EXHIBIT F

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION

GEORGIA STATE CONFERENCE OF THE NAACP, et al.

Plaintiffs,

vs.

STATE OF GEORGIA, et al,

Defendants.

Case No. 1:21-CV-5338
ELB-SCG-SDG

STATE OF GEORGIA, et al.,

Plaintiffs,

vs.

BRAD RAFFENSPERGER,

Defendant.

Case No. 1:22-CV-00090
ELB-SCJ-SDG

Deposition of Moon Duchin, PhD
(Signature is reserved.)
February 27, 2023
1:07 p.m.

Remote via Zoom technology

Reported by: Carla J. Hopson, RPR, CCR-1816

Rights Act lawsuit has to begin with establishing three threshold conditions called the Gingles factors. In Gingles 1, which is the one I'm discussing here, involves the production of demonstration maps with additional majority minority districts.

Q And those additional majority minority districts are not necessarily majority black VAP majority -- or majority BVAP districts; is that correct?

A That's right. In general -- since you're asking about Gingles 1 in general, it depends on the group on whose behalf the challenge is launched.

Q And your maps in this case or in this report -- in some cases you've drawn more majority BVAP districts and in others you've drawn more coalition districts. Is that fair to say?

A That's correct. The -- the claims were sometimes looking for additional opportunity on behalf of black voters and sometimes on behalf of the coalition.

Q And you say the effective districts are shown to be highly likely to provide an opportunity for black and Latino voters to elect candidates of

an opinion about the particular motivation behind a plan? Is that correct?

A I think at a high level the narrative that I am offering in terms of my conclusions is that what I observe in the plans is consistent with a pursuit of partisan ends but one in which race was clearly used to achieve those ends.

Q And so your opinion is that the legislature pursued partisan ends but then used race in part to achieve those partisan ends?

A I try to be careful to be clear that I'm not reading minds. And so if you will allow me, I'll continue to use constructions like "I find evidence consistent with the following behavior," so that I'm not pretending to know more than I'm able to discern from the data that's available to me.

Q And you anticipated my next question which was, are you offering any opinions about the reasoning of Georgia legislators in the creation of the Congressional, State House and State Senate plans?

A Right. I would -- I would say that generally I think the kinds of findings that I describe here are evidence that might be persuasive in terms of discerning intent, but I certainly can

A Absolutely. Absolutely. So the process is to use regionally specific ACS estimates to poll the citizenship ratio for four different groups: Black, Hispanic, white and other. And so I used tract level data. Tracts are census units typically with about 8,000 people.

So I used tract-level data to get those local ratios of citizenship, and then I apply that to the voting age population of the block level.

Q At the very bottom of Page 7 you talk about how in Section 8, "I will confirm that my alternative plans satisfy the Gingles 1 standard for coalition districts using black and Hispanic CVAP as well as using VAP."

What is the Gingles 1 standard for coalition districts as you understand it.

A Well, here I'm referring to the threshold that was in my understanding confirmed in Bartlett vs. Strickland. That's the 50 percent plus one threshold. That's what I mean.

Q And it's your understanding that that 50 percent plus one standard for coalition district came from Bartlett?

A Was clarified in Bartlett.

Q And did you use that understanding as

you drew your alternative plans in constructing those districts?

A Oh, definitely. They're -- they're designed to meet a 50 percent plus one threshold.

Q And next -- I know we already referenced these tables, but on Page 8 you go into the demographic trends, the different places, and we talked about various numbers. But just in looking at the change in the black CVAP population in Table 2 from 2010 to 2019, that's a movement of almost exactly two points from 2010 to 2019; right?

A 2 percentage points, right.

Q And then Figure 2 has your racial dot density plot.

A Yes.

Q Please describe the difference in a Choropleth versus a racial dot density plot?

A Absolutely. And I think they can both be informative. If you use just one, sometimes you're not getting the whole picture. So as I said before, a Choropleth colors the units. But that's subject to what geographers called MAUP, M-A-U-P, which stands for the modifiable aerial unit problem, which suggests that you can radically change the impressions of the picture just by shifting the

Alt plan back on Page 11 compared to the enacted plan. It's correct that every district changes at least somewhat between the enacted plan and the Alt plan, right?

A I'm sorry. Would it okay if I opened my own local copy of this report because it's a little slow in the exhibit software.

Q That's totally fine with me if it's the same report in pdf --

A It's the same report.

Q -- and if it will make it go faster --

A Yeah, it will go faster. Thank you.

All right. So you said back to Page 11?

Q Back to Page 11.

A Yes. Oh, is it fair to say, I think you asked, that all the districts changed? I believe that's -- that seems to be true.

Q Okay. And looking at Congress Alt, you'd agree that it connects parts of south Fulton and Clayton Counties with Troup and Meriwether Counties and Harris County in rural Georgia; right?

A Which district are you asking about?

Q District 3.

A District 3. Yes, it does touch Fulton and it does reach down to rural Georgia. It's -- I

would say it's in -- close to the same part of the state it's geographically aligned with where District 3 is in the other maps.

Q Would you agree that there's more of urban population in the Congress Alt District 3 than in the enacted District 3?

A Yes, that seems quite likely.

Q And District 12 on the Alt plan connects Augusta over to Houston County and separates Macon-Bibb County from Houston County; is that right?

A I don't have the county names in front of me in this report, but I accept that.

Q Let's move next to the Senate plan. And you -- again, we talked a little bit about the lack of competitiveness on the plan, and that refers to kind of district performance, not overall number of seats for a political party; right?

A Correct. That's right.

Q And isn't a lack of competitiveness on a plan generally a sign of a partisan goal of the map drawer?

A Well, usually I think you'd say that it's a sign of wanting to create safe seats on both sides. So is that partisan? I think typically when

earlier.

Q So did you start with a blank map or did you start with the enacted plan and modify the enacted plan?

A For all of these, I don't start with a blank map except that -- well, to be clear, I'm dong everything on the level of clusters. I know we've said that but just repeating that. And so I don't start with a statewide blank slate.

I start with a region that's been carved out by a district in the enacted plan. So in that sense the enacted plan gets strong deference in all of my alternatives because each of those regions is picked out by a collection of districts enacted by the state.

Q And so you start with an area enacted by the state. Do you begin then with the majority minority districts that you're looking to draw and then draw the remaining districts around it?

A No, it's -- that's not -- I wouldn't -- I wouldn't agree to that.

Q Okay. So can you just give me an example if we -- let's say the SD East Black Belt. We have that as a region on Page 13. Is there a particular process or methodology you would follow

for how you would draw the districts in that particular region when you were looking at them?

A Sure. Should we discuss specifically the algorithmic exploration stage or the hand drawing following that?

Q I'm interested primarily in the hand drawing stage.

A Sure.

Q So how that process works.

A Sure. So I will -- at that point I will have seen a collection of maybe dozens of alternatives, and I'll examine those to try to find some that have properties that seems to handle the tradeoffs of redistricting in a way that seems favorable.

So just to be clear by what I mean by that, everyone who draws maps knows that you have to handle tradeoffs. You have -- to make your map better in one way you're necessarily sacrificing something else and we're trying to take account of many things, of county splits, of maybe opportunity to elect, if that's a priority for the map drawer, compactness, which can be scored in many ways and so on.

So when you see a district like that one

that wraps there that you identified in Alternative Effective 1 that's not going to have a great score in certain compactness methods, like Polsby-Pepper, but it can still have a very good score in other compactness methods like Reock.

And as a line drawer, you just face these trade-offs everywhere. And so you're trying to balance them and come up with something favorable across the board.

Q In terms of the process of doing that balancing, what types of data did you have displayed while you were working on drawing the different components in the hand-drawing phrase to be clear?

A Only the data that you see in the report. Those are the only things I considered. I didn't look at anything else besides the metrics that are discussed here, the -- my so-called effectiveness score, and demographics because the Gingles 1 assignment involves hitting a 50 percent plus one line.

Q Were all those data points displayed as you were drawing all of the effectiveness score, the racial data? Were all those displayed while you were drawing the maps?

A So unfortunately, because my drawing

span of some time.

And so I'm not sure how it intersperses with the map drawing, which also extended over quite a long time.

Q So it would be fair to say that those processes were running simultaneously, reviewing the -- well, not simultaneously, in parallel, reviewing the public comment and working on drawing the maps, right?

A I think that would be fair, yes.

Q And when you were looking at various metrics -- let's just use compactness as an example, did you ever reach a point where you drew a map, ran compactness reports or looked at scores and then go modify the plan to improve the compactness scores?

A Yes.

Q And the same for county splits. Did you reach a point where you had drawn a plan and then ran a county I split analysis of some sort and went back to unsplit some counties?

A Yes. And I'll mention that the modular method makes it particularly tricky to handle county splits well because it concedes to the design of the enacted plan certain choices of splits to make. That's because the modules are made, again, out of

be cognizant of that and pay attention not only to the number of split counties but also to the number of pieces into which they were split.

So that's an example of a way that I draw while keeping in mind some of the testimony that I read.

Q And just to avoid having to repeat those for each of the plan did you follow a similar process as we've described in terms of the metrics and the drawing and the modules for drawing the House plan well?

A Yes. The process was quite parallel for the House and the Senate.

Q And did it differ at all for the drawing of the Congressional plan from the process we've talked about?

A Well, only in that the Congressional plan wasn't modularized, wasn't -- wasn't regionalized.

Q Are there 1, 2 and 3 plans the order in which they were drawn, you drew Plan 1 first, then Plast 2, and then Plan 3, or is that just kind of the number you assigned them after they were complete?

A That's right. The numbers shouldn't be

remediable packing and cracking.

Q And so the primary focus really was looking for areas where you thought you could find remediable packing and cracking; right?

A Well, generally I would say that I was trying to create -- because this is for -- in the first instance my goal was to create Gingles demonstrative maps.

Of course I reused the clusters later for the purpose of effectiveness analysis or effectiveness alternatives, I should say.

And so to create Gingles districts, again, which require 50 percent plus 1, you need to have some minority population in order to achieve that.

Q And in the House section you indicate that there were 42 House districts that were unchanged, but then I didn't see a similar count for unchanged Senate districts, although I think we both can confirm visually there's really some that aren't changed; right?

A That's right. But the difference is that in the Senate clusters they cover the whole state. And so that means every single district could at least be potentially changed according to

Q And so not relying on the 50 percent plus 1 line as a predictor of electoral opportunity, you're not saying that's the state of the law today. You're just saying -- you're trying to distinguish where Bartlett is from that?

A Oh, I do think that in the state of the law today that these two concepts are distinct. The concept a majority district has a role in the law, but that's distinct from the concept of an opportunity district even in the law today.

MR. CANTER: And I'm going to object to the extent it was calling for a legal conclusion. Just be careful on that point.

THE WITNESS: Thank you. I think that's -- that's a good reminder. We're talking about my understanding that informs my expert work.

I certainly don't mean to be opining on anything that requires a legal conclusion.

Q (By Mr. Tyson) Now, have you drawn maps for jurisdictions to the used in elections?

A Yes.

Q And have any of those been statewide plans?

A Well, it -- here it depends on -- often

drawing maps that are ultimately enacted involves participation from many people. But I had a role in, for instance, the drawing of the Massachusetts state Senate districts in this cycle.

Q And in that role do you advise legislators or others who are drawing or working with you on those plans that maximizing electoral opportunity for minority-preferred candidates is a goal they should ascribe to?

A I've certainly never advised that as a goal.

Q And so ultimately in this report, I guess since we're getting into the section, it's criticizing Georgia for not drawing enough majority minority districts on its Congressional House and Senate plans. Is that fair?

A Oh, I wouldn't say so. Rather than criticizing Georgia for not doing enough, what I'm trying to do here is create a framework for measurement. And then, as I say in the section we've already reviewed, providing maps that demonstrate that it's possible to get more opportunity while still being very respectful to DPs.

But I don't think it amounts to

being unusually terse framework, that's in reference to the 15 or so that you've looked at in other states?

A Yes, what's what I meant. I meant that of the one that I reviewed, I think this may be the shortest I've seen.

Q And have you looked at Georgia criteria or principles of redistricting from prior redistricting cycles?

A No, I haven't.

Q So in looking at the various metrics -- we'll move to population balance. And I guess this is the first -- Table 7 is the first of several tables that are going to compare various metrics among the enacted plan and then various alternative plans. Is that right?

A That's right.

Q And so in looking at the enacted Senate district for the alternative 1, 2, and 3, you'd agree the deviation is higher -- the total deviation is higher on all the alternative plans than on the enacted plan; right?

A Yes, it is.

Q And that's also true for the House alternative plans? Higher deviation for each of the

alternative than for the enacted plan?
A Yes, that's correct.
Q And then looking at compactness, you'd agree that compactness is something you have to measure in relationship or comparison to something else. It's not an objective measurement. Is that generally correct?
A I think the term I would use rather than objective -- I mean, to me objective just means not influenced by personal discretion. So all of these would be objective in that sense. But I think the question is about whether it can sort of stand alone or whether it's best used comparatively.
I've definitely argued very frequently that compactness scores are best understood comparatively. Although I think some people persist in using them as though they can be read on their own.
Q And so you'd agree that there's not a Polsby-Popper score where a district is not compact, it's just more or less compact than something else; right?
A That's right. And furthermore, more or less compact by the likes of that one metric. So I kind of referenced this earlier when we were talking

about a C-shaped district. But Polsby-Popper and Reock, those are contour based scores that measure slightly different things.

And so would probably -- unless there was emphatic agreement among all of the metrics, I would avoid saying something is more compact than another full stop. And I would try to specific measured how.

Q And in looking at the compactness scores -- let's just take them kind of one at a time. So the alternative plan, I guess, on Polsby-Popper is slightly more compact on the Polsby-Popper score than the enacted plan. Am I saying that in the right formulation?

A That sounds good. Are we talking about the Congressional?

Q Yes, I'm starting with Congressional and Polsby-Pipper.

A Right. So the alternative plan is more compact by Polsby Popper than the enacted plan is on average.

Q In your experience is a difference in two hundredths of a point on Polsby-Popper a significant difference in the plans?

A I think they usually call that two

points, as in two percentage points rather than two hundredths.

Q Oh, two points. I'm sorry.

A I would try to resist making any blanket statements about, you know, how big of a difference is officially significant. I don't think that there are -- I think it really depends where you are and what you're measuring.

I've written about this at length. Polsby Pepper scores in particular can penalize you for following coastlines. They have all kinds of features that make it desirable to understand them in context and not try to say anything like 2 percentage points is an official big difference. I would resist that.

Q And then conversely, I guess, for the Reock on the Congressional plan, the alternative plan is more compact than the enacted plan on the Reock score as well; right?

A Right. So not conversely, but in -- it's not compact on both Polsby-Popper and Reock.

Q On both. Yes, I'm sorry. That's right I was going the other direction. Yes.

And so for all the differences between the various plans in Table 8 would you categorize

any of them as significant differences in compactness scores?

A That's not -- I'm not sure. I mean, it's possible that words like "significant" have crept in in individual places. But I would say generally if one plan is more compact than another on all three of these measures, Polsby-Popper, Reock and cut edges, then I'm comfortable saying that it's generally more compact.

And that's certainly the case for this CD Alt versus enacted CD. It's -- it's more compact on all three of these measures. And so I would say CD Alt is generally more compact than the enacted plan.

Q And you knew the compactness scores of the enacted plans when you were drawing the alternative plans for Congress, House and Senate; right?

A I knew them? I had certainly reviewed them, yes.

Q And did you have as one of your goals in drafting the alternative plans a compactness metric to hit?

A No, I didn't have a numerical goal.

Q And your redistricting program that you

three districts, that contributes one to county splits but it contributes three to county pieces.

Q Thank you. And in looking at the various comparisons on -- let's just -- let's start with just county splits or the number of times -- well, the number of counties that are split. We'll just call it that. That's the first column in Table 9; right?

A Yes.

Q And so on the -- looking at the Senate district, the comparison of the enacted to the alternative plan on Alt 1 and Alt 3 have the same or more county splits and Alt 2 has three fewer counties that are split; right?

A That's correct.

Q And on that House plan, the enacted House plan as compared to the Alt plans, Alt 1, 2 and 3 alternative plans have the same number or more county splits than the enacted plan for the House; right?

A That's right.

Q And you have a count of municipality splits. Do you know Georgia prioritizes avoiding splits of municipalities?

A Well, what I tried to do -- so I'm aware

Democratic districts, you might pick a higher threshold than 5 out of 8. And so if you did that, it could be higher or it could be lower. It's just a different -- and that's -- that was my point from earlier.

This really is not attempting to get a measure of Democratic performance. It's doing something different.

Q And so in looking then -- let's kind of look at the specific groupings we have. So we have the enacted plan has two majority BVAP districts and five majority BHBVAP [sic] districts, right? BHVAP districts. Sorry.

A Yes. Let's get that right. Okay. Sorry. So the enacted plan has two majority BVAP, five majority BHVAP and just four majority BHCVAP.

Q Okay. And so the differences from the enacted plan to the Alt plan for Congress with plus 2 BVAP, plus 1 BHVAP, and plus 2 BHCVAP and plus 1 effective, right?

A Correct.

Q And the Senate plan here. On just the majority BVAP column are either going to go plus 3 majority BVAP for Alt 1 plus one majority BVAP for Alt 2 and minus 6 majority BVAP for all three. Do I

have that right?
A That looks right.
Q And similarly for the House, only Alt 1 increases the number of majority BVAP districts and that's plus 1, and Alts 2 and 3 both reduce the number of majority BVAP districts over from the enacted plan, right?
A I agree.
Q Let's move next to out incumbency and core retention setup. So you reference the incumbent database that you were provided by counsel but U suspect that it's not current data given where we -- where they stand. Please explain generally what you're talking about in Section 6.5.
A Right. I was provided with incumbent addresses. I then geo-located them, and based on what I found I'm not sure that they're fully accurate or up to date for everyone.
One reason is that there is a requirement of living in the district for legislative districts, though not for Congressional and I wasn't finding that all the incumbents lived in the districts from which they were elected.
So that leads me to think there were some errors.

retention you'll find far higher retention numbers.

Q And so wrapping Section 6 -- one more question on this front. You are aware that on the Senate plan there are districts that would be collapsed in south Georgia and move to north Georgia as part of the process; right?

A I did read that in the transcript, the collapsed districts. And that's completely consistent with -- with what I inferred from my study of the map.

Q So wrapping up Section 6 of the report here, you've reported a variety of metrics, but we start at a point where you're offering opinions but you're still just reporting statistics about the various plans; right?

A Well, to some extent there are opinions here such as the opinion that relative to other states I find there to be low evidence of a priority on core retention. You could characterize that as an opinion.

And so along the way in the discussion of these, there's some implicit opinions that are articulated. But generally I agree with you that the point of this section is to report the metrics.

Q Let's move next to the Gingles

Demonstration Plans. So in reviewing -- I'll start with Congress, Section 7.1. And the alternative plan that you've drawn does not make district 6 a majority-minority district, it remains a majority white district; is that right?

A Yes, that's right. In my CD Alt plan District 6 is 57.1 percent white by VAP.

Q And District 3 is a district that now has become a majority black VAP and BHVAP district, right?

A That's correct.

Q Then moving to the Senate plans, you indicate in the second paragraph there on Page 25 under 7.2 that the increase in majority BVAP, BHVAP, BHCVAP districts is accomplished while maintaining other traditional principles. Do you see that?

A I do.

Q And what is the basis -- is the basis for you saying that the increase is accomplished while maintaining other traditional principles like compactness and splitting scores that are generally comparable to or better than those of the state's enacted plan that the metrics we looked at in Section 6 are largely similar?

A Similar or better, that's right.

Q And so in dealing with the incredibly complicated puzzle that we know redistricting and the tradeoffs that are involved, when you're creating the alternative Senate plans were you able to prioritize any of the principles over any others, or does each district involve a balancing of those principles as you drew?

A You're always balancing. And as I indicated earlier, when I found what I thought were materially different ways of handlings the tradeoffs, I offered two options rather than just one.

Q Let's look at some of those options, turning to Page 26. And this is the SD Atlanta region; is that right?

A Yes. Correct.

Q And so in this -- in this plan District 16 as it's drawn, it looks like it's the southernmost district -- we'll call it that just for easy reference on this -- includes parts of Clayton County with other more rural counties south of Atlanta, is that right?

A I'm not sure I could pick out Clayton confidently without a label, but I think if I have it right, then yes.

Q And Fayette County -- we'll make it a little easier. Fayette County is all dark blue on Alt 1?

A Okay.

Q That includes a part of south Fulton along with all of Fayette; right?

A Yes. That's what it looks like.

Q And so is there a particular methodology you used in deciding to put, for example, south Fulton with all of Fayette?

A That wouldn't have been, you know, a sort of explicit consideration. I looked to see if there were ways of drawing the maps that balanced the principles that we've discussed.

These should be understood, of course, as demonstration maps that show that it's possible to do several things at the same time. And that's the intent of presenting them here.

Q Okay. And so you weren't considering, for example, the rural nature of southern Fayette and the more urban nature of south Fulton as you were drawing the alternative plans, right?

A Generally as we discussed earlier, I had certain aspects of community testimony in mind because, as we discussed, I reviewed that testimony

at the same time that I was doing map drawing. But as a general matter, I think it's important to emphasize again that these are particular kinds of demonstrative plans that have a particular racial threshold that they in my understanding have to hit by law and that they're not the same as remedial plans which come at a later stage of the Voting Rights Act.

Q And so these are examples, they're not districts that the legislature should have necessarily created? It's more just to show a problem?

A I think the role of Gingles 1 demonstrative plans is to show that there's a problem and to show that the problem is remediable.

MR. CANTER: Bryan, we've been going --

Q In looking --

MR. CANTER: We've been going just about an hour, just if you're -- Moon, if you're fine, then we can keep going. I just wanted to --

THE WITNESS: Yeah, I -- I'd love to keep going for now.

Q (By Mr. Tyson) All right. So looking over at tables 12 and 13, this is where you're

comparing the enacted plans to the alternative plans, right?

A That's right.

Q And so in looking at Alt 1, for example, you have districts 34 at 72.2 percent on BVAP, right?

A Yes.

Q And in Alt 2, District 39 is at 86.5 percent on the BVAP number, is that right?

A That's right.

Q Do you consider either of those districts to be packed under your definition?

A Well, so the definition of packing is elevation of the -- that I gave before. So my -- my working definition for the purposes of this report is the elevation of minority population past what's necessary to achieve a certain goal.

And so here -- in particular, to achieve electoral opportunity. So here my claim isn't that I've tried to optimize demographics. In fact, as I think we all know in redistricting, there's a delicate balance we're trying to strike where you must be race conscious at least to hit the 50 percent plus 1 threshold.

But you try to be minimally race

conscious because it's -- it's best not to let -- you're required not to let race predominate over other concerns.

And so this area, we're looking at the Atlanta region, has a lot as we saw in the dot densities before. It's -- it's quite a segregated area. There are areas with very high concentration. And so if I'm only looking at race in order to meet that 50 percent threshold, then it is likely that I'll tend to see some districts with extremely high black voting age population.

So, again, if I'm not exclusively trying to bring that down but only trying to draw minimally racer conscious alternatives that meet the threshold requirement, then it's not surprising to see high concentration.

Q And just so I understand that last point, so your goal is to draw minimally race conscious districts that are above 50 percent, that essentially -- like, for example, District 39 on Alt 2 is leftover population after you created those other districts that were above that 50 percent threshold?

A No. Rather what I mean to say is that based on the size of the Senate district and the

regions which are very heavily black I found that I was creating some district with very high black percentage just as a matter of human geography but that even though that was happening it did not impede my ability to draw additional majority districts. So that the Gingles threshold standard is quite easily met in this part of the state.

Q And so then in your mind the 86.5 percent district on Alt 2 wouldn't be packed because the Gingles threshold can be met in districts around it?

A Well, the term packed is -- is not as we saw before a matter of bright lines. It's definitely true -- as I said, when I have two different demonstration plans it's often that I'm trying to illustrate a tradeoff.

And so here Alt 2 has fewer majority districts than Alt 1 does but still more than the state. And on the other hand, it's a bit more compact, maybe even substantially more compact depending on what you think counts as a substantial difference.

So you're seeing tradeoffs here. And I think it's the -- the stats that we see in Alt 1 where there are nine majority BVAP districts, ten

majority BHVAP and also ten by BHCVAP. What I've shown here is that that's readily accomplished while being highly mindful of other principles. Alt 2 shows that if you dial up certain other principles you can still even with a very heavy emphasis, say, on compactness, you can still achieve that while increasing the number of majority districts over the state.

Q Let's look next to Page 28 which is the SD Gwinnett area. And this one, unlike the prior set of maps, only has an Alt comparison, not an Alt 1 and Alt 2 comparison. Is Alt 2 any different in this area?

A There is no Alt 2. I'm sorry. Can you ask that a different way?

Q Certainly. So I just wanted to understand in the SD Atlanta region you provided enacted, Alt 1 and Alt 2. In the Gwinnett you only have enacted an Alt 2. And so my question is: Is Alt 2 in SD Gwinnett different than the enacted or different than Alt 1, or are you just selecting one to look at?

A Oh, I'm sorry. I don't mean to be non responsive. But there is no Alt 2, so I can't describe it's properties. But --

A That's definitely right. It reaches significantly further north south in the Alt 1 than it did in the enacted.

Q Turning over to Page 34 and Table 17 and 18, I wanted to ask you about Table 18. You said that Alt 2 dominates the enacted plan. And that's based on the county splits and number of cut edges only; is that right?

A So -- sorry if that's unfamiliar. So dominates is a technical term from optimization in which you say that one -- if you have multi-objective optimization, if you have several different metrics you're considering, to dominate is just to be better in all.

That's all it means. I know the connotations are sort of aggressive, but it's -- it's a technical term.

Q Great. Thank you. Thank you for that clarification. I definitely was thinking a more aggressive reading of that, not the technical reading.

So in looking at the Alt plan again, I noticed that on Alt 1 counted four districts that are greater than 80 percent on the Black VAP number, a district that's over 90 percent on Alt 2 in

District 57 on the Black VAP number.

Are these districts packed in your estimation?

A It depends whether you're using the word packed to kind of connote the intent to dilute the vote. And certainly if you mean packed that way, then they're not packed. Because there's no dilutive intent, I can assure you.

If, on the other hand, you mean the more restricted population concentration beyond what's needed to achieve certain goals, I would say that those are very high numbers but they reflect the -- what I found in the geography.

Now, of course, you can always attempt to unpack that to counteract the human geography by creating, for example, elongated districts. But I found that that was not necessary here in order to significantly improve on the number of majority districts overall.

So, again, just to summarize. That was a bit of a mouthful. What I'm saying is, yes, those numbers are very high. No one's claiming you need 90 percent black population to have opportunity. But, you know, the -- the tradeoff of compactness and county splitting and so on that would be

1 necessary to bring those down isn't needed here in
2 order to meet the Gingles standard.
3 Q If we keep working our way along through
4 the southwest region, and this is a region -- in
5 looking at this, this looks like it's a plus 2 on
6 all three of the majority and coalition categories;
7 is that right?
8 A Yes. So now we're in HD Southwest, and
9 I see plus 2 in all categories.
10 Q And one of the things on the Alt plan I
11 noticed is Albany is the -- kind of population
12 center area. It's connected all the way down to the
13 Florida border. Again, is there a particular reason
14 why you're putting Albany with a border county
15 with -- on the Florida border like that?
16 A I would just repeat the explanation from
17 earlier that says that these are intended to be
18 demonstrations of what's possible, not necessarily a
19 call for a particular configuration in -- you know,
20 in this remedy at the end of the day.
21 Q And going over to Table 19, the HD
22 Southwest Alt 1 also does split more counties than
23 the enacted plan, right?
24 A That's correct.
25 Q And I think I know the answer to this

account or is this really just focused on effectiveness?

A This -- this section shows a focus on effectiveness.

Q So you can't identify any particular geographic or community reasons to link that part of Columbus with this part of south Georgia?

A Well, no.

Q -- in the effectiveness?

A That's right. And once again, I'm not suggesting that some -- this particular configuration is in any way required. I'm showing what might happen if you were drawing with an eye to effectiveness and the TDPs.

Q I'm looking over to the Augusta area. It looks like from this that in the process of adding the effective districts there's not a single district that's below -- above 50 percent on either BVAP or BHVAP on this east Black Belt Alt 3 map, right?

A Right. That's -- that's quite notable here. So while no districts get to 50, four of the districts are nonetheless effective, labeled effective.

Q And looking over to SD Southeast gets us

Q We again have a collection of four districts as I counted them of 80 percent BVAP in the process of getting to the increase in effective districts. And again, that wasn't something that you looked at because you weren't looking at racial issues while drawing, right?

A I was not.

Q And in the HD Cobb area, we have a 93.1 percent BVAP district in Districts 58. And again, no particular reason for that configuration beyond that's what happened when you figured these other effective districts.

A Right. That would be the story throughout that you can see some very high numbers here as a function of the human geography that says especially black but also to a lesser extent Latino people live residentially in some parts of the state in area that are extremely heavily concentrated with minority residents.

It's possible to reduce those numbers. But if you're not looking at race, you might tend to see really high numbers like these.

Q And you also have one of the -- one of the changes I noted on this chart, too, is in District 43. There's a decrease in the number of

generals that are successfully for the minority preferred candidate from 8 to 5 in District 43. But still because it met the definition of effectiveness under your method you counted that as an effective district, right?

A That's absolutely right. And not a great indication that we're not sort of -- aiming for Democratic performance here but for opportunity under this constructed definition.

Q So looking at DeKalb on the next page, I guess the same answers in terms of high BVAP percentages and nothing difficult in this region versus any of the others; right?

A Identical answers.

Q And for particular configurations, again, like connecting areas of Milton with areas of Roswell or parts like that in north Fulton, that wasn't a consideration you were looking at in drawing these plans, right?

A Right. I mean, with the knowledge -- I'll will just sort of reiterate. With the knowledge that I gained throughout this process about areas where people were talking about shared community concerns, that probably informs all the map drawing in the back of my mind.

But because it's not visible on a map, those considerations aren't always going to be front of mind in the mapping process.

Q And so then for Gwinnett, for Southwest for East Black Belt, the process that you followed was the same for all of those regions, including fro Southeast region, right?

A Yes, quite the same.

Q That makes that part of the process a little bit shorter then. So in terms of Section 9 of the report, are you offering of any opinions in this section of the report or just presenting the plans that you drew in light of what you described at the beginning of the section?

A Well, there's -- there's really very minimal text at all in this section. So to the extent that I intend conclusions -- they're conclusions about possibility, right. So the existence of these demonstrative plans shows that certain things are possible. And that's all that I want -- wanted to conclude from that section.

Q Let's move into our racial gerrymandering section. And so your method of looking at racial gerrymander as I understand it in this section is through core retention or conversely

1 partisan considerations can be in play. My question
2 was just was raced used to achieve them or is there
3 evidence that racial considerations were also in
4 play.
5 Q And so -- but specifically in this
6 section of your report, you're not analyzing any
7 political data in comparison to racial data for
8 these various geographic changes; right?
9 A I think in this section itself you won't
10 see that. But the section is supported by several
11 appendix tables. And, for example -- let me just
12 flip ahead and find them.
13 So Section C supports the split of
14 subsection of 10, and there you will see political
15 data compared to demographic data.
16 Q So in terms of finding a complete
17 analysis in Section 10, you have to include all of
18 Appendix C to see the complete analysis of that. is
19 that fair to say?
20 A I guess the way I would phrase it is
21 that I think Section -- Appendix C can be helpful.
22 But I've tried in section -- in the body of Section
23 10 to present what I think is a collection of useful
24 facts and observations.
25 Q Let's start with District 6. And you

A That's right. It's the most overpopulated on this chart.

Q And 14 -- well, and District 11 as well was also overpopulated by more than 37,000 people, right?

A Okay.

Q And those are districts that all -- at least in part touch District 6, is that right?

A Let's see. What was the list again? 14, 11 -- I just want to make sure I'm --

Q And 7.

A Yes, that sounds right. I'm trying to -- I'll just flip back to my map.

14, yes. So that doesn't touch 6, right?

Q 14 does not touch 6. It touches 6, yes. There's -- I'm sorry. 14 is on your chart here, but it doesn't touch District 6, you're correct.

A Right. I mean, it does in my alternative map, but not in the enacted plan, the benchmark plan, or the Duncan-Kennedy plan.

Q And so you'd expect that there would be changes to all the districts. You're just pointing out -- when you're pointing out this closeness of District 6 to the ideal district size, that's not

1 looking at anything else in context, right?
2 A That's right. It's merely saying that
3 if -- that one could conclude from that merely that
4 if core retention were the top of mind
5 consideration, only very small changes would have to
6 be made. But of course we all fully recognize that
7 there are many other considerations in play.
8 Q And on District -- I'm sorry. On Page
9 68 you're discussing this -- back to Exhibit 1.
10 You're discussing the transfers that took place
11 here.
12 A Once again, what page are we on?
13 Q I'm sorry. Back on Exhibit 1, your main
14 report, Page 68.
15 A Yes. Okay. I'm there.
16 Q Okay. And so you note that there were
17 swaps or transfers of more urban, more black and
18 Hispanic neighborhood out of CD 6 while bringing in
19 whiter suburban areas; right?
20 A Correct.
21 Q And you say at the end of that
22 paragraph, "This transition looks to be plainly
23 dilutive of voting power."
24 What about the transition is plainly
25 dilutive of voting power?

But equally because nothing changes in a vacuum, if you change a district you change its neighbors. And I also considered whether any of those swaps improved the prospects in the neighboring districts, and they do not.

So taken together, that's what supports the conclusion that this transition looks to be plainly dilutive.

Q And how do you rule out that the transition could be plainly political in terms of the goals of the map drawers?

A I don't need to rule it out to conclude that it's dilutive, right? It could be both political and dilutive.

Q Moving next into the changes made in CD 14 into Cobb County.

A Yes.

Q And you say that -- I'm going to point here. In that -- in the next paragraph after what we were just looking at, you say Figure 31 makes it clear that the movement of these areas of Cobb into the district can't be justified in terms of compactness or respect for urban/rural communities of interest."

How does Figure 31 illustrate that to be

shifts.

Q And how did you go about doing the -- garnering the information about, for example, Senator, now Representative Au or Senator Islam?

A Let's see. So I think I -- one thing that I had encountered is a list of who -- I'm actually not sure how to pronounce it. Galeo or Galeo had -- had endorsed in the elections. So I got -- you know, I really used sort of every means at my disposal to try to figure out who were the candidates aligned with the grass roots organization representing black and Latino voters.

So the -- this endorsement is a matter of public record. Other than that, I mean, I'm sure I looked at PDM many times to try to figure out what I could about the reelection records. But I didn't use any other non-publicly available resources.

Q And do you consider racially imbalanced population transfers in and out of a district as evidence of racial predominance in the consideration of a district map?

A I would call it suggestive evidence, not conclusive evidence, but suggestive evidence.

Q Do you think a racially imbalanced population shift is suggestive of a racial goal of a

precincts you cannot claim to be doing do, I think -- as far as I'm aware, you cannot claim to be confidently doing so on the basis of election history.

Of course you can use the predictive analytics to try to guess who voted how. But in my understanding the primary tool that you have at your disposal when you split precincts is demographics. That's what's available to you when you split precincts.

And so I find that the state has split far, far more precincts than my alternative maps have. And again, we're talking about state precincts here, not the census VTDs.

And to me that is -- that is suggestive of race, not party, as a kind of explanation.

Q So beyond the precinct splits we just talked about and for purposes of this report, you don't have further analysis to discuss splits of a partisan nature having a racial impact that may be unintended, right?

A That's right. The strongest evidence is that of split precincts.

Q Well, let's move into the state House. I wanted to ask you about -- I think this gets into

could learn from that record.

Q And so the same question as to the Senate districts that we talked about. Are you saying that the districts listed in Table 40 on Page 71 were drawn primarily based on race to the detriment of traditional districting principles?

A Well, again, I -- I would probably stop short of using a word like "primarily," but I would say they were drawn in a quite racially-distinctive way.

And I think what I mean for you to -- for readers to draw from these figures is we can see they have more countries reversals than they used to have, they're less compact looking than they used to be.

And so I'm not seeing at least that level any possible TP justification, although certainly, as you say, there could be others that aren't on the record.

Q And did you review precinct shapes as part of your analysis of traditional districting principles for these districts?

A I definitely do take that into account where I can, yes.

Q And my question was specifically, did

mean that very sincerely. You can achieve things that look really conspicuous must by chance. But here I find that, you know, the indicia of racial sorting are quite strong. And so generally that's suggestive of the use of race at least as a proxy.

Q So are you offering the opinion in this report, looking at Page 72, that race predominated over other traditional districting principles in the splits in the Congressional map of Cobb, Fayette, Fulton, Douglas, Newton, Gwinnett, Muscogee and Bibb Counties?

A Well, I made a slightly more qualified determination here the way I wrote it, which is to say that I see patterns consistent with a packing and cracking strategy.

Q But you're not saying there was a packing and cracking strategy. You're just saying the data are consistent with that kind of strategy?

A Well, that's right. I -- I try not to overstate the kinds of conclusions that can be drawn from these kinds of methods.

Q In turning to the precinct split analysis, which is our next section, you reference the -- and so in looking at these -- and I saw you've given seven precincts as examples of split

A Well, let's see. CD 6 and 11. I don't -- let's see. They might be contained in the figures in Appendix C.

Let me take a quick look. But otherwise, from memory I wouldn't be able to say. I don't think those are in the figures. So I can't say from memory.

Q Okay. I didn't see them either, so that's -- that's --

A Okay. We agree.

Q And in Table 42 you use kind of the same language we just said. There's a showing of significant racial disparity consistent with an effort to diminish the electoral effectiveness of CD 6 for black voters.

You're not saying that was the effort. You're just saying the evidence is consistent with that kind of effort, right?

A That's right. I've made an effort to be disciplined about the language.

Q When you reviewed -- the next page over there's kind of a District CD 4 and 10 precinct split with the boundaries.

A Yes.

Q Did you look to see if there were other

geographic features, like highways or other areas along which those boundaries were split?

A That is something I generally do look for. I can't tell you with confidence, you know, in realtime whether I looked at that for these particular splits. But that is generally something I do consider.

Q Next you look at the state Senates. And we have similar -- a similar kind of county precinct sequence. And you being with the county splits. And you note there is significant racial disparities between the splits in Fulton, Gwinnett, DeKalb, Cobb, Bibb, Chatham, Douglas and Houston and Newton, Clarke, Hall, Muscogee, Fayette and Richmond Counties.

You're not saying that these -- you're saying, like the Congressional plan, that these are splits consistent with a racial goal, not that it was definitely a racial goal in those splits, right?

A Right. I would never try to claim that I can definitely conclude anything about goals.

Q And you also say that numerous counties were split into unnecessarily many pieces, again, in that district than necessary. You're just referring to that if it was done and there could have been a

reduction in precincts -- I mean in county splits?
A Right. Necessary refers to possibility. And so, for instance, some counties are so large that they're larger than Senate districts and so they must be split. Those are necessary splits.
And, you know, some counties are so large they must be split into at least a certain number of pieces. And my point here is that the actual number of pieces far exceeds that necessary count.
Q And then you reference that there were 13 state precincts split with a significant racial disparity; right?
A Yes.
Q And you didn't identify any other precincts that were split on the Senate plan with a significant racial disparity besides the 13, right?
A Right. And I think -- what I -- if I wrote this well, which I hope that I did, what I meant by significant is the same 20-point disparity that was referred to earlier in the paragraph, although I -- it would have been better if I had specified within the sentence.
Q And then for the state House plan you listed out 30 counties, and I won't read off all of

those. But I'm assuming the same opinion in terms of you find the racially sorting splits consistent with a racial goal, but you can't say for certain that it is a racial goal, right?

A That's right. And I'll note that here it returns to a theme I mentioned, you know, a few hours ago, which is that, as I wrote here, the large counties take the brunt of the splitting. So, you know, Fulton 22 pieces and Gwinnett 21 and so on.

And that's something that I gleaned from the public testimony was undesirable from a community's point of view.

Q And then you say the number of precinct splits was a striking number. Any special meaning for striking there, like dominate earlier?

A No, there's no technical meaning, just that I was struck by it.

Q Okay. And you identified only 47 precincts in the state House plan that are split with a heavy racial disparity across the division; right?

A That's right.

Q Then you conclude this section by saying racially distinctive precinct splits provide particularly strong evidence that race has