UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF ARKANSAS
CENTRAL DIVISION

THE CHRISTIAN MINISTERIAL ALLIANCE, et al., Plaintiffs, v. ASA HUTCHINSON, et al., Defendants.	Civil Case No. 4:19-cv-402-JM

PLAINTIFFS' REPLY MEMORANDUM OF LAW IN SUPPORT OF THEIR MOTION TO EXCLUDE THE EXPERT REPORT AND TESTIMONY OF DR. PETER A. MORRISON

October 21, 2021

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Defendants bear the burden of establishing that Dr. Peter A. Morrison's expert opinions are reliable and admissible. Fed. R. Evid. 702; *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 597 (1993). Instead of attempting to meet that burden, Defendants seek to circumvent it—first, by offering a laundry list of reasons as to *why* Dr. Morrison failed to proffer any methodologically sound analysis in his report (Defs. Br. 3-7); and then, by soliciting this Court to lower the bar to permit Dr. Morrison's deficient testimony simply because *Daubert* presents a "liberal admissibility standard." (Defs. Br. 2.) But the law in the Eighth Circuit is clear: "In exercising its gatekeeping function, the trial court must first make a preliminary assessment of whether the reasoning or methodology underlying the proposed expert testimony is scientifically valid . . . ." *In re Wholesale Grocery Prods. Antitrust Litig.*, 946 F.3d 995, 1000-01 (8th Cir. 2019) (citing *Synergetics, Inc. v. Hurst*, 477 F.3d 949, 955 (8th Cir. 2007)) (cleaned up). Dr. Morrison's report and testimony, which fail to offer *any* scientifically valid methodology to assess the findings of Mr. Bill Cooper and Dr. Baodong Liu, cannot satisfy this requirement and must be excluded.

Acknowledging these infirmities in Dr. Morrison's report and conceding that a supplemental report by Dr. Morrison would be improper under Rule 26 (Defs. Br. 7-9), Defendants now appear to suggest that Dr. Morrison should be permitted to testify *at trial* as to issues raised for the first time in his deposition (Defs. Br. 3). In effect, Defendants' response to Plaintiffs' objections to the late and incomplete disclosure of Dr. Morrison's expert opinion is that they need not produce a written report of all his opinions before he takes the stand. That cannot be right: to permit as much would give rise to the very prejudice Rule 26 was designed to safeguard against, and this Court should not permit the attempt.

ARGUMENT

I. DEFENDANTS' EFFORTS TO JUSTIFY DR. MORRISON'S FAILURE TO PROFFER ANY CONCLUSION AS TO MR. COOPER DO NOT WITHSTAND SCRUTINY

Defendants effectively concede that Dr. Morrison never offered any affirmative opinion in his report that any aspect of Mr. Cooper's analysis was unreliable, incomplete, or otherwise problematic. By Defendants' own admission, the *only* testimony that Dr. Morrison offered was that he could "not yet conclude with scientific certainty" that Mr. Cooper's analysis was correct—not because of any substantive issue inherent to Mr. Cooper's methodology, but because of "unresolved technical issues" and a putative lack of data. (*See* Defs. Br. 4.) At this juncture, Defendants have offered no reason why Dr. Morrison should be permitted to take the stand and testify as to Mr. Cooper's findings. *See Nave v. Indep. Sch. Dist. No. 20 of Leflore Cnty.*, No. 17-cv-096, 2018 WL 6445475, at *2 (E.D. Okla. 2018) (defendant expert's conclusion that she could not affirm plaintiff's assertion of retaliation was "not an expert opinion at all but rather a lack of an opinion").

Lacking any substantive opinion by Dr. Morrison, Defendants now suggest in their opposition brief that Dr. Morrison should be permitted to offer *new* testimony at trial regarding "differences between his methodology and Mr. Cooper's methodology," under the theory that such testimony was referenced in his deposition and would constitute a "reasonable elaboration and explanation" of his expert report. (Defs. Br. 3.) But Dr. Morrison never explained in his report "his methodology," and his own testimony forecloses characterizing his testimony as elaborating on it. Indeed, at deposition, he explained that such testimony *could not* have been included his report because he "didn't feel that [he] had . . . enough information to claim that [he] knew [he] had replicated [Mr. Cooper's] methodology." Deposition of Peter A. Morrison dated August 20, 2021 ("Morrison Dep.") 36:20-22, attached as Exhibit-1. And, notwithstanding

Plaintiffs' "extensive[]" questioning of Dr. Morrison during his deposition (Defs. Br. 3), Plaintiffs never received any description of his purported methodology or how it compared to Mr. Cooper's—written or otherwise—despite Plaintiffs' request for such materials. *See* Morrison Dep. 57:19-25 ("[W]e would just request that any additional opinions that Dr. Morrison intends to offer and that were not previously disclosed in his report or described in his report would be made in writing and disclosed to us as we think is required by Rule 26."). Having had no opportunity to explore the handful of opaque comments made by Dr. Morrison *for the first time* in his deposition,[1] Plaintiffs would be unduly blindsided by the introduction of such testimony at trial—the precise type of prejudice Rule 26 was designed to preclude. *See Bison Advisors LLC v. Kessler*, No. 14-cv-3121, 2016 WL 3525900, at *14 (D. Minn. Jan. 21, 2016) (Rule 26 prohibits "sandbag[ging] one's opponent with claims and issues which should have been included in the expert witness' initial report" (cleaned up)).

Defendants make various excuses to explain away the deficiencies in Dr. Morrison's report, and to justify their attempt to backfill his deficient opinion, but none of them qualify Dr. Morrison to testify in violation of *Daubert*.

First, Defendants contend that Dr. Morrison's failure to proffer an opinion as to Mr. Cooper's conclusions was due to Plaintiffs' late disclosure of expert data. (Defs. Br. 3-7.) But the data that Dr. Morrison claimed he needed to replicate Mr. Cooper's analysis were *publicly available*, and the sources of that publicly available data were clearly identified by Mr. Cooper in

[1] For example, Dr. Morrison indicated for the first time in his deposition that when he received Mr. Cooper's report, he did not immediately look at it himself—instead, he made undisclosed "inferences" as to the data before turning it over to a colleague to analyze. Morrison Dep. 46:6-23, 47:2-13. Dr. Morrison then testified that he and his colleague "went through a number of different reviews" of what his colleague found, none of which he clarified, and that there were "discrepancies" between his colleague's results and Mr. Cooper's, none of which he explained. *Id.* 47:13-18.

his report. *See* Revised Declaration of William S. Cooper dated June 15, 2021 ("Cooper Rep.) ¶ 43 n.16, attached as Exhibit-2. Even taking Defendants' claims at face value, any such delay could not have affected Dr. Morrison's ability to opine on the key issues. Moreover, as discussed in Plaintiffs' opening brief, federal courts have made clear that "the correct approach would have been to seek an extension of [the expert disclosure] deadline, not to disclose only some opinions, while, in effect, attempting to reserve the right to violate the Scheduling Order by disclosing more opinions later." (Pls. Br. at 5 (quoting *Wells v. Lamplight Farms, Inc.*, 303 F.R.D. 530, 537 (N.D. Iowa 2014).) Dr. Morrison never requested an extension of time to submit his expert report, and admitted in his deposition that he was not even in the process of analyzing any data that had been produced over two months earlier.

Indeed, Defendants had every opportunity to submit a timely and complete expert report from Dr. Morrison.[2] Beyond never requesting an extension, Defendants never asked for additional time to depose Mr. Cooper regarding his analysis. And when they received notice that Mr. Cooper would be supplementing his analysis, Defendants neither opposed supplementation, nor sought any extension on their summary judgment papers, despite Plaintiffs expressly offering to meet and confer on the issue. In light of the myriad opportunities that Defendants had—and elected not to take—to submit a complete report by Dr. Morrison and to respond to Mr. Cooper's

[2] Defendants also assert, without support, that Dr. Morrison is "accustomed to receiving an 'iterative proportional fit' file" from Mr. Cooper in other litigations, and that he needed this hypothetical "IPF file" from Mr. Cooper in order to complete his analysis. (Defs. Br. 6.) As Plaintiffs' opening brief makes clear, Plaintiffs have already produced all of Mr. Cooper's work product, and no such file exists. (Pls. Br. at 6.) Upon receipt of Defendants' opposition brief, Plaintiffs' counsel confirmed with Mr. Cooper that he did not prepare or rely on an "IPF file" in connection with his report in this case, and would be happy to furnish a declaration from Mr. Cooper so stating should the Court request it.

supplemental report, they cannot now argue that this supplemental disclosure should be a factor in evaluating the sufficiency of Dr. Morrison's expert opinion under *Daubert*.

Furthermore, Defendants have now taken the position that Dr. Morrison will not offer any supplemental report—contradicting Dr. Morrison's own stated intent in his deposition. (*Compare* Defs. Br. 7, *with* Morrison Dep. 15:14-20.) Defendants' position thus appears to be that, in light of Dr. Morrison's purported delay in obtaining expert data from Mr. Cooper (which Dr. Morrison has now had for at least four months), this Court should (i) absolve itself of any gatekeeping obligations under *Daubert*, (ii) excuse Dr. Morrison's failure to come to a conclusion, and (iii) permit Dr. Morrison to provide new and entirely undisclosed testimony at trial. That is plainly foreclosed by law.

Second, in the absence of a viable expert opinion, Defendants attempt to lower the bar by arguing that this Court should generally apply a "presumption against rejecting expert testimony." (Defs. Br. at 2.) But such a presumption—even as overstated by Defendants—does not override the clear duty of this Court to "discharge [its] gatekeeper duties under *Daubert*." *Nat'l Bank of Commerce v. Assoc. Milk Producers, Inc.*, 22 F. Supp. 2d 942, 982-83 (E.D. Ark. 1998). It remains the burden of the party proffering expert testimony to "establish the admissibility of [its expert] when that evidence is challenged in a *Daubert* proceeding." *Id.* at 983. As discussed *supra*, Defendants do not even attempt to identify any articulable criticism of Mr. Cooper in Dr. Morrison's expert report; instead, Defendants focus entirely on why he failed to offer any such opinion, and why they should be afforded another bite at the apple.

Third, in a complete non-sequitur, Defendants expend two pages arguing that *Mr. Cooper* should not be permitted to offer a supplemental report. (Defs. Br. 7-9.) Although they could have, Defendants have not moved to exclude the supplemental report of Mr. Cooper. And

even if they had, this question is entirely irrelevant to the subject of this motion: whether Dr. Morrison's report should be excluded.

Defendants' arguments as to why Mr. Cooper should not be permitted to supplement his expert report are in any event meritless. Defendants emphasize that Mr. Cooper's supplemental report offers "*entirely new* proposed maps" (Defs. Br. 8) (emphasis in original)—but those maps are merely the application of updated data to an existing disclosed methodology, which courts in this Circuit have consistently found permissible under Rule 26. *See, e.g.*, *Gomez v. Tyson Foods, Inc.*, No. 08-cv-21, 2013 WL 11310485, at *2 (D. Neb. Mar. 13, 2013) (supplemental calculations applying new numbers to "same methodology" was "in keeping with Fed. R. Civ. P. 26(e)"); *In re Genetically Modified Rice Litig.*, No. 06-md-1811, 2009 WL 3336086, at *1 (E.D. Mo. Oct. 6, 2009) (supplemental report applying "the same methodology and same types of data" from additional years permitted under Rule 26). And as discussed *supra*, Defendants reserved the right to depose Mr. Cooper on his supplemental report, but opted not to. That opportunity eliminates any claim of prejudice that Defendants might suggest and certainly should not be used as a backdoor for testimony involving a new *methodology* by Dr. Morrison at trial. *See, e.g.*, *Ribeiro v. Baby Trend, Inc.*, No. 12-cv-204, 2017 WL 1393088, at *4 (D. Neb. Apr. 17, 2017) ("The defendants were afforded an opportunity to depose the experts and can show no prejudice in any late disclosure.").

II. DEFENDANTS' SHIFTING CHARACTERIZATIONS OF DR. MORRISON'S TESTIMONY AS TO DR. LIU CANNOT JUSTIFY HIS FAILURE TO APPLY ANY RELIABLE METHODOLOGY TO EVALUATE DR. LIU'S FINDINGS

Defendants have likewise failed to carry their burden of showing that Dr. Morrison should be permitted to testify regarding Dr. Liu's findings.

As a threshold issue, Defendants' abandonment of Dr. Morrison's original characterizations in his report exemplifies the lack of any reliable methodology in Dr. Morrison's expert opinion. Dr. Morrison's main attack on Dr. Liu in his report was that Dr. Liu relied on a "convenience sample." Expert Declaration of Dr. Peter A. Morrison dated June 9, 2021 ("Morrison Rep.) ¶¶ 18-20, attached as Exhibit-3. He stated that the reason why Dr. Liu's data "fall[] far short" of an ideal dataset is because "Professor Liu appears to have based his conclusions upon incomplete 'convenience samples' of Arkansas precincts." *Id.* ¶ 18. Now, faced with Dr. Morrison's admission that he did not conduct ***any*** of the diligence necessary to determine whether Dr. Liu's sample was indeed a so-called "convenience sample" (*see* Pls. Br. 7-8), Defendants for the first time articulate another new position: the "convenience sample" analysis was actually a red herring, and Dr. Morrison's testimony was "more fundamental[ly]" about "holes in Dr. Liu's datasets." (Defs. Br. 10-11.)[3]

But Defendants' about-face once again contradicts Dr. Morrison's own deposition testimony. There, Dr. Morrison testified that he was not critiquing Dr. Liu's data selection, but instead suggested that his sole issue with Dr. Liu's report was that it did not come with caveats. *See* Morrison Dep. 115:24-116:1 ("Q. . . . You do not have any critique of Dr. Liu's selection of the data that he used, correct? A. Correct."). At this late stage, Plaintiffs and the Court should not be left to guess at whatever ultimate conclusion Dr. Morrison intends to proffer, or what changing characterization of Dr. Liu's opinion Dr. Morrison intends to adopt next. As courts

[3] It is worth noting that, in addition to the reasons discussed *infra* as to why this new characterization is problematic, Dr. Morrison himself rejected this attempted distinction. *See* Morrison Dep. 102:19-103:4 ("Q. . . . You criticize Dr. Liu for using a convenience sample in his RPV analysis, right? A. I referred to it as a convenience sample myself, yes. Q. And that's a separate criticism from it merely being incomplete, right? A. *I wouldn't say it's a separate criticism. . . . The two are the same*." (emphasis added)).

have held in analogous situations, this lack of clarity is fatal. *See, e.g.*, *In re Prempro Prods. Antitrust Litig.*, No. 03-cv-1507, 2012 WL 1303302, at *2 (E.D. Ark. Apr. 19, 2012) (expert's statement that "contradicted earlier testimony, without explanation" found unreliable under *Daubert*).

Even the most charitable formulation of Dr. Morrison's critique—*i.e.*, that Dr. Liu's dataset "undermines the scientific reliability of any statistical estimates that derive from such data" (Defs. Br. 10)—does not pass muster under *Daubert* and Rule 702. As Dr. Morrison himself acknowledges in his deposition, social scientists often work with datasets of varying levels of comprehensiveness, and the bare fact that a dataset is less comprehensive than another is not, by itself, a reason to reject the dataset *or* the conclusions that come from that dataset. *See* Morrison Dep. 123:3-123:11 ("Q. . . . [I]f Dr. Alford concludes that the methodology that Dr. Liu used to gather data and to analyze that data is aboveboard, [then] you would not have any quarrel with that conclusion? A. That is correct."). Instead, whether a dataset is "proper" ultimately depends on the methodology with which it is selected, and how it is used to generate conclusions—two aspects of Dr. Liu's report that Dr. Morrison was forced to admit he did not look into. *See id.* 117:15-118:10 (Dr. Morrison did not "scrutinize Dr. Liu's report when it came to his methodology for inquiring and processing [his] data").

Dr. Morrison's testimony therefore fails to proffer *any* methodology by which this Court could assess Dr. Liu's findings—a quintessential case for exclusion under *Daubert*. His reported conclusion only goes so far as to *describe* the data the Dr. Liu used, without providing any way of measuring whether that data was reliable, or whether the conclusions drawn from it could be reliable. He simply suggests that there *may* be a problem with Dr. Liu's data, and that the existence or extent of that problem is a matter for a different expert, Dr. Alford, to determine.

See Morrison Dep. 122:10-21 ("So I'm putting the information out there for all to look at, Dr. Alford included . . . . He may say well, it's not as big an issue as you think, Morrison, or he might say it's a bigger issue than you might have ever imagined, Morrison."). Not only is this unhelpful to the trier of fact, it is prejudicial: it suggests that there is a problem with Dr. Liu's analysis, without providing any actual basis to believe that one exists. Dr. Alford—the expert that Dr. Morrison admitted was the proper person to opine on this question—did not make any such criticism of Dr. Liu's data or conclusions.

For that reason, Defendants' attempt to analogize this case to *Smith v. BMW North America, Inc.*, 308 F.3d 913, 918-19 (8th Cir. 2002), is unavailing. In *Smith*, the Eighth Circuit considered whether a medical expert's explanation for the cause of an injury should be excluded, given the possibility that a different expert could offer another explanation based on "factors other than those used by [the medical expert]." *Id.* at 919. Here, by comparison, Dr. Morrison is not proffering a *different* methodology from Dr. Alford. Instead, he has steadfastly refused to proffer *any* methodology for this Court to determine whether such representativeness issues actually exist in Dr. Liu's data, and whether they would impact his resulting analysis. Such an approach has never been accepted by the Eighth Circuit, and this Court should decline to be the first to do so here.

CONCLUSION

For the foregoing reasons, Plaintiffs' Motion to Exclude the Expert Report and Testimony of Dr. Peter A. Morrison should be granted.

Dated: New York, New York
October 21, 2021

Respectfully submitted,

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Exhibit 1

IN THE UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF ARKANSAS
CENTRAL DIVISION

THE CHRISTIAN MINISTERIAL ALLIANCE, et al.,

Plaintiffs,

v. Case No. 4:19-cv-402-JM

ASA HUTCHINSON, et al.,

Defendants.

VIDEOTAPED ORAL DEPOSITION

OF

PETER MORRISON, Ph.D.

(Taken August 20, 2021, at 8:03 a.m.)

REPORTED BY: KRISTI GRAY

file" that was being released by the Census Bureau would be difficult to work with, so there was a lot of uncertainty. But now the data are out.

The access -- one's access to the data is no longer very much in doubt. It's just a matter of clearing the massive cue for deadlines that are pending and that's why I say when it becomes necessary to have that opinion finalized that's when I will be meeting that deadline, and I would certainly not consider putting it off until days before I testify. It would certainly be in the order of two weeks or so before I testified so there would be ample time for me to provide what I knew and finalize my opinion.

Q So you anticipate finalizing your opinion approximately two weeks before you'll be required to give testimony in this case?

A I would say at least two weeks. And if I'm instructed to do it earlier than that so that there is more time, I would do my best to oblige the client, my client in this case and the Court.

Q Sorry.

A And oblige -- you know, to meet whatever schedule is necessary, not only for my client but for the Court itself.

Q Did you receive any instructions from your counsel

A No. That's not the only condition. There remains the fact that I cannot replicate his 50.02 percent.

Q Setting aside whether you can replicate his 50.02 percent, you ran an analysis. That analysis produced numbers on your own. Did you take that analysis and would you have been able to reach a conclusion regarding whether or not Black voters in Arkansas are sufficiently numerous and geographically compact that two additional majority min- -- or two majority minority appellate districts could be drawn?

A I could not reach that conclusion with scientific certainty. The numbers that I got would not support that conclusion with scientific certainty. They were hovering right around either just slightly under or right at 50 percent and that leaves a substantial margin of uncertainty.

Q And why didn't you include the analysis and the conclusion that you just articulated to me in your original report?

A Because I didn't feel that I had -- I didn't feel that I had enough information to claim that I knew I had replicated his methodology. I didn't feel that I had the necessary basis for replicating what he did, and I wasn't sure that the various ways of aggregating Black eligible voters was -- would replicate the

differences between our two versions of those estimates.

Q In your work as an expert, whether in this case or in other cases, do you ever draw the maps yourself whether through the use of software or otherwise?

A I do not use a GIS program myself. I turn that over to my colleague who works with me, Thomas Bryan. And he is a former Census Bureau statistician who has worked with census data for years as a Census Bureau employee and subsequent to that for decades as a collaborator with me. And what I do is I review his preparation of the data for each district, as to say all of the official counts and estimates that he derives using the Census Bureau's methodology for performing an IPF analysis. He provides those data to me in tabular form so that I can review them and draw whatever conclusions I want and then I instruct him as to how I want to form districts or how I want to replicate a district that some other expert has formed so that I can have my own certified way of doing an estimate prepared for a district that either I formed or some other expert has formed, and I have tried to replicate the actual numbers for that district.

Q So when you received Mr. Cooper's report, did you give an instruction to Mr. Bryan with regard to the

data referenced area?

A Yes, I did. And I explained to him that the objective of the analyses that we were going to do together was to replicate Mr. Cooper's analyses using the definitions that Mr. Cooper provided. And Mr. Cooper's description of his categories of Black are somewhat ambiguous, and so there -- it was necessary to make some inferences because the Census Bureau's DOJ five-year file is a special tabulation which we demographers use because it is a file designed and intended to exactly match the definitions of the protected groups recognized under the Voting Rights Act, so that's what we did. And Thomas Bryan replicated the data and we went through a number of different reviews of what he found and there were discrepancies between the results that we got and the results that Mr. Cooper reported as best we can interpret them.

Q What work product did you receive from Mr. Bryan in order to do your work?

A I would have received a standard Excel spreadsheet and table in which he showed the percentages that he got for a definition of Black voting age citizens for a particular district that incorporated the boundaries that were shown by Mr. Cooper as the boundaries of a

conducted.

Q I understand. Any other opinions with regarding the content of section five of Mr. Cooper's report?

A Nothing that comes to mind, no.

Q So I'm going to move on, but -- give me just one moment.

MR. ORDWAY: So Jennifer, it's going to be plaintiffs' position that Mr. Morrison's opinions that were not included in his original report were not disclosed in a timely fashion and, therefore, should not be permitted to be introduced at trial. That said, if you have a contrary opinion, then I guess that we ask that you please send us authority supporting that position.

MS. MERRITT: Okay.

MR. ORDWAY: And regardless of whether supplementation of his report and his ability to give initial opinions is permissible, we would just request that any additional opinions that Dr. Morrison intends to offer and that were not previously disclosed in his report or described in his report would be made in writing and disclosed to us as we think is required by Rule 26.

voters in certain precincts are not being accounted for. We don't know whether these are heavily Black areas or areas in which Blacks are only a small proportion of the eligible voter population. We know nothing about which pieces of geography have been excluded and why, and so there is no way to judge the kinds of hidden biases that could enter into an analysis based upon a dataset that is so incomplete. That's my central criticism of the EI analyses that Dr. Liu has performed.

My more general criticism is I'm appalled that a purported expert would not have caught this kind of an incompleteness and would have proceeded to draw conclusions based on data that are so rife with incompleteness and it further leads me to wonder whether the data that he has for earlier years might be flawed in some other less obvious ways. That's my opinion.

Q Let's take that one piece at a time. You criticize Dr. Liu for using a convenience sample for his RPV analysis, right?

A I referred to it as a convenience sample myself, yes.

Q And that's a separate criticism from it merely being incomplete, right?

A I wouldn't say it's a separate criticism. It's an alternative way of thinking about the sample that alerts one to how convenience versus inconvenience might bias the data. The two are the same.

Q So, well, let's look at your report again. You write in Paragraph 19 -- if you could turn to Paragraph 19 of your report.

A All right. I've got it.

Q So fair to say you define convenience sample as one where the units that have been selected for inclusion in this sample are the easiest to access, right?

A Correct.

Q And that's still an accurate statement of your opinion?

A I stand by that statement, yes.

Q Is it your view that a convenience sample is never appropriate, that it always produces unreliable results?

A It is -- it is not necessarily inappropriate, but it has unknown limitations, and so without further evaluation or analysis to understand what kinds of hidden biases might have crept in, it is not ready for an expert to rely upon without addressing the limitations themselves. So it's not that a convenience

MS. MERRITT: Okay.

BY MR. ORDWAY:

Q Dr. Morrison, do I understand then that your critique has -- and I'm sorry if I'm asking you to repeat yourself, but do I understand that your critique of Dr. Liu has to do with the possible inferences that can be drawn from incomplete data from certain elections?

A That's a fair statement, yes.

Q So it's not as much -- it's not that you fault Dr. Liu for his selection criteria as much as his failure to caveat the inferences that he makes from that data?

MS. MERRITT: Object to form.

BY MR. ORDWAY:

Q You can answer.

A I think I understand what you're saying and it sounds to me like it's the same thing that I said I have -- the answer I gave before, which is, you know, I agree with that statement, but I'm not sure I understand exactly how you phrased it. If you want to try it one more time.

Q Sure. I'll try again. Simply that you -- I'll ask it in two parts. You do not have any critique of Dr. Liu's selection of the data that he used, correct?

A Correct.

Q The critique that you have of Dr. Liu is that he did not caveat the inferences that he made from that data in a matter you think was appropriate?

A Let me just rephrase it to what I think you're saying that I believe. What I do believe is that Dr. Liu did not insert the normally expected caveats that go with incomplete data to say these are the limitations of the data, these are the limitations of my conclusions, because of what I don't know about the data, we are stuck with the data we have. It's not -- it sometimes is the case that we don't have a perfect dataset, but the limitations here are grounds for exercising caution, either in the conclusions that I have drawn or in the weight that one places on my conclusions in those years where the data are substantially incomplete.

Part of it is a way -- my way of saying there are some years when I don't claim there's anything wrong with the data he used just for my, you know, preliminary analysis. Those years for those data, no problem, and they were the very early years, but the later ones where there were substantial limitations with the data, there should have been -- they should have been in your term caveated, if that's a verb, to

alert the reader that these are based on a sample that may not be representative and, therefore, may not accord with the assumptions necessary for an ecological inference analysis.

Q Assume for the moment that Dr. Liu had included the caveats that you just described in his report. Do you have an opinion as to whether or not his ultimate conclusions should be doubted?

A I -- my position is that I'm troubled by the unanswered -- the broader unanswered question of where Dr. Liu got his data, how he got his data, and whether he assured himself that they met the minimum quality standards that one ought to meet before rendering an opinion with any scientific certainty.

Q Dr. Morrison, didn't you testify just not too many minutes ago that you did not scrutinize Dr. Liu's report when it came to his methodology for inquiring and processing that data?

A I don't think -- I don't think what I'm saying contradicts that statement. I have not -- I have not approached Dr. Liu's report with the idea of evaluating how he analyzed the data he had. I'm simply saying that in my field of demography, we start with the data and we evaluate its quality so we know what the limitations are, and that's what I've done in this

case. And I have alerted my audience, including you, to the two red flags that I have encountered, one from Shelby Johnson, who alerted me to the possibility of mismeasured data, and, two, the obvious fact that there seemed to be many people who are not included in the sample -- or not included in the dataset that Dr. Liu used. One needs to pursue that a lot further to know what's going on, but those are red flags that need to be addressed and I'm not the one to do anything other than to sound the cautionary note.

Q Okay. So you -- I guess I'm trying to understand, it sounds like you have two opinions here. One is that there is a problem with the inferences that you can draw from certain data because it's incomplete, correct?

A Correct.

Q And then the other opinion, I thought I heard you say, and if this is not your opinion, please tell me, but I thought I heard you say that you had concerns over how Dr. Liu collected this data and used it for his analysis, which is separate from what the data can tell you, right?

A Correct. And let me sharpen exactly what I mean there. What I'm saying is I wonder -- I wonder whether Dr. Liu has exercised the minimum standards that a

A I have not had any direct discussion with Dr. Alford about what I found out about the limitations in Dr. Liu's data. My presumption is that Dr. Alford will take note of what I had to say in my report and the most important will take note of the latest findings that I came upon just based on the latest material that were turned over to me. It's a matter of -- it seems like it was weeks ago, but it was actually more like a month and a half ago.

So I'm putting the information out there for all to look at, Dr. Alford included, and I believe he is -- I know him to be the kind of person who would not just use the data that I gave him but would probably independently check it to make sure that it made sense, and I have every reason to believe that he will be aware of what I have found most recently about Dr. Liu's data. I don't presume to tell him what to do with those findings. He may say well, it's not as big an issue as you think, Morrison, or he might say it's a bigger issue than you might have ever imagined, Morrison. But I want -- it's part of the record. I think it matters and I put him in touch as well, "him" being Dr. Alford, with Shelby Johnson because I said you should talk to Shelby Johnson so you will know firsthand about the limitations of the data that any

political scientist will confront in doing any kind of racially-polarized voting analysis.

Q I think I just heard you say this, but again just for a clear record, if Dr. Alford concludes that the methodology that Dr. Liu used to gather data and to analyze that data is aboveboard that you would not have any quarrel with that conclusion?

A That is correct. I would -- I look to Dr. Alford to make the final definitive pronouncement on whether these data are or are not acceptable by his -- by "his," Dr. Alford's standards.

Q If I could turn your attention to your report on Paragraph 15.

A Tell me again which exhibit that is now.

Q So that's 98. And it's Paragraph 15 is on page 5.

A All right.

Q And you see where you write in the second sentence there, "There are grounds for qualifying or even doubting the validity of conclusions by plaintiffs' expert Professor Liu insofar as those conclusions are based on county or precinct level election returns on or around the following years 2010, 2011, 2012, and 2018"?

Did I read that right?

A Yes.

Exhibit 2

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF ARKANSAS
CENTRAL DIVISION

THE CHRISTIAN MINISTERIAL ALLIANCE, et al., Plaintiffs, v. ASA HUTCHINSON, et al., Defendants.	Civil Case No. 4:19-cv-402-JM

REVISED DECLARATION OF WILLIAM S. COOPER

WILLIAM S. COOPER, acting in accordance with 28 U.S.C. § 1746, Federal Rule of Civil Procedure 26(a) (2) (B), and Federal Rules of Evidence 702 and 703, does hereby declare and say:

I. INTRODUCTION

A. Redistricting Experience

1. My name is William S. Cooper. I have a B.A. in Economics from Davidson College. As a private consultant, I was retained as a demographic and redistricting expert for the Plaintiffs. I am compensated at a rate of $150 per hour, and my compensation is not contingent on the outcome of this litigation. I reserve the right to continue to supplement my reports in light of additional facts, testimony, and/or materials that may come to light.

2. I have qualified at trial as an expert witness on redistricting and demographics in federal courts in about 45 voting rights cases in 18 states. My testimony in these lawsuits almost always included a review of demographics and socioeconomic characteristics for the jurisdictions at issue.

3. Six of the 45 lawsuits resulted in changes to state legislative boundaries that were favorable to the Section 2 minority plaintiffs: In the 1990s—*Rural West Tennessee African-American Affairs v. McWherter*, Civ. A. No. 92–2407 (W.D. Tenn.); in the 2000s—*Old Person v. Cooney*, No. CV–S–96–04–GF–PMP (D.Mont.); and *Bone Shirt v. Hazeltine*, No. CIV.01–3032 (D.S.D); in the 2010s – *Alabama Legislative Black Caucus v. Alabama*, 2:12–CV–691 (M.D. Ala.) and *Thomas v. Bryant.* Approximately 30 of the 45 cases led to changes in local election district plans.

4. Since the release of the 2010 Census, I have developed nine state legislative plans (Alabama, Connecticut, Florida, Georgia, Kentucky, Mississippi, South Carolina, Texas, and Virginia) and about 150 local redistricting plans—primarily for organizations working to protect minority voting rights. In addition, I have prepared congressional plans for clients in nine states (Alabama, Florida, Georgia, Louisiana, Maryland, Ohio, Pennsylvania, South Carolina, and Virginia).

5. I have been retained as expert and consultant by both civil rights plaintiffs and government entities. Three plans that I developed for local government clients

during 2011—in Bolivar County, Miss., the City of Grenada, Miss., and Sussex County, Va.—were precleared under Section 5 of the Voting Rights Act by the U.S. Department of Justice.

6. In 2013, I served as a redistricting consultant for the Claiborne County, Miss. Board of Supervisors and the Tunica County, Miss. Board of Supervisors. In March 2014, I was retained by the City of Decatur, Ala. as a redistricting consultant in *Voketz v. City of Decatur*.

7. In August 2018, the City Council in Wenatchee, Washington adopted a hybrid election plan that I developed in consultation with the Change of Government Study Committee. The Wenatchee election plan is the first plan adopted under the Washington Voting Rights Acts of 2018. In the summer of 2019, I developed redistricting plans for the Grand County (Utah) Change of Form of Government Study Committee. And in May and June of 2020, I served as a consultant to the City of Quincy, Florida—the Defendant in a Section 2 lawsuit filed by two white voters (*Baroody v. City of Quincy*).

8. For additional historical information on my testimony as an expert witness, see **Appendix 1** attached to this report.

B. Purpose of Report

9. Plaintiffs in this case have asked me to determine whether the Black population in Arkansas is "sufficiently large and geographically compact"[1] to allow for: (1) two single-member majority-Black districts for the Arkansas Court of Appeals and (2) one single-member majority-Black district for the Arkansas Supreme Court, which currently elects seven justices at large.

10. In addition, Plaintiffs have asked me to review historical and current demographics (reported in the decennial Census and annual estimates published by the U.S. Census Bureau), as well as socioeconomic characteristics reported in the annual releases of the American Community Survey ("ACS") for African Americans and non-Hispanic whites.[2]

C. Expert Summary of Key Conclusions

11. Black people in Arkansas are sufficiently numerous and geographically compact to allow for:

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[1] *Thornburg v. Gingles*, 478 U.S. 30, 50 (1986).

[2] In this report, "Black" and "African American" are synonymous, as are "Latino" and "Hispanic," and "white" and "non-Hispanic white." Unless otherwise noted, beginning with the 2000 Census. "Black" refers to persons of all ages who are any part Black ("AP Black"), i.e., single-race Black or more than one race and some part Black. Prior to the 2000 Census, the AP Black count could not be derived from the PL-94-171 file used for redistricting.

The AP Black classification includes all persons who self-identified in the 2010 Census as single-race Black or some part Black, including Hispanic Black. It is my understanding that following the U.S. Supreme Court decision in *Georgia v. Ashcroft*, 539 U.S. 461 (2003), the "Any Part" definition is the appropriate Census classification to use in most Section 2 cases.

- **Two single-member majority-Black districts in a 12-district plan for the Court of Appeals**, based on population apportioned by either the 2010 decennial Census or the 2019 estimates published by the Census Bureau, **(pp. 18-27 *infra*)**, both of which support my finding;

- **One single-member majority-Black district in a 7-district plan for the Supreme Court**, based on population apportioned by either the 2010 decennial Census or the 2019 estimates published by the Census Bureau. **(pp. 28-33 *infra*)**, both of which support my finding.

12. When the current Court of Appeals Plan was adopted in 2003, **Black people in Arkansas were sufficiently numerous and geographically compact to allow for at least one single-member majority-Black district (Appendix 4) or one 2-member majority-Black district. (Appendix 4)**. The Court of Appeals plan as implemented is extremely imbalanced in terms of total population by district, with a current total deviation of 70.78% according to the Census Bureau's 2019 population estimates. **(p. 17 *infra*)**.

13. According to the 2010 Census, Arkansas has a total population of 2,915,918. Non-Hispanic whites ("NH whites") are a majority of the population at 74.54%; **single-race Black Arkansans comprise 15.43%, any-part Black Arkansans comprise 16.07%**, while Latinos comprise 6.38%. **Appendix 3** contains a demographic profile of Arkansas, according to the decennial Census and Census Bureau estimates, on which I base my opinions.

14. As reported in the 1-Year *2019 American Community Survey*, a demographic survey published by the U.S. Census Bureau in Arkansas **non-Hispanic**

whites significantly outpace Black Arkansans across most key indicators of socioeconomic well-being, including employment rates, household income, and homeownership. **(pp. 33-36 i*nfra*)**.

D. Organization of Report

15. In this report I have prepared illustrative plans for the Arkansas Court of Appeals and State Supreme Court. These plans adhere to one-person one-vote and the non-dilution of minority voting strength, as well as other traditional redistricting principles, including compactness, contiguity, and respect for communities of interest.

16. **Section II** examines the 6-district Court of Appeals plan in effect for elections from 1980 to 2003, and the current 7-district Court of Appeals plan in place since the 2004 elections.

17. **Section III** demonstrates that the Black population in Arkansas is sufficiently numerous and geographically compact to comprise a majority of the citizen voting-age population ("CVAP") in two districts of 12 for the Court of Appeals.

18. **Section IV** demonstrates that the Black population in Arkansas is sufficiently numerous and geographically compact to comprise a majority of the CVAP in one of seven districts for the Supreme Court.[3]

19. **Section V** provides data from the U.S. Census Bureau documenting that non-Hispanic white Arkansans outpace Black Arkansans across a broad range of socioeconomic indicators, as reported in the 1-Year *2019 American Community Survey*.

20. **Section VI** reiterates my conclusions.

21. **Appendix 2** describes the sources and methodology I employed in the preparation of this report. **Appendix 3** provides a contemporary demographic profile of Arkansas against a backdrop of regional population change since the 2000 Census. **Appendix 4** presents three hypothetical plans for the Court of Appeals that would have contained majority-Black districts based on the 2000 Census and 1990 Census.

II. COURT OF APPEALS PLANS: HISTORICAL (1979) AND CURRENT (2003)

22. The Court of Appeals was created in 1979 with six judges covering six districts. Under the 1979 Plan, the distribution of Black voters across district lines prevented the Black population from having the ability to elect their candidates of

[3] It is my understanding that "50% plus 1" constitutes a majority—*Bartlett v. Strickland*, 556 U.S. 1 (2009) and that Black CVAP is an appropriate metric to use for determining that majority—*Perez v. Abbott* (WD. Texas, March 1, 2017).

choice. That said, as I demonstrate in **Appendix 4**, a single-member majority-Black district (based on the 1990 Census) could have been drawn as early as 1997 when the number of judges on the Court of Appeals increased to 12.

23. The Court of Appeals was redistricted in 2003 to account for the expanded court consisting of 12 judges. Under the 2003 Plan, single-member "opportunity"[4] District 7 is not majority Black voting age ("BVAP") under either the 2000 Census or 2010 Census. However, as I demonstrate in **Appendix 4**, at the time of the 2003 redistricting, a two-member majority-BVAP district could have been drawn (based on the 2000 Census).

24. Below I review the demographics of the 1979 Plan and 2003 Plan in more detail.

A. 1979 Court of Appeals Plan – 1980 and 2000 Census

25. Following the creation of the Court of Appeals in 1979, district elections were first held for appellate judges in 1980 under the 1979 Plan depicted in **Figure 1**.[5] Six judges were elected by district—one in each district.

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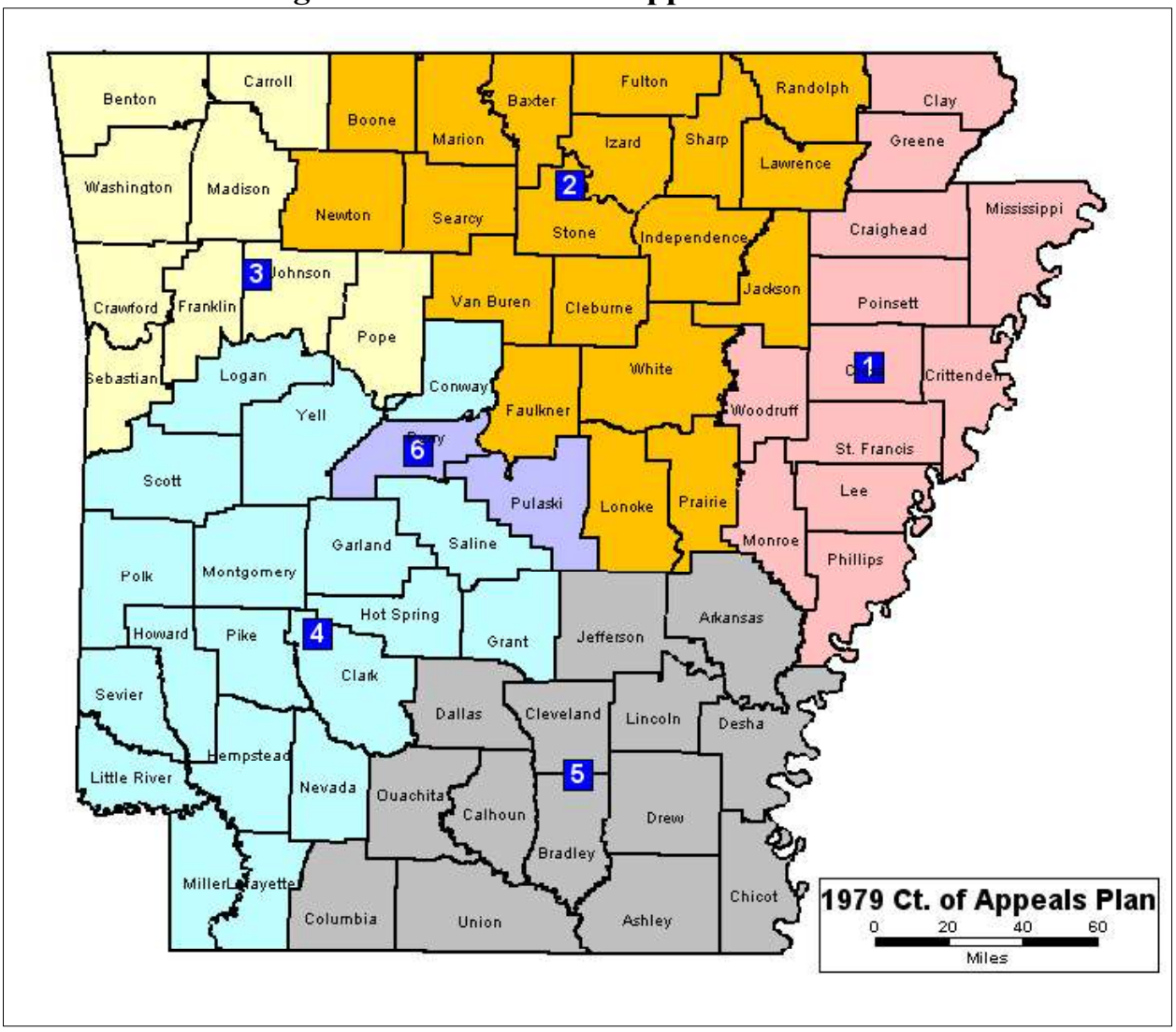
[4] A minority "opportunity" district is one that provides minority voters with the opportunity to elect a candidate of their choice.

[5] Source: *1980 Arkansas Elections* (district maps on p.107 and p. 109) https://www.sos.arkansas.gov/uploads/elections/1980%20Election%20Results.pdf

Figure 1: 1979 Court of Appeals Plan



26. The 1979 Plan was malapportioned from its inception. The deviation in the 1979 Plan is higher than the 10% deviation rule-of-thumb threshold applied in other non-judicial redistricting cases.[6] As shown in **Figure 2**, according to the 1980

[6] In redistricting, "deviation" refers to the difference between the populations of electoral districts. A deviation metric is calculated by summing the absolute value of the most underpopulated district deviation (a negative value representing the percentage by which a district population falls below the ideal size) plus the value of the most overpopulated district deviation (a

Census, the total deviation of the 1979 Plan was 16.97%. This resulted in a total population difference of 64,659 between the highest and lowest populated districts—District 4 and District 6, respectively—meaning that a judge elected to District 4 presided in a district comprised of an additional sixty thousand persons, compared to a judge elected to District 6.

Figure 2: 1979 Court of Appeals Plan – 1980 Census

District	# of Judges	1980 Population	Dev	% Dev.	% SR Black
1	1	377524	-3549	-0.93%	25.8%
2	1	384810	3737	0.98%	3.8%
3	1	409398	28325	7.43%	2.0%
4	1	412538	31465	8.26%	12.2%
5	1	354286	-26787	-7.03%	34.3%
6	1	347879	-33194	-8.71%	23.5%

Ideal size = 381,073
Total deviation =16.97%

positive value representing the percentage by which a district population is above the ideal size). The resulting summation is usually referred to as "total deviation."

For example, in a plan with six districts, if District C is the most populated district and over-populated by 2.2% from the ideal district size and District B is the least populated and under-populated by 3.1%, then the total deviation of the plan is 5.3%.

The ideal district size is determined by dividing total population by the number of elected representatives or judges. In Arkansas' 7-district hybrid appellate plan, the ideal district size for the five 2-member districts is two times the ideal district size of the two single-member districts.

Generally, a 10% total deviation is an appropriate maximum threshold. The 10% rule-of-thumb traditional redistricting principle of nearly equal district population is not currently required in judicial districting. However, a deviation of 70.78%, as found in the current Court of Appeals Plan, is an unusual population imbalance and would be characterized as extreme malapportionment in non-judicial election plans.

27. The 1979 Plan also fragmented or cracked[7] Black voters into Districts 1, 5, and 6, meaning that Black voters were compact enough so that they could have had greater voting strength with a different configuration of counties. Of the six districts, District 5 had the highest Black total population—34.3% single-race ("SR") Black (all ages), according to the 1980 Census.[8]

28. Regional population shifts within Arkansas during the 20 years between 1980 and 2000 exacerbated the imbalances in Court of Appeals districts. The population change was not uniform by race and ethnicity.

29. For example, in Pulaski County, between 1980 and 2000, the SR Black population increased by 33,502 (41%) while the NH white population fell by 25,503 (-10.1%). In neighboring Jefferson County, between 1980 and 2000, the NH white population fell by 12,515 (-23.6%), compared to a Black population gain of 4,960 (13.5%).

30. By 2000, as shown in **Figure 3**, the 1979 Plan had become severely malapportioned—with an extreme overall deviation of 64.19%, according to the 2000 Census. Five of the six districts had double-digit deviations. This resulted in a total population difference of 211,494 between the highest and lowest populated

[7] "Cracking" is a term used by redistricting practitioners to identify election districts that unnecessarily fragment or divide the minority population, resulting in an overall dilution of minority voting strength in the voting plan.

[8] Voting age by race and ethnicity was not reported in the 1980 PL-94 171 file.

districts—District 3 and District 5, respectively. Black voters also continued to be cracked among three districts, diluting their voting strength. Underpopulated District 5 had the highest Black voting age percentage at 34.52% AP BVAP.

Figure 3: 1979 Court of Appeals Plan – 2000 Census

Dist.	# of Judges	Pop.	Dev	% Dev	% SR Black	18+ Pop	% 18+ SR Black	% 18+ AP Black	% 18+ NH White
1	1	372422	-73145	-16.42%	26.24%	270655	22.60%	22.76%	83.81%
2	1	503256	57689	12.95%	3.79%	382867	3.44%	3.51%	93.74%
3	1	614060	168493	37.82%	2.22%	454657	2.00%	2.11%	89.02%
4	1	483923	38356	8.61%	10.45%	363802	9.51%	9.62%	83.77%
5	1	328056	-117511	-26.37%	37.36%	243163	34.31%	34.52%	69.94%
6	1	371683	-73884	-16.58%	31.04%	277887	27.54%	27.84%	72.80%

Ideal district size= 445,567
Total deviation = 64.19%

B. 2003 Court of Appeals Plan – 2000 and 2010 Censuses, 2019 Estimates

31. The Court of Appeals grew from six to nine appellate judges in 1996 and then to twelve in 1997.[9]

32. In 1999, an amendment was approved to realign the Court of Appeals districts in order to account for the population changes in Arkansas since 1980.[10] Viewed from the state level, there was modest total population growth (16.9%) over the 1980 to 2000 period. The Black and NH white population grew in tandem (12%

[9] https://www.arcourts.gov/courts/court-of-appeals

[10] https://www.arcourts.gov/courts/court-of-appeals

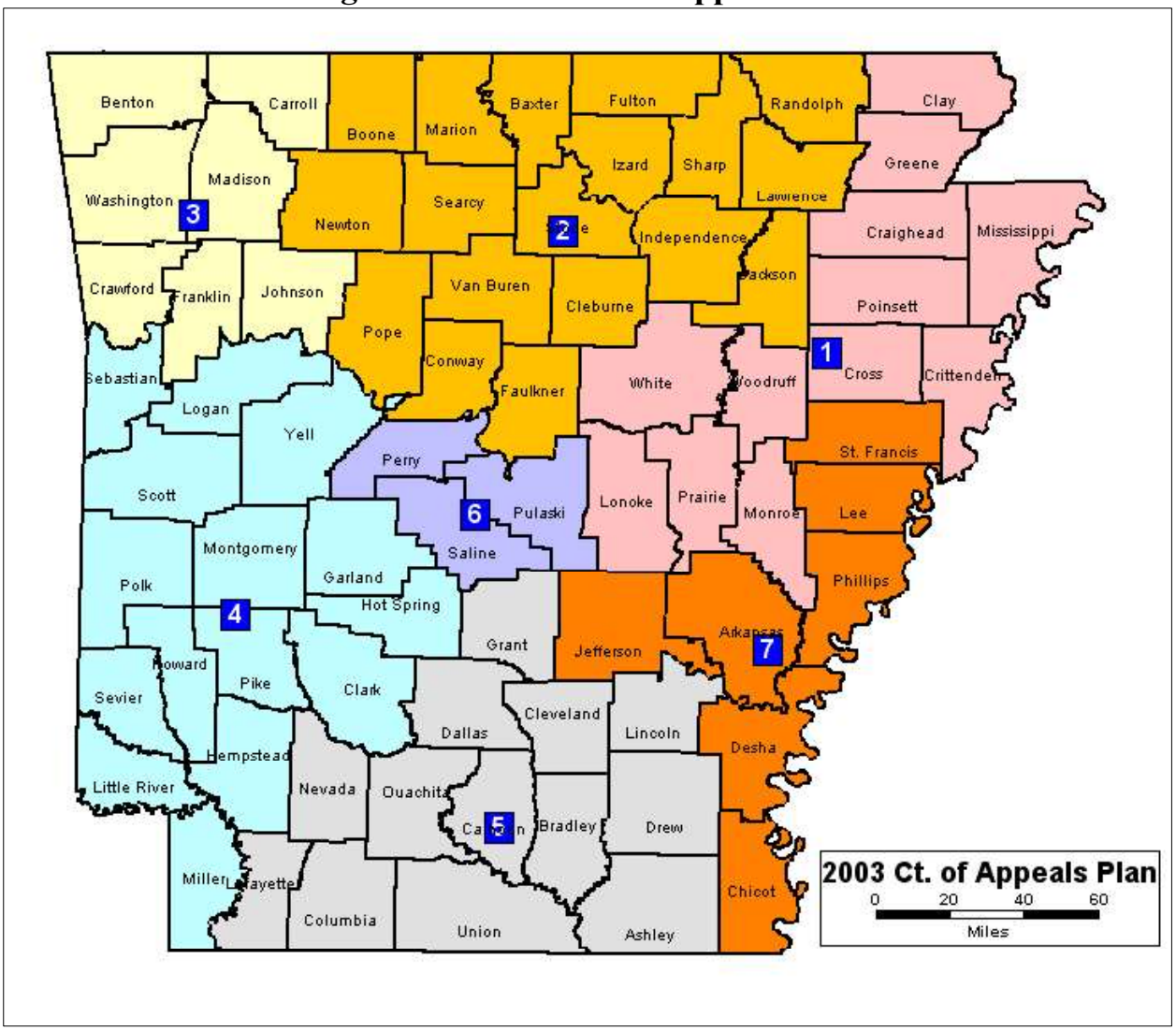
and 11.7%, respectively), while the Latino population jumped significantly from a very small population base, growing by 385.2%.

33. In recognition of regional population shifts, Act 1812 of the 2003 Arkansas Legislature reapportioned the Court of Appeals into seven electoral districts, beginning with the 2004 elections.[11]

34. The map in **Figure 4** depicts the 2003 Court of Appeals Plan ("2003 Plan"), which remains in effect to this day. The plan changed from six districts to seven districts. The 2003 Plan features two single-member districts (District 5 and District 7), with each of the other five districts electing two judges.

[11] https://www.arcourts.gov/courts/court-of-appeals

Figure 4: 2003 Court of Appeals Plan



35. **Figure 5** provides the population data for each district created in the 2003 Plan. This plan, at the time of its creation, had a total deviation of 12.22%, according to the 2000 Census. Single-member District 7 was 48.58% SR Black, 44.14% SR BVAP, and 44.37% AP BVAP.

Figure 5: 2003 Court of Appeals Plan – 2000 Census

Dist.	# of Judges	Pop.	Dev	% Dev	% SR Black	18+ Pop	% 18+ SR Black	% 18+ AP Black	% 18+ NH White
1	2	433600	-11967	-2.69%	15.60%	317968	13.31%	13.43%	83.81%
2	2	448529	2962	0.66%	3.58%	342919	3.25%	3.32%	93.74%
3	2	444520	-1047	-0.23%	1.15%	328954	1.08%	1.17%	89.02%
4	2	460151	14584	3.27%	10.11%	345489	9.12%	9.26%	83.77%
5	1	228549	5765.5	2.59%	29.69%	170320	27.41%	27.60%	69.94%
6	2	455212	9645	2.16%	25.75%	340140	22.87%	23.11%	72.80%
7	1	202839	-19944.5	-8.95%	48.58%	147241	44.14%	44.37%	52.80%

Ideal district size = 445,567 (2-judges), 222,784 (1-judge)
Total deviation = 12.22%

36. The 2003 Plan was an improvement over the 1979 plan because it substantially reduced the malapportionment from more than 60% to approximately 12% and created a Black "opportunity" district. According to the 2000 Census, single-member District 7 had an AP BVAP of 44.37%—about 10 percentage points higher than the BVAP percentage in District 5 under the 1979 Plan.

37. Still, it is clear based on the geographic distribution of the Black population under the 2000 Census, that the 2003 Plan continued to crack the Black population—ignoring the significant Black population in Little Rock and rural counties to the south. Indeed, as revealed in **Appendix 4**, a 2-member majority-Black district could have been drawn in 2003.

38. As shown in **Figure 6**, at the start of the 2010s, the 2003 Plan had a total deviation of 43.16%. District 7 was 52.44% AP Black (all ages), but remained below the voting-age majority threshold with an AP BVAP of 49.01% and a single-race

non-Hispanic citizen BVAP ("NH BCVAP") of 49.16%.[12] **Exhibit A** reports detailed population statistics for the 2003 Plan, according to the 2010 Census, as well as CVAP estimates from the coincident 2008 – 2012 ACS.[13]

Figure 6: 2003 Court of Appeals Plan – 2010 Census, 2008-12 ACS CVAP

Dist.	# of Judges	Pop.	Dev	% Dev	% AP Black	18+ Pop	% 18+ AP Black	% 18+ NH White	%NH BCVAP	% NH WCVAP
1	2	464007	-21979	-4.52%	16.63%	344666	14.44%	81.50%	14.52%	82.58%
2	2	496750	10764	2.21%	4.54%	386254	3.93%	91.24%	3.91%	92.43%
3	2	573180	87194	17.94%	2.25%	422754	1.84%	82.15%	1.76%	88.71%
4	2	484986	-1000	-0.21%	10.91%	368707	9.77%	80.37%	9.96%	83.78%
5	1	214983	-28010	-11.53%	29.93%	164680	28.35%	68.00%	28.69%	68.94%
6	2	500311	14325	2.95%	28.69%	379585	25.87%	66.99%	26.28%	68.95%
7	1	181701	-61292	-25.22%	52.44%	137797	49.01%	47.68%	49.16%	48.22%

Ideal district size 485,986 = (2 judges), 242,993 (1 judge)
Total deviation = 43.16%

39. Since 2010, the Black population percentage has increased in underpopulated District 7, which is estimated to be majority-Black (all ages) in 2019 at 53.43%.[14] And the 2015-2019 ACS indicates that District 7 has also become

[12] Percent CVAP by race and ethnicity in **Figure 6** is based on the 5-Year 2008-2012 Special Tabulation of the American Community Survey. The midpoint of the 2008-2012 survey period is July 1, 2010, roughly coincident with the April 1, 2010 decennial Census. The ACS Special Tabulation does not provide an "Any Part" estimate, so the SR NH Black CVAP slightly understates AP Black CVAP.

[13] The 2015-2019 ACS is the most current 5-year Special Tabulation survey available, with a survey midpoint of July 1, 2017. The 2016-2020 ACS is scheduled for release in February 2022.

[14] The Census Bureau Estimates Program does not publish sub-state annual estimates of the voting age population.

majority-Black citizen voting age (50.87% NH BCVAP)—up from 49.16% at the start of the decade.

40. As shown in **Figure 7**, the 2003 Plan has become even more malapportioned since 2010, with a total deviation of 70.78%, according to 2019 Census Bureau estimates.[15]

Figure 7: 2003 Plan – 2019 Estimates, 2015-19 ACS CVAP

Dist.	# of Judges	2019 Pop.	Dev	% Dev	% AP Black	%NH BCVAP	% NH WCVAP
1	2	471906	-31061	-6.18%	17.77%	14.27%	80.88%
2	2	509043	6076	1.21%	5.73%	4.26%	90.84%
3	2	670834	167867	33.38%	3.33%	2.16%	85.31%
4	2	483317	-19650	-3.91%	11.86%	10.51%	81.12%
5	1	200479	-51005	20.28%	29.60%	29.05%	67.83%
6	2	524803	21836	4.34%	31.41%	28.48%	65.90%
7	1	157422	-94062	37.40%	53.43%	50.87%	45.95%

Ideal district size = 502,967 (2 judges), 251,484 (1 judge)
Total deviation = 70.78%

41. Just 16.6% of the 2019 total Black population in Arkansas resides in District 7. Put differently, about four of five Black voters statewide are submerged in overwhelmingly NH white districts, with most of those Black voters living in counties that are adjacent to or near current District 7. As demonstrated **in Section III** below, there is sufficient Black population in neighboring counties to create a second majority-Black district for the Court of Appeals.

[15] https://www.census.gov/newsroom/press-kits/2020/population-estimates-detailed.html

III. GINGLES 1 ILLUSTRATIVE PLANS: APPELLATE COURTS

42. The Court of Appeals has not been redistricted since the 2003 Plan. This section presents two illustrative plan configurations for the Court of Appeals. Both illustrative plans comply with one-person one-vote and non-dilution of minority voting strength, as well as other traditional redistricting principles, including compactness, contiguity, and respect for communities of interest.

43. Specifically, I demonstrate that based on either the 2010 Census or 2019 Census Bureau estimates,[16] a 12-district Appellate Court plan can be drawn with two majority-Black districts

44. The illustrative plans presented below meet the first *Gingles* precondition, i.e., the Black population is sufficiently numerous and geographically compact to allow for the creation of at least one single-member majority Black district.

45. The illustrative plans also demonstrate that there are viable remedies for the Court of Appeals in this Section 2 lawsuit. Alternative county configurations beyond those presented in the Plaintiffs' illustrative plans are possible.

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16 The 2020 Census PL94-171 redistricting file has been delayed by several months due to the pandemic. Accordingly, in the absence of 2020 Census data, I rely on 2010 decennial Census or the 2019 estimates published by the Census Bureau. Further, as explained in **Appendix 2,** for counties that are split between two districts, 2019 county-level estimates are disaggregated to the 2010 census block level. The Census Bureau Estimates Program does not publish county-level or block-level voting age population estimates.

46. The illustrative plans are drawn to follow, to the extent possible, county boundaries. Where counties are split to ensure districts are equally apportioned, I have used whole 2010 Census VTDs[17] as sub-county components to determine boundary lines.

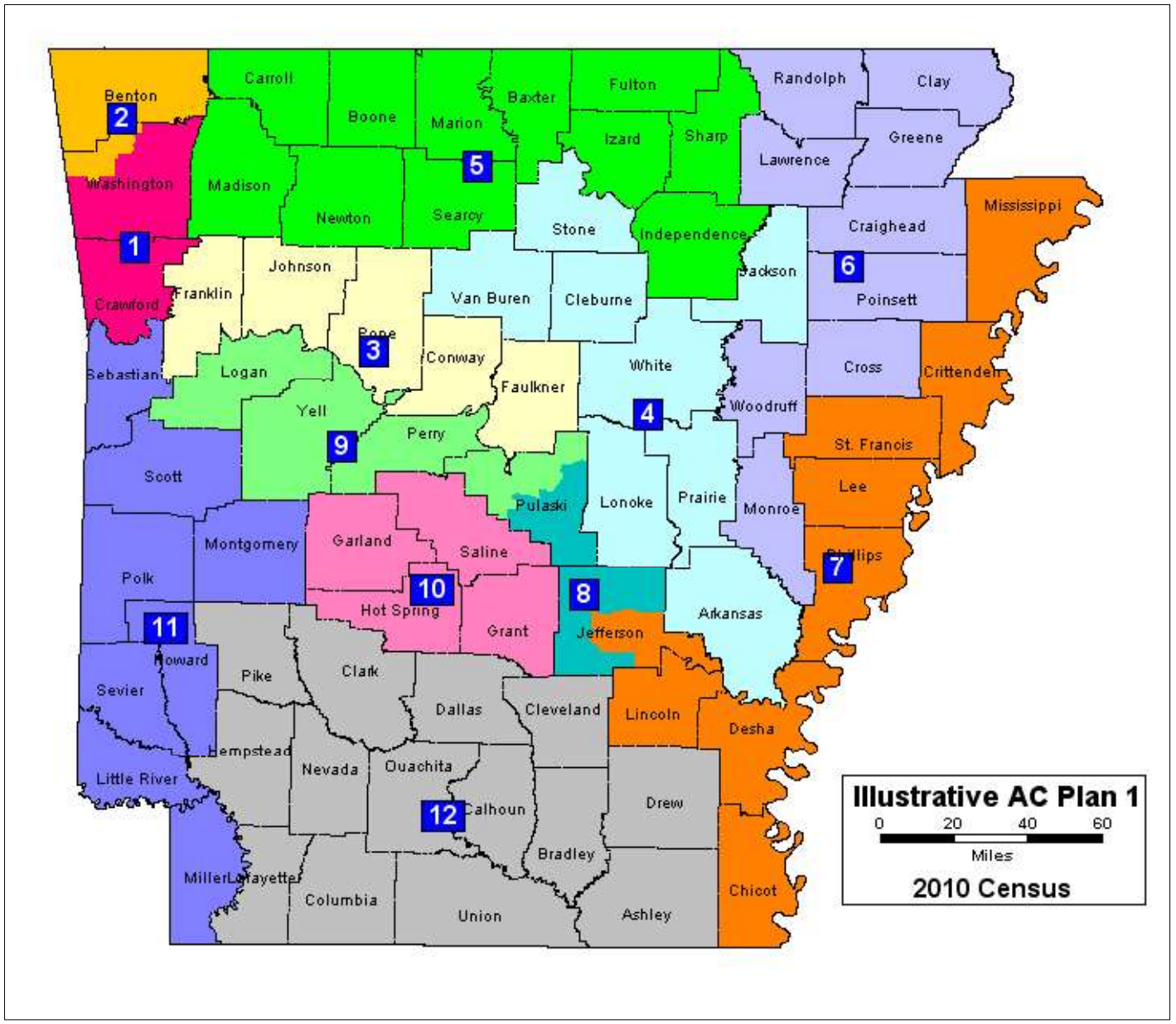
A. Court of Appeals Gingles 1 Plans

(i) Illustrative AC Plan 1 – 2010 Census

47. The map in **Figure 8** depicts 12-district *Illustrative AC 1*, apportioned according to the 2010 Census. *Illustrative AC 1* features two majority-Black CVAP districts, according to the 2015-19 ACS – District 7 and District 8. *Illustrative AC 1* has a total deviation of 8.5% and splits three counties along Census VTD lines—Pulaski, Jefferson, and Washington—to allow for the districts to be substantially more balanced in population than the current 2003 Court of Appeals Plan.

[17] Voting Tabulation Districts ("VTDs") follow census block boundaries and are Census Bureau proxies for precincts which sometimes split census blocks.

Figure 8: Appellate Court – Illustrative AC Plan 1 – 2010 Census



48. **Figure 9** presents summary population statistics for *Illustrative AC 1*. Detailed population statistics for *Illustrative AC 1* are in **Exhibit B-1. Exhibit B-2** is a high-resolution map depicting *Illustrative AC 1*.

Figure 9: Illustrative AC Plan 1– 2010 Census, 2015-19 ACS CVAP

Dist.	Pop.	Dev	% Dev	% AP Black	18+ Pop	% 18+ AP Black	% 18+ NH White	% NH BCVAP	% NH White CVAP
1	247019	4026	1.66%	3.29%	184107	2.73%	80.67%	3.17%	84.12%
2	239333	-3660	-1.51%	1.62%	172563	1.29%	80.87%	1.62%	84.66%
3	239929	-3064	-1.26%	7.40%	182041	6.56%	86.37%	7.41%	86.75%
4	246822	3829	1.58%	7.04%	188267	6.24%	89.59%	5.99%	89.25%
5	234609	-8384	-3.45%	0.82%	184408	0.61%	94.27%	0.61%	93.94%
6	247862	4869	2.00%	10.39%	187413	8.82%	87.44%	9.33%	86.59%
7	234287	-8706	-3.58%	53.71%	172598	50.23%	46.46%	50.80%	44.76%
8	243696	703	0.29%	50.02%	184304	46.11%	45.93%	51.12%	43.95%
9	233946	-9047	-3.72%	12.16%	178983	10.50%	82.21%	13.80%	79.52%
10	253918	10925	4.50%	7.18%	195685	6.18%	88.73%	7.39%	87.77%
11	254606	11613	4.78%	10.61%	190573	9.43%	77.95%	10.21%	78.69%
12	239891	-3102	-1.28%	30.20%	183501	28.38%	67.07%	29.34%	67.10%

Ideal district size = 242,993 (1 judge)
Total deviation = 8.50%

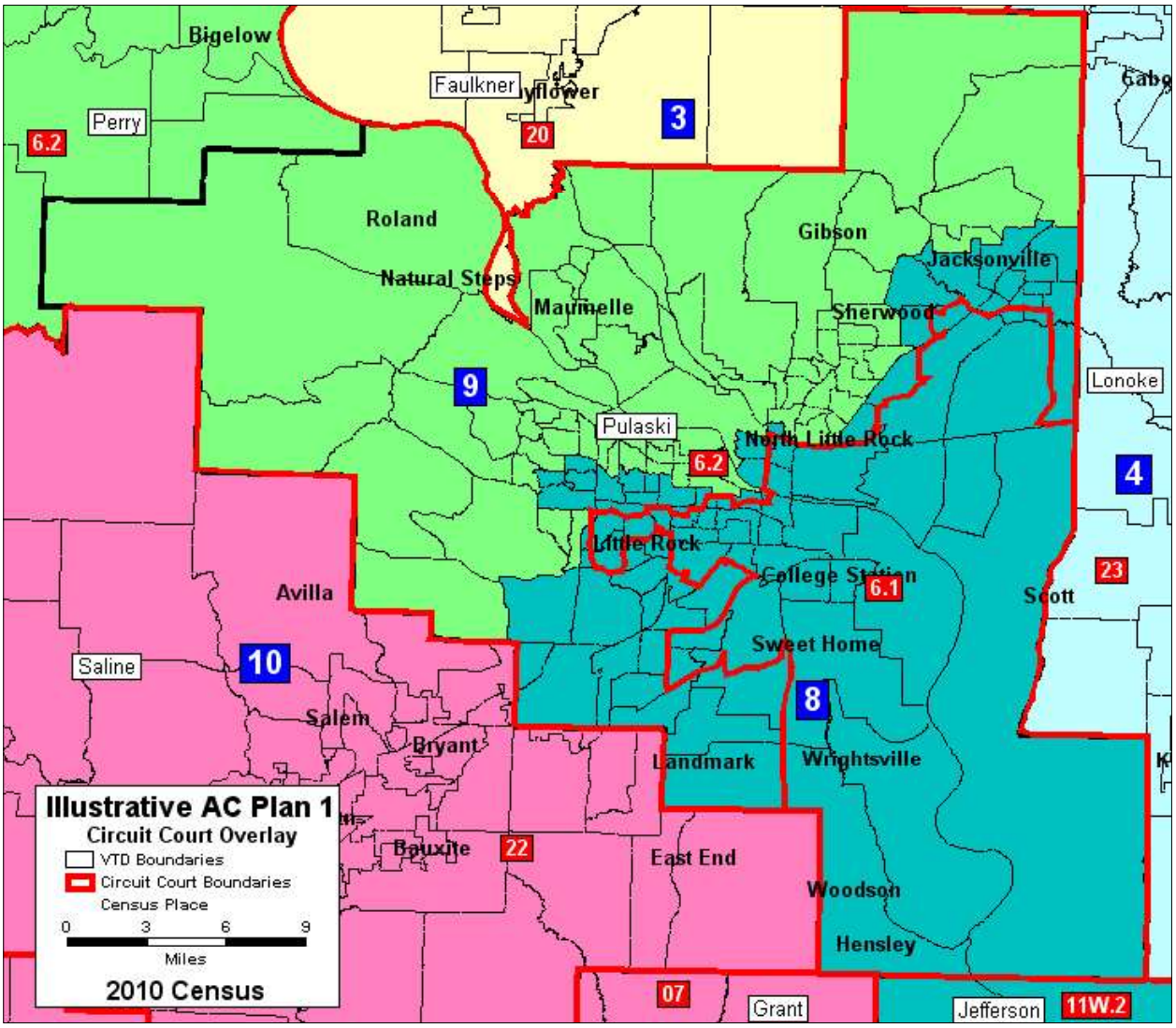
49. District 7 (50.8% NH BCVAP) encompasses the seven Delta counties that border the Mississippi River, along with all of Lincoln County and a portion of Jefferson County. Pine Bluff in Jefferson County is split between District 7 and District 8 along Census VTD lines.

50. District 8 (51.12% NH BCVAP) covers the remainder of Jefferson County that is not in District 7, sharing Pulaski County with District 9. District 8 includes portions of Little Rock, North Little Rock, and Jacksonville.

51. This method of splitting counties and/or cities is commonplace in Arkansas. The map in **Figure 10** displays a closer view of Pulaski County under *Illustrative AC 1*. *Illustrative AC 1* splits Pulaski County in a fashion similar to the way in which it is already divided for the Arkansas circuit courts. Red lines show

circuit court boundaries. Pulaski County is split between majority-Black Circuit Court 6.1 and majority-white Circuit Court 6. 2.

Figure 10: Pulaski County – Illustrative AC 1 with Circuit Court Overlay 2010 Census

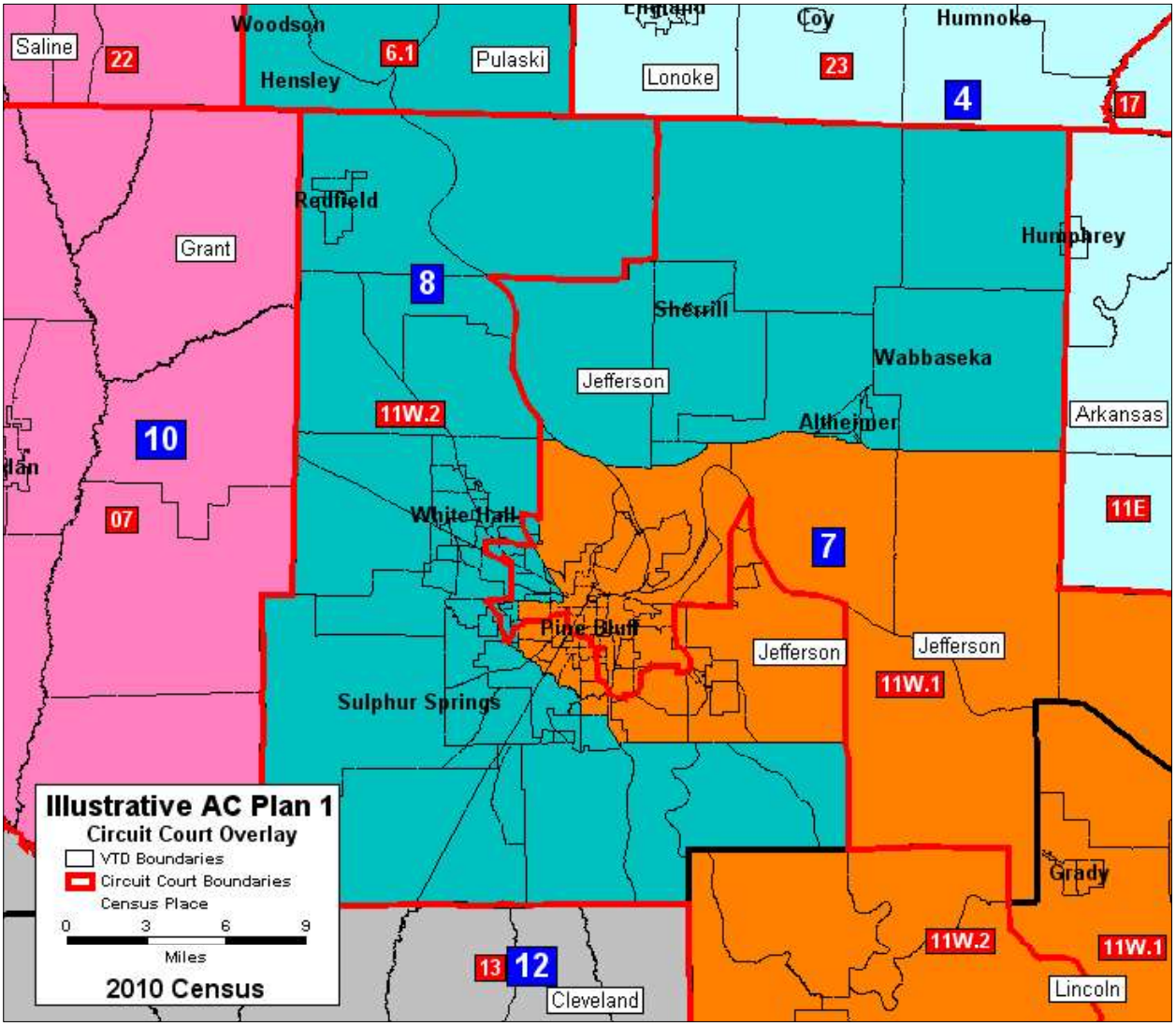


52. In the **Figure 10** map, red labels and lines identify circuit court districts. Blue labels and color blocked areas identify *Illustrative AC 1* districts. Thin black lines demarcate 2010 VTDs. Thick black lines show county boundaries where there is no corresponding circuit court boundary (e.g., the Perry-Pulaski county line).

53. Under *Illustrative AC 1*, District 8 encompasses all of the 2010 VTDs in Pulaski County that are in Circuit Court District 6.1, along with several adjacent VTDs with significant Black populations that are assigned to Circuit Court District 6.2.

54. The map in **Figure 11**, in the same style as **Figure 10**, shows a closer view of Jefferson County under *Illustrative AC 1*. Jefferson County is split between Circuit Court majority-Black 11W.1 and majority-white Circuit Court 11W.2. Thus, *Illustrative AC 1* splits Jefferson County in a similar fashion to the way it is split for the circuit courts.

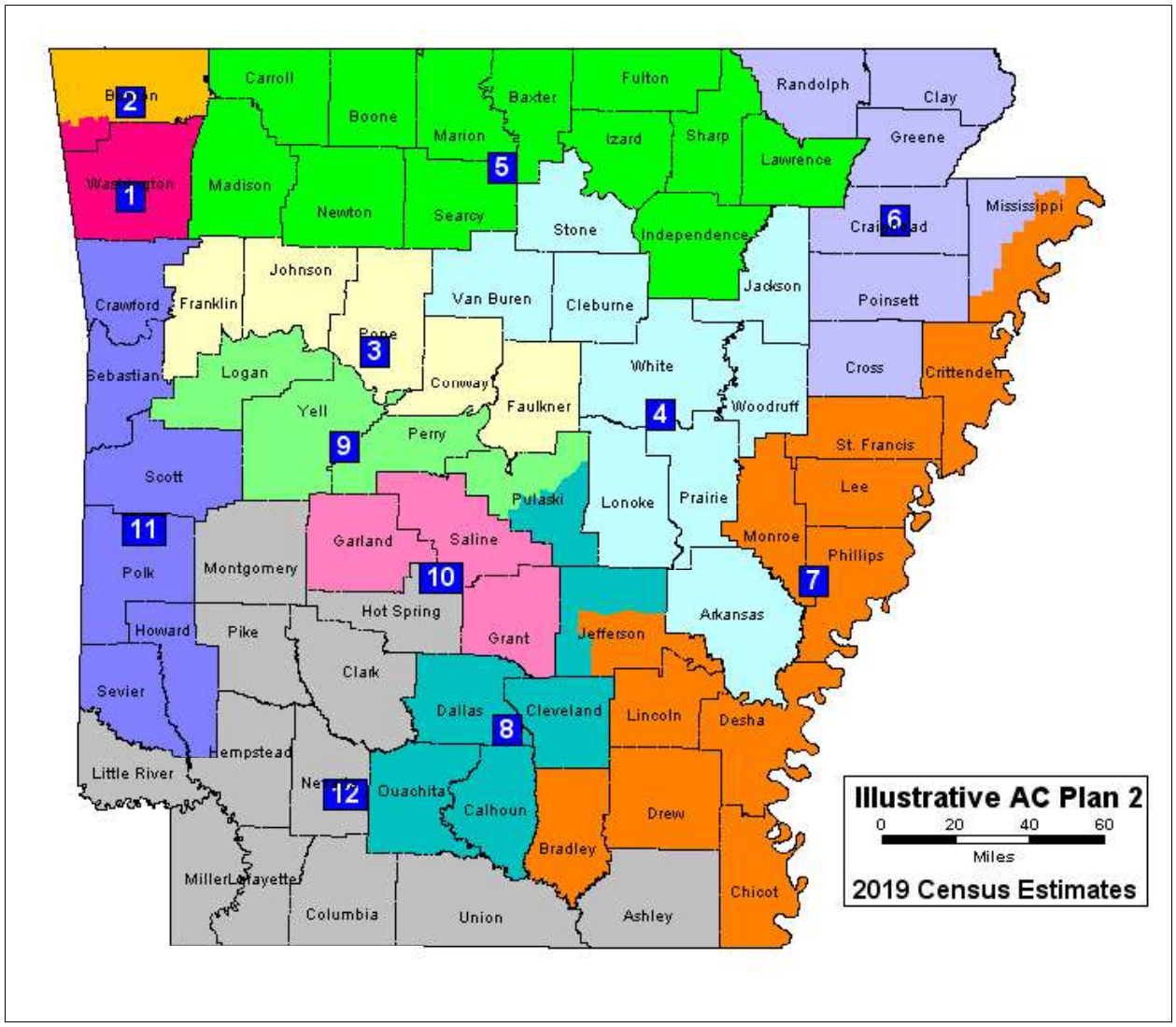
Figure 11: Jefferson County – Illustrative AC 1 with Circuit Court Overlay 2010 Census



(ii) Illustrative AC Plan 2 – 2019 Census Estimates

55. The map in **Figure 12** depicts 12-district *Illustrative AC 2*, based on 2019 Census estimates. Like *Illustrative AC 1*, *Illustrative AC 2* contains two-majority Black districts—District 7 (50.17% NH BCVAP) and District 8 (50.58% NH BCVAP), according to the 2015-2019 ACS.

Figure 12: Appellate Court – Illustrative AC Plan 2
2019 Census Estimates



56. Compared to *Illustrative AC 1*, predominantly rural *Illustrative AC 2* District 7 extends deeper into Jefferson County and adds Drew and Bradley Counties to the south. Rather than including Mississippi County in its entirety, as in *Illustrative AC Plan 1*, only the eastern part of Mississippi County (divided along 2010 Census VTD lines), is included in District 7. Majority-Black District 8 expands into Lower Arkansas, picking up four counties—Cleveland, Dallas, Calhoun, and Ouachita.

57. **Figure 13** presents summary population statistics for *Illustrative AC 2*. **Exhibit C** is a high-resolution map of *Illustrative AC 2*.

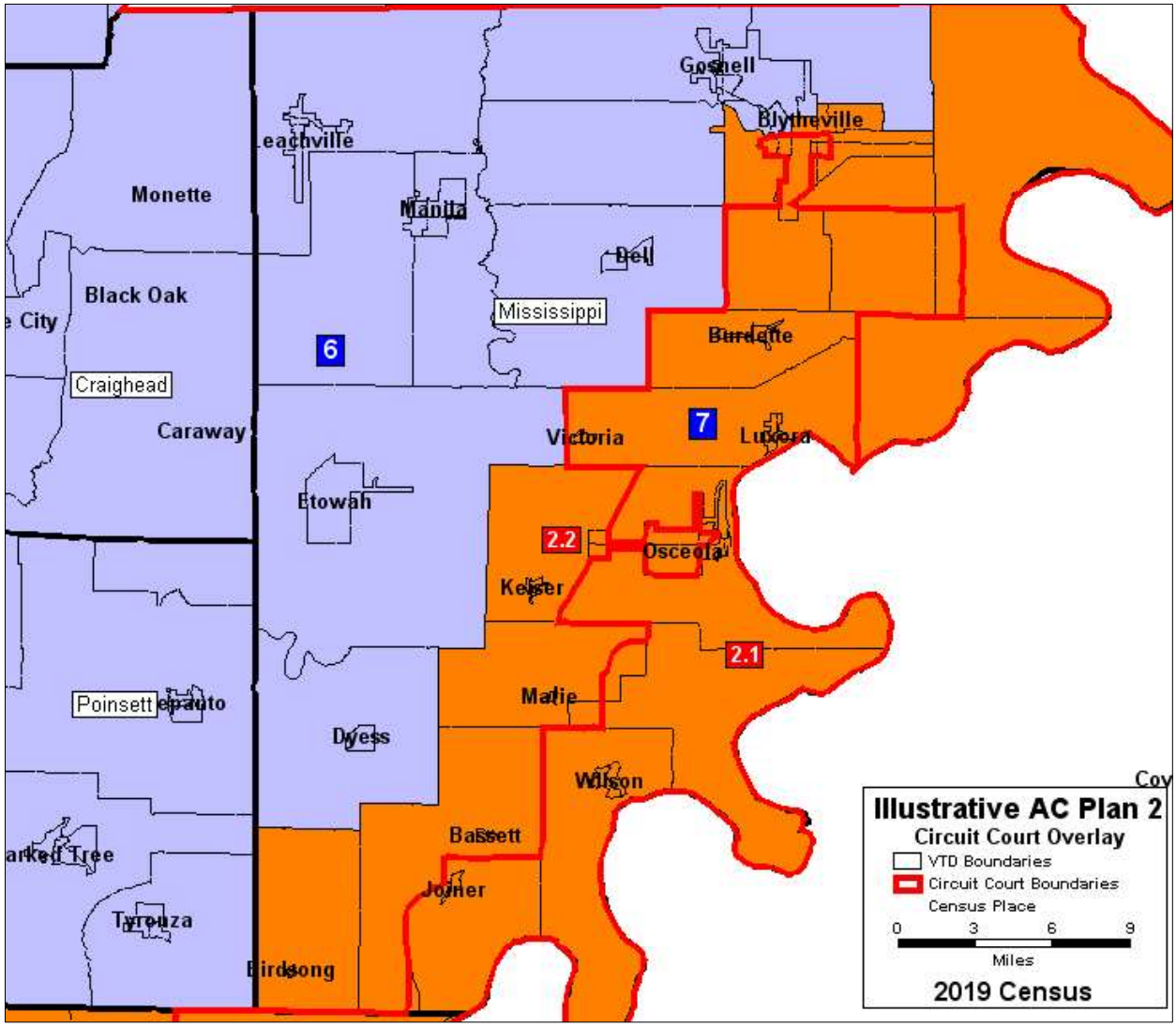
Figure 13: Illustrative AC Plan 2 – 2019 Census Estimates, 2015-19 ACS CVAP

Dist.	Pop.	Dev	% Dev	% AP Black	% NH BCVAP	% NH White CVAP
1	263417	11933	4.75%	4.47%	3.34%	82.57%
2	254911	3427	1.36%	2.82%	1.70%	85.08%
3	255218	3734	1.48%	8.99%	7.41%	86.75%
4	254619	3135	1.25%	8.10%	6.55%	88.78%
5	254427	2943	1.17%	1.56%	0.65%	94.12%
6	244824	-6660	-2.65%	12.09%	8.54%	86.97%
7	242214	-9270	-3.69%	53.49%	50.17%	45.51%
8	246451	-5033	-2.00%	54.94%	50.58%	45.12%
9	260582	9098	3.62%	14.80%	15.07%	78.31%
10	240088	-11396	-4.53%	9.00%	6.85%	88.24%
11	251538	54	0.02%	6.65%	5.29%	82.11%
12	249515	-1969	-0.78%	25.23%	23.77%	72.16%

Ideal size = 251,484 (1 judge)
Total deviation = 9.28%

58. **Figure 14** displays Mississippi County under *Illustrative AC 2*. Red lines show how Mississippi County is split between majority-Black Circuit Court 2.1 and majority-white Circuit Court 2.2. The county is split in an east-west fashion similar to the circuit court boundaries.

Figure 14: Mississippi County -- Illustrative AC 2 with Circuit Court Overlay 2019 Estimates



(iii) Summary Finding

59. To recap, as demonstrated by the above illustrative plans, which represent a sampling out of a range of possible alternatives, Arkansas' Black population is sufficiently large and geographically compact to allow for the creation of two single-member majority-Black districts for the Arkansas Court of Appeals.

IV. GINGLES 1 ILLUSTRATIVE PLANS: SUPREME COURT

60. This section presents two illustrative plan configurations for the Arkansas Supreme Court, for which justices currently run at large.[18] Both illustrative plans are comprised of a 7-district Supreme Court with one majority-Black district and comply with traditional redistricting principles, including compactness, contiguity, respect for communities of interest, and the non-dilution of minority voting strength, as well as ensuring districts are not malapportioned.

61. The illustrative plans meet the first *Gingles* precondition, i.e., the Black population is sufficiently numerous and geographically compact to allow for the creation of at least one single-member majority Black district. The illustrative plans also demonstrate that there are viable remedies in this Section 2 lawsuit. Alternative plan configurations beyond those presented in the Plaintiffs' illustrative plans are possible.

62. The illustrative plans are drawn to follow, to the extent possible, county boundaries. Only one county is split in both plans—Pulaski County—to ensure districts are equally apportioned. I have used whole 2010 Census VTDs as sub-county components to determine district lines.

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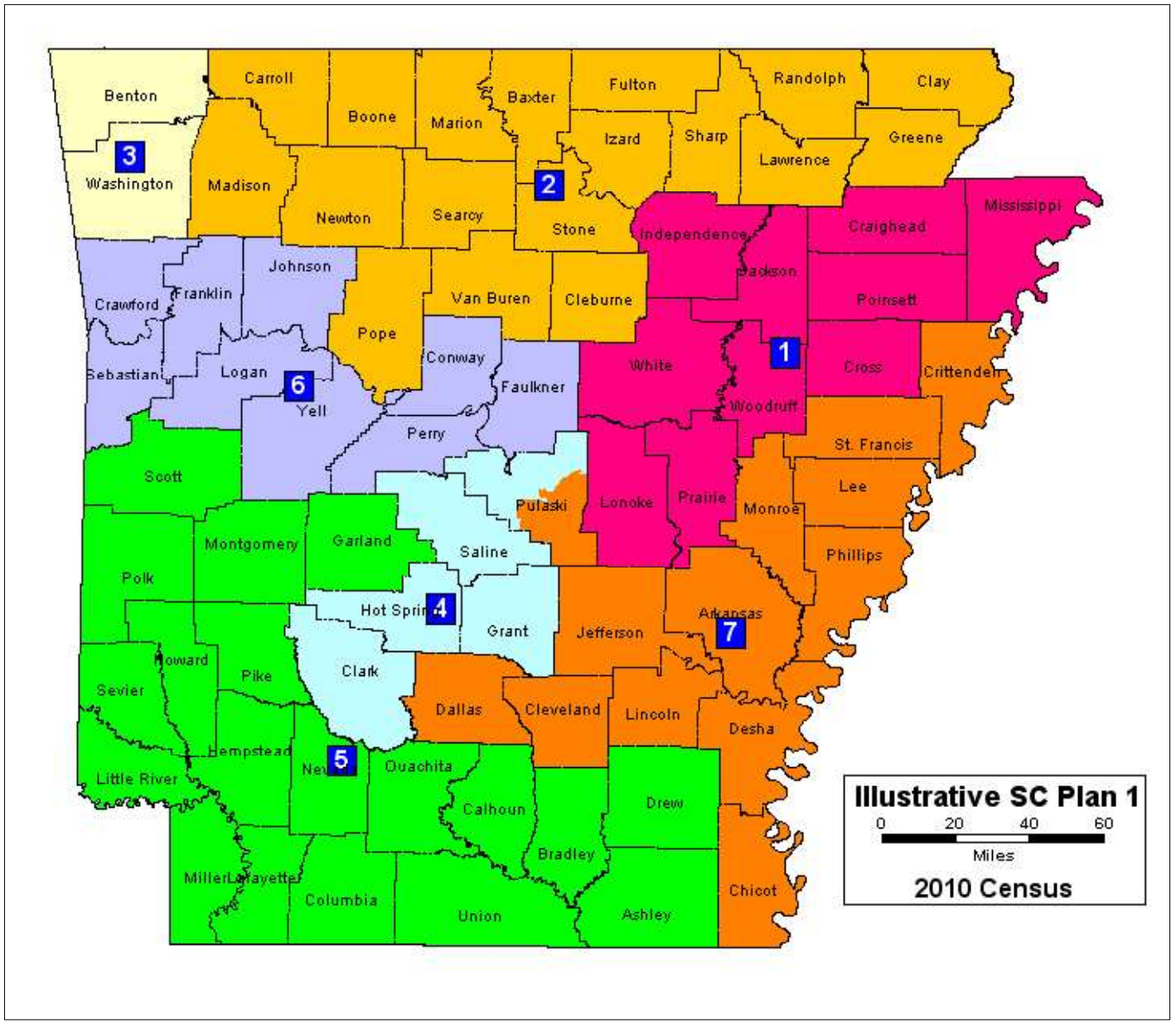
[18] An at-large election system is one in which all voters can vote for all candidates running for open seats in the jurisdiction and candidates run in an entire jurisdiction rather than from districts or wards in the area.

63. Given the delay of the 2020 Census PL94-171 redistricting file, I demonstrate that a 7-district plan for the Supreme Court can be drawn based on either the 2010 Census (*Illustrative SC 1*) or 2019 Census Bureau estimates (*Illustrative SC 2*).

64. The map in **Figure 15** depicts 7-district *Illustrative SC 1*, apportioned according to the 2010 Census.

Figure 15: Supreme Court – Illustrative SC Plan 1
2010 Census



65. Majority-Black District 7 (53.59% NH BCVAP) is anchored in the Delta and Little Rock. *SC Plan 1* encompasses a dozen whole counties plus the southern part of Pulaski County, which is split between District 7 and District 4 along 2010

VTD lines. As I noted in describing the Illustrative Plans for the Court of Appeals, such a split of a county when creating districts is not uncommon in Arkansas.

66. **Figure 16** reports summary population statistics, under *Illustrative SC 1*. *Illustrative SC 1* has a total deviation of 6.68%. Detailed population statistics for *Illustrative SC 1* are in **Exhibit D-1**. **Exhibit D-2** is a high-resolution map depicting *Illustrative SC 1*.

Figure 16: Supreme Court – Illustrative SC Plan 1
2010 Census, 2015-2019 ACS

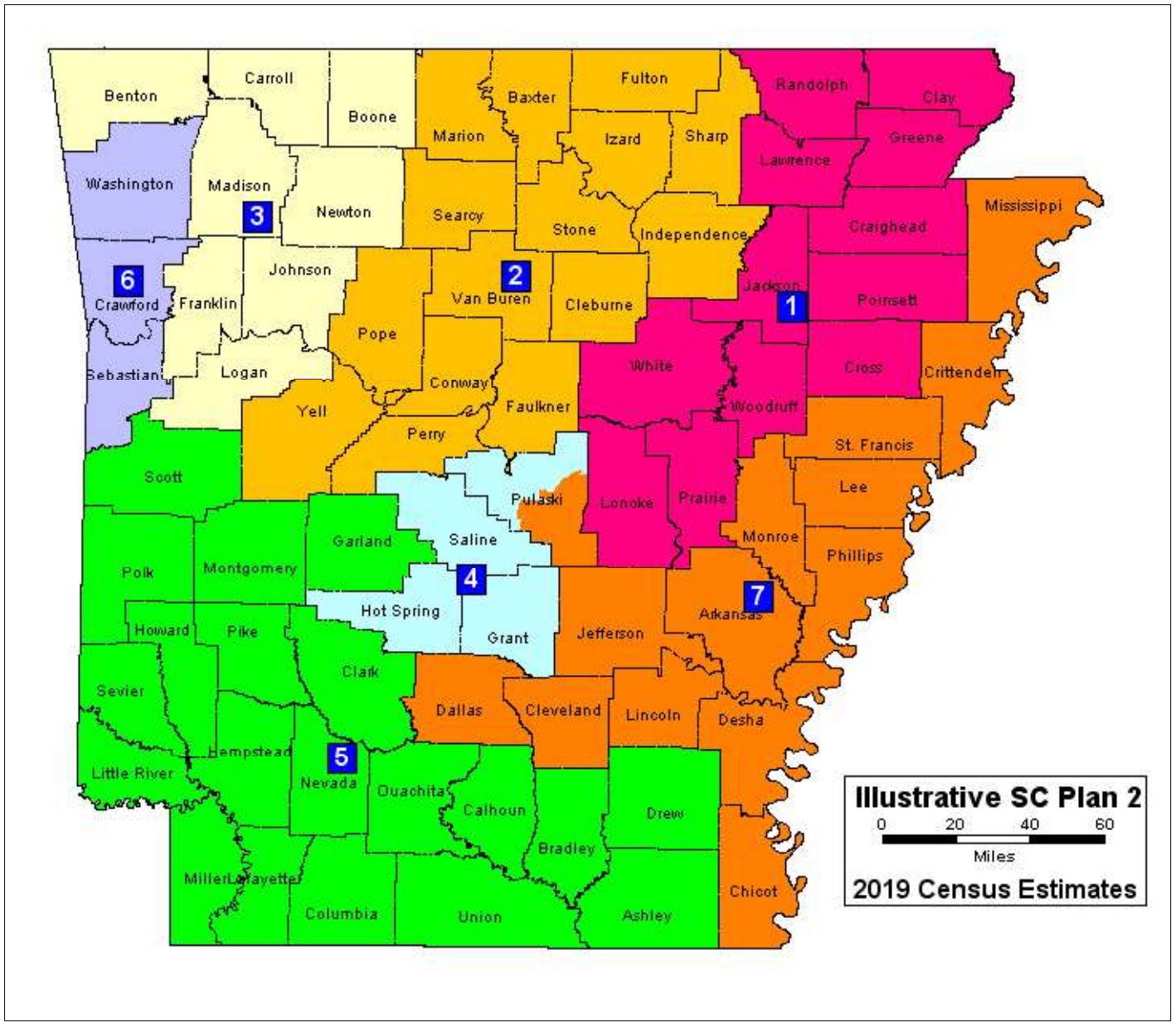
Dist.	Pop.	Dev	% Dev	% AP Black	18+ Pop	% 18+ AP Black	% 18+ NH White	% NH BCVAP	% NH White CVAP
1	401427	-15133	-3.63%	12.68%	300389	10.95%	84.44%	10.89%	84.07%
2	408932	-7628	-1.83%	1.05%	319685	0.79%	94.50%	0.94%	94.16%
3	424404	7844	1.88%	2.58%	311072	2.15%	79.56%	2.55%	83.79%
4	429281	12721	3.05%	15.26%	330397	13.43%	80.49%	16.36%	78.08%
5	424977	8417	2.02%	20.82%	324887	19.22%	74.53%	19.86%	75.07%
6	420850	4290	1.03%	6.44%	315247	5.60%	83.97%	6.27%	84.61%
7	406047	-10513	-2.52%	54.55%	302766	51.08%	43.89%	53.59%	42.18%

Ideal size = 416,560 (1 judge)
Total deviation = 6.68 %

(ii) Illustrative SC Plan 2 – 2019 Census Estimates

67. The map in **Figure 17** depicts 7-district *Illustrative SC 2*, apportioned according to 2019 Census estimates. Majority-Black District 7 (51.55% NH BCVAP) expands from the Census 2010 *Illustrative SC 1* configuration to include Mississippi County. Elsewhere, *Illustrative SC 2* encompasses the same set of counties as *Illustrative SC 1*. Pulaski County is split between District 7 and District 4 along 2010 VTDs.

Figure 17: Supreme Court – Illustrative SC Plan 2
2019 Estimates



68. **Figure 18** reports summary population statistics under *Illustrative SC 2*. *Illustrative SC 2* has a total deviation of 6.09%. **Exhibit E** is a high-resolution map depicting *Illustrative SC 2*.

Figure 18: Supreme Court – Illustrative SC Plan 2
2019 Estimates, 2015-2019 ACS

Dist.	2019 Pop.	Dev	% Dev	% 2019 AP Black	%NH BCVAP	%NH WCVAP
1	427682	-3433	-0.80%	10.13%	7.36%	88.05%
2	444571	13456	3.12%	5.83%	4.40%	90.43%
3	435041	3926	0.91%	2.33%	1.32%	87.59%
4	428812	-2303	-0.53%	16.74%	15.95%	78.38%
5	433137	2022	0.47%	21.26%	20.08%	74.93%
6	430271	-844	-0.20%	5.57%	4.19%	82.39%
7	418290	-12825	-2.97%	55.88%	51.55%	44.17%

Ideal size = 431,115 (1 judge)
Total deviation = 6.09%

(iii) Summary Finding

69. To recap, as demonstrated by the above illustrative plans, which represent a sampling out of a range of possible alternatives, Arkansas' Black population is sufficiently large and geographically compact to allow for the creation of one single-member majority-Black district for the Arkansas Supreme Court.

V. SOCIOECONOMIC PROFILE OF ARKANSAS

70. As in most other Section 2 cases where I have served as an expert, I also reviewed the socioeconomic statistics for Arkansas as reported in the ACS. In Arkansas, African Americans and Latinos trail NH whites across most key indicators of socioeconomic well-being. This disparity is summarized in the charts in **Exhibit F-1** and the table in **Exhibit F-2**, as reported in Table S0201 from the 2019 ACS. Note that socioeconomic data from the 2020 ACS, which will take into account the impact of the pandemic, will not be available until the fall of 2021.

71. The following items specifically compare African Americans (NH AP Black) and NH whites, according to the 1-Year 2019 ACS:

A. Income

- Over a quarter (27.3%) of African Americans in Arkansas live in poverty, compared to 13.3% of whites. (**Exhibit F-1 at p. 22 and Exhibit F-2 at p. 8**)

- About two in five (38.1%) African American children live in poverty, compared to 16.44% of white children. (**Exhibit F-1at p. 22 and Exhibit F-2 at p. 8**)

- About half (48.3%) of African American female-headed households with children live in poverty, compared to a 33.1% poverty rate for white female-headed households. (**Exhibit F-1 at p. 20 and Exhibit F-2 at p. 8)**

- African American median household income is $33,779, compared to $52,788 for white households. (**Exhibit F-1 at p. 14 and Exhibit F-2 at p. 7**)

- Per capita income disparities in Arkansas track the disparities seen in median household income. African American per capita income is $18,308, compared to white per capita income of $30,250. (**Exhibit F-1 at p. 17 and Exhibit F-2 at p. 7**)

- Nearly one fourth (23.8%) of African American households rely on food stamps (SNAP)—about three times the 8.4% SNAP participation rate of white households. (**Exhibit F-1 at p. 15 and Exhibit F-2 at p. 7**)

B. Education

- Of persons 25 years of age and over, 13.0% of African Americans have not finished high school, compared to 10.1% of their white counterparts. (**Exhibit F-1 at p. 5 and Exhibit F-2 at p. 3**)

- At the other end of the educational scale, for ages 25 and over, 17.3% of African Americans have a bachelor's degree or higher, compared to 24.9% of whites. (**Exhibit F-1 at p. 5 and Exhibit F-2 at p. 3**)

C. Employment

- The Black unemployment rate (for the population over 16 years old (expressed as a percent of the civilian labor force)) is 7.6%—compared to a 4.2% white unemployment rate. (**Exhibit F-1 at p. 11 and Exhibit F-2 at p. 5**)

- Of employed African Americans, 24.5% are in service occupations, compared the 15.5% rate of similarly employed whites. **(Exhibit F-1 at p. 13 and Exhibit F-2 at p. 6**)

E. Home Ownership

- Fewer than half of African-American householders (44.6%) are homeowners, while 71.1% of white households are owner-occupied. (**Exhibit F-1 at p. 21 and Exhibit F-2 at p. 9**)

- Median home value for African-American homeowners is $85,900, compared to the $143,600 median home value for Whites. (**Exhibit F-1 at p. 25 and Exhibit F-2 at p. 9**)

F. Health

- About two in five African Americans (43.1%) aged 65 and over have a disability, compared to 40.7% of their white cohorts. (**Exhibit F-1 at p. 7 and Exhibit F-2 at p. 4**)

- 8.6% of African Americans have no health insurance coverage, compared to 7.2% of Whites. (**Exhibit F-1 at p. 18 and Exhibit F-2 at p. 7**)

G. Transportation/Communication

- About one in six African American households (14.2%) lacks access to a vehicle, while 4.9% of white households are without a vehicle. (**Exhibit F-1 at p. 23 and Exhibit F-2 at p. 9**)

- About 11.8% of African Americans carpool or take public transportation to work, compared to 9.4% of whites. **(Exhibit F-1 at p. 12 and Exhibit F-2 at p. 5**)

- There is a 6-point Black-white gap in households with a computer, smartphone, or tablet—84.7% versus 90.3%. (**Exhibit F-1 at p. 27 and Exhibit F-2 at p. 9**)

- Nearly one fourth (24.9%) of African American households do not have a broadband internet connection, compared to 19.2% of white households. (**Exhibit F-1 at p. 27 and Exhibit F-2 at p. 9**)

72. Based on 2019 Census Bureau estimates, about 31% of the African American population in Arkansas lives in Pulaski County—a county that is excluded from opportunity District 7 under the 2003 Court of Appeals Plan. Socioeconomic disparities by race in Pulaski County generally mirror the statewide disparities. **Exhibit G** contrasts socioeconomic characteristics of NH whites and African Americans in Pulaski County, according to the 5-Year *2015-2019 ACS*.

VI. SUMMARY

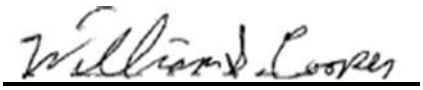
73. From the preceding analysis, I reach the following conclusions:

- Black people in Arkansas are sufficiently numerous and geographically compact, consistent with the *Gingles 1* precondition, to comprise a majority of the citizen voting-age population in at least one Supreme Court district under a 7-district plan and two Court of Appeals districts under a 12-district plan.

- Plaintiffs' illustrative plans respect one-person one-vote and the non-dilution of minority voting strength, as well as other traditional redistricting criteria, including compactness, contiguity, and communities of interest.

- As reported in the *American Community Survey*, in Arkansas, white people significantly outpace Black people across most indicators of socioeconomic stability.

Executed on June 15, 2021



WILLIAM S. COOPER

Exhibit 3

IN THE UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF ARKANSAS
CENTRAL DIVISION

THE CHRISTIAN MINISTERIAL ALLIANCE, *et al.*, **PLAINTIFFS,**

v. **Case No. 4:19-cv-00402-JM**

ASA HUTCHINSON,
the Governor of the State of Arkansas, *et al.*, **DEFENDANTS.**

EXPERT DECLARATION OF PETER A MORRISON, PH.D.

Pursuant to 28 U.S.C. 1746, I declare:

1. My name is Peter A. Morrison, Ph.D., and I have been retained as an expert in the case of *Christian Ministerial Alliance, et al. v. Asa Hutchinson, et al.* I have been asked to evaluate and address Plaintiffs' assertions (at para. 17 of Plaintiffs' Second Amended Complaint filed 03/03/20) that "Defendants' current methods of electing the Justices of the Supreme Court and judges of the Court of Appeals violate Section 2 because they result in the denial or abridgment of the rights of Black voters to have an equal opportunity to participate in the political process and to elect candidates of their choice."

2. One focus of my evaluation is the June 15, 2021 *Revised Declaration of William S. Cooper*, supporting Plaintiffs' assertions quoted above. Mr. Cooper summarized his conclusions at paragraph 11, pertaining to the first *Gingles* prong:

> "Black people in Arkansas are sufficiently numerous and geographically compact to allow for:
>
> - **Two single-member majority-Black districts in a 12-district plan for the Court of Appeals**, based on population apportioned by either the 2010 decennial Census or the 2019 estimates published by the Census Bureau, **(pp. 18-27 *infra*)**, both of which support my finding;
>
> - **One single-member majority-Black district in a 7-district plan for the Supreme Court**, based on population apportioned by either the 2010 decennial Census or the 2019 estimates published by the Census Bureau. **(pp. 28-33 *infra*)**, both of which support my finding."

3. To evaluate Mr. Cooper's basis for these conclusions, I have attempted to replicate his analysis using the official data sources that Mr. Cooper and experts such as myself rely upon when evaluating the first prong of the *Gingles* three-prong test under Section 2 of the Voting Rights Act. This first *Gingles* prong tests whether there is a potential remedy to cure an alleged violation of minority voting rights. If so, attention then focuses on whether a violation has occurred (the second and third *Gingles* prongs).

4. I also evaluated the latest files that Plaintiffs just furnished to Defendants on June 15, 2021, as part of their latest response to Defendants' request for production of documents I previously requested. My request was for the data that Plaintiffs' expert, Professor Baodong Liu, relied upon to estimate racially polarized voting (the focus of the second and third *Gingles* prongs).

5. These tasks are within the scope of my expertise as an applied demographer. I have conducted similar analyses in numerous prior cases and am familiar with the *Gingles* three-prong test. In my field, it is standard practice to evaluate data integrity, quality, and completeness of coverage.

6. I am an applied demographer and am retired from The RAND Corporation, where I was Senior Demographer and the founding director of RAND's Population Research Center. I have authored or edited five books and published over 40 scholarly articles in peer-reviewed academic journals. I have served by invitation on the U.S. Census Bureau's Advisory Committee on Population Statistics (1989–1995) and on the Bureau's Working Group on 2010 Race and Ethnicity. I have been elected as President of the Southern Demographic Association and a Director of the Population Association of America. These are the two leading associations of professional

demographers nationwide. I have taught undergraduate statistics at the University of Pennsylvania and other courses at the RAND Graduate School and the University of Helsinki. I am being compensated at a rate of $300/hour for my work in reviewing materials and preparing this report. I will be compensated at a rate of $450/hour for any testimony I give in court or by deposition.

7. Attached Appendix A lists all cases in which I have testified by declaration, deposition, or at trial since June 2016. Attached Appendix B summarizes my academic background, including all publications in the last four years.

8. All conclusions contained within my Report are to the reasonable degree of scientific certainty (at least 90% certain) that scholars and experts in my field use.

SUMMARY OF CONCLUSIONS

9. I am still evaluating Mr. Cooper's underlying data and attempting to replicate his own analyses, based upon 2010 and subsequent data. I anticipate having the necessary basis for forming my opinion as to whether Black voting-age citizens are sufficiently numerous and geographically compact, consistent with the *Gingles 1* precondition, to comprise a majority of the citizen voting-age population in at least one Supreme Court district under a 7-district plan and two Court of Appeals districts under a 12-district plan.

10. There are grounds for qualifying or even doubting the validity of conclusions by Plaintiffs' expert Baodong Liu regarding racially-polarized voting (RPV). Missing data introduces troubling uncertainties about the reliability of the statistical estimates upon which Professor Liu necessarily relies. A recognized scientific principle applies here: Risking reliance upon such incomplete data obliges one to qualify all conclusions in light of the potential unmeasured selection biases.

FINDINGS

First *Gingles* Prong

11. The U.S. Department of Justice (DOJ) furnishes the recognized official data source for evaluating the first prong of the *Gingles* three-prong test. This recognized source is the U.S. Census Bureau's annual "Special Tabulation of Citizen Voting-age Population by Race and Ethnicity," based upon the Bureau's 5-year American Community Survey file.[1] The key feature of this Special Tabulation is its unique classification of the citizen voting-age population (CVAP). The definitions used to classify the CVAP precisely mirror the legally-recognized racial/ethnic minority groups protected under the Voting Rights Act.

12. A particular strength of this DOJ Special Tabulation is the clarity of all definitions with reference to Section 2 of the VRA. The definitions used avoid commonly encountered imprecisions arising from various accumulations of legally-recognized minorities (e.g., such imprecise aggregates as "people of color" or "all other groups"), whose deliberate inclusion or exclusion directly affect one party's effort to establish a bare (50.00%) majority district.

Evaluation of Mr. Cooper's Findings and Conclusions Pertaining to First *Gingles* Prong

13. Mr. Cooper states three conclusions at paragraph 73 of his *Revised Declaration* dated June 15, 2021:

a. Black people in Arkansas are sufficiently numerous and geographically compact, consistent with the *Gingles 1* precondition, to comprise a majority of the citizen voting-age population in at least one Supreme Court district under a 7-district plan and two Court of Appeals districts under a 12-district plan.

b. Plaintiffs' illustrative plans respect one-person one-vote and the non-dilution of minority voting strength, as well as other traditional redistricting criteria, including compactness, contiguity, and communities of interest.

[1] For further details, see: https://www.census.gov/programs-surveys/decennial-census/about/voting-rights/cvap.html

c. As reported in the *American Community Survey*, in Arkansas, white people significantly outpace Black people across most indicators of socioeconomic stability.

14. I have independently replicated Mr. Cooper's analyses using official data obtained directly from the U.S. Census Bureau. Based upon my own analyses, I cannot yet conclude with scientific certainty that Black voting-age citizens are sufficiently numerous and geographically compact, consistent with the *Gingles 1* precondition, to comprise a majority of the citizen voting-age population in at least one Supreme Court district under a 7-district plan and two Court of Appeals districts under a 12-district plan. I am still addressing unresolved technical issues with the census block data he used.

Evaluation of Plaintiffs' County-level Data for Detecting Racially Polarized Voting

15. Next, I address the trustworthiness of Plaintiffs' county-level data as a basis for drawing scientifically reliable conclusions about racially polarized voting (RPV) in specific historical elections. There are grounds for qualifying or even doubting the validity of conclusions by Plaintiffs' expert Professor Liu, insofar as those conclusions are based upon county- or precinct-level election returns on or around the following years: 2010–11, 2012, 2018.

16. I base this conclusion on my evaluation of files recently furnished to me on or about June 15, 2021, by Plaintiffs as part of their latest response to Defendants' request for production of documents for data underlying the opinions of William S. Cooper and Baodong Liu.[2] Of three files I have examined so far, all three appear to be missing significant blocks of data,

[2] The specific data files are Excel files named: "matched-lg-vtd-7.xlsx", "matched-pre-vtd-2012.xlsx", "Supreme_Court_2010_11_counties_Nov_16_draft.xlsx"; and "Auditor.xls", and several folders labelled "2010", "2008", "2006", "2004", "2002" which contain multiple files (some of them unreadable). Also, see Appendix 2 in *Expert Report of Baodong Liu, Ph.D., May 25, 2021*.

rendering these incomplete data potentially untrustworthy. Those whose trustworthiness I doubt bear directly on elections in 2018, 2012, and 2010–11.

17. Each of these files links the necessary demographic data profile of eligible voters by race/ethnicity to each of the precincts in an Arkansas county. For each precinct, this demographic profile shows the percentage of eligible voters who are Black, white, Hispanic, etc. That demographic profile would then be matched (precinct by precinct within a county) to electoral outcomes in a particular year. Ideally, a complete precinct-level database for precincts in all 75 Arkansas counties would afford a suitable basis for deriving the statistical EI estimates upon which to base a scientifically reliable opinion.

18. Professor Liu has fallen far short of this ideal. For the recent elections I have examined so far, Professor Liu appears to have based his conclusions upon incomplete "convenience samples" of Arkansas precincts. In doing so, he excluded anywhere from one-fifth to as many as four-fifths of all Black eligible voters statewide, depending upon the particular election year.

19. A "convenience sample" is simply one where the units that have been selected for inclusion in the sample are the easiest to access. Here, Professor Liu has relied upon subsets of Arkansas voting precincts for which he could easily gauge the racial composition of all eligible voters in a particular year. Since these convenience samples of precincts were not chosen at random, his samples may not be representative of all the ballots that Black voters cast in all Arkansas voting precincts for a specific election.

20. A convenience sample may suffer from bias, undermining one's ability to generalize results based upon it with known certainty. Here, the less-easily accessible precincts Pro-

fessor Liu has excluded might well differ from the more-easily accessible ones.[3] In such instances, an alternative sample design which is not compromised by such obvious selection bias would be far preferable, because it would afford the testifying expert reasonable scientific certainty in reaching any conclusions.

21. My evaluation thus far has identified the following limitations with Professor Liu's database. In each instance, his own data for a given year document the actual number of eligible voters (by race) who are missing from that year's data (owing to an incomplete "convenience sample" of Arkansas precincts that year):

a. The 2018 file omits 10 of the 75 counties in Arkansas (source: Plaintiffs' file named "matched-lg-vtd-7.xlsx"). It would appear that Professor Liu's conclusions pertaining to the 2018 Lt. Governor election are based wholly or partly from this file. My tabulations of Professor Liu's own data show that this file excludes precincts where 18% of the State's voting-age citizens, and 24% of the Black voting-age citizens, would vote.

b. The 2012 file omits 12 of the 75 counties in Arkansas (source: Plaintiffs' file: "matched-pre-vtd-2012.xlsx"). It would appear that Professor Liu's conclusions pertaining to the 2012 election derives wholly or partly from this file. My tabulations of Professor Liu's own data show that this file excludes precincts where 22% of the State's voting-age population, and 30% of Black voting-age persons, would vote.

c. The 2010-11 file omits 65 of the 75 counties in Arkansas (source: "Supreme_Court_2010_11_counties_Nov_16_draft.xlsx"). It would appear that Professor Liu's conclusions pertaining to the 2010 election derive wholly or partly from this file. My tabulations of Professor Liu's own data show that this file excludes precincts where fully 81% of the State's voting-age population, and fully 67% of Black voting-age persons, would vote.

[3] To illustrate: Much of our understanding of prehistoric Spaniards comes from the cave drawings at Altamira, where thousand-year-old paintings still survive. Prehistoric Spaniards, therefore, are associated with caves because that is where the data still exists, not necessarily because most of them lived in caves for most of their lives.

22. The voters demonstrably missing from these files—ranging from 18% to as high as 81%—are problematic. Missing data undermines the scientific reliability of any statistical estimates that derive from such data. As time permits, I intend to evaluate additional files among those just received, to further inform my concerns here based upon additional elections in 2002, 2004, 2006, 2008, and 2014.

23. In my opinion, county-level data that fail to include the behavior of sizable percentages of voters are of questionable reliability, owing to potential selection bias. A universally accepted scientific principle applies here: Risking reliance upon such incomplete data obliges the analyst to qualify one's conclusions in light of their known limitations, including potential unmeasured selection bias.

Executed on July 9, 2021.
I declare under penalty of perjury that the foregoing is true and correct.

Peter A. Morrison