸⁷ Riley Memo Sum. Jud., at 42

⁸⁸ ARB Op. Riley Sum. Jud., at 49.

and either stated such a fact, or even if they addressed the lettering system. Neither is the case. Rather, after coming back on the record, Ms. McConnochie made the motion to truncate districts if they were less than 75% the same people, and noted that it would only affect SD B, (Sen. Coghill) who, under the new standard, would not be truncated.⁸⁹ Ms. McConnochie's motion had nothing to do with the lettering. Rather, the record strongly infers that Ms. McConnochie's new clarity related to the the **standard** she was proposing.

The concern is greatly heightened by the Board's confession that it routinely used daisy-chain meeting processes to discuss and decide substantive issues. Without a shred of evidence to the contrary, the Board is asking this court to believe an assertion that is clearly at odds with the Board's own record. The Court should simply disregard the Board's unwarranted invitation to ignore the man behind the curtain.

VI. Senate District B And UAF.

The Board's opposition ignores and does not address Alaska's Equal Protection clause as applied to Senate districts, which was described in *Kenai Peninsula*

⁸⁹ARB 000016914 (lines 11-19)

*Borough.*⁹⁰ The Court in that case adopted the neutral factors test as applied to Senate districts similar to that proposed by Justice Powell in his dissent in *Davis v Bandemer*.⁹¹ As the Court noted, selectively ignoring communities of interest and meandering boundaries shift the burden of proof to the Board to affirmatively demonstrate that its acts were aimed to effectuate proportional representation.⁹²

There is little question that the Board selectively ignored communities of interest: i.e. insisting on keeping Ester/Goldstream together, but fragmenting Badger/North Pole, UAF, and Fort Wainwright.⁹³ Equally, there is little question that HD 3 and 4 are only made contiguous by virtue of a narrow corridor in order to form SD B. Under Justice Powell's neutral factors test, the evidence is sufficient to shift the burden to the Board to affirmatively demonstrate that the pairing of the HD 3 and 4 was "aimed to effectuate proportional representation."⁹⁴

In opposition, the Board offers no such evidence,

90 *Kenai Peninsula Borough v State*, 743 P.2d, at 1369.

91 478 U.S. 109 (1986)

92 *Kenai Peninsula Borough v State*, 743 P.2d, at 1369

93 See Section III(c), *supra*.

94 *Kenai Peninsula Borough v State*, 743 P.2d, at 1369

either in the record nor new evidence that the Board did not consider.⁹⁵ Given the Board's failure in this regard, the Court should grant summary judgment to the Plaintiffs.

CONCLUSION.

The Riley Plaintiffs request entry of summary judgment on the issues stated above for the reasons set forth herein.

Date: September 26, 2013

GAZEWOOD & WEINER, PC
Attorneys for Riley et.al. Plaintiffs



Michael J. Walleri ABA No. 7906060
Jason A. Gazewood ABA No. 0211060

⁹⁵Oddly, offers extensive argument on every thing except whether the Board "aimed to effectuate proportional representation.

Report on Compactness of Alaska Proclamation Plan and Demonstration Plan of Attorney Michael Walleri

Prepared by Leonard Lawson

Scope of the Project:

I was hired by attorney Michael Walleri to create a demonstration plan and run compactness analysis on both the demonstration plan and the Proclamation Plan prepared by the Alaska Redistricting Board.

Professional Background and Experience

I have a Bachelor of Science in Mathematics with a Concentration in Physics. I led a redistricting project by the Alliance for Reproductive Justice that created and presented more than 6 complete redistricting maps to the Alaska Redistricting Board. I have attended the National Conference of State Legislatures Redistricting Seminar held over four days in Washington DC. I was trained on the Maptitude software by the software's developers Calliber Corporation during three days of training at their company headquarters in Newton, Massachusetts. I work as a database administrator for the past three years most recently for the Alaska Democratic Party. Redistricting software and geographic information systems on which it is based is solely merging of databases with the visual display of information on a map. These disciplines are closely related.

Compactness Analysis:

Using Maptitude for Redistricting version 6.0 I created the Demonstration Plan for Attorney Mike Walleri. Maptitude is a well-recognized expert in GIS software used by multiple Federal government agencies such as Housing and Urban Development and the US Census Bureau. I also uploaded the Proclamation Plan from the shapefiles obtained directly from the AK Redistricting Board. Using the Maptitude Software I conducted all eight compactness measures provided by the Caliper on both the Proclamation and Demonstration Plans and attached them as Attachments A and B.

 Oct. 17 2018
Leonard Lawson

Measures of Compactness Reports

Maptitude for Redistricting computes seven measures of compactness: Reock, Schwartzberg, Perimeter, Polsby-Popper, Length-Width, Population Polygon, Population Circle, and Ehrenburg.

Measures of Compactness

DISTRICT	Reock	Schwartzberg	Perimeter

The following references were used to develop these measures:

- Cox, E. P. A method of assigning numerical and percentage values to the degree of roundness of sand grains. *Journal of paleontology*, 1:179-183, 1927.
- Hofeller, T., and B. Grofman. Comparing the compactness of California congressional districts under three different plans: 1980, 1982 and 1984. In B. Grofmann, editor, *Toward Fair and Effective Representation*, pages 281-288, New York, 1990. Agathon.
- Niemi, R. G., B. Grofman, C. Carlucci, and T. Hofeller. Measuring compactness and the role of a compactness standard in a test for partisan and racial gerrymandering. *Journal of Politics*, 52(4):1155-1181, 1990.
- Polsby, D. D., and R. D. Popper. The third criterion: compactness as a procedural safeguard against partisan gerrymandering. *Yale Law and Policy Review*, 9:301-353, 1991.
- Reock, E. C., Jr. Measuring the compactness as a requirement of legislative apportionment. *Midwest Journal of Political Science*, 5:70-74, 1961.
- Schwartzberg, J. E. Reapportionment, gerrymanders, and the notion of compactness. *Minnesota Law Review*, 50:443-452, 1966.
- Young, H. P. Measuring the compactness of legislative districts. *Legislative Studies Quarterly*, 13(1):105-115, 1988.
- Ehrenburg 1892, see Frolov, Y. S., Measuring the shape of geographic phenomena: a history of the issue, *Soviet Geography* 16, 676-87, 1995.
- Iowa State Legislature Web Site:
[HTTP://WWW.LEGIS.STATE.IA.US/REDIST/JUNE2001REPORT.HTM](http://www.legis.state.ia.us/redist/june2001report.htm).

Reock Test

The Reock test is an area-based measure that compares each district to a circle, which is considered to be the most compact shape possible. For each district, the Reock test computes the ratio of the area of the district to the area of the minimum enclosing circle for the district. The measure is always between 0 and 1, with 1 being the most compact. The Reock test computes one number for each district and the minimum, maximum, mean and standard deviation for the plan.

See [Reock 1961] and [Young 1988].

Schwartzberg Test

The Schwartzberg test is a perimeter-based measure that compares a simplified version of each district to a circle, which is considered to be the most compact shape possible. This test requires the base layer that was used to create the districts. The base layer is used to simplify the district to exclude complicated coastlines.

For each district, the Schwartzberg test computes the ratio of the perimeter of the simplified version of the district to the perimeter of a circle with the same area as the original district. The district is simplified by only keeping those shape points where three or more areas in the base layer come together. Water features and a neighboring state also count as base layer areas. This measure is usually greater than or equal to 1, with 1 being the most compact. Unfortunately, the simplification procedure can result in a polygon that is substantially smaller than the original district, which can yield a ratio less than 1 (e.g., an island has a 0 ratio). The Schwartzberg test computes one number for each district and the minimum, maximum, mean and standard deviation for the plan.

See [Schwartzberg 1966] and [Young 1988].

Perimeter Test

The Perimeter test computes the sum of the perimeters of all the districts. The Perimeter test computes one number for the whole plan. If you are comparing several plans, the plan with the smallest total perimeter is the most compact.

See [Young 1988].

Polsby-Popper Test

The Polsby-Popper test computes the ratio of the district area to the area of a circle with the same perimeter: $4\pi\text{Area}/(\text{Perimeter}^2)$. The measure is always between 0 and 1, with 1 being the most compact. The Polsby-Popper test computes one number for each district and the minimum, maximum, mean and standard deviation for the plan.

See [Cox 1929], [Polsby and Popper 1991], and [Niemi, Grofman, Carlucci, and Hofeller 1990].

Length-Width Test

The length-width test computes the absolute difference between the width (east-west) and the height (north-south) of each district. The bounding box of a district is computed in longitude-latitude space, and the height and width of the box through the center point are compared. The total is divided by the number of districts to create the average length-width compactness. A lower number indicates better length-width compactness. This measure of compactness is designed for contiguous districts, since the bounding box encloses the entire district.

See [HTTP://WWW.LEGIS.STATE.IA.US/REDIST/JUNE2001REPORT.HTM](http://www.legis.state.ia.us/redist/june2001report.htm).

Population Polygon Test

The population polygon test computes the ratio of the district population to the approximate population of the convex hull of the district (minimum convex polygon which completely contains the district). The population of the convex hull is approximated by overlaying it with a base layer, such as Census Blocks. The measure is always between 0 and 1, with 1 being the most compact. The Population Polygon test computes one number for each district and the minimum, maximum, mean and standard deviation for the plan.

See [Hofeller and Grofman 1990] and [Niemi, Grofman, Carlucci, and Hofeller 1990].

Population Circle Test

The population circle test computes the ratio of the district population to the approximate population of the minimum enclosing circle of the district. The population of the circle is approximated by overlaying it with a base layer, such as Census Blocks. The measure is always between 0 and 1, with 1 being the most compact. The Population Circle test computes one number for each district and the minimum, maximum, mean and standard deviation for the plan.

See [Hofeller and Grofman 1990] and [Niemi, Grofman, Carlucci, and Hofeller 1990].

Ehrenburg Test

The Ehrenburg test computes the ratio of the largest inscribed circle divided by the area of the district. The measure is always between 0 and 1, with 1 being the most compact. The Ehrenburg test computes one number for each district and the minimum, maximum, mean and standard deviation for the plan.

See [Frolov 1975].

Plan Name: Test VRA strenghten
 Plan Type: House
 Date: 10/4/2011
 Time: 3:47:21PM
 Administrator: Leonard Lawson
 User: lawson

Measures of Compactness

10/4/2011

DISTRICT	Reock	Schwartzberg	Perimeter	Polsby-Popper	Length-Width	Population Polygon	Population Circle	Ehrenburg
1	0.51	1.62	739.58	0.26	4.95	0.87	0.84	0.44
2	0.26	2.34	1,461.21	0.13	36.22	0.26	0.25	0.38
3	0.50	1.29	281.13	0.37	16.13	0.59	0.58	0.45
4	0.53	1.64	671.48	0.26	5.88	0.75	0.48	0.40
5	0.32	2.19	1,601.91	0.15	10.36	0.25	0.04	0.15
6	0.53	1.46	51.61	0.29	1.65	0.92	0.83	0.44
7	0.32	1.58	335.62	0.23	42.66	0.40	0.18	0.32
8	0.38	1.40	267.39	0.30	2.29	0.28	0.18	0.45
9	0.66	1.23	12.78	0.64	0.35	0.96	0.72	0.49
10	0.33	2.08	57.70	0.19	3.66	0.45	0.34	0.34
11	0.46	1.35	806.42	0.46	45.62	0.06	0.05	0.41
12	0.41	1.37	154.91	0.42	2.24	0.70	0.05	0.50
13	0.56	1.53	31.14	0.38	0.50	0.88	0.74	0.52
14	0.45	1.31	28.28	0.54	4.33	0.89	0.69	0.38
15	0.35	1.56	141.31	0.34	20.47	0.35	0.19	0.52
16	0.56	1.28	149.37	0.55	12.40	0.43	0.18	0.49
17	0.38	1.53	14.89	0.30	0.94	0.92	0.81	0.32
18	0.41	1.30	50.75	0.55	0.88	0.50	0.22	0.50
19	0.53	1.47	8.93	0.44	0.00	0.83	0.62	0.46
20	0.35	1.69	8.93	0.33	1.22	0.82	0.54	0.25
21	0.55	1.35	7.98	0.53	0.73	0.91	0.75	0.46
22	0.50	1.47	11.68	0.45	1.45	0.88	0.48	0.53
23	0.35	1.62	16.18	0.37	1.60	0.70	0.36	0.39
24	0.58	1.40	10.92	0.49	0.79	0.85	0.58	0.47
25	0.35	1.43	11.04	0.48	1.69	0.91	0.42	0.33
26	0.45	1.31	49.09	0.57	5.74	0.62	0.28	0.57
27	0.42	1.39	10.71	0.49	1.70	0.85	0.62	0.41
28	0.44	1.24	26.63	0.62	1.90	0.88	0.30	0.61
29	0.47	1.23	9.68	0.65	0.13	0.94	0.50	0.58
30	0.56	1.37	19.16	0.47	0.36	0.80	0.42	0.59
31	0.38	1.45	19.45	0.40	2.84	0.73	0.41	0.41
32	0.16	2.19	1,578.76	0.13	244.61	0.63	0.04	0.22
33	0.34	1.44	71.89	0.43	16.35	0.93	0.70	0.29
34	0.50	1.83	562.01	0.18	15.84	0.43	0.12	0.44
35	0.44	1.45	791.31	0.36	11.52	0.34	0.33	0.42
36	0.16	2.02	2,893.38	0.11	391.20	0.72	0.36	0.22
37	0.00	3.34	5,897.20	0.02	629.73	0.13	0.03	0.09
38	0.23	2.47	2,924.54	0.08	61.51	0.58	0.28	0.23
39	0.20	2.27	4,158.20	0.13	354.90	0.04	0.03	0.22
40	0.29	1.56	2,343.65	0.31	255.53	0.99	0.13	0.39
Sum	N/A	N/A	28,288.84	N/A	N/A	N/A	N/A	N/A
Min	0.00	1.23	N/A	0.02	0.00	0.04	0.03	0.09
Max	0.66	3.34	N/A	0.65	629.73	0.99	0.84	0.61
Mean	0.40	1.63	N/A	0.36	55.32	0.65	0.39	0.40
Std. Dev.	0.14	0.43	N/A	0.17	132.92	0.28	0.25	0.12

Plan Name: Proclamation Plan
 Plan Type:
 Date: 10/5/2011
 Time: 11:13:27AM
 Administrator:

Measures of Compactness

10/5/2011

DISTRICT	Reock	Schwartzberg	Perimeter	Polsby-Popper	Length-Width	Population Polygon	Population Circle	Ehrenburg
1	0.45	1.82	46.12	0.26	1.51	0.53	0.42	0.39
2	0.19	2.03	76.51	0.18	1.64	0.75	0.70	0.30
3	0.32	1.65	338.42	0.22	38.75	0.22	0.19	0.34
4	0.46	1.39	19.48	0.46	0.16	0.92	0.57	0.64
5	0.39	1.53	236.03	0.28	12.10	0.32	0.20	0.58
6	0.37	1.82	1,333.77	0.20	98.95	0.46	0.13	0.37
7	0.46	1.49	642.29	0.37	30.45	0.31	0.11	0.57
8	0.46	1.74	44.27	0.30	0.70	0.76	0.59	0.45
9	0.28	1.74	34.39	0.30	5.81	0.80	0.48	0.35
10	0.46	1.44	151.71	0.38	0.34	0.84	0.06	0.54
11	0.51	1.40	184.69	0.40	5.91	0.40	0.18	0.41
12	0.45	1.58	66.34	0.35	3.30	0.46	0.41	0.32
13	0.40	1.53	32.01	0.39	1.70	0.49	0.29	0.48
14	0.37	1.46	8.97	0.46	1.76	0.85	0.41	0.29
15	0.47	1.58	11.91	0.39	0.07	0.81	0.51	0.36
16	0.39	1.58	12.09	0.36	1.61	0.80	0.40	0.48
17	0.42	1.45	8.48	0.45	0.95	0.90	0.64	0.39
18	0.46	1.38	16.38	0.45	1.38	0.83	0.43	0.34
19	0.47	1.35	51.24	0.53	5.59	0.42	0.35	0.57
20	0.27	1.67	20.66	0.31	3.29	0.72	0.46	0.27
21	0.42	1.23	27.23	0.59	2.47	0.85	0.33	0.58
22	0.43	1.41	12.57	0.49	1.39	0.85	0.34	0.49
23	0.52	1.32	13.26	0.56	1.52	0.91	0.50	0.41
24	0.46	1.36	15.19	0.52	1.75	0.85	0.44	0.40
25	0.39	1.36	13.69	0.46	0.90	0.98	0.58	0.28
26	0.52	1.24	89.72	0.52	8.50	0.75	0.50	0.56
27	0.35	1.49	148.30	0.38	16.26	0.73	0.34	0.31
28	0.51	1.53	455.67	0.34	9.81	0.46	0.12	0.25
29	0.38	1.60	81.45	0.36	10.61	0.88	0.75	0.27
30	0.47	1.37	336.58	0.41	24.11	0.57	0.37	0.46
31	0.43	1.41	217.30	0.25	12.91	0.86	0.80	0.38
32	0.18	2.71	1,096.12	0.09	74.44	0.45	0.36	0.17
33	0.56	1.48	680.42	0.34	2.82	0.81	0.78	0.40
34	0.20	2.44	1,527.33	0.12	99.76	0.26	0.25	0.22
35	0.08	3.13	2,843.66	0.06	302.89	0.42	0.04	0.09
36	0.29	2.12	3,460.58	0.12	38.51	0.27	0.06	0.44
37	0.00	2.51	3,858.25	0.02	673.80	0.04	0.02	0.13
38	0.22	1.86	2,138.45	0.20	296.01	0.21	0.03	0.20
39	0.20	2.31	4,301.76	0.12	354.90	0.04	0.03	0.19
40	0.35	1.46	2,164.37	0.36	241.29	0.99	0.14	0.40
Sum	N/A	N/A	26,817.65	N/A	N/A	N/A	N/A	N/A
Min	0.00	1.23	N/A	0.02	0.07	0.04	0.02	0.09
Max	0.56	3.13	N/A	0.59	673.80	0.99	0.80	0.64
Mean	0.37	1.67	N/A	0.33	59.77	0.62	0.36	0.38
Std. Dev.	0.13	0.42	N/A	0.14	134.49	0.27	0.22	0.13

IN THE SUPERIOR COURT FOR THE STATE OF ALASKA
FOURTH JUDICIAL DISTRICT AT FAIRBANKS

In Re 2011 Redistricting Cases,

Supreme Court No. S-14721

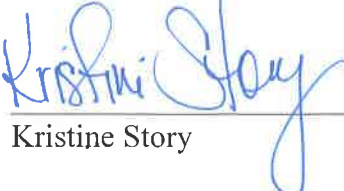
Case No. 4FA-11-02209 Civil

CERTIFICATE OF SERVICE

I, Kristine Story, Paralegal for Gazewood and Weiner, Attorneys at Law, hereby certify that a true and correct copy of Riley Et. Al. Plaintiff's Reply Memorandum in Support of Motion for Summary Judgment was emailed to the following on September 26th, 2013:

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